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Ultricore · User Guide

• Ross Part Number: 2201DR-104-15
• Release Date: October 15, 2021.
• Software Issue: 4.7

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This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a Commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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Class A equipment (Broadcasting and communications service for business use).
This device is a business-use (Class A) EMC-compliant device. The seller and user are advised to be aware of this fact. This device is intended for use in areas outside home.

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>User’s Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>A급 기기 (업무용 방송통신기자재)</td>
<td>이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.</td>
</tr>
<tr>
<td>Class A Equipment (Industrial Broadcasting &amp; Communication Equipment)</td>
<td>This equipment is <strong>Industrial (Class A) electromagnetic wave suitability equipment</strong> and seller or user should take notice of it, and this equipment is to be used in the places except for home.</td>
</tr>
</tbody>
</table>

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This equipment has been tested under the requirements of CISPR 22:2008 or CISPR 32:2015 and found to comply with the limits for a Class A Digital device.

Notice — This is a Class A product. In domestic environments, this product may cause radio interference, in which case the user may have to take adequate measures.

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If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross. Warranty repairs will be conducted at Ross, with all shipping FOB Ross dock. If repairs are conducted at the customer site, reasonable out-of-pocket charges will apply. At the discretion of Ross, and on a temporary loan basis, plug in circuit boards or other replacement parts may be supplied free of charge while defective items undergo repair. Return packing, shipping, and special handling costs are the responsibility of the customer.

This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

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The equipment may contain hazardous substances that could impact health and the environment.

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The crossed-out wheeled bin symbol invites you to use these systems.

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Introduction

This guide covers the installation, configuration, and use of the Ultricore Central Controller in a routing system. The following chapters are included:

- “Introduction” summarizes the guide and provides important terms, and conventions.
- “Getting Started” provides an overview for creating a routing system with Ultricore, and general information to keep in mind before installing and configuring your Ultricore panel.
- “Hardware Overview” provides a basic introduction to the Ultricore front and rear panels.
- “Physical Installation” provides instructions for the basic physical installation of the Ultricore panel.
- “Basic Configuration” provides instructions for configuring the Ultricore network settings, displaying the Ultricore nodes in DashBoard, and setting up your first database for the routing system.
- “Software License Keys” provides instructions for enabling licensed features of your Ultricore.
- “Ultricore Profiles” provides an introduction to the Ultricore Profiles for your routing matrix and includes general information on managing those profiles.
- “Device Communication Setup” provides instructions for using Ultricore to establish connections with NK Series devices, Ross Ethernet devices, and third-party devices in your routing system.
- “Database Configuration” provides instructions for defining the elements of your routing system database such as matrices, levels, destinations, and sources.
- “Tallies” provides instructions on how to enable TSL UMD messages in the active database, and assign Tally IDs to your sources and destinations.
- “Using Categories” describes how to assign each destination, source, and level, to a specific category in the routing system database.
- “Soft Panels in DashBoard” provides instructions for creating virtual panels in Ultricore.
- “Using Salvos” describes how to create and recall a salvo using the options in DashBoard.
- “Operation with Ross Devices” provides general information for operating the Ultricore in a routing system that also includes Ross NK Series devices.
- “System Integration Examples” provides generalized examples of integrating Ultricore into existing routing systems.
- “External Control” lists the third-party protocol commands the Ultricore supports.
- “Monitoring” describes the alarms and status indicators in the DashBoard interface for the Ultricore. General information is also provided on the Ethernet port LEDs.
- “DashBoard Interface Overview” summarizes the functions, menus, and parameters of the Ultricore tabs and windows in DashBoard.
- “Technical Specifications” provides the specifications for the Ultricore.
- “Software Licenses” provides third-party software license information for your Ultricore.
- “Glossary” provides a list of terms used throughout this guide.

Related Publications

It is recommended to consult the following Ross documentation before installing and configuring your Ultricore:

- *DashBoard User Manual*, Ross Part Number: 8351DR-004
- *NK-IPS User Guide*, Ross Part Number: 9807DR-1020
- *NK Series User Guide*, Ross Part Number: 9807DR-0100
- *RCP-ME User Guide*, Ross Part Number: 2201DR-200
Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Interface Elements

Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example:

In the **Edit** dialog, click **Insert Above**.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the **Language** box, enter **English**.

Referenced Guides

Italic text is used to identify the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the *Ultrix User Guide*.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads “*File > Save As*,” you would click the **File** menu and then click **Save As**.

Important Instructions

Star icons are used to identify important instructions or features. For example:

🌟 Contact your IT department before connecting to your facility network to ensure that there are no conflicts. They will provide you with an appropriate value for the IP Address, Subnet Mask, and Gateway for your device.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately,
a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Technical Support**: (+1) 613-652-4886
- **After Hours Emergency**: (+1) 613-349-0006
- **E-mail**: techsupport@rossvideo.com
- **Website**: http://www.rossvideo.com
Getting Started

Ultricore alleviates the burden typically placed on the user to partition, offset, and assign to levels the inputs and outputs of the routers that will be part of the system. Ultricore’s user-friendly, graphical interface provides the tools for easily handling those configuration issues and more at a system, rather than router, level.

If you have questions pertaining to the operation of Ultricore, please contact us at the numbers listed in the section “Contacting Technical Support”. Our technical staff is always available for consultation, training, or service.

General Overview

Ultricore is the central system controller for Ross Video’s routing systems. It allows the connection of Ethernet based routers and remote control panels, T-Bus based Ross NK Series routers and remote control panels, and third-party automation systems.

By collating the potentially complex aspects of a system’s switching scheme, Ultricore allows for minimal out-of-the-box configuration of routers. This not only makes it easier to initially setup a system, but it also makes it easier to change configuration as needed.

The DashBoard client software enables you to monitor and control your Ross routing system components, including Ultricore from a computer. DashBoard communicates with the Ross routing system through ethernet, TCP, connections.

Features

Some features of the Ultricore include:

• SLP discovery or manual configuration of connection to DashBoard client software
• Client and server operation with client connection failover support
• Basic system crosspoint control and status monitoring via DashBoard
• Connections for redundant power supplies
• Alarm output with locking GP connector
• Dual Gigabit Ethernet interfaces
• T-Bus with looping connectors and power for native NK series connectivity
• Non-volatile memory for system recovery and logging
• Real-time clock
• Supports a maximum of 64 levels, with a maximum matrix of 4096 sources and 4096 destinations
• Dual configurable serial ports (RS-232 or RS-422)
• Front status display for system events
• Bi-directional Ethernet and Serial protocol support for the GVG Native protocol
• Supports the Probel SW-P-08 serial protocol
• Acts as a central system controller for up to 25 DashBoard clients and up to 50 hardware clients (routers, remote control panels, third-party control systems, etc.)
• Supports links from the NK-IPS for legacy installed systems
• Supports NK-IPS pass-through type connection for direct NK device support
• Supports Virtual Routing, Matrix Partitioning, and Mapping
• Label support

1. Ultricore does not support Unicode characters.
Typical System Equipment

Use Ultricore in typologies where routers and remote control panels are distributed throughout a facility. In this scenario some of the routers and panel are physically located a great distance from the Ultricore. You would use Ethernet connections to the Ultricore.

Figure 2.1 Example of a Possible Routing System with Ultricore
Before You Begin

Before configuring and operating the Ultricore, you must first:

1. Download and install the latest version of the DashBoard client software. The DashBoard software and user manual are available from our website.

   ✪ Contact your IT department before connecting to your facility network to ensure that there are no conflicts.

2. Connect your routers and panels to your facility network.

3. Launch DashBoard.

4. Ensure that your routers and remote control panels are available/visible in DashBoard.

For More Information on...

- planning and installing your routing system, refer to the user documentation that accompanied your devices.
- configuring the NK-NET, refer to the NK-NET User Guide.
- configuring the NK-IPS, refer to the NK-IPS User Guide.

Installation and Setup Overview

The generalized workflow of installing and configuring your Ultricore is:

1. Implement your routing system plan by installing the devices and configuring their network settings.

2. Use Walkabout to establish communications between Ultricore and DashBoard.

3. Ensure that DashBoard discovers the routing system and all its devices.

4. Configure individual device settings in DashBoard.

5. Define the routing system database using the options in the Ultricore interfaces in DashBoard.

6. Set up control panels.

Implementing a System Plan

Once the topology of the system has been decided with respect to routers, panels, connecting devices (NK-NET, NK-IPS) etc. the components are connected and configured. Once all the Ross routing system components are configured for network communication, the required information is entered into the Ultricore’s databases through its DashBoard interfaces.

An example use topology would be a broadcast facility or studio where there are routers and panels distributed throughout a building or a campus with the Ultricore collating the system’s components.

   ✪ Ultricore acts as a central system controller for up to 10 DashBoard clients and up to 50 hardware clients (routers and/or remote control panels).

Establish Communications

Ultricore supports the Walkabout system for initial configuration of IP settings. Once you establish communications over Ethernet between the Ultricore panel and DashBoard, you can proceed to use the interfaces in DashBoard that enable Ultricore to communicate with the other devices in your routing system.

For More Information on...

- establishing a network connection to Ultricore, refer to the section “Using Walkabout to Assign an IP Address to the Ultricore Panel” on page 32.
Define the Routing System Database in Ultricore

The Database interface in DashBoard for Ultricore enables you to create system input and output lists, assign those signals to system sources and destinations, define multiple levels and matrices. You can create multiple databases, each one with unique parameters, that are saved to the Ultricore panel memory. This provides the flexibility of recalling a database and edit parameters as needed. You may wish to use the following process when defining the database for your routing system.

● Ultricore supports a maximum of 64 levels, with a maximum matrix of 4096 sources and 4096 destinations.

For More Information on...
• defining a database, refer to the section “Creating a New Database” on page 64.

Set up Virtual Control and Resource Management in Ultricore

Once your router connections are defined, and a database is established, you can start building a map of several different physical devices that become one virtual device. When a switch request is made for a virtual device, all the physical devices that are mapped to the virtual device are switched.

Ultricore enables you to map inputs and outputs from routers for control via any remote control panel. These parameters can be saved to a database, enabling you to change configurations easily and quickly, allowing devices to used in a number of different operating scenarios.

Configure the Soft Panels in Ultricore

There are seven types of soft panels available in the Ultricore interface:

● A Matrix panel displays the sources and destinations in a grid pattern, allowing you to quickly select a router, then select which crosspoints to switch from, and perform a Take transition between the crosspoints.
● A MultiBus panel arranges the sources and destinations in separate crosspoint buses, but provides similar controls as the Matrix panel.
● A Category panel displays the sources, destinations, and levels as defined by the CAT Index tags defined via the Categories interface.
● A Category Index panel provides an interface for classic category/index selection. The various categories and indexes are set via the Cat/Index category table within each database.
● A Group category panel provides a method of grouping dissimilarly named resources into functional selection groups. The group assignments are set via the Group categories table within each database.
● A Push Button panel provides a button-per-source style panel in a grid layout.
● An UltritouchPB panel provides a button-per-source grid of buttons scaled to support Ultritouch panels.
● An UltritouchMV panel provides specific Ultriscape Multiviewer controls scaled for display on Ultritouch panel.

Operation

Once configured, the Ultricore provides central controller functionality for the routing system, including:

● the storage and implementation of routing system configurations, which collect a series of routing matrices into a system and provide a logical database view of the whole system
● switching the physical crosspoints of the routers according to the system configuration
• the control and system database interface for devices that control and/or display routing status (e.g. remote control panels, switchers, master control, automation systems, multi-viewers, and tally systems)

• virtual routing, matrix partitioning, and mapping

• label support for protocols supporting labels

• system control through DashBoard

• connection and status logging

• client and server operation with client connection fail-over support
Hardware Overview

This chapter presents information on the Ultricore front and rear panels.

Front Panel Overview

The Ultricore front panel provides LEDs for monitoring the communication activity and power supply status of the panel. An LCD display is also included for monitoring purposes.

1. Front Panel Wave Light
   The front panel provides various system status indication via the 'wave light'. The concave section of the black front panel bezel emits light of various colors to indicate system function.

   *Table 3.1 Front Panel Wave Light*

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue pulsing to White</td>
<td>When lit blue, this indicates normal operation.</td>
</tr>
<tr>
<td>Red</td>
<td>When lit red, this indicates a serious issue that requires immediate attention.</td>
</tr>
</tbody>
</table>

2. LCD Display
   The LCD display reports on the overall system status, IP address of the panel, and current fault conditions. During normal operations, the display reports the Device Name (user assigned) and the active IP address of the panel. Under some conditions, fault conditions are reported such as: device boot status, Walkabout locate mode indication, SRAM battery warnings, and firmware upgrade states. The information on the display alternates between normal operation and the error messages.

3. Navigation Positioner
   The front panel includes a five-direction joystick that is used to navigate the Ultricore on the LCD Display. Refer to the section “Monitoring via the Front Panel” on page 182 for details.

4. ETHERNET Port LEDs
   *Table 3.2 Front Panel LEDs* describes the Ultricore front panel LEDs that are used to monitor ethernet communication activity of the Ultricore panel. When facing the front panel, the left LED reports the status of ETHERNET PORT 1 while the right LED reports the status of ETHERNET PORT 2.

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETH# - ACT</td>
<td>Bright Blue</td>
<td>A valid physical ethernet connection is established, and the port is active. There is data transfer activity on the indicated ETHERNET port.</td>
</tr>
<tr>
<td></td>
<td>Dim Blue</td>
<td>A valid physical ethernet connection is established, but the port is not the active one. There is no data transfer activity on the indicated Ethernet port.</td>
</tr>
<tr>
<td>Off</td>
<td>No valid ethernet link to the indicated Ethernet port.</td>
<td></td>
</tr>
</tbody>
</table>
Rear Panel Overview

The Ultricore rear panel provides communication ports, two power supply ports, and an alarm condition general purpose output.

For More Information on...
- the pinouts for the Ultricore rear panel connections, refer to the chapter “Technical Specifications” on page 229.
- the power specifications, refer to the section “Power” on page 232.

1. PSU Ports

Two +15V DC power supply connections (PSU1, PSU2) are provided to connect to external brick power supplies to the Ultricore panel.

Notice — The Ultricore automatically powers on when power is applied.

2. ALARM GPO

This contact closure connector is used to report an alarm where closed is a system fault, and open when the system is running without errors.

3. ETHERNET Ports

Ultricore communicates over an Ethernet connection to routers, and other devices. PORT 1 is the primary Ethernet connection for Ultricore. PORT 2 is the redundant (backup) Ethernet connection. The exact steps for connecting to your facility via an ethernet network depends on the requirements defined by your IT Department.

4. T-BUS Ports

Each port provides a loop-through connection for Ross NK series communication. This enables communication to legacy routers and remote control panels as part of the routing system.

5. COM Ports

There are two female DB-9 serial ports used to connect to third-party automation devices. Each port can be configured for RS-232 or RS-422 serial communication. Uses these ports to connect to third-party automation devices that will control the routing system.
Physical Installation

If you have questions pertaining to the installation of Ultricore, please contact us at the numbers listed in the section “Contacting Technical Support”. Our technical staff is always available for consultation, training, or service.

Before You Begin

These installation guidelines assume the following:

• The relevant Ross equipment is installed into a ventilated rack frame. The relative humidity in the environment of the equipment should be <70% (non-condensing). The ambient temperature of the air entering the front panel should not exceed 40°C (104°F), and should not fall below 0°C (32°F).

• The install location of the router should be accessible, dry, and dust-free.

• The socket/outlet should be installed near the equipment and be easily accessible.

• Valid IP addresses are assigned to the equipment.

Static Discharge

Throughout this chapter, please heed the following cautionary note:

Mounting Requirements

The Ultricore panel is designed for installation into a standard 19” equipment rack. It has integrated rack ears, allowing it to be screwed in using standard screws and cage nuts.

The Ultricore panel mounts in the rack frame by means of four rack screws fastened through the front mounting ears. This should normally be sufficient to carry the load, including the weight of accompanying cables.

Under some conditions, the ambient air temperature inside rack-mount cabinets can be greater than the ambient temperatures within a room. For safe long term reliability, ensure the ambient air temperatures at the router front intake are within the router’s specified operating temperature range. Adequate ventilation within a rack frame must also be maintained.

For More Information on...

• the technical specifications for the Ultricore, refer to the chapter “Technical Specifications” on page 229.

Connecting the Ultricore to a Network

Each Ethernet port is a standard 10/100/1000 RJ45 Ethernet connector and is used to exchange data and communicate with other devices in your router system.

★ Contact your IT department before connecting to your facility network to ensure that there are no conflicts. They will provide you with an appropriate value for the IP Address, Subnet Mask, and Gateway for your device.

The Ultricore is connected directly to your network so that it can interface with the devices and the computer running the DashBoard client. After a physical connection is established, DashBoard is used to configure the network settings for the Ultricore.

For More Information on...

• downloading and installing DashBoard, refer to the DashBoard User Manual.
If difficulties or problems are experienced when connecting the Ultricore to a network hub, or with assigning IP addresses, please contact your network administrator.

**To establish a physical connection to the network**

1. To connect the primary network connection for the Ultricore panel:
   a. Connect one free end of the straight through CAT5/5e/6 cable to a free port of the network hub.
   b. Connect the other end of the same cable to Ethernet **PORT 1** on the Ultricore rear panel.

2. If required, connect the redundant network connection for the Ultricore panel:
   a. Connect one free end of a second straight through CAT5/5e/6 cable to a free port of the network hub.
   b. Connect the other end of the same cable to Ethernet **PORT 2** on the Ultricore rear panel.

**Connecting the Ultricore to Ross NK Series Devices**

Ross NK Series devices, such as routers and remote control panels, communicate within the routing system via the Ross T-BUS protocol. The Ultricore panel includes two T-BUS ports that can be used to cable an NK Series router or other legacy device that uses the T-BUS protocol.

*For More Information on...*

- the T-BUS port pinouts, refer to the section “**T-Bus Ports**” on page 231.
- establishing T-BUS protocol communications between Ultricore and an NK Series router, refer to the section “**Connecting to Ross NK Series Devices**” on page 55.

**To connect the Ultricore to a NK Series device via T-BUS**

1. Connect a T-BUS Interface cable to one of the T-BUS RJ-45 ports on the Ultricore rear panel.
2. Connect the other end of the same T-BUS Interface cable to either of the RJ-45 ports of the device. Most Ross NK Series devices are equipped with two RJ-45 ports for looping or daisy chaining configurations.

Connecting the Ultricore to a Serial Device

Each COM port is a DB9 female port on the Ultricore rear panel that accepts RS-232 or RS-422 connection. These ports can be used to connect a third-party device or automation system that uses a supported serial protocol for communications.

For More Information on...
- the COM port pinouts, refer to the section “Serial Ports” on page 230.
- the pinouts required by your device, refer to the user documentation that accompanied your device.
- the serial protocols and commands the Ultricore supports, refer to the chapter “External Control” on page 161.

To connect the Ultricore to a serial device
1. Connect a Serial Interface cable to the COM 1 port on the Ultricore rear panel.

![Figure 4.3 Ultricore — Serial Cabling to Third-Party Device](image)

2. Connect the other end of the same Serial Interface cable to the applicable serial port on the device.

Connecting to a Power Supply

The Ultricore panel is powered by one +15V DC, 30W PSU, with an optional PSU available to provide redundancy and load sharing.

For redundancy, each power cord should be connected to a separate power source for protection against failure of the A/C power circuit. In the event of one power supply failure, the panel load is seamlessly transferred to the other connected redundant power supply.

**Warning Hazardous Voltages** — The safe operation of this product requires that a protective earth connection be provided. This protective earth is provided by the ground conductor in the equipment’s supply cord. To reduce the risk of electrical shock to operator and service personnel, this ground connector must be connected to an earthed ground.

**Warning** — In some countries it may be necessary to supply the correct mains supply cord. Use only certified cords for the country of use.
To connect the power cables to the Ultricore panel

1. Connect the male end of the provided power cable into the socket marked PSU1 on the Ultricore rear panel.

   **Note:** It is recommended that you always connect the Power Supply Unit to the Ultricore before connecting to Mains Power.

2. Connect the remaining power cable into the PSU2 power supply socket if redundancy is required.
3. Connect the supplied AC power cable into the power modules.
4. Connect the supplied power cable’s three-prong male connector to an AC outlet.

### Configuring the Loss of Power Alarm

The ALARM connector on the Ultricore rear panel is used when the panel loses power so that DashBoard cannot interrogate a non-powered device. Under normal operation, the Center pin (2) is open. An alarm condition connects this pin to ground. Refer to the section “ALARM Connector” on page 229 for pinout details.
Basic Configuration

The Ultricore system controller with the DashBoard client software allows configuration and control of the Ultricore and other routing system devices, enhancing the capability of any installed Ross products by providing access to the entire range of functions. Ultricore provides a basic platform operation with SLP discovery and manual configuration of connection to DashBoard.

This chapter provides instructions on basic set up that includes launching DashBoard, establishing network connections for the Ultricore panel, and creating your first database. This includes:

- Launching DashBoard
- Using Walkabout to Assign an IP Address to the Ultricore Panel
- Adding the Ultricore to the Tree View in DashBoard
- Accessing the Ultricore Interfaces in DashBoard

Getting Started

Figure 5.1 summarizes the basic steps in configuring the Ultricore system.

![Workflow for Configuring the Ultricore](image-url)
Launching DashBoard

DashBoard must be run on a computer that has a physical wired Ethernet connection. Wireless connections do not allow device discovery.

For More Information on...
- downloading and installing the DashBoard client software, refer to the DashBoard User Manual.
- the Ultricore interfaces in DashBoard, refer to the chapter “DashBoard Interface Overview” on page 185.

To launch DashBoard
1. Ensure that you are running DashBoard software version 8.2.0 or higher.
2. Launch DashBoard by double-clicking its icon on your computer desktop.

Using Walkabout to Assign an IP Address to the Ultricore Panel

Once the Ultricore panel is physically installed and cabled to your facility network, you will need to assign it a static IP Address to enable DashBoard to locate it on your network. Establishing an IP Address enables DashBoard to communicate with the Ultricore and update the Basic Tree View with the Ultricore nodes.

To assign a static IP address to the Ultricore panel
1. Launch DashBoard.
2. From the DashBoard client main toolbar, select File > Show Walkabout.
   The DashBoard window displays the Walkabout table.
3. Click Refresh, located at the bottom of the Walkabout tab, to ensure the list in the Walkabout table is current.
4. In the Walkabout table, find the entry for the Ultricore you want to configure.
5. Use the Name field to assign a unique identifier to the Ultricore panel. This will be the name displayed in the Tree View of DashBoard.
   ★ After editing a cell in the Walkabout table, press Enter to confirm your edits. To verify your changes, wait up to 30 seconds, then click Refresh.
6. Use the Address field to specify the IP Address supplied by your IT Department for this device.
7. Ensure the Netmask field is set to match your network requirements.
8. Use the Gateway field to specify the IP Address for connection outside of the local area network (LAN).
9. Click Reboot in the row of the Walkabout table for the Ultricore to reboot the device.

Adding the Ultricore to the Tree View in DashBoard

Once you have assigned the Ultricore panel to a static IP Address via Walkabout, you can then manually add it to the Tree View in DashBoard. Manually adding the Ultricore panel displays its node in the Tree View, granting you access to the interfaces described in the chapter “DashBoard Interface Overview” on page 185.

To manually add the Ultricore to the Tree View in DashBoard
1. In the Basic Tree View toolbar of DashBoard, click 🗑️. The Add New Connections dialog opens.
2. Expand the openGear/DashBoard Connect node.
3. Select **TCP/IP DashBoard Connect or openGear Device**.

4. Click **Next >**.

   The **TCP/IP DashBoard Connect/openGear Device** dialog opens.

5. Select the **JSON** radio button as the **Protocol**.

6. Enter the IP Address for the Ultricore in the **IP Address** field assigned in the section “**To assign a static IP address to the Ultricore panel**” on page 32.

7. Perform one of the following steps:
   - In the text fields provided, enter the display name and port of the Ultricore you wish to add; or
   - Click **Detect Frame Information** to automatically retrieve the connection details.

8. Click **Finish**.

   The Ultricore panel displays in the **Tree View**.

### Accessing the Ultricore Interfaces in DashBoard

The interfaces are accessed by expanding the Ultricore node in the DashBoard Tree View.

**To access the Ultricore interfaces in DashBoard**

1. Locate the **Ultricore** node in the Tree View of DashBoard.
2. Expand the **Ultricore** node.
3. Expand the **Ultricore Controller** node to display a list of sub-nodes in the Tree View.
Each sub-node is an Ultricore interface.

4. Expand a sub-node to access the functions of the interface.
   For example, expand the Database node to list the options available for configuring a database for the Ultricore.

5. Double-click a node to display its tab in the right-side of the DashBoard window.
   For example, double-click the Salvos node to display the Salvos interface (as seen in the example below).
   ✴ The selected interface may be blank or missing some data if the database is new and is not configured yet.

![Salvos Interface](image)

**Configuring the Ultricore Mode**

Ultricore Mode is the control system feature that enables an Ultricore to control up to three client routers over an Ethernet connection. This functions as a master/slave (remote) system where the master Ultricore is configured as a Primary and each remote router is configured as a Client.

**Overview**

When an Ultrix router is a client to the primary Ultricore, it acts similar to an Ross NK router in the system. The client router provides another set of inputs and outputs with a crosspoint between them. These inputs and outputs are then available to assign in the database of the primary Ultricore.

The primary Ultricore initiates a connection point to the client device(s) in the routing system. Once communication is established, whenever a crosspoint switch or salvo is executed on the primary Ultricore, the commands are automatically pushed to the client device(s).

*For More Information on...*

- monitoring the communications between the primary Ultricore and its clients, refer to the section “Monitoring the Ultricore Mode Status” on page 317.

**Assigning a Role to the Ultricore**

Primary and client operation is determined by the role assigned to the Ultricore in its Communication Settings interface.

✴ Ensure each Ultricore is connected to your facility network and configured for Ethernet communications.
To configure the Ultricore as the primary

1. Expand the Devices node.
2. Expand the Controllers + Matrices node.
3. Double-click the node for your Ultricore.
   
   The Hardware Configuration interface opens with the Frame Configuration interface selected.
4. Click Communication Settings.
   
   The Communication Settings interface updates.
5. Select Primary from the Ultricore Mode options.

To configure the Ultricore router as a client

1. Expand the Devices node.
2. Expand the Controllers + Matrices node.
3. Double-click the node for your Ultricore.
   
   The Hardware Configuration interface opens with the Frame Configuration interface selected.
4. Click Communication Settings.
   
   The Communication Settings interface updates.
5. Select Client from the Ultricore Mode options.

Specifying the Time Source

The Ultricore requires an external time source in order to accurately report the time-of-day. The options in the Frame Configuration interface enable the selection of time/date source via an NTP Server in your facility, or you can set the device time to match the computer which is running the current DashBoard client.

Using an NTP Server as the Time Source

★ Before proceeding, contact your IT Department to learn the IP address(es) of the NTP server(s) in your facility.

To specify an NTP Server as the time source for the Ultricore router

1. Expand the Devices node.
2. Expand the Controllers + Matrices node.
3. Double-click the node for your Ultricore.
   
   The Device Configuration interface opens.
4. Locate the NTP Servers table.
5. If you are using one NTP server, enter the IP address in the **Address** field of the **Server 1** row.

6. If using a backup NTP server:
   a. Enter the IP address of the first NTP server in the **Address** field of the **Server 1** row.
   b. Enter the IP address of the backup NTP server in the **Address** field of the **Server 2** row.

7. Select the **NTP Enabled** box.

8. Verify that the **Status** field(s) in the **NTP Servers** table report a valid connection to the listed IP address(es). You may need to refresh the interface as follows:
   a. Close the **Device Configuration** interface.
   b. Re-open the **Device Configuration** interface by repeating steps 1 to 3 to update the **Status** field(s).

**Using the DashBoard Client Computer as the Time Source**

This section outlines how to set the Ultricore to the local time without using an NTP Server. Instead, you will set the time to the values reported by the DashBoard client computer you are using.

❗ The time the Ultricore reports is not linked to this computer. It is a once off setting of the time to match the computer time when the **Set to PC Time** button is selected on the Ultricore interface. If the DashBoard client computer time changes, you will need to update the time reported on the Ultricore by repeating the procedure below.

**To specify the DashBoard client computer as the time source for the Ultricore**

1. Expand the **Devices** node.
2. Expand the **Controllers + Matrices** node.
3. Double-click the node for your Ultricore.
   a. The **Device Configuration** interface opens.
4. Locate the **NTP Servers** table.
5. Click **Set to PC Time**. This button is located above the **NTP Servers** table.

**Reviewing the Network Settings for the Ultricore Panel**

Once you establish initial communications with the Ultricore panel, and it displays in the DashBoard Tree View, you may wish to alter the network settings according to your facility network requirements.

**To update the network settings for the Ultricore panel**

1. In the Tree View of DashBoard, double-click the **System Status** node.
   a. The **System Interfaces** display in the DashBoard window.
2. Select the **Network** tab.
3. Locate the **Settings** area of the tab.
4. Use the **Address** field to specify the new static IP Address for the Ultricore panel.
5. Use the **Subnet Mask** field to specify the subnet mask for your network.
6. Use the **Gateway** field to specify the gateway for communications outside of the local area network (LAN).
7. Click Network Settings **Apply**.

### Re-naming the Ultricore

Each Ultricore can be given a unique name that is used on internal menus and as the identifier in the tree views of DashBoard.

* Changing the Ultricore name *after* database configuration takes time to propagate through the system, and for DashBoard to reconnect, resuming stable system operation. Sufficient time must be allowed when making this change before attempting to use the system. This time will vary depending on features, matrix size, and configuration. In the case of a system with an ULTRIX-1RU and ULTRIX-2RU, the worst case will be 3-4 minutes. In the case of a system with an ULTRIX-5RU, the worst case is 10 minutes. The Ultricore name is typically assigned during initial commission and very rarely ever changed again.

#### To re-name the Ultricore in DashBoard

1. In the Tree View of DashBoard, double-click the **System Status** node.
   
   The **System Interfaces** display in the DashBoard window.
2. Select the **Setup** tab.
3. Use the **Device Name** field to specify the new name for the Ultricore.
4. Press **Enter** to apply the new name.

### Configuring Access for DashBoard Clients

You can specify which DashBoard clients on your network can access and connect to your Ultricore. By default, the **Permitted Clients** list is blank, allowing all DashBoard clients on your network to connect to your Ultricore.
To enable access for a DashBoard client

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Network tab.
3. Locate the Permitted Clients area of the Network tab.
4. Click Add in the Permitted Clients area of the Network tab.
   The Add Address dialog opens.
5. Use the IP Address field to specify the IP Address of the DashBoard client you wish to grant access to your Ultricore.
6. Click Apply.
   The Add Address dialog closes.
   The Dashboards list in the Permitted Clients area updates to display the specified IP Address.
7. Repeat steps 4 to 6 for each DashBoard client you want to allow access.
   ★ Ensure that the IP Address for your DashBoard client machine is also added.
8. Click Apply in the Permitted Clients area to apply the change.

To disable access for a DashBoard client

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Network tab.
3. From the Dashboards list, select the IP Address for the DashBoard client you want to disable access for.
   ★ Do not delete the IP Address for your DashBoard client machine.
4. Click Delete in the Permitted Clients area of the Network tab.
5. Click Apply in the Permitted Clients area to apply the change.
Software License Keys

The Ultricore has software options that license functions and features. This chapter outlines the available software licensed features, and how to install a software key for a licensed feature on your Ultricore.

Before You Begin

When installing a software license key on the Ultricore:

- You must have the DashBoard client installed and communicating with the Ultricore that you wish to install the key for.
- Ensure that you are using DashBoard version 8.2.0 or higher. This information is available by selecting Help > About DashBoard from the DashBoard main toolbar.

License Keys Overview

Table 6.1 provides a brief summary on the types of licensed features available for the Ultricore

<table>
<thead>
<tr>
<th>License</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultricore-EMBER+</td>
<td>A license that enables the use of the EMBER+ protocol for video and audio streaming via an ULTRIX-IP-IO blade.</td>
</tr>
<tr>
<td>Ultricore-NVISION</td>
<td>A license that enables the use of the NVISION protocol on the Ultricore.</td>
</tr>
<tr>
<td>ULTRICORE-PRO</td>
<td>A licensed that provides full Ultricore Profiles support.</td>
</tr>
<tr>
<td>Ultricore-SNMP</td>
<td>A license that enables basic SNMP monitoring on Ultricore.</td>
</tr>
</tbody>
</table>

Installing a License Key

Ross Video uses license keys to control user access to specific Ultricore features. You can obtain a key for an Ultricore licensed feature from Ross Video Technical Support.

To install an Ultricore license key

1. Launch the DashBoard client.
2. Locate the Ultricore node in the Tree View.
3. Expand the Ultricore node to display a list of sub-nodes in the Tree View.
4. Expand the Devices node.
5. Expand the Controllers + Matrices node.
6. Double-click the node for your Ultricore.
7. The Device Configuration interface opens.
8. Click Licenses.
9. Make a note of the character string in the Request Code field for the feature you wish to enable.
10. Contact Ross Video Technical Support using the information found in the section “Contacting Technical Support” on page 16.
a. When you speak to your Technical Support representative, tell them your name, your facility name, and the Request Code from the Licenses table.

b. You will be given a License Key that must be entered in the applicable field in the Licenses table.

10. Enter the provided License Key in the applicable License Key field in the Licenses table.

You can also right-click on the row for the License Key you are installing, and copy the Request Code to or paste the License Key from the Microsoft® Windows® clipboard.

11. Click Apply in the row for the License Key you entered in step 10.

12. Verify that the Count field is updated to report each installed License Key.

Removing a License Key

Removing a License Key also removes user access to all of the Ultricore features associated with that License Key.

To remove a Ultricore license key
1. Launch the DashBoard client.
2. Locate the Ultricore node in the Tree View.
3. Expand the Ultricore node to display a list of sub-nodes in the Tree View.
4. Expand the Devices node.
5. Expand the Controllers + Matrices node.
6. Double-click the node for your Ultricore.
   The Device Configuration interface opens.
7. Click Licenses.
   Each row represents a type of licensed feature.
8. Click in the cell for the slot and licensed feature you want to remove.
   A drop-down menu displays.
9. Select Disable to remove the license.
Ultricore Profiles

A DashBoard client has the ability to detect devices on a subnet and can enable complete control of all settings on all devices. Ultricore Profiles are designed to enable administrators to assign and manage user permissions and determine the level of access for those users. For example, one user is only responsible for monitoring the video sources is given access only to control panels, while another user who manages the input and outputs of the routing matrix is also given access to manage the databases.

This chapter provides an introduction to the Ultricore Profiles for your routing matrix and includes general information on managing those profiles.

Overview

The Ultricore Profiles operate as a form of hierarchical database where user permissions are organized into a tree-like format. A profile determines which groups and pages that a user can access.

Any number of profiles may be created and can be used in the following ways:

- **Group/Role** — This profile type is not specific to any user or machine. Once created they can be referenced or used by any number of users or machines. For example, a Graphics Editor profile can be created and referenced by a team of graphics editors. When a new control panel is added to that profile, all graphics editors are updated with the new panel automatically.

- **User** — A user profile identifies a specific username and can either reference an existing role as above or copy an existing role then modify, add, or remove items to allow total customization as required. This allows a user that has a specific profile to have the same capabilities on any DashBoard system regardless of where they log in.

- **Location** — This profile is defined by a specific location (user station) and assigns a consistent function regardless of who is logged in that suits the operation in that location. In this way the DashBoard instance in front of, for example, the audio operator in a specific control room will only have the optimize functionality for that role. A location profile can also reference or copy and modify role profiles.

Profiles can also be created that identify a specific user at a specific user station to further optimize the user interface in different locations. If no profile exists for the combination of user and location, the system default profile is used.

When there are multiple possible profiles the one used is chosen as follows:

1. A **User** profile has the highest priority. This means that an administrator can log in anywhere and execute Administrator level functions or an operator can login anywhere and have an optimized UI for their function.

2. A **Location** profile is used for all users at a specific location unless the user logged in has a profile. This allows more or different functionality for users logged into a specific location even if they do not have a specific profile themselves.

3. The system default profile is used in all other scenarios.

Modes of Operation

The Ultricore Profiles feature consists of three sub-functions or modes of operation.

- The ULTRICORE-PRO license is required to upgrade from the basic, non-configurable profiles on the Ultricore chassis to full, customizable configurations. The ULTRICORE-PRO license is standard on the Ultricore-BCS.

Creation and Management of User Credentials

User profiles can reference the operating system username of the individual currently logged into the workstation. Enabling User Credentials in the Setup tab of the status page engages the Ultricore User Credentials feature which allows an independent definition of usernames and passwords specifically for the Ultricore Profiles feature.
Creation and Management of User Profiles via the Default Role Profiles Only

User and Location profiles are created and function as above but only reference one of the three default profiles:

- **Engineer Admin** (default profile) can access all features;
- **Operator Admin** (default operator profile) has full database and configuration capability but not engineering configuration and admin functions; or
- **Operator** (default minimum profile) can access all soft panels for normal day to day operations.

Full Creation, Customization and Management of User Profiles

In addition to the above mode included with Ultricore-BCS and optional for Utrix and Ultricore-CC is the ability to create and customize group and role profiles as well as create custom profiles on a user or location basis as appropriate. In addition, the order of items within these profiles can be set to fully optimize the operational environment for a specific user or group as needed.

Ultricore Profiles Interface

The options for configuring and managing the Ultricore Profiles are organized as individual panes within a single interface of a DashBoard window. The available options, and the number of panes, depends on whether the ULTRICORE-PRO license is installed.

Accessing the Ultricore Profiles Interface

You display the Ultricore Profiles interface by selecting its node in the DashBoard Tree View for the Ultricore in your system. By default, all nodes are displayed and accessible by any user or DashBoard client machine.

To display the Ultricore Profiles interface

1. Launch DashBoard on your desktop.
2. Locate the Ultricore in the Tree View of DashBoard.
3. Expand the Ultricore node to display a list of sub-nodes in the Tree View.
4. Expand the Database sub-node.
5. Double-click the Ultricore Profiles sub-node.

The Ultricore Profiles interface displays in the DashBoard window. The following example shows the default interface (the ULTRICORE-PRO license is not enabled).
Overview

When the ULTRICORE-PRO license is enabled, the Ultricore Profiles interface is organized into five distinct areas. Figure 7.1 Each area is briefly described in this section starting with the leftmost area of the DashBoard window.

Figure 7.1 Example of the Ultricore Profiles Interface with the ULTRICORE-PRO license

Users
When the system is configured to use the user login mechanism, a list of all currently configured usernames along with their current online status displays in this area.

Profiles
A list of all currently configured profiles. Selecting a profile (row) in this area automatically updates the items displayed in the Profile Details, Device Tree, and Options areas.

Profile Details
This area displays the details of the profile showing the conditions under which the tree in the following section will be applied.

Tree Nodes
A visual representation of the tree view that is defined in the Profile Details. Note that certain entries that are specific to licenses or other conditions may be visible but not in the actual tree view. Should conditions change that enable those entries, they will appear as shown in this display. A profile also maintains the position of items in groups allowing the most relevant items to be the easiest to reach.

The tree nodes are organized in a hierarchy where the top level (blue icons) list system specific options, and secondary levels (yellow icons) list specific functions.

★ This area only displays when the ULTRICORE-PRO license is enabled.

Group Tabs
This area displays all the available items that have not yet been assigned to the currently selected profile but are available to define.

★ This area only displays when the ULTRICORE-PRO license is enabled.
Creating a Database of Users

If you wish to use the User Profile feature, the first step is to create a new user account. Once this account is created, all users will default to the **Operator Profile** (the default minimum profile) unless or until they have a profile created that allows them appropriate access for their role.

* When creating users and profiles, ensure that the system is not in use. Any currently active DashBoard instances will require users to login and features may be blocked.

You can create as many users as required by your system.

**To create a new user account**

1. Display the Ultricore Profiles interface as outlined in “To display the Ultricore Profiles interface” on page 42.
2. Click **Manage Users**.
   
   The **Manage Users** dialog opens.

   * Users can change their own password at the login screen, the **Update Password** button allows an Administrator to reset a forgotten password. A user name change requires the deletion of the current user and the creation of a new one with the new user name.

3. Click **Add**.
4. Use the **User Name** field to assign a unique identifier for the user account.
5. Use the **Password** field to define the password the user will need to enter when logging in with this account.
6. Repeat this procedure for every new user you wish to create.

Once all the user accounts are created, you can proceed to create profiles and assign users to these profiles.

Creating a Profile

* The User Profiles features offers a significant flexibility to optimize the tools in front of individual operators which, if inadvertently mis-configured could lead to administrators being locked out. As such, it is a good idea for the administrator to ensure that no users are actively working within the system prior to making significant changes to users and profile settings.
Four profiles are created automatically:

- **Engineer Admin Profile** — a group profile giving access to all features and functions as has been available prior to the Ultricore Profiles feature. This profile is read-only by default.

- **Operator Admin Profile** — a group profile giving access to all non-engineering features and functions. This allows an operational Administrator the ability to configure and use all operational functions and databases of the systems.

- **Operator Profile** — a group profile giving access to only the soft control panels. This allows users that are registered but either have no defined profile on a system or only require basic operational access the ability to control pre-configured operational functions of the systems.

- **Ultricore Admin Profile** — a user profile which allows the “Administrator” user mentioned above to have full admin and engineering capabilities by using the Default Profile. This profile is read-only by default.

* All users default to the Default Tree Profile with no System Login required. In other words, until specifically enabled, the Ultricore Profiles feature is not engaged, and the systems will all behave as in previous versions. It should be noted that while the Ultricore Profiles feature is not engaged, the default user profile can be modified should the tree for all users need to be modified.

**To create a profile**

1. In the Profiles area, click **Manage Profiles**.

   The Manage Profiles dialog opens.

   ![Manage Profiles dialog](image)

2. Click **Add** to create the new profile.

3. Use the **Profile Name** field to assign a unique name for the profile.

   Since the profile could be either specific to a user, a workstation or a group of users, it is recommended to create a name that reflects its purpose. For example, John Doe (a specific user), Graphics Operator (a group of users), or PCR1-TD (a workstation).

4. Use the **Username** field to assign a specific user to the profile.

   An asterisk (*) indicates the profile applies to all users subject to the other profile detail entries.

5. Use the **Machine Name** field to specify the OS/DNS machine name for a workstation.

   This allows the identification of a specific workstation in an environment where DHCP means the IP address may change over time.

6. Use the **IP Address** field to specify the IP address for a workstation.

   This allows identification of a specific workstation in a statically addressed system.

7. Use the **Admin** box to enable/disable (selected/cleared) access to admin functions.

   For example, upload, reboot, refresh and other tasks that are not normal operational functional requirements.
8. Use the Parent Profile to assign any of the currently configured profiles as a parent or reference profile for the profile being created or edited.

9. Use the Use and/or Copy options to determine if the parent profile tree configuration is used directly by the profile being created or edited or copied into this profile allowing customization of the tree for the specific needs of the user.

★ If another profile tree is used rather than copied, changes to the tree need to be performed on the parent profile tree and will affect all users that “use” that parent profile and that the same change would need to be executed individually on all users that copied the parent profile tree.

10. Repeat this procedure for every new profile you wish to create.

Defining the Permissions for a Profile

Once a profile is created, the remaining two areas of the Ultricore Profiles interface allow display and/or modification of the tree structure that will be enabled for the user or users of the selected profile.

★ This section only applies if the ULTRICORE-PRO license is enabled.

Figure 7.2  Example of the Tree Nodes and Tabs for a Selected Profile

Overview

This section provides a brief overview of each area and their options.

Tree Nodes

The tree (the leftmost area) displays all the assigned options and their desired order in the tree structure much like the tree view in DashBoard for an Ultricore. The nodes in Ultricore Profiles tree view are determined by your system configuration and any licenses installed for your system. Buttons at the bottom of this area (Up, Down, Remove) allow entries to be moved up and down in the tree within the group to which the item belongs or removed if they are not required for the selected profile. When removed, the item is returned to the list of available items in the appropriate group tab.

Group Tabs

The group tabs (the rightmost area) contain all items available in the group in question that are not included in the selected profile’s tree currently. If an item is not in the tree currently but required, the appropriate group tab is selected, the item required is selected and the Assign button is clicked moving it to the bottom of the appropriate
group of the tree. The **Up** and **Down** buttons can then be used to order the tree items specific to the needs of the profile.

When any changes are made to the tree structure(s), the changes are captured locally but are not recorded in the database until the **Apply** button on the bottom row is clicked. Clicking **Apply** records all the pending changes in the system database. Clicking **Cancel** will discard any unsaved changes. There are no pending changes if the **Apply** and **Cancel** buttons are not highlighted.

### Enabling the Ultricore Profiles Feature

Once you created the profiles and groups for your system, you can proceed to enable the Ultricore Profiles feature. Enabling the feature requires you to disable the current user credentials and settings and apply the profiles and groups you defined in previous sections.

**Before proceeding, ensure that you created a new Administrator profile that has full access to your system. This is a separate profile from the default Ultrix Admin profile (which is read-only).**

**This procedure requires a reboot of the Ultricore.**

#### To enable the Ultricore Profiles feature

1. In the Tree View of DashBoard, double-click the **System Status** node.
   
   The **System Interfaces** display in the DashBoard window.
2. Select the **Setup** tab.
3. Locate the **Ultricore Profile Settings** area.
   
   You may need to scroll down the tab to view this area.
4. Clear the **User Credentials** box.
   
   A dialog opens to confirm the selection.
5. Select the **User Profiles** box.
   
   A dialog opens to confirm the selection.
6. Click **Reboot**.

### Application of the Ultricore Profiles

Once the Ultricore Profiles function is enabled, all users from that point forward will initially receive a tree that only has a System Login entry. Once the user is created with either the default or a specific password by the Administrator, the user can login through a login page displayed in the DashBoard window.

![Example of the System Login Sub-node](image)

#### To log in

1. In the **Basic Tree View**, locate the device you wish to access.
2. Expand the device nodes to display the System Login sub-node.
3. Double-click the **System Login** sub-node.
   
   The **System Login** page displays in the DashBoard window.
4. Enter the credentials for the profile assigned to you.

5. Click **Login**.
   - The login information is confirmed by the system, and the appropriate tree with all assigned pages and functions are immediately available for use in the DashBoard window.
   - The **Login** page updates to the **Logout** page.

☆ When you log out, the Basic Tree View returns to the System Login tree view. **Figure 7.3**

**To change the password**

- Click **Change Pwd** on the **System Login** page.

☆ The old password is required for the user to change the password and the new password needs to be confirmed to ensure the new password is as the user expects. If the old password is forgotten or lost the admin can force an update to the user password through the Manage Users dialog in the Users area of the Ultricore Profiles interface.

**User Data Import/Export**

Due to the need to maintain different permutations of user data to system data, the Import/Export database functions now includes the ability to import databases with and without the user data (user accounts and profiles). In addition, the user files can be imported and exported independently to any chosen database. This allows for instance a different show configuration to be loaded while maintaining the same staff and location configuration or for a truck for instance, allows a new crew configuration to be loaded without changing system configurations.
Configuring the Ports

This chapter provides instructions on how to configure the ports available on the Ultricore rear panel.

Updating the Network Settings for the Ultricore

Once you establish initial communications with the Ultricore, and it displays in the DashBoard Tree View, you may wish to review or change the IP Address and other settings according to your facility network requirements.

* This section is not applicable if your Ultricore is already set to the correct IP Address.

To update the network settings for the Ultricore

1. Locate the Ultricore in the Tree View of DashBoard.
2. Expand the Ultricore node to display a list of sub-nodes in the Tree View.
3. Expand the Devices node.
4. Expand the Controllers + Matrices node.
5. Double-click the Ultricore node for your Ultricore.
   The Device Configuration interface opens.
6. Click Communication Settings.
7. Locate the Ethernet Configuration area.
   The Ethernet Configuration area reports the status of the active ENET port on the Ultricore rear panel, and the network settings for the Ultricore.
8. Use the IP Address field to specify the new static IP Address for the Ultricore.
9. Use the Subnet Mask field to specify the subnet mask for your network.
10. Use the Default Gateway field to specify the gateway for communications outside of the local area network (LAN).
11. Click Apply to apply the new settings.
Device Communication Setup

Ultricore functions as a central controller for the Ross routing system. From Ultricore, you can store and implement routing system configurations into a system while providing an overview of your entire routing system.

Ultricore Communications Overview

A connection point is how the Ultricore is connected to routing system components such as routers (matrices), and remote control panels. A connection point defines the interface and the protocol to be used for communications. Once defined, Ultricore retrieves the information of any device on that connection point.

* Third-party device information is not automatically retrieved. These devices must be added manually.

Ultricore provides bi-directional protocol translation to facilitate the control of third party or legacy routers as part of a Ross routing system. You can also integrate control over a Ross routing system by a third-party automation system. Table 9.1 lists the important communication ports for Ultricore.

Table 9.1  Communications Ports

<table>
<thead>
<tr>
<th>Device</th>
<th>Protocol</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>NK Routers</td>
<td>TCP</td>
<td>5000</td>
</tr>
<tr>
<td>Ultrix Routers</td>
<td>TCP</td>
<td>15000</td>
</tr>
<tr>
<td>Walkabout Discovery</td>
<td>UDP</td>
<td>5555</td>
</tr>
</tbody>
</table>

Device Discovery in DashBoard

When DashBoard is launched, devices such as openGear frames and Ross NK routers, are listed and made available in the Tree View. DashBoard uses the open SLP protocol to locate devices on the same network as the computer running the DashBoard client software. There are two methods for adding a device to the Tree View in DashBoard: using the auto-connect feature of DashBoard or manually adding a device by specifying the IP address of the device. Both methods are described in more detail in the DashBoard User Manual.

Communications between Ultricore and the Devices in a Routing System

The Ultricore Connections interface enables you to use DashBoard to locate devices in your network. To enable Ultricore to function as the ‘master’ of the routing system, you must establish communications with the devices it is connected to and define how they are connected. Each router must have a connection point defined. For those devices that are not directly connected to your network, such as Ross NK Series routers, you must supply their connection information (NK-NET/NK-IPS) in the Connections interface. Once this information is entered into the interface, the Ultricore panel can communicate directly with the device.

Connecting to an Ultrix Router

Ultricore may act as a master controller for one or more Ultrix routers as well and legacy Ross NK series devices. A connection is made from the controlling (primary) Ultricore panel to the (client) Ultrix router(s). The controlling Ultricore panel contains the full database configuration for the entire operation of the system.

* Ultricore redundancy is only available when using Ultricore BCS panels. Refer to the Ultricore BCS User Guide for more information.

For More Information on...

• configuring the Ultrix router, refer to the Ultrix User Guide.
General Work Flow

![Figure 9.1 Work Flow for Setting up a Connection Point between Ultrix and Ultricore]

Configuring the Ultriscape

The Ultriscape PiP and head destination mapping is required in the Ultricore 'master' database for each Ultriscape head in use by the Ultrix router. The procedure is the same as the Ultriscape configuration for a stand-alone Ultrix router.

Mapping Logical Sources and Destinations

The physical inputs and outputs the Ultrix provides will display in the Port Labels tab of the Ultricore database. These input and outputs ports are now ready for re-naming (if required) and mapping to logical source and destinations.

Setup Notes

Keep the following mind when establishing a connection point from an Ultricore to an Ultrix router:

- Ensure unique device names for each Ultrix router. This allows identification of each individual router throughout the setup process. You can edit the name via the Ultrix front panel interface as outlined in the Ultrix User Guide.
- Ensure that the Remote Controller Mode is enabled for each client Ultrix router. Refer to the Ultrix User Guide for details.
- Client hardware configuration (licensing, port configuration, etc.) is achieved via its own device node within the DashBoard tree.
- Client Ultriscape Multiviewers are configured via the Ultriscape node within the DashBoard tree of the client Ultrix that physically hosts that Multi-Viewer.
- Routing commands are issued to the primary device via remote control panels, external protocols or DashBoard soft panels. Any client router will ignore routing commands not originating from the primary while in this connected mode.

Adding a Connection Point

Before defining a connection point between the Ultricore and an Ultrix router, you must verify that the router is listed in the Walkabout utility.

Once a connection point is established between the Ultricore and its client routers, the physical inputs and outputs the clients provide will display in the Port Labels tab of the primary Ultricore database. These input and outputs ports are now ready for renaming (if required) and mapping to logical source and destinations.

To add an Ultrix connection point

1. Ensure each router is installed, configured, and listed in the Basic Tree View of your DashBoard client.
2. Launch the Walkabout utility in DashBoard as follows:

1. Only the soft panels defined within the database of the Ultricore may control the system.
a. Expand the **NK Utilities** node in the Tree View.
b. Double-click **Show Walkabout** to open the Walkabout utility in the DashBoard window.
c. Verify that the Ultrix router is listed in the table of the Walkabout utility. Make a note of its name and IP Address.

3. Display the **Connections** tab in DashBoard for Ultricore as follows:
   a. Expand the **Database** node in the Tree View.
   b. Double-click the **Connections** node.
   
   The **Connections** tab opens that lists the current database connection points.

4. Click **Edit > Add**.
   
   The **Add Connections** dialog opens.

5. In the **Add Connections** dialog, perform the following:
   a. Use the **Protocol** menu to select **ultrix**.
   b. Use the **Type** menu to select **tcp**.
   c. Use the **Count** menu to specify the number of new connection entries (rows) to make in the **Connections** table. For example, to connect to three Ultrix routers you would enter a value of 3.
   d. Click **Apply** to create the new device row(s) in the **Servers** table.

   The **Add Connection** dialog closes.

6. In the **Name** column of the **Servers** table, click the cell of the new **Ultrix** row to display the drop-down menu.

7. From the drop-down menu, select the Ultrix router you which to establish a connection to.

8. If the Ultrix router is not listed in the drop-down menu:
   a. Close the **Connections** tab.
   b. Launch Walkabout to detect the on-line devices in your system.
   c. Double-click the **Connections** node for the Ultricore to display its **Connections** tab.
   d. Repeat steps 4 to 7.

9. In the **Enabled** column of the new row, select **Enable**.

10. Repeat steps 6 to 9 for each additional Ultrix router.

11. Click **Apply** at the bottom of the **Connections** tab to save the new settings.

**Deleting a Connection Point**

* Once a connection point is deleted from the Ultricore database, the Ultricore panel and the Ultrix router will need to be re-configured as per the new requirements. This will require you to update the database(s) on each device.
To delete a connection point between Ultricore and an Ulrix router

1. Display the Connections tab for Ultricore as follows:
   a. Expand the Database node in the Tree View.
   b. Double-click the Connections node.

   The Connections tab opens that lists the current database connection points.

2. In the Servers table, select the Ulrix connection to be deleted.
   The row is now highlighted in the Servers table.

3. Click Edit > Delete.

4. Power cycle the Ulrix router to re-establish its own internal database.

5. Re-configure Ultricore and the Ulrix router as per the new requirements.

Connecting to Ross Ethernet Devices

A router must be defined for Ultricore to utilize it. A router or remote control panel may be defined using the auto-populated fields in the Connections tab in the Ultricore interface, or, in the case of third-party devices, with connection settings added manually to the fields.

For More Information on...
• establishing communications with a third-party device, refer to the section “Connecting to Third-Party Devices” on page 57.

To establish communication between Ultricore and a Ross ethernet device

1. Launch the Walkabout utility in DashBoard as follows:
   a. Expand the NK Utilities node in the Tree View.
   b. Double-click Show Walkabout to open the Walkabout utility in the DashBoard window.
   c. Verify that your Ross Ethernet device is listed in the table of the Walkabout utility. Make a note of its name and IP Address.

   If the device you want to connect to the Ultricore is not detectable in Walkabout, you can still establish communications with it in Ultricore using the Connections > Settings menu to manually enter/edit the device settings.

2. Display the Connections tab for Ultricore as follows:
   a. Expand the Database node in the Tree View.
   b. Double-click the Connections node.

   The Connections tab opens that lists the current database connection points.
3. Click **Edit > Add**. The **Add Connections** dialog opens.

4. In the **Add Connections** dialog, perform the following:
   a. Use the **Protocol** menu to specify the ethernet protocol the device uses to communicate with the Ultricore.
   b. Use the **Type** menu to select **tcp**.
   c. Use the **Count** menu to specify the number of new connection entries to make in the **Servers** table.
   d. Click **Apply** to create the new device row(s) in the **Servers** table.

5. In the **Name** column, click the cell of the new row to display the drop-down menu.

6. From the drop-down menu, select the device you which to establish a connection to.

   - Ross Video devices detected by Walkabout will auto-populate this menu. Third-party devices will require a chosen name to be typed into this field.

7. In the **Enabled** column of the new row, select **Enable**.

8. Click the `[...]` button to verify the IP Address and TCP port values for the device.

9. Click **Apply** at the bottom of the **Connections** tab to save the new settings.

---

### Connecting to Ross NK Series Devices

Ross NK routers and remote control panels are linked via the T-Bus Control System, a multi-drop RJ-45 control system. These T-Bus devices can communicate over Ethernet via a Ross NK-IPS or NK-NET.

A connection point between the Ultricore and an NK-IPS or NK-NET is defined using the auto-populated fields in the Connections tab of the Ultricore interface. Once a connection point is established, the Ultricore gains control over those Ross NK devices connected to the NK-IPS or NK-NET.

**To establish a connection point between Ultricore and an NK-IPS or NK-NET**

1. Launch the Walkabout utility in DashBoard as follows:
   a. Expand the **NK Utilities** node in the Tree View.
   b. Double-click **Show Walkabout** to open the Walkabout utility in the DashBoard window.
c. Verify that your the NK-NET and/or NK-IPS device is listed in the table of the Walkabout utility. Make a note of its name and IP Address.

* If the device you want to connect to the Ultricore is not detectable in Walkabout, you can still establish communications with it in Ultricore using the Connections > Settings menu to manually enter/edit the device settings.

2. Display the Connections tab for Ultricore as follows:
   a. Expand the Database node in the Tree View.
   b. Double-click the Connections node.

   The Connections tab opens that lists the current database connection points.

3. Click Edit > Add.

   The Add Connections dialog opens.

4. In the Add Connections dialog, perform the following:
   a. Use the Protocol menu to select Ross NK.
   b. Use the Type menu to select tcp.
   c. Use the Count menu to specify the number of new connection entries to make in the Servers table.
   d. Click Apply to create the new device row(s) in the Servers table and close the Add Connections dialog.

5. In the Name column, click the cell of the new row to display the drop-down menu.

6. From the drop-down menu, select the device you which to establish a connection to.

   Ross Video devices will auto-populate this menu.

7. In the Enabled column of the new row, select Enable.

8. Click the [...] button to verify the IP Address for the device.

9. Click Apply at the bottom of the Connections tab to save your settings.

Connecting to Ross NK Series Devices via T-Bus

The Ultricore hardware contains a loop-though T-BUS port for direct communication with Ross NK Series devices. A connection point for this T-BUS port is defined by default in Ultricore.

To establish a connection between Ultricore and a Ross NK Series Device via T-Bus

1. Physically connect the Ross NK series to the T-BUS port on the Ultricore rear panel as outlined in the section “To connect the Ultricore to a NK Series device via T-BUS” on page 28.

2. Follow the instructions in the section “Integrating Ross NK Series Devices with Ultricore” on page 148.

   Ultricore will load the information from the Ross NK series devices for further database configuration.

Connecting to Ross Remote Control Panels

An Ultricore can communicate with external remote control panels such as the Ross RCP-NK series, RCP-ME, and RCP-QE. Communication with Ethernet enabled panels is direct from the panel to Ultricore. Refer to the panel user manual for specific configuration details.

RCP-NK Series Panels

Communication with RCP-NK series panels is via an established connection point with either an NK-IPS or NK-NET network bridge. Refer to the RCP-NK User Guide for details.
RCP-NK series control panels do not automatically receive the active database labels. The database labels must be replicated on each RCP-NK series device.

**RCP-ME and RCP-QE Panels**

The connection from the remote control panel to Ultricore is configured on the panel’s DashBoard interface.

1. Display the **RCP Connection Editor** in DashBoard for your remote control panel. Refer to the user guide for your remote control panel for details.

2. Locate the **Servers to Connect** table.

3. In the first row of the table, use the **IP address** column to specify the IP address of the Ultricore that the remote control panel will communicate with.

4. Send the current configuration file to the remote control panel. Refer to the user guide for your remote control panel for details.

   The remote control panel will connect to the Ultricore router and receive a copy of the current database labels.

**Connecting to Third-Party Devices**

Ultricore provides bi-directional Ethernet and Serial protocol support with labels to facilitate control of:

- third party and legacy routers as part of the Ultricore routing system
- an Ultricore routing system by third party control or automation system

Before proceeding, ensure that your third-party device is installed and configure according to its documentation.

**Overview**

Ultricore provides bi-directional translation of the following third-party protocols:

- GVG Native serial and Ethernet protocols
- Probel SW-P-08 serial protocol

Connection to third-party devices may be categorized into two broad groups: controller and controllee.

- Controllers are devices that will control the Ultricore and connect via what may be termed an incoming connection.
- Controllees are devices to be controlled by Ultricore router and connect via what may be termed an outgoing connection.

**For More Information on...**

- the protocols and ports for configuring third-party communications on Ultricore, refer to Table 9.2 and Table 9.3.
- the commands that Ultricore supports, refer to the chapter “External Control” on page 161.
- connecting a third-party device to the serial port on the Ultricore rear panel, refer to the section “Connecting the Ultricore to a Serial Device” on page 29.

**Incoming Ethernet Connections**

The Ultricore can communicate with third-party external devices via a TCP connection. By default, Ultricore runs a server process for the following Ethernet protocols:
These Ethernet servers are always running. No further configuration is required — simply configure your client device to match the Ultricore’s TCP/IP address and port number.

Outgoing Ethernet Connections

This section outlines how to configure a client connection (out-going control) interface to the external system.

To set up a connection over Ethernet between Ultricore and a third-party device

1. Expand the Database node.
2. Double-click the Connections node located under the Database node.
   The Connections tab opens that lists the current database connection points.
3. Click Edit > Add.
   The Add Connections dialog opens.
4. In the Add Connections dialog, perform the following:
   a. Use the Protocol menu to select the Ethernet protocol the device uses to communicate with the Ultricore. Refer to Table 9.2 for a list of options.
   b. Use the Type menu to select tcp or udp as required by the external device.
   c. Use the Count menu to specify the number of new connection entries to make in the Servers table.
   d. Click Apply to create the new device row(s) in the Servers table.
5. In the Name field, type a unique identifier for the third-party device. This name is used to identify the specific device within the Ultricore database.
6. Click the [...] button in the new row to display the Communication dialog.

### Table 9.2  Supported Protocols — Ethernet Connection

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Default Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVG Native Series 7000</td>
<td>TCP: 12345</td>
</tr>
<tr>
<td>Probel SW-P-08</td>
<td>TCP: 8910</td>
</tr>
<tr>
<td>RossTalk</td>
<td>TCP: 7788</td>
</tr>
<tr>
<td>TSL UMD v3.1</td>
<td>TCP: 5727, UDP: 4490</td>
</tr>
<tr>
<td>TSL UMD v4.0</td>
<td>TCP: 5728, UDP: 4491</td>
</tr>
<tr>
<td>TSL UMD v5.0</td>
<td>TCP: 5729, UDP: 4492</td>
</tr>
</tbody>
</table>
7. Use the **Communication** dialog to further define the server to connect to:
   a. Use the **Address** field to specify the IP Address assigned to the third-party device.
   b. Use the **Port** field to specify the Port Number assigned to the third-party device that the Ultricore will try to connect to.
   c. Use the **Wrapping** field to specify the TSL UMD v5.0 TCP wrapping is enabled or disabled. This setting is ignored for other protocol types.
   d. Click **Apply** to save your settings and close the dialog.

8. Edit the **Description** field to your requirements.

9. In the **Enabled** column of the new row, select **Enable**.

   The **Connected** field in the **Connections** tab reports “**Connect**” when communication is established between the third-party device and Ultricore.

10. Click **Apply** in the **Connections** tab to save the new settings.

### Defining a Serial Connection

Ultricore may communicate directly with third-party devices using a native serial protocol. The same protocols may also be implemented via serial connections with the following settings:

* A serial connection point must be implemented on the **Connections** tab in the Ultricore database before communications can start. The settings may be changed from the protocol defaults to suit your requirements.

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Type</th>
<th>Baud</th>
<th>Data Bits</th>
<th>Parity</th>
<th>Stop Bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVG Native Series 7000</td>
<td>RS232 or RS422</td>
<td>38400</td>
<td>8</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>Probel SW-P-08</td>
<td>RS232 or RS422</td>
<td>38400</td>
<td>8</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>TSL UMD v3.1</td>
<td>RS422 or RS485</td>
<td>38400</td>
<td>8</td>
<td>Even</td>
<td>1</td>
</tr>
<tr>
<td>TSL UMD v4.0</td>
<td>RS422 or RS485</td>
<td>38400</td>
<td>8</td>
<td>Even</td>
<td>1</td>
</tr>
<tr>
<td>TSL UMD v5.0</td>
<td>RS422 or RS485</td>
<td>38400</td>
<td>8</td>
<td>Even</td>
<td>1</td>
</tr>
</tbody>
</table>

#### To set up a serial connection between Ultricore and a third-party device

1. Double-click the **Connections** node located under the **Database** node.

   The **Connections** tab opens.

2. Click **Edit > Add**.

   The **Add Connections** dialog opens.

3. In the **Add Connections** dialog, perform the following:
   a. Use the **Protocol** menu to select the protocol standard.
   b. Use the **Type** menu to select **Serial**.
   c. Use the **Count** menu to specify the number of new connection entries to make in the **Servers** table.
   d. Click **Apply** to create the new device row(s) in the **Servers** table.

4. In the **Name** field, type a unique identifier for the third-party device. This name is used to identify the device within the Ultricore system.

5. Click the [...] button in the new row to display the **Communication** dialog.
6. Use the Port field to specify the Port Number assigned to the third-party device that Ultricore will try to connect to.

7. From the Type menu in the Communication dialog, select RS232 or RS422. The table in the Communication dialog updates to display the settings for serial communication.

8. Use the Type field to specify the serial transmission standard for the third-party device.

9. Use the Baud Rate field to specify the bit rate for the third-party device.

10. Use the Parity field to specify the parity for the third-party device.

11. Click Apply to save your settings and close the Communication dialog.

12. In the new row, select the Enabled box.

13. Click Apply to save your settings.

The Connected field in the Connections tab reports “Connect” when communication is configured and enabled between the third-party device and Ultricore. The system does not poll or query the serial link to verify the validity of the setup.

Creating a Logical Matrix for an External Device

If the external device presents a matrix of crosspoint switches for routing, you can create logical matrices in an Ultricore database using the device inputs and outputs. Creating a logical matrix from the external device enables Ultricore to include the inputs and outputs for selection in the Sources and Destination tabs of the Ultricore database.

* The input/output range and level you specify in the Ultricore database must match the settings within the external matrix.

To create a logical matrix from an external device

1. Expand the Database node.

2. Double-click the Third Party Matrices node located under the Database node. The Third Party Matrices tab opens.

3. Click Edit > Insert to add a blank row to the Third Party Matrices table.
4. In the Name field, type a unique identifier for the third-party matrix. This name is used to identify the matrix within the Ultricore database.

5. From the Device ID drop-down menu, select the device you want to define the logical matrix for. This is the name given to the device when you established a connection point with it on the Connections tab.

The Device ID menu lists only the third-party devices that have a valid connection point with the Ultricore router.

6. Define the matrix size as follows:
   a. Use the First Output and Last Output fields to define the range of destinations from the device within the Ultricore database.
   b. Use the First Input and Last Input fields to define the range of sources from the device within the Ultricore database.

These created inputs and outputs will use the nomenclature DeviceID.Slot.Port.Type.Channel where DeviceID represents the Name assigned to the external device on the Connections tab.

7. Use the Level field to specify the number of levels for the device within the Ultricore database.

8. Use the Type field to specify the signal type for the matrix.

9. Click Apply to save the new matrix to the database and add it to the list of available matrices in the Port Labels tab.
Database Configuration

A database in Ultricore stores and implements a routing system configuration. Multiple databases can be configured using a different combination of devices, matrices, levels, sources, and destinations for the routings system. Procedures in this chapter assume that you have DashBoard launched and the Ultricore displayed in the Tree View.

How a Database Determines the Routing System

The various tables within an Ultricore router determine if a signal/route can be made from input to output.

For a given level, if there is a physical port mapped in both the Source and Destination tabs, and the controlling device has the level enabled, then a crosspoint switch can be issued and executed on the router(s). Table 10.1 outlines a database with four levels. Level 1 has mapped valid Sources and Destinations, and the level is enabled on the controlling device.

<table>
<thead>
<tr>
<th>Table 10.1 Example of a Multi-Level Database Setup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
</tr>
<tr>
<td>Is a physical source assigned?</td>
</tr>
<tr>
<td>Is a physical destination assigned?</td>
</tr>
<tr>
<td>Is the Level enabled on the Controller device?</td>
</tr>
<tr>
<td>Can a switch be executed?</td>
</tr>
</tbody>
</table>

a. An entry is not present in the corresponding Level column of the Source tab.
b. An entry is not present in the corresponding Level column of the Destinations tab.
c. A resulting switch will be executed.
d. A resulting switch will not be executed. Physical ports from the same logical matrix must be entered in the same control level before a connection can be made.

Configuration Overview

The generalized work flow of configuring a database for the Ultricore is:

1. Establish connection points to external devices. Refer to the chapter “Device Communication Setup” on page 51 for details.
2. Verify available I/O ports to ensure correct system connections. This default port naming convention of frame.slot.port.type nomenclature is to be overwritten (if required) at this stage.
3. Create a database as outlined in the procedure “Creating a New Database” on page 64.
   • Ultricore does not support Unicode characters.
4. Define a soft panel or establish a connection to a remote control panel (RCP).

Database File Management Overview

Each database consists of a collection of configuration files necessary for Ultricore operation. The database resides within the Ultricore storage system. Multiple databases may be saved and accessed at any time.

Use the System Status > Database tab to create, load, and delete databases. Use the System Status > Transfer tab to backup and restore databases.

For More Information on...

• the System Status tabs and menus, refer to the section “System Status Interfaces” on page 186.
Database management consists of the following tasks:

Creating a New Database

A database manages the configuration file and settings for your Ultricore. Ultricore may use a number of database configurations depending on its role in the routing system. Refer to the section “Creating a New Database” below.

Loading an Existing Database

Use the System Status > Database tab to load a configured database to your Ultricore. Refer to the section “Loading a Database” on page 66.

Exporting a Database

Enables you to capture a database configuration in a *.uda file that is saved to a location on your network that you can specify. Refer to the section “Exporting a Database” on page 82.

Importing a Database

Enables you to import a saved *.uda file and make it available in the System Status > Database tab. Refer to the section “Importing a Database” on page 83 for details.

Deleting an Existing Database

You can choose to permanently delete any configured database on your Ultricore. Refer to the section “Deleting a Database” on page 83 for details.

Creating a New Database

When you define a database, the information you enter into the Levels, Sources, and Destinations fields will auto-populate the applicable fields in the other interfaces for that Ultricore router. You can change the labels for the destinations and sources at any time using the options in the Destinations and Sources interfaces. There are two methods for creating a new database: using the Database Builder, or using the options in the System Status > Database tab. Both methods are described below.

Using the Database Builder

Use the Database Builder to quickly create a starting point database. Once you define the basic parameters of the new database using the settings in the Quick Start interface, you can then define the levels, destinations, and sources for the new database. This makes it very easy to build basic configurations as well as get a system up and running quickly.

* Before proceeding, ensure that the required license keys are installed for the device(s) the database will be saved to. Refer to the chapter “Software License Keys” on page 31 for more information.

To create a new database using the Database Builder

1. Display the Database nodes as outlined in the procedure “To access the Database interfaces in DashBoard” on page 25.
2. Double-click the Database Builder sub-node.

   The Database Builder interface opens in the DashBoard window with the Quick Start page automatically displayed.
3. Use the **Provide a Name** field to type a unique identifier for the database.

4. Select the box(es) from the provided list of detected routers the routers to make the database available to.

5. If you wish to leave the remaining settings at their default values and quickly setup a database, you can click **Finish** and the database will be generated based on selected routers in step 4.

   ✴ Click **Next**, located at the bottom of the DashBoard window, to display the next page of options in the Database Builder interface.

6. If any AUX Ports are populated with SFP modules, use the **Include AUX ports** menu to specify how to label the I/O in the database.

   ✴ The default is Insert at Slot, which labels the I/O in each slot as 1-18 with the AUX Ports as 17 and 18.

7. Use the **Support Video Signal** and **Number of Audio Channels** menus to define the Levels in the database.

8. Use the **Breakaway Source Support** menus to implement audio shuffling. The options for SDI and MADI channels are as follows:
   - None — there are no audio channels of this type.
   - Mono — audio channels are applied to all levels
   - Stereo — audio channels are assigned by pair (1-2, 3-4, 5-6 etc.)
   - Quad — audio channels are assigned in groups of four (1-4, 5-8, 9-12 etc.)
   - Oct — audio channels are assigned in groups of eight (1-8, 9-16, 17-24 etc.)

   ✴ You must have SFP modules installed that support MADI.

9. Use the **Disconnect Source** menu to set unused audio channels to disconnect.

10. Use the **Passthrough Source** menu to route the sources without changes/edits.

11. If you have an UltriScape license installed, use the last set of menus to define the heads, including the number of Picture in Picture (PIPs) that new layouts can include.

   ✴ You can still create and edit layouts in a database with settings that differ from these.

12. Click **Next** to review the levels, destinations, and sources tables before completing the database builder.

    a. Use the **Levels** page to review or rename the level labels if required.

    b. Use the **Destination** page to review the destination label to physical port mapping. Renaming the labels is also possible from this page if required.
c. Use the **Sources** page to review the source label to physical port mapping. Renaming the labels is also possible from this page if required.

13. Click **Finish** to create the new database and apply it to the routers selected in step 4.

* Click **Rename** to define multiple elements. For example, clicking Rename on the Sources page enables you to define a prefix (e.g. SRC) and apply from a starting point (input 4).

**Using the Database Tab**

You can use the Database tab in the System Status interface when only configuring a database for a single device.

*For More Information on...*

- assigning destinations, refer to the section “**Defining the Destinations in a Database**” on page 69.
- assigning sources, refer to the section “**Defining the Sources in a Database**” on page 73.

**To create a new database**

1. In the Tree View of DashBoard, double-click the **System Status** node.

   The **System Interfaces** display in the DashBoard window.

2. Select the **Database** tab.

3. Locate the **Add Database** options in the **Database Management** area of the tab.

   ![Database Management Interface](image)

4. In the Add Database **Name** field type a unique identifier for the database. When the database is currently loaded in the system (in use), the Database node displays the database name in the tree view under the Ultricore node.

5. Select the **Include I/O Maps** box to create a database to match the quantity of BNC I/O ports available in the connected router.

   * Each SDI IN/OUT ports will be mapped to the default labels of SRC# and DST# respectively for Level 1 only (SDI). The Destinations and Sources fields are ignored, but the Level field is applied.

6. Use the **Levels** field to specify the total number of levels available in the database.

7. Use the **Sources** field to specify the total number of inputs available in the database.

8. Use the **Destination** field to specify the total number of outputs in the database.

9. Click Database **Add** to create the new database and save it to the Ultricore file system.

10. Load the database to ensure it is active before proceeding to customize it.

**Loading a Database**

Each active database includes a unique setup saved to the Ultricore file system. You must recall a database before you can configure the matrices, levels, sources and destinations, and soft panels for a particular setup. This also enables you to quickly recall a saved (configured) routing setup just by recalling a different database.
To load a saved database

1. In the Tree View, double-click the **System Status** node.
2. Select the **Database** tab.

3. From the **Name** menu in the **Load Database** area, select the database you want to load.
4. Click **Load**.
5. Verify the following to ensure the database was loaded:
   - The **Name**, **Levels**, **Sources**, and **Destination** read-only fields in the **Current Database** area in the **Database** tab report the correct values.
   - The **Database** node in the Tree View for the Ultricore now reports the correct Database name.

Defining the Levels in a Database

A level is a term used to describe a section or layer of the routing system (e.g. video level, audio level). Ultricore uses level definitions for easy identification and control of various routing matrices or parts of the system. The levels defined in the Levels tab have a direct relationship with the Level columns found in other database tabs.

Before You Begin

Determining the amount of levels needed requires a little planning.

Ultricore may operate with as little as a single level to define control of the Ultrix SDI switching matrix. Ultricore also allows independent routing of SDI embedded audio channels as well as MADI channels. Using one single level of control will limit the independent selection of embedded audio and/or MADI streams.

Any Ross NK series routers or other third-party routers attached to the Ultricore system will require their own control level/

🌟 The quantity of levels determines how many independent input/output ports (including embedded / MADI channels) may be grouped together as one source or destination selection.
Examples
A single control level can be used when there is limited independent embedded audio/MADI channel switching.

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SDI</td>
</tr>
</tbody>
</table>

* If AFV (audio-follow-video) is desired on a single level database, the Audio Bypass must be enabled for each input and output port or disable the Ultrimix function.

A single level setup with NK-A64 analog audio router attached would require the following levels:

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SDI</td>
</tr>
<tr>
<td>2</td>
<td>AnAud L</td>
</tr>
<tr>
<td>3</td>
<td>AnAud R</td>
</tr>
</tbody>
</table>

A setup using SDI with 4 embedded audio levels. This can allow independent switching of 4 of the embedded SDI channels and grouping of 4 MADI channels. The following levels would be required:

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SDI</td>
</tr>
<tr>
<td>2</td>
<td>A1</td>
</tr>
<tr>
<td>3</td>
<td>A2</td>
</tr>
<tr>
<td>4</td>
<td>A3</td>
</tr>
<tr>
<td>5</td>
<td>A4</td>
</tr>
</tbody>
</table>

To define a level in the database

1. Double-click the Levels node located under the Database node.
   The Levels tab opens.
2. Verify the ID field to specify the priority of the level.
   * The ID field is a row number automatically defined by the routing system. This ID value corresponds to level numbers when used in Remote Control Panel (RCP) configurations and third-party communications.
3. To re-name a level:
   a. In the Name column, type a unique identifier for the level. It is recommended to use words that describe the level such as 3G, Audio, etc.
   b. Click Enter to update the name.
4. To select a unique color that will represent the level in the soft panels:
   a. In the Color column, click the cell for the level you want to configure to display the Color Select dialog.
   b. Select the hue from the provided vertical color grid in the Color Select dialog.
   c. Use the Saturation options to specify the depth of the color.
   d. Use the Lightness options to specify the amount of white or black mixed with the selected hue.
   e. Confirm that the field beneath the color grid displays the correct color for the level.
   f. Apply your changes using one of the following options:
      - Click Live to preview the color scheme and apply it but not close the Color Select dialog; or
• Click **OK** to apply the new color to the level and close the **Color Select** dialog.

5. To provide additional information about the level:
   a. In the **Description** column, type a brief summary of the level or provide additional information about the level use or purpose. This column is for identification purposes only and not required for operation.
   b. Click **Enter** to update the description.

   ✷ Inserting a level in a working database can have destructive effects. It is recommended to insert below the last row to minimize this effect.

6. Click **Apply** to save your changes.

**To create additional levels**
1. Select a row in the **Levels** tab.
2. Click **Edit**.

   ✷ You can also copy and paste an existing level by clicking **Copy > Paste** from the **Edit** dialog.

3. To add a single level, select **Add**.
4. To add multiple levels:
   a. Select **Add Series** to display the **Add Rows** dialog.
   b. In the **Prefix** field, type the phrase. For example, if you want to create levels as **AUDIO 1**, **AUDIO 2**, etc., you would type **AUDIO** into the **Prefix** field.
   c. In the **Start Value** field, type the first number to be used in the series.
   d. In the **End Value** field, type the last number to be used in the series.
   e. Click **Apply**.

**To delete an entry from the Levels table**
1. Select the row for the destination to delete in the **Levels** tab.
2. Click **Edit > Delete**.

   ✷ Ensure the ID numbers are correctly sequenced when deleting and inserting entries in the **Levels** table by selecting **Edit > Reset All IDs**.

---

**Defining the Destinations in a Database**

Ultricore uses a database to assign inputs and outputs, as well as define levels and matrices. **Table 10.2** outlines the available outputs for mapping to the destinations in your database.

**Table 10.2  Mapping Outputs to Database Destinations**

<table>
<thead>
<tr>
<th>Default Slot Label</th>
<th>Physical or Virtual Port?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slotx.out[y].sdi.ch1</td>
<td>P</td>
<td>Digital video output slot x port y</td>
</tr>
<tr>
<td>flex.out[y].sdi.ch1</td>
<td>P</td>
<td>Digital video output flex slot port y (ULTRIX-FR5 only)</td>
</tr>
<tr>
<td>Slotx.out[y].audio.chn</td>
<td>P</td>
<td>Digital audio channel n of output slot x port y</td>
</tr>
<tr>
<td>flex.out[y].audio.chn</td>
<td>P</td>
<td>Digital audio channel n of flex slot output port y (ULTRIX-FR5 only)</td>
</tr>
</tbody>
</table>
For More Information on...

- defining a database, refer to “Creating a New Database” on page 64.

### Specifying a Destination Label

The Destinations tab allows the definition of names (or labels) for your routing system outputs. When a database is initialized, default labels of *Dest #* are automatically filled in to the quantity specified by the database. These destination labels may be changed to suit your naming conventions.

**To specify a label for a destinations**

1. Double-click the **Destinations** node located under the **Database** node.

   The **Destinations** tab opens.

2. Select the cell in the Name column of the label to alter.

3. Type the required label.

4. Press **Enter** to apply the change.

   * Take care to limit the amount of characters as these labels are displayed on Remote Control Panels (RCPs) which have a limited display area.

5. Repeat steps 2 to 4 for each destination you want to specify a virtual label for.

6. Click **Apply** at the bottom of the **Destinations** tab to save your changes.

---

**Table 10.2 Mapping Outputs to Database Destinations**

<table>
<thead>
<tr>
<th>Default Slot Label</th>
<th>Physical or Virtual Port?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slotx.head[y].sdi.ch1</td>
<td>V</td>
<td>Ultriscape video output slot x head y</td>
</tr>
<tr>
<td>Slotx.heady-pip[z].sdi.ch1</td>
<td>V</td>
<td>Video destination for PiP z of slot x Ultriscape Head y</td>
</tr>
<tr>
<td>Slotx.heady-pip[z].meter.chn</td>
<td>V</td>
<td>Audio destination for meter n PiP z of slot x Ultriscape Head y</td>
</tr>
<tr>
<td>Slot0.mixer-in[y].audio.ch1</td>
<td>V</td>
<td>Audio destination mixer input port y</td>
</tr>
<tr>
<td>Slot0.virt-out[y].sdi.ch1</td>
<td>V</td>
<td>Acuity AUX BUS output port y</td>
</tr>
</tbody>
</table>
Mapping an Output to a Destination

The Destinations tab is organized into a table with each row representing a Destination and each column representing a Level. The table cells are the output ports assigned to the Destination for that level. Initially, the table cells are empty (e.g. the destination labels are not assigned to physical output sockets). These may be populated as described in “To map a physical output to a destination” on page 71, or, via the Advanced Fill tool.

The Advanced Fill tool is provided to create new destination labels that are automatically assigned to physical outputs depending on options set by the user. The audio routing features provided by Ultricore can result in an extensive source and destination definition map requiring some time to manually enter. The Advanced Fill tool will speed the assignment of physical ports greatly.

Various editing options are available from the editing menus, accessed via the Edit button located on the bottom toolbar of the tab.

If you are defining the destinations in a database for use with UltriScape, it is recommended to first define the destinations using the Advanced Fill tool, then re-name the UltriScape Heads as required. Otherwise there may be duplicate assignments of channels in the database.

For More Information on...
• assigning Tally IDs to destinations, refer to “Assigning the Tally IDs to the Destinations” on page 88.

To map a physical output to a destination
1. Double-click the Destinations node located under the Database node.
2. If desired, type a new name for the destination in the Name cell as outlined in the procedure “To specify a label for a destinations” on page 70.
3. In the Destinations tab, locate the column for the level you wish to include in the destination definition.
4. To map a single output, perform one of the following:
   • Select the cell of the row in the table to display a list of available outputs; or
   • Choose an output from the available Matrix Outputs list and click Assign.

Cell ranges may be horizontal as well as vertical. For example, a common operation would be to assign SDI embedded channels 1 to 16 to levels 2 to 17. The selected range would be horizontal across many levels but the selection would be vertical from the available outputs. The assignment operation will take the top most of the available outputs selection and assign it to the left most of the horizontal selection and so on through the selection range.
5. To map a range of outputs:
   a. Select the first cell in the table column.
   b. Press and hold Shift.
   c. Select the last cell in the table column.
   d. Select a range in the available Matrix Outputs list with the same click + shift-click method.
   e. Click Assign.
6. Click Apply at the bottom of the Destinations tab to apply the changes to the database.

To map a series of outputs to the same level
1. In the table of the Destinations tab, select the first row in the series you want to define for the level.
2. Press and hold Shift.
3. Click the last row in the series to select a range of cells within a Level column.
4. Select a range of outputs as outlined in “To map a physical output to a destination” on page 71.
5. Click Assign.
6. Click Apply at the bottom of the Destinations tab to apply the changes to the database.
To delete an entry from the Destinations table

1. Select the row for the destination to delete in the Destinations tab.

2. Click Edit > Delete.

* Ensure the ID numbers are correctly sequenced when deleting and inserting entries in the Destinations table. To re-order the Destinations ID numbers in the database, click Edit > Reset All IDs in the Destinations tab.

Configuring the Destination Follow Feature

The Destination Follow feature enables you to route a specific destination’s source signal to another destination. For example, set Dest 1 to follow Dest 6 so when Dest 6 is switched to a different source, Dest 1 is also switched to that same source. You can set multiple destinations to follow another single destination, or each following their own unique destination.

To configure the Destination Follow feature

1. Double-click the Destination Follow node located under the Database node.

   The Destination Follow tab opens.

   ![Destination Follow tab](image)

   2. Locate the row for the destination to configure.

   3. Use the Following menu to specify the output that the selected Destination will follow.

      In the example below, the user is configuring Dest1 to follow Dest6.

      ![Following menu](image)
Defining the Sources in a Database

Ultricore uses a database to assign inputs, as well as define levels and matrices. Table 10.2 outlines the available inputs for mapping to the sources in your database.

### Table 10.3 Mapping Inputs to Database Sources

<table>
<thead>
<tr>
<th>Default Slot Label</th>
<th>Physical or Virtual Port?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slotx.in[y].sdi.ch1</td>
<td>P</td>
<td>Digital video input slot x port y</td>
</tr>
<tr>
<td>flex.in[y].sdi.ch1</td>
<td>P</td>
<td>Digital video output flex slot port y (ULTRIX-FR5 only)</td>
</tr>
<tr>
<td>Slotx.in[y].audio.chn</td>
<td>P</td>
<td>Digital audio channel n of input slot x port y</td>
</tr>
<tr>
<td>flex.in[y].audio.chn</td>
<td>P</td>
<td>Digital audio channel n of flex slot input port y (ULTRIX-FR5 only)</td>
</tr>
<tr>
<td>Slot0.disconnect[1].sdi.ch1</td>
<td>V</td>
<td>A ‘no signal/disconnected’ video source</td>
</tr>
<tr>
<td>Slot0.disconnect[1].audio.ch1</td>
<td>V</td>
<td>A ‘no signal/disconnected’ audio source</td>
</tr>
<tr>
<td>Slot0.passthrough[1].audio.ch1</td>
<td>V</td>
<td>Audio on this channel will follow video regardless of audio matrix</td>
</tr>
<tr>
<td>Slot0.layout: name[n].mv.ch1</td>
<td>V</td>
<td>Ultriscape Head layout file name id n – route a layout to a head to change Ultriscape layouts</td>
</tr>
<tr>
<td>Slot0.mixer-out[y].audio.ch1</td>
<td>V</td>
<td>Audio source for mixer output port y</td>
</tr>
<tr>
<td>Slot0.mixer-out[y].audio.ch1</td>
<td>V</td>
<td>Audio source for mixer channel strip direct output port y</td>
</tr>
<tr>
<td>Slot0.virt-in[y].sdi.ch1</td>
<td>V</td>
<td>Acuity AUX BUS Input port y</td>
</tr>
</tbody>
</table>

For More Information on...

- assigning Tally IDs to sources, refer to the section “Assigning the Tally IDs to the Sources” on page 88.

Specifying a Label for a Source

The Sources tab allows the definition of labels for your routing system inputs. When a database is initialized, default labels of src # are automatically filled in to the quantity specified by the database. These source labels may be changed to suit your naming conventions.

To specify a label for a source

1. Double-click the Sources node located under the Database node.

   The Sources tab opens.
2. Select the cell in the **Name** column of the label to alter.
3. Type the required label.
4. Press **Enter** to apply the change.

* Take care to limit the amount of characters as these labels are displayed on Remote Control Panels (RCPs) which have a limited display area.
5. Repeat steps 2 to 4 for each destination you want to specify a virtual label for.
6. Click **Apply** at the bottom of the **Destinations** tab to save your changes.
7. Click **Apply** at the bottom of the **Sources** tab to save your changes.

## Mapping an Input to a Source

The Sources tab allows the mapping of physical and virtual input ports to your routing system inputs. The tab is organized into a table with each row representing a Source and each column representing a Level. At the top of the column is the name of the Level. The table cells are the input ports assigned to the source for that level.

An **Advanced Fill** tool is provided to create new source labels that are automatically assigned to inputs depending on options set by the user. The audio routing features provided by Ultricore can result in an extensive source and destination definition map requiring some time to manually enter. The **Advanced Fill** tool will speed the assignment of ports greatly.

Various editing options are available from the editing menus, accessed via the **Edit** button located on the bottom toolbar of the tab.

### To map a physical input with a source

1. Double-click the **Sources** node located under the **Database** node.
2. If desired, type a new name for the source in the **Name** cell as outlined in the procedure “To specify a label for a source” on page 73.
3. In the table of the **Sources** tab, locate the column for the level you wish to include in the source definition.
4. To map a single input, perform one of the following:
   - Select the cell of the row in the table to display a list of available input sockets; or
   - Choose an input from the available **Matrix Inputs** list and click **Assign**.
Cell ranges may be horizontal as well as vertical. For example, a common operation would be to assign SDI embedded channels 1 to 16 to levels 2 to 17. The selected range would be horizontal across many levels but the selection would be vertical from the available inputs. The assignment operation will take the top most of the available inputs selection and assign it to the left most of the horizontal selection and so on through the selection range.

5. To map a range of inputs:
   a. Select the first cell in the table column.
   b. Press Shift.
   c. Select the last cell in the table column.
   d. Select a range in the available Matrix Inputs list.
   e. Click Assign.

6. Click Apply at the bottom of the Sources tab to apply the changes to the database.

To map a series of inputs to the same level
1. In the table of the Sources tab, select the first row in the series you want to define for the level.
2. Press and hold Shift.
3. Click the last row in the series to select a range of cells within a Level column.
4. Select a range of inputs as outlined in step 5 of the procedure “To map a physical input with a source” on page 74.
5. Click Assign.
6. Click Apply at the bottom of the Sources tab to apply the changes to the database.

To delete an entry from the Sources table
1. Select the row for the destination to delete in the Sources tab.
2. Click Edit > Delete.

Ensure the ID numbers are correctly sequenced when deleting and inserting entries in the Sources table. To re-order the Sources ID numbers in the database, click Edit > Reset All IDs in the Sources tab.

Using the Advanced Fill Tool
The Advanced Fill operation is typically a tool used to initially set up an Ultricore database. Edits and customization may then be performed after the Advanced Fill tool has done the bulk of the work.

The following examples are shown on a new database with only database default settings loaded.

Ensure when determining label names. While a long name may be nice and descriptive for the Source and Destination tabs, many control devices have limited screen space and labels may be truncated.

For More Information on...
• the settings and menus available in the Advanced Fill tool, refer to the section “Advanced Fill Tool” on page 371.

Create Source Labels with Assignments for SDI Video Levels
The objective of this example is to insert new labels and assignments for inputs for all routers on SDI Levels only.

To create source labels with assignments for SDI video levels
1. Define the levels as outlined in the section “Defining the Levels in a Database” on page 67.
2. Select an entry point in the Sources tab from where the new labels and assignments will begin.
a. Double-click the **Sources** node located under the **Database** node. 

The **Sources** tab opens.

b. Select the cell of the row for the entry point. The new entries will be inserted *below* this row.

c. Click **Edit > Fill**.

The **Breakaway Fill** dialog opens.

![Breakaway Fill dialog](image)

3. If required, select **Fill > Entire Device**.

4. In the **Name** field, type a label prefix. Enter a trailing space to ensure a space between the prefix and the numerical counter.

5. From the **AUX Port** menu, define the router AUX ports.

6. From the **Slot** menu, select the first slot in the router. (e.g. Ultrix.slot1)

7. From the **Port** menu, select the first IN port. (e.g. Ultrix.slot1.in[1])

8. From the **Starting Channel** menu, select the first channel of the selected port. (e.g. Ultrix.slot1.in[1].sdi.ch1)

9. In the **Levels** table of the dialog, select the fully qualified Input assignment name from the **I/O Assignment** column.

10. Click **Apply**.

The dialog closes, and the **Source** tab updates with the newly created and insert labels with assignments.

★ The Ultrix AUX ports are defined in the list. In this case, these would only be usable providing an SFP module that includes an SDI video input was installed into the relevant AUX port on the Ultrix rear panel.
Create Destination Labels with Assignments for SDI Video Levels

The objective of this example is to insert new labels and assignments for Ultricore outputs for the SDI only level.

**To create destination labels with assignments for SDI video levels**

1. Define the levels as outlined in the section “Defining the Levels in a Database” on page 67.
2. Select an entry point in the Destinations tab from where the new labels and assignments will begin.
   a. Double-click the Destinations node located under the Database node.
      The Destinations tab opens.
   b. Select the cell of the row for the entry point. The new entries will be inserted below this row.
   c. Click Edit > Fill.
      The Fill dialog opens.

3. If required, select Fill > Entire Device.
4. In the Name field, type a label prefix. Enter a trailing space to ensure a space between the prefix and the numerical counter.
5. From the AUX Port menu, define the router AUX ports.
6. From the Slot menu, select the first slot in the router. (e.g. Ultrix.slot1)
7. From the Port menu, select the first OUT port. (e.g. Ultrix.slot1.out[1])
8. From the Starting Channel menu, select the first channel of the selected port. (e.g. Ultrix.slot1.out[1].sdi.ch1)
9. In the Levels table of the dialog, select the fully qualified Output assignment name from the I/O Assignment column.
10. Click Apply.

The dialog closes, and the Source tab updates with the newly created and insert labels with assignments.

The AUX ports of the Ultrix router are defined in the list. These would only be usable providing an SFP module that includes an SDI video output was installed into the relevant AUX port on the router rear panel.

Create Source Labels with Assignments for SDI and Embedded Audio

The objective of this example is to create source labels and assignments for the SDI video and the first four embedded audio channels for an entire Ultricore enabled slot. The remaining twelve audio channels are not used.

To create source labels with assignments for the SDI video and embedded audio levels
1. Ensure that you have the Ultrix licensed feature enabled for the slot. Refer to the Ultrix User Guide for details.
2. Define one level for SDI Video and 16 levels for the embedded audio as outlined in the Ultrix User Guide.
3. Select an entry point in the Sources tab from where the new labels and assignments will begin.
   a. Double-click the Sources node located under the Database node.

      The Sources tab opens.
   b. Select the cell of the row for the entry point. The new entries will be inserted below this row.
   c. Click Edit > Fill.

      The Breakaway Fill dialog opens.
4. If required, select Fill > Entire Slot.
5. In the **Name** field, type a label prefix. Enter a trailing space to ensure a space between the prefix and the numerical counter.

6. From the **AUX Port** menu, define the router AUX ports.

7. From the **Slot** menu, select the Ultrimix enabled slot in the router. (e.g. Ultrix.slot1)

8. From the **Port** menu, select the first port of the Ultrimix enabled slot. (e.g. Ultrix.slot1.out[1])

9. From the **Starting Channel** menu, select the first channel in the series.

10. In the **Levels** table of the dialog, select a range of **Level** rows by clicking the first row level name, then holding the **Shift** button, click the last row level name.

    Ensure to select the SDI Video level and the first four embedded audio levels.

11. Click **Assign** to automatically fill the **I/O Assignment** column for the selected levels.

    The **Breakaway Fill** dialog updates but does not close.

![Breakaway Fill Dialog](image)

**To set the unused audio channels to disconnect**

1. From the **Slot** menu in the **Breakaway Fill** dialog, select Ultrix.slot0.

2. From the **Port** menu, select Ultrix.slot0.

3. From the **Starting Channel** menu, select Ultrix.slot0.disconnect[1].audio.ch1.

4. In the **Levels** table of the dialog, select the remaining twelve audio levels (e.g. A5-A16) from the **I/O Assignment** column.

5. Select Ultrix.slot0.disconnect[1].audio.ch1 from the **I/O Assignment** cell for the first selected row (e.g. A5).

    The disconnect[1].audio will be applied to all the selected rows.

1. Pass through may also be selected. Pass through has the effect of passing through any audio (silence or otherwise) on the channels A5 to A16. Disconnect effectively mutes those channels on the output stream.
6. Click **Apply**.

The dialog closes, and the **Source** tab updates with the newly created and insert labels with assignments.

---

**Creating Labels with Assignments for SDI and Embedded Audio, with Audio Breakaways**

The objective of this example is to create and insert a series of labels with assignments for SDI video and embedded audio. Also, audio breakaway sources will be required to implement audio shuffling.

To enable the ability to shuffle audio (that is to take an audio channel and route into another stream in a different position within that stream), we need to define that audio channel as a source and assign it across all required levels.

For example, we may wish to take channel 3 audio from an input SDI stream, and route (just that individual channel) to channel 2 of an output SDI stream. To facilitate this, the following definitions are needed;

<table>
<thead>
<tr>
<th>Source Name</th>
<th>SDI Level</th>
<th>Level A1</th>
<th>Level A2</th>
<th>Level A3</th>
<th>Level A4</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDI 1 ch3</td>
<td>&lt;blank&gt;</td>
<td>In[1].audio.ch3</td>
<td>In[1].audio.ch3</td>
<td>In[1].audio.ch3</td>
<td>In[1].audio.ch3</td>
</tr>
</tbody>
</table>

**If only four audio levels are defined as shown in Table 10.4, and assuming no other level definitions, the user can only route 'SDI 1 ch3' to any of the corresponding levels in the destination, i.e. cannot route 'SDI 1 ch3' to a destination stream channel 8 as Out[1].audio.ch8 is not defined in any of the destination levels.**

To enact the previous example, the user selects the destination channel by selecting the appropriate level button on the control panel (in this case, the A2 level) before actuating the crosspoint switch (destination button SDIout1, then, source button SDI 1 ch1). The **Advanced Fill** tool can automate the creation of these audio breakaway sources saving a great deal of setup time.

**To create source labels with assignments for SDI and embedded audio, with audio breakaways**

1. Define one level for SDI Video and 16 levels for the embedded audio as outlined in the section “**Defining the Levels in a Database**” on page 67.
2. Select an entry point in the **Sources** tab from where the new labels and assignments will begin.
   a. Double-click the **Sources** node located under the **Database** node.
      
      The **Sources** tab opens.
   b. Select the cell of the row for the entry point. The new entries will be inserted **below** this row.
   c. Click **Edit > Fill**.
      
      The **Breakaway Fill** dialog opens.
3. From the Fill menu, select **Entire Slot**.

4. In the Name field, type a label prefix. Enter a trailing space to ensure a space between the prefix and the numerical counter.

5. From the Slot menu, select the Ultrimix enabled slot in the Ultrix router. (e.g. Ultrix.slot1)

6. From the AUX Port menu, define the router AUX ports.

7. From the Port menu, select the first port of the Ultrimix enabled slot. (e.g. Ultrix.slot1.out[1])

8. From the Starting Channel menu, select the first channel in the series.

9. In the Levels table of the dialog, assign physical ports to the levels.

10. Select the BRK I/O box for the Levels assignment to be broken out to a separate label/assignment definition.

11. Select the BRK Level box for each level to be included in that label/assignment definition.

12. Click **Apply**.

   The dialog closes, and the Source tab updates with the newly created and insert labels with assignments, and the audio breakaways definitions.

   Notice the chx automatic suffix to the label. This may be overridden by placing text in the BRK Suffix cell of the Breakaway Fill dialog.
Creating Categories

You can assign each destination, source, and level to a specific category in the router database. Defining multiple categories enable you to filter the sources, destinations, and level and organize them into logical groups. Each database provides up to six categories that you can define.

For More Information on...
• managing the categories for your Ultricore database, refer to the chapter “Using Categories” on page 91.

Managing your Databases

A database can be archived by saving it as a *.uda file to a specified location. This enables you to import and export an archived database which is useful for:
• creating a safe, off-frame copy of a default database configuration
• importing a copy of a reference database that can be tailored to a specific application
• restoring a known backup copy of a database to an Ultricore

★ This feature requires DashBoard v8.2 or higher.

Overview

The following information is captured when you archive a database:
• Definitions of levels, sources, and destinations
• Salvos
• Category assignments
• Soft panels
• User assigned port labels
• Current crosspoint status

★ The following information is not captured: hardware specifics, and license settings.

Exporting a Database

You create an archive of a database (as a *.uda file) using the options in the System Status > Transfer tab.

To export a database to the archive
1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Transfer tab.
3. Locate the Export area on the tab.
4. Use the Database field to specify the database to export.
5. Click Browse... to specify the location to save the *.uda file to.
   The Archive read-only field updates with the selected path and database name.
6. Click Apply.
   The Downloading Archive dialog opens to report the status of the export.
Importing a Database

Once a database is imported from the archive to your system, you can select it from the list of databases to load in the System Status > Database tab.

The database is not automatically loaded. You must follow the procedure “Loading a Database” on page 66 to load the imported database.

To import a database to an Ultricore

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Transfer tab.
3. Locate the Import area on the tab.
4. Select the *.uda file you wish to import as follows:
   a. Click Browse...
      The Open dialog opens.
   b. Use the Open dialog to specify the *.uda file to import.
   c. Click Open to close the dialog and load the file.
5. Click Apply.
   The Uploading Archive dialog opens to report the status of the transfer.
6. Verify that the imported database is now available for selection in the System Status > Database tab.

Deleting a Database

Ensure the database that you are about to delete is not currently loaded and in use by Ultricore.

To delete a database

1. In the Tree View, double-click the System Status node.
   The System interface displays in the DashBoard window.
2. Select the Database tab.
3. From the Delete Database Name menu, select the database you want to delete.
4. Click Database Delete.
Tallies

Ultricore accepts TSL UMD tally messages, and passes tally messages associated with a router source to the routed destination tally status.

Tally Types

Tally information may be associated with either routing system sources or destinations. Below is a summary of the implementations.

* Ultricore does not support Unicode characters.

Source Association

Tally IDs associated with routing system sources may serve two purposes:

1. Trigger any Ultriscape Multiviewers to display tally status (this requires that the Ultrix router has at least one Ultriscape Head enabled and configured).
2. Enable the tally status to be mapped to other Tally IDs based on router crosspoint status (the destination must have Tally ID associated and Tally Direct enabled).

To associate Tally IDs to sources in the database

• Use the Sources tab in the Database interface to associate the Tally IDs with logical sources in the Ultricore database.
• Choose the UMD “Tally Level”.

Destination Association

A Tally ID may be associated with routing system destinations. This enables any tally status associated with router sources to map to a different Tally ID associated with a router destination, based on current router crosspoint status.

• Use the Destinations tab in the Database interface to associate Tally IDs with logical destinations.
• When a source is switched to a destination on the selected Tally Level, Ultricore forwards the tally status of the source that is active on the destination, but the outbound TSL message has its display ID re-mapped to the display ID that is associated with the destination (Tally Redirect is set to ON).

* Ensure the destination Tally IDs do not conflict with Tally IDs asserted by other devices.

• When the TallyID is associated with an Ultriscape PiP (slotn.headx-pip[y] or slot0.pip[y]), any assertion on this TallyID will directly control the PiP tally visual elements and over ride any Tally associated with the PiP video source (Tally Redirect is set to OFF).
• For switcher support, the label of the connected source to a destination is sent as TSL tally text (TSL v3.1 only and when Tally Redirect is set to OFF).

Tally ID Format

Table 11.1 summarizes the format that the TSL protocol defines Display IDs that are associated with the tally displays.

<table>
<thead>
<tr>
<th>TSL Protocol Version</th>
<th>Tally ID Format</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>&lt;displayID&gt;</td>
<td>0 - 127</td>
</tr>
<tr>
<td>4.0</td>
<td>&lt;displayID&gt;</td>
<td>0 - 127</td>
</tr>
<tr>
<td>5.0</td>
<td>&lt;screenID&gt;:&lt;displayID&gt;</td>
<td>0 - 65535 : 0 - 65535</td>
</tr>
</tbody>
</table>
Keep the following in mind when using tally display IDs:

- TSL v3.1 and 4.0 protocol messages will always map to screen 0.
- When using TSL v5.0, the screen ID is assumed to be 0 if no screen ID is entered.
- If the controller is configured for either v3.1 or 4.0 protocol, it is not necessary to enter a screen ID.
- If the controller is configured for v5.0, it is only necessary to specify the screen ID if the tally controller is configured to send messages to tally displays on ‘screens’ other than the one with the screen ID of 0.

**Router Tally Output Operation**

Ultricore will track current Tally Status messages sent by a controller via Tally Display IDs associated with router sources. When a source (with a Tally ID) is routed to a destination (with a Tally ID), the router will emit Tally Status messages that reflect the current tally status of the Tally ID associated with the source, but that target the Display ID associated with the destination.

* An outgoing connection point must be defined for Ultricore to send the new status out.

**Example**

Consider the following source and destination configurations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Tally ID</th>
<th>Tally Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Src 1</td>
<td>5</td>
<td>T1:on</td>
</tr>
<tr>
<td>Src 2</td>
<td>10</td>
<td>T1:off</td>
</tr>
<tr>
<td>Destinations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dest 1</td>
<td>33</td>
<td>T1:xxx</td>
</tr>
</tbody>
</table>

For the above configuration settings, the following states are possible:

<table>
<thead>
<tr>
<th>Router Status</th>
<th>Tally Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Src 1 &gt; Dest 1</td>
<td>TallyID 33 = TallyID 5 (on)</td>
</tr>
<tr>
<td>Src 2 &gt; Dest 1</td>
<td>TallyID 33 = TallyID 10 (off)</td>
</tr>
</tbody>
</table>

**Tally Routed Mode**

The **Tally Routed** mode associates a tally with a specific router destination. Ultricore knows which input is routed to that output, and so can assert tally indicators wherever the input signal is displayed in an Ultriscape PiP. Refer to the *Ultrix User Guide* for details on this mode.

**Router Status over TSL UMD v3.1 Operation**

Ultricore can use the TSL UMD protocol version 3.1 to send the connected source database name as tally text. This requires you to:

1. Set up an outgoing TSL v3.1 connection.
2. Assign Tally ID numbers to the destinations you wish to track.
3. Ensure the Tally mode is set to None.
When a configured destination changes, the name of the new source will be sent as tally text. Ultrix will resend all the configured destinations every 1 minute, and immediately for any source change on a configured destination.

### Getting Started

You must first perform the following in the active database:

1. If RS-232 or RS-422 communication is required, add a serial connection point for either incoming or outgoing TSL protocol support.
2. Add an Ethernet connection point for outgoing TSL protocol support if not using the serial connection point described in step 1.
3. Enable Tally ID support.
4. Assign the Tally IDs to the sources.
5. Assign the Tally IDs to the destinations.
6. Set the Tally mode to None.

### Adding a Serial Connection Point

Connections may be created via the Edit > Add menu on the Connections tab in the database interface. Refer to the section “Defining a Serial Connection” on page 59 for details on adding a serial connection point to third-party devices.

### Adding an Ethernet Connection Point

An Ethernet connection point must be added for outgoing TSL protocol support. Incoming Ethernet services are natively available. Refer to the section “Incoming Ethernet Connections” on page 57 for details on adding an Ethernet connection point to third-party devices.

### Enabling Tally ID Support

To enable tally ID configuration in an active database, you must select the Enable Tally box on the System Status > Database tab, and then define the Status Level for tally operation.

### Enabling Tally ID Support in the Active Database

Once support is enabled, the Source and Destinations tabs display a Tally column which is used to assign Tally IDs to sources and/or destinations in the active database.

**To enable tally ID support in the active database**

1. In the Tree View, double-click the System Status node. The System interface displays in the Dashboard window.
2. Select the Database tab.
3. Verify that the active database is the one you wish to enable tally ID support for.
4. Select the Enable Tally box located in the Current Database area.

   The Source and Destinations tabs automatically update to display the Tally column.

### Defining the Status Level for Tally Operation

The Status Level specifies which level in the routing system is used to determine the current source switched to a given logical destination.
Generally this should be the main SDI Video level; which in most systems is the level to which the Ultriscape Head PiP and/or Router Video destinations are mapped in the system database.

**To define the status level for tally operation**

1. Double-click the **Levels** node located under the **Database** node.

   The **Levels** tab opens.

2. Use the **Tally Status Level** menu (located at the bottom of the **Levels** tab) to specify the Level in the active database that will determine the tally status.

![Levels tab](image)

**Assigning the Tally IDs to the Sources**

Assigning a Tally ID to an Ultricore source enables configured Ultriscape displays to show tally information.

![Sources tab](image)

1. Double-click the **Sources** node located under the **Database** node.

   The **Sources** tab opens.

2. Verify that the **Tally** column displays in the **Sources** tab. If it does not, refer to the section “**Enabling Tally ID Support in the Active Database**” on page 87.

3. Select the cell in the **Tally** column of the **Sources** tab to assign the Tally ID to.

4. Type the Tally ID you wish to assign to that source.

5. Press **Enter** to apply the change.

6. Repeat steps 3 to 5 for each source you wish to assign a Tally ID.

7. Click **Apply** at the bottom of the **Sources** tab to save your changes.

8. Before proceeding, ensure you verify which TSL protocol you are using. The protocol determines how you must enter the information into the **Tally** cells of the **Sources** tab. Refer to **Table 11.1** for details.

**To assign a Tally ID to a source in the database**

1. Double-click the **Sources** node located under the **Database** node.

   The **Sources** tab opens.

2. Verify that the **Tally** column displays in the **Sources** tab. If it does not, refer to the section “**Enabling Tally ID Support in the Active Database**” on page 87.

3. Select the cell in the **Tally** column of the **Sources** tab to assign the Tally ID to.

4. Type the Tally ID you wish to assign to that source.

5. Press **Enter** to apply the change.

6. Repeat steps 3 to 5 for each source you wish to assign a Tally ID.

7. Click **Apply** at the bottom of the **Sources** tab to save your changes.

**Assigning the Tally IDs to the Destinations**

Assigning a Tally ID to a standard Ultricore destination (e.g. not a PiP, audio mixer destination, etc.), enables currently routed source tally data to be output on a defined destination Tally ID, essentially routing the tally information along with the video.

* An outgoing connection point (either ethernet server or RS232/422 port) is required for Ultricore to emit tally information.
Before proceeding, ensure you verify which TSL protocol you are using. The protocol determines how you must enter the information into the Tally cells of the Destinations tab. Refer to Table 11.1 for details.

To assign a Tally ID to a destination in the database

1. Double-click the Destinations node located under the Database node.
   
   The Destinations tab opens.

2. Verify that the Tally column displays in the Destinations tab. If it does not, refer to the section “Enabling Tally ID Support in the Active Database” on page 87.

3. Select the cell in the Tally column of the Destinations tab to assign the Tally ID to.

4. Type the Tally ID you wish to assign to that destination.

5. Press Enter to apply the change.

6. Select the Tally Redirect box to enable the connected source Tally ID to be directed to this destination Tally ID.

7. Repeat steps 3 to 6 for each destination you wish to assign a Tally ID.

8. Click Apply at the bottom of the Destinations tab to save your changes.

Tally ID 51 follows the connected source associated tally. This requires an established outgoing connection point. (TSL UMD v3.1 and v4.0 TallyID format).

Tally Screen 4, ID 11 follows the connected source associate tally. This requires an established outgoing connection point. (TSL UMD v5.0 TallyID format).

The label of the source currently connected to DST 1 will be sent as TSL text on Tally ID 5. (TSL UMD v3.1 only).

When Tally ID 8 is asserted, any PiPs showing the same source as routed to DST 1 also have their tally asserted (if defined on the PiP). For example, if DST 1 has source CAM 1 routed to it, and one or more Ultriscape PiPs also had source CAM 1 displayed, the PiP would display tally data from Tally ID 8.

The label of the source currently connected to destination DST 1 will be output as text in a TSL 3.1 message with Tally ID 11. The Ultriscape PiP displays the tally information from Tally ID 11 regardless of the displayed source video.

The Ultriscape PiP displays tally information from the connected source associated Tally ID.

Figure 11.2 Example of Destinations with Assigned Tally IDs
Using Categories

Category navigation enables you to organize the sources, destinations, and/or levels in a router database to defined categories. There are three types of categories each with independent interfaces:

- **Group** — allows a user to organize database resources (sources, destinations, and levels) into folders and sub-folders with arbitrary group name. Resources may be assigned to multiple groups if required.
- **Cat/Index** — allows a user to piece together or build up the final resource name from category names and index identifiers.
- **Legacy** — allows compatibility with earlier RCP-QE models. Note that this is not available as a soft panel.

Group Categories Overview

* Group category mode is only available when using an Ultrix router or Ultricore running software version 2.0 or higher.

Group Category allows the user to organize database resources (sources, destinations, and levels) into folders and sub-folders with arbitrary group names. The group name is not required to match the resource names (it is similar to setting up file folders). This group categorization is useful when you need to group resources based on their operational regions, events, personnel credentials etc.

Example of a Group Category Setup

A user wants to arrange sources and destinations based on the types of sports the network broadcasts: baseball and football. The resources available are:

<table>
<thead>
<tr>
<th>Sources</th>
<th>Destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD1</td>
<td>SAT1</td>
</tr>
<tr>
<td>HD2</td>
<td>SAT2</td>
</tr>
<tr>
<td>HD3</td>
<td>SAT3</td>
</tr>
<tr>
<td>HD4</td>
<td>SAT4</td>
</tr>
<tr>
<td>HD5</td>
<td>SAT5</td>
</tr>
</tbody>
</table>

The resources need to be arranged into the following groups based on the sport type:

<table>
<thead>
<tr>
<th>Baseball</th>
<th>Football</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD1</td>
<td>HD4</td>
</tr>
<tr>
<td>HD2</td>
<td>HD5</td>
</tr>
<tr>
<td>HD3</td>
<td>SAT4</td>
</tr>
<tr>
<td>SAT1</td>
<td>SAT5</td>
</tr>
<tr>
<td>SAT2</td>
<td></td>
</tr>
<tr>
<td>SAT3</td>
<td></td>
</tr>
</tbody>
</table>
The Group Category interface would be used to arrange the resources into group categories:

![Group Categories Interface](image)

*Figure 12.1 Example of Group Categories Arrangement Based on Sport Type*

Once the group categories are defined, the user can perform switches, on a hard or soft panel, based on the group categories.

In the example below, the user uses RCP-QE18 to select the source labeled as **HD 3**.

![RCP-QE18 Selecting HD 3](image)

*Figure 12.2 RCP-QE18 — Selecting HD 3 via Category Mode*

In the example below, the user uses a soft panel to select the destination labeled as **SAT 1**.

![Ultricore Soft Panel](image)

*Figure 12.3 Ultricore — Selecting SAT 1 via a Soft Panel*
Configuring Group Categories

Group categories are arranged in a hierarchy and displayed in a tree view. This is similar to the file system on your PC where each group is represented as a folder or node, and the resources included in that group are nodes. Each type of resource is represented within the hierarchy as follows: sources are green, destinations are blue, and levels are red. (Figure 12.4)

Configuring group categories requires:
1. Creating group names
2. Assigning destinations, sources, and/or levels to groups
3. Configuring a soft panel or a hard panel for use

Creating Group Names

For each database, you can create multiple category groups and add sub-groups. For example, Figure 12.4 shows two main groups (MV, and SDI) where the SDI group also has four sub-groups (Slot1, Slot2, Slot3, and Slot4). Once you create your groups, resources can be added.

 عشرicore does not support Unicode characters.

ByUsername, the groups are organized alphabetically in the tree view.

To create a category group
1. Double-click the Group Categories node located under the Database node.

The Group Categories tab opens.
2. Select the **Group Categories** node.

3. Click **Add**.

   The **Add Group** dialog opens.

4. In the **Name** field, type a unique identifier for the new group.

5. Click **Apply**.

   The **Add Group** dialog closes and the new group is added as a child of the selected node.

   In the example below, a new sub-group “**Studio 1**” was created below the **SDI** group.

6. Click **Apply** in the bottom right corner to apply your changes.

**To create a category sub-group**

1. In the **Group Categories** tree, select the group icon that you wish to add a sub-group to.

2. Click **Add**.

   The **Add Group** dialog opens.

3. In the **Name** field, type a unique identifier for the new sub-group.

4. Click **Apply**.

   The **Add Group** dialog closes and the new sub-group is added to the Group Categories tree view.

   In the example below, a new sub-group “**Cameras**” was created within the **Studio 1** group.

5. Click **Apply** in the bottom right corner to apply your changes.
To move a group within the tree view

1. In the **Group Categories** tree, select the group you want to move.
   The **Move** dialog opens. Notice that the dialog header displays the name of the selected group to move.

2. Use the tree view in the dialog to select where to move the group to.
   In the example below the Audio sub-group was selected to move to the Studio 1 root.

3. Click **Apply**.
   The **Move** dialog closes and the group displays in the selected position of the tree view.

4. Click **Apply** in the bottom right corner to apply your changes.

**Auto Generating the Groups**

You can also choose to create a group based on the levels, sources, and destinations in your database or a combination. This requires the virtual labels for each resource to be consistent. For example, if all destinations are labeled as Dest x, a group will be created called “Dest” with each destination listed as a separate node.

* Auto generating a group will delete the groups currently listed in the Group Categories tree view.

**To auto generate a group**

1. Click **Auto Generate**.
   The **Auto Generate Groups** dialog opens.
2. Select the box to include the resources in the group.
3. Click **Apply**.
   
   The **Auto Generate Groups** dialog closes and the **Group Categories** tree updates.
4. Click **Apply** in the bottom right corner to apply your changes.

### Assigning Resources to a Group

Once a group is configured, you can assign resources (destinations, sources, levels).

**To assign a resource to a group**

1. In the **Group Categories** tree, select the group you want to add a resource to.

   The middle pane of the Group Categories interface updates to list the sub-groups or resources assigned to it.

   In the example below the area is blank because nothing is assigned to the selected group.

2. In the right pane, select the tab for the type of resource you wish to assign to the group.
In the example above, the **Destinations** tab was selected.

3. To assign a single resource, select the resource from the tab.

4. To select a series of resources:
   a. In the selected tab, select the first resource in the series you want to assign.
   b. Press and hold **Shift**.
   c. Click the last row in the series.

5. Click **Assign**.

The **Group Categories** tree updates to display the selected resources in the group.

In the example below, **Dest 1** to **Dest 6** were assigned to the **Studio 1** group.

6. Click **Apply** in the bottom right corner to apply your changes.

**To move a resource to another group**

1. In the **Group Categories** tree, select the resource you want to move.

2. Click **Move**.

   The **Move** dialog opens.

3. Select the new location for the resource.

4. Click **Apply**.

   The **Move** dialog closes.

   The **Group Categories** tree updates to display the resource in the new location. Notice that the resource is now removed from the original group.

5. Click **Apply** in the bottom right corner to apply your changes.

**To delete a resource from a group**

1. In the **Group Categories** tree, select the specific resource you want to delete from the group.

2. Click **Delete**.

   The **Delete** dialog opens.

3. Click **Yes**.
The **Delete** dialog closes.

The **Group Categories** tree updates to no longer display the resource in the group.

4. Click **Apply** in the bottom right corner to apply your changes.

**To delete a series of resources from a group**

1. In the **Group Categories** tree, select the specific group you want to edit.
   
   The middle pane of the Group Categories interface updates to list the sub-groups or resources assigned to it.

2. In the middle pane, select the first resource in the series you want to delete.

3. Press and hold **Shift**.

4. Click the last row in the series.

5. Click **Delete**.
   
   The **Delete** dialog opens.

6. Click **Yes**.
   
   The **Delete** dialog closes.

   The **Group Categories** tree updates to no longer display the resource in the group.

7. Click **Apply** in the bottom right corner to apply your changes.

**Managing the Groups**

★ You cannot rename resources using the options in the Group Categories interface.

**To rename a group**

1. In the **Group Categories** tree, select the specific group you want to rename.

2. Click **Rename**.
   
   The **Rename Group** dialog opens.

3. Use the **Name** field to enter a unique identifier for the selected group.

4. Click **Apply**.
   
   The **Rename Group** dialog closes.

   The **Group Categories** tree updates to display the new name for the group.

5. Click **Apply** in the bottom right corner to apply your changes.

**To delete a group**

1. In the **Group Categories** tree, select the group you want to delete.

2. Click **Delete**.
   
   The **Delete** dialog opens.

3. Click **Yes**.
   
   The **Delete** dialog closes.

   The **Group Categories** tree updates to no longer display the group.

4. Click **Apply** in the bottom right corner to apply your changes.
Cat/Index Categories Overview

Cat/Index category mode (also referred to as Category Index mode), allows alpha-numeric extensions to labels to 'build up' the final label selection. For example, VTR 1 - 6 may be expressed as a VTR label with numerical extensions 1 through 6. Similarly, alpha extensions may be used, for example, VTR A - E for VTRs A through E.

Destination and source names are split into substrings - the first substring traditionally referred to as the category, and subsequent substrings the indexes (e.g. Category VTR index 1 through 6). As source/destination names become more complex, an index may not be the final part of the selection name. For example, consider the source names CG TX 1 and CG TX 2; Cat/Index category mode may be configured so that a user selects CG, then TX, then either 1 or 2. This may be extrapolated to cover a large range of sources and destinations.

Example of a Cat/Index Category Setup

The resources available are:

The possible categories and indexes would be:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Indexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM_ (^a)</td>
<td>1 5 D</td>
</tr>
<tr>
<td>SAT_</td>
<td>2 A E</td>
</tr>
<tr>
<td>CG_</td>
<td>3 B RX_</td>
</tr>
<tr>
<td>EDIT_</td>
<td>4 C TX_</td>
</tr>
<tr>
<td>VTR</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) The "_" characters represents a blank space. This indicates the category will filter resources with a space in the name (e.g. the CAM_ category will allow resources named CAM 1, CAM 2 but not CAM3).

Once the Cat/Index categories are defined, the user can perform switches, on a hard or soft panel, based on the categories.

In the example below, a RCP-QE18 is used to select the source labeled as CAM 1. Notice that only the sources are available for the second button selection. In this example, the user would need to select TAKE to make the switch.
In the example below, an Ultricore soft panel is used to select the destination labeled as **CG RX 2**.

**Configuring a Cat/Index Category Setup**

Configuring Cat/Index categories requires:

1. Assigning categories
2. Assigning indexes
3. Configuring a soft panel or a hard panel for use

**Assigning Categories**

You can assign each destination to a specific category or multiple categories in a database. Using multiple categories enable you to filter the destinations, and organize them into logical groups. By default, categories are organized in alphabetical order.
To auto generate categories based on a database

1. Double-click the **Cat/Index Categories** node located under the **Database** node.

   The **Cat/Index Categories** tab opens.

2. Click **Generate**.

   The **Auto-Generate** dialog opens.

3. Click **Yes**.

   The **Auto-Generate** dialog closes.

   All previous categories are deleted from the **Categories** pane and new ones are listed based on the resource labels in your database.

4. Click **Apply**.

To manually create categories

1. In the **Cat/Index Categories** tab, click **Add**.

   The **Add Category** dialog opens.

2. Use the **Name** field to specify a unique identifier for the new category.

   The entry must match a resource name prefix.

   Some example entries would be:

   - “**CG_**” creates a category to categorize resources named **CG_xxxx** where **xxxx** is any index.
   - “**CG**” creates a category to categorize resources named **CGxxxx** where **xxxx** is any index.
   - “**cg**” will not categorize any resources as the category names are case sensitive.

3. Select the **Insert trailing space** box to represent a space character with the “**_**” symbol.

4. Click **Apply**.

   The **Add Category** dialog closes.

   The new category is listed in the **Categories** pane.

5. Click **Apply**.
Assigning Indexes

An index for a category enables you to filter resources. For example:

- "TX_" creates a sub-index of TX, meaning further entry is required on the control panel. This will filter resources named `<category name>TX xxxx` where `xxxx` is any index.
- "TX 1" creates an 'end-point' index, meaning TX 1 is the last substring and no further entry is required on a control panel. This will filter resources named `<category name>TX 1`. You cannot create an index of “TX 1” and a sub-index of “TX_”. You must choose one or the other.

As category names and indexes are entered, the affected Resources list in the interface will update to indicate which sources or destinations of a given category is accessible on a control panel. Select a category name in the categories list to see which source or destinations are in that category and filtered by the available Indexes list.

To manually create categories

1. Double-click the **Cat/Index Categories** node located under the **Database** node.
   
   The **Cat/Index Categories** tab opens.

2. Click **Add** (located next to the **Categories** pane).

   The **Add Category** dialog opens.

3. Use the **Name** field to specify a unique identifier for the new category.

   The entry must match a resource name prefix.
   
   For example:
   
   - "CG_" creates a category to categorize resources named `CG xxxx` where `xxxx` is any index.
   - "CG" creates a category to categorize resources named `CGxxxx` where `xxxx` is any index.
   - "cg" will not categorize any resources as the category names are case sensitive.

4. Select the **Insert trailing space** box to represent a space character with the “_” symbol.

5. Click **Apply**.

   The **Add Category** dialog closes.

   The new category is listed in the **Categories** pane.

6. Click **Apply**.

To create a category for a specific resource type

1. Double-click the **Cat/Index Categories** node located under the **Database** node.
   
   The **Cat/Index Categories** tab opens.

2. Click **Create** for the resource type you wish to filter.

   The **Create Category/Index** dialog opens.

3. Use the **Category Name** field to specify the characters for the new index filter.

   The entry must match a partial resource name.

4. Select the **Insert trailing space** box if you wish to include trailing spaces in the filter.

5. Click **Apply**.

   The **Create Category/Index** dialog closes.

6. Click **Apply**.

Assigning Index Filters

An index for a category enables you to filter resources. As category names and indexes are entered, the **Affected Resources** pane in the interface will update to indicate which sources or destinations of a given category is
accessible on a control panel. Select a name in the **Categories** pane to see which source or destinations are in that category and filtered by the available **Indexes** pane.

To assign an index filter

1. Double-click the **Cat/Index Categories** node located under the **Database** node. The **Cat/Index Categories** tab opens.
2. Click **Add** (located next to the **Indexes** pane). The **Add Index** dialog opens.
3. Use the **Name** field to specify a new index filter.
   * The entry must match a partial resource name.
   
   For example:
   * “**TX_**” creates a sub-index of TX, meaning further entry is required on the control panel. This will filter resources named `<category name>TX_xxxx` where `xxxx` is any index.
   * “**TX 1**” creates an ‘end-point’ index, meaning TX 1 is the last substring and no further entry is required on a control panel. This will filter resources named `<category name>TX 1`.
   * Note that you would not create an index of “TX 1” and a sub-index of “TX_”. You must choose one or the other.
4. Click **Apply**.
   
   The **Add Index** dialog closes.
   
   The new index filter is listed in the **Indexes** pane.
5. Click **Apply**.

To assign an index filter for a specific resource type

1. Double-click the **Cat/Index Categories** node located under the **Database** node. The **Cat/Index Categories** tab opens.
2. Click **Create** for the resource type you wish to filter.
   
   The **Create Category/Index** dialog opens.
3. Use the **Index Name** field to specify a unique identifier for the new index filter.
   * The entry must match a partial resource name.
4. Select the **Insert trailing space** box if you wish to include trailing spaces in the filter.
5. Click **Apply**.
   
   The **Create Category/Index** dialog closes.
6. Click **Apply**.

Legacy Categories Overview

Legacy Category mode allows some category functionality on older RCP-QE control panels (17 button). There is no soft panel for Legacy Category Mode. Legacy mode is similar in operation to Group category mode with some elements of the index functionality of the Cat/Index Category mode.

Legacy mode limitations;
* A destination or source cannot be in more than one category
* Only numerical indexes are supported
For More Information on...

- the legacy category mode, refer to the *RCP-QE User Guide*.

Configuring Legacy Categories

Source and destination selection may be achieved in two ways: direct selection or numerical index entry. The setup of the Ultricore Category tables determines the operational functionality.

Category Direct Selection Mode

*Figure 12.7* illustrates the Categories configured in the Ultricore database for direct selection mode.

*Figure 12.7  Ultricore — Entries in the Categories Tab*

*Figure 12.8* illustrates direct destination entries and the resulting available destinations in the selected category.

*Figure 12.8  Ultricore — Resulting Operation*

To set up direct selection in categories

1. Display the **Categories** tab in DashBoard for the Ultricore as follows:
   a. Expand the **Database** node in the Tree View.
   b. Double-click the **Categories** node.
2. Click **Destination** or **Source** as required.
3. Type the text for a category name in column ‘Category 1’ for each row that is required to be in that category.
4. Copy the items in the name column to the Category 2 column.

You can use keyboard shortcuts such as **Ctrl+C** (copy) and **Ctrl+V** (paste) and **Shift+click** to select a range for ease of data entry.

This will result in those rows being within the category you named in column Category 1.

Numerical Index Entry Mode

*Figure 12.9* illustrates the Categories configured in the Ultricore database for numerical entry mode.
Because we have set the VTRs numbered 6 through 10 in Figure 12.9, the Ultricore expects a two digit entry signified by the two underlines on the button next to the category name. As only numerals 1 or 0 are the only possible entries to make for the first digit, the Ultricore has blanked the invalid entry keys. (Figure 12.10)

To select VTR 6, press 0 then the remaining available numbers will become available, then press 6 to finish the selection.

Creating a Soft Panel with Categories

Once you have defined your categories and tags for each level of a database, you can create a custom soft panel using the category settings as a basic for arranging the sources, destinations, and levels.

For More Information on...
- managing your Category panels, refer to the section “Using Category Panels” on page 125.
Soft Panels in DashBoard

A soft panel is a software implementation of a physical remote control panel (RCP). The soft panel configurations are part of a database so any instance of DashBoard connecting to a given Ultricore has the defined soft panels available. You can customize a soft panel by defining the sources, destinations, levels, and/or salvos that will be available on the panel interface. Ultricore provides the following types of soft panels for control;

- **Matrix** — the destinations and sources are organized into a grid layout.
- **MultiBus** — the destinations and sources are organized into separate a rows (buses) of buttons.
- **Cat/Index Category** — the resources are defined using a defined set of search criteria (indexes).
- **Group Category** — the destinations and sources are grouped by pre-defined categories.
- **Ultritouch PB** — the resources are organized into a customized layout that is pre-sized for an Ultritouch hard panel. Refer to the *Ultritouch + Ultricore User Guide* for details.
- **Push Button** — similar layout and features of the Ultritouch PB panel but sized for use on a computer monitor.

Before You Begin

Keep the following in mind when managing your soft panels in DashBoard:

- Soft panels require the setup of the database source/destinations/levels and port assignment to be complete.
- If the database changes (source/destination/level/salvo addition or deletion), you will need to edit the soft panel configuration to ensure the correct sources/destinations/levels/salvos are visible.
- Ultricore does not support Unicode characters.

For More Information on...

- databases, refer to the chapter “Database Configuration” on page 63.

Soft Panels Overview

A soft panel is created using the options in the Panels interface for your database. Soft panels are listed as sub-nodes under the Soft Panels node in the Tree View of DashBoard. Double-click a sub-node to display the corresponding soft panel in the DashBoard window. The hierarchy of the nodes in the tree is determined by their Panel ID which is assigned when the soft panel is created in the database. In Figure 13.1 there are seven soft panels in the tree view.

![Figure 13.1 Example of a Soft Panels Tree View](image)

A soft panel can be as simple or complex in its layout as you require. The Panels interface enables you to specify the number of destinations, sources, levels, and salvos displayed on your panel. You select a soft panel type and specify the elements of the soft panel including giving the panel a unique name.
For More Information on...

- Matrix panels, refer to the section “Using Matrix Panels” on page 116.
- Multibus panels, refer to the section “Using MultiBus Panels” on page 122.
- Category panels, refer to the section “Using Category Panels” on page 125.
- Ultritouch PB panels, refer to the *Ultritouch + Ultrix User Guide*.
- Push Button panels, refer to the section “Using Push Button Panels” on page 129

Enabling Machine Control

Typically, the ports on a data router (such as the NK-M series routers) are bi-directional where there is both a transmit (input to output) and reciprocal receive connection that is made for each port. For example, a switch from port 1 to port 2 involves a forward path (from port 1 input to port 2 output) and the reciprocal connection from (port 2 input to port 1 output).

In some cases however, there is a need to connect on the port's input to several ports’ output (e.g. one device commanding many target devices) without making the reciprocal connection. This allows the commanding device to just broadcast commands and not receive from the many devices it communicates with.

When configuring a soft panel, you have the option to add a Machine Control button to the panel. When selected on the panel, this Machine Control button sends a Take request directed to an NK-M series data router to automatically make the reciprocal port switch. On a video router, the connection is all one way from an input port to an output port (e.g. such as from IN 1 to OUT 2).

Creating a Soft Panel

Soft panels are listed under the Soft Panels node in a hierarchy as determined by their Panel ID. When you create a new soft panel, you select from the three existing soft panel types: Matrix, MultiBus, and Categories. You then assign a Panel Name and ID to display in the tree view using the nomenclature “Panel Name [#]” where [#] is the Panel ID.

- A Default Panel is available that is a MultiBus style with 1 level, 4 destinations, and 4 sources.

To create a soft panel

1. Double-click the Panels node located under the Database node.

   The Panels tab opens.

   ![Panels tab](image)

   2. Click Edit > Add.

   The Add Panel dialog opens.
3. Type a unique identifier in the **Name** field. This will be used to identify the panel in the tree under the Soft Panels node.

4. Use the **Style** menu to specify the type of panel to create. Choose from the following:
   - **Matrix** — Creates a soft panel that organizes the destinations and sources in a grid layout.
   - **MultiBus** — Creates a soft panel where destinations and sources are organized into separate buses.
   - **Category** — Creates a soft panel where destinations and sources are arranged as determined by the **Category** tab. Refer to the chapter “Using Categories” on page 91 for more information.
   - **Push Button** — Creates a soft panel that organizes the destinations and sources in a distinct vertical layout.
   - **Ultritouch PB** — Creates a soft panel that is used on an Ultritouch hard panel. Refer to the *Ultritouch + Ultracore User Guide* for details.

5. Click **Apply** to save your settings and close the Add Panel dialog.

   The new panel name is added to the **Save Panels** list of the **Panels** tab and automatically selected in the tab for editing.

6. Select the **Info** tab.

7. Use the **Panel ID** menu to determine the position of the panel in the Soft Panels tree where a value of “1” is the highest priority (and listed at the top).

   Ensure that the new soft panel does not use the same **Panel ID** as a previously saved panel.

8. Use the **Description** field to provide a textual summary of the panel.

9. Use the **Protection Operation** menu to provide options for preventing crosspoint switches. Choose from the following:
   - **Enable** — The **Lock**, **Protect**, and **Free** buttons display on the soft panel. Refer to the section “Using Matrix Panels” on page 116 or “Using MultiBus Panels” on page 122 for a description of these buttons.
   - **Disables** — The **Lock**, **Protect**, and **Free** buttons do not display on the soft panel. These protection options are not available for the soft panel.

10. Use the **Take Operation** menu to configure the **Take** button for the soft panel. Choose from the following:
    - **Confirm** — Displays a **Take** button on the soft panel. You must select the **Take** button to perform a crosspoint switch.
    - **Direct** — The soft panel does not display a **Take** button. A crosspoint switch occurs automatically after each destination/source selection made by the user on the soft panel.

11. If you selected MultiBus in step 4, use the **Selection Operation** menu to enable multiple crosspoint/level selections and display the **Multi Select** button. Choose from the following:
    - **Single** — Disables this feature. The **Multi Select** button does not display on the soft panel.
    - **Multi** — The **Multi Select** button displays on the soft panel.

12. Use the **Machine Control** menu to control whether a Take request directed to an Ross NK-M series data router automatically makes a reciprocal port switch. Choose from the following:
    - **Enable** — Displays a **Machine Control** button on the soft panel. You must select the **Machine Control** button to enable the reciprocal port switch on the NK-M series router.
    - **Disable** — The soft panel does not display a **Machine Control** button. This is the default setting.

13. If you set the **Style** to **Push Button**, proceed to the section “Configuring a Push Button Soft Panel” on page 131.

14. Click **Apply** to save your new soft panel.

   The new panel displays in the Soft Panels tree. In the example below, there are seven panels in the tree view. Note that the Priority ID is the value displayed in the [#] brackets.
15. Continue to the next sections to add levels, destinations, sources, and salvos to your soft panel as required.

Levels for the Soft Panel

You can specify the total number of levels available on the soft panel to the user. For example, if you set the Viewable levels to 6 but have assigned 8 levels to the panel, only the first six levels in the Assigned list are displayed.

To specify the levels for the soft panel

1. Double-click the soft panel name from the Panels list in the left toolbar of the Panels tab.
2. Select the Levels tab.
3. Use the Viewable levels field to specify the total number of levels for the soft panel.
4. To add a level to the soft panel:
   a. From the Available list, select the level(s) you wish to add to the soft panel.
   b. Click .

The Assigned list updates to include the selected level(s).

5. To assign all the available levels in the database to the soft panel, click ➡️.

6. To assign multiple levels to the soft panel:
   a. From the Available list, select the first level you wish to add to the soft panel.
   b. Press Shift.
   c. From the Available list, select the other level(s) you wish to add to the soft panel.
   d. Click ➡️.

The Assigned list updates to include the selected levels.
7. Use the provided buttons beside the **Assigned** list to determine the order in which the levels are displayed on the soft panel.

8. Click **Apply** at the bottom of the Panels tab to save your settings.

**Destinations for the Soft Panel**

You can create a soft panel with a specified number of destinations and determine the order in which they are displayed in the crosspoint row of the panel. For example, the database may have 32 destinations but you only want to make the first 4 outputs selectable on the crosspoint row of your soft panel. You would then set the Viewable destinations to 4. You can also specify the order in which the destination buttons are displayed on the soft panel.

**To specify the destinations for the soft panel**

1. Double-click the soft panel name from the **Panels** list in the left toolbar of the **Panels** tab.
2. Select the **Destinations** tab.
3. Use the **Viewable destinations** field to specify the total number of destinations for the soft panel.
4. To add a destination to the soft panel:
   a. From the **Available** list, select the destination(s) you wish to add to the soft panel.
   b. Click ➔.
      The **Assigned** list updates to include the selected destination(s).
5. To assign all the available destinations in the database to the soft panel, click ➔.
6. To assign multiple destinations to the soft panel:
   a. From the **Available** list, select the first destination you wish to add to the soft panel.
   b. Press **Shift**.
   c. From the **Available** list, select the other destination(s) you wish to add to the soft panel.
   d. Click ➔.
      The **Assigned** list updates to include the selected destinations.
7. Use the provided buttons beside the **Assigned** list to determine the order in which the destinations are displayed on the soft panel.
8. Click **Apply** at the bottom of the Panels tab to save your settings.
Sources for the Soft Panel

You can create a soft panel with a specified number of sources and determine the order in which they are displayed in the crosspoint row of the panel. For example, the router may have 64 sources but you only want to make the first 12 inputs selectable on the crosspoint row of your soft panel. You could set the Viewable sources to 12 or assign only those 12 inputs to the soft panel. You can also specify the order in which the source buttons are displayed on the soft panel.

To specify the sources for the soft panel

1. Double-click the soft panel name from the Panels list in the left toolbar of the Panels tab.
2. Select the Sources tab.
3. Use the Viewable sources field to specify the total number of sources for the soft panel.
4. To add a source to the soft panel:
   a. From the Available list, select the source(s) you wish to add to the soft panel.
   b. Click .

   The Assigned list updates to include the selected source(s).

5. To assign all the available sources in the database to the soft panel, click .
6. To assign multiple sources to the soft panel:
   a. From the Available list, select the first source you wish to add to the soft panel.
   b. Press Shift.
   c. From the Available list, select the other source(s) you wish to add to the soft panel.
   d. Click .

   The Assigned list updates to include the selected sources.
7. Use the provided buttons beside the Assigned list to determine the order in which the sources are displayed on the soft panel.
8. Click Apply at the bottom of the Panels tab to save your settings.

Salvos for the Soft Panel

Before you can add salvos to a soft panel, you must configure them as outlined in the section “Creating Salvos” on page 137.
To specify the salvos available on the soft panel

1. Double-click the soft panel name from the Panels list in the left toolbar of the Panels tab.
2. Select the Salvos tab.

3. Use the Viewable salvos field to specify the total number of salvos for the soft panel.
4. To add a salvo to the soft panel:
   a. From the Available list, select the salvo you wish to add to the soft panel.
   b. Click ➔.

      The Assigned list updates to include the selected source(s).

5. To assign all the available salvos in the database to the soft panel, click ➔.
6. To assign multiple salvos to the soft panel:
   a. From the Available list, select the first salvo you wish to add to the soft panel.
   b. Press Shift.
   c. From the Available list, select the other salvo(s) you wish to add to the soft panel.
   d. Click ➔.

      The Assigned list updates to include the selected salvos.

7. Use the provided buttons beside the Assigned list to determine the order in which the salvos are displayed on the soft panel.
8. Click Apply at the bottom of the Panels tab to save your settings.

Copying a Soft Panel

To copy a soft panel

★ Ensure the soft panel is currently not in use.

1. Double-click the Panels node located under the Database node.

   The Panels tab opens.
2. From the Panels list in the left toolbar, select the soft panel to copy.
3. Click Edit > Copy.
4. Click **Edit > Paste**.
   
The **Panels** tab updates to display the settings for the selected soft panel. New soft panels are automatically named “**New Panel #**” where # is an auto-generated value.

5. Select the **Info** tab.

6. Type a unique identifier in the **Panel Name** field. This will be used to identify the panel in the tree under the Soft Panels node.

7. Click **Apply** at the bottom of the Panels tab to save the new soft panel. This also helps to ensure that you do not mistakenly edit the original panel that you copied.

**Editing a Soft Panel**

Once you edit a soft panel, you must re-load the soft panel if it was in use prior to the edit.

* Ensure the soft panel is currently not in use.

**To edit a soft panel**

1. Double-click the **Panels** node located under the **Database** node.

   The **Panels** tab opens.

2. From the **Panels** list in the left toolbar, select the soft panel to edit.

   The **Panels** tab updates to display the settings for the selected soft panel.

3. Edit the settings for the panel using one of the following procedures:

   * You cannot edit the **Panel Style** of a soft panel.
     
   - “**To specify the levels for the soft panel**” on page 110
   - “**To specify the destinations for the soft panel**” on page 111
   - “**To specify the sources for the soft panel**” on page 112
   - “**To specify the salvos available on the soft panel**” on page 113

4. Click **Apply** at the bottom of the **Panels** tab to save the new settings.

5. If a dialog opens to remind you that the affected soft panel is currently in use:

   a. Click **OK** to close the dialog.

   b. Perform the procedure “**To re-load a soft panel**”.

**To re-load a soft panel**

1. Close the newly edited soft panel as follows:

   a. Locate the tab for the soft panel in the DashBoard client window.

   b. Click ✗ to close the tab.

2. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore.

3. Double-click the node for the newly edited soft panel.

   The tab for the selected soft panel opens.

**Deleting a Soft Panel from the Database**

* Ensure the soft panel is currently not in use.

**To delete a soft panel from the database**

1. Double-click the **Panels** node located under the **Database** node.

   The **Panels** tab opens.
2. Select the soft panel name from the **Panels** list in the left toolbar.
3. Click **Edit > Delete**.
4. Click **Apply** at the bottom of the **Panels** tab.

## Using the Lock and Protect Features

Whether your soft panel includes the Lock and Protect features depends on the panel type. The Matrix and Category panels can include the **Lock**, **Protect**, and **Free** buttons. The MultiBus panels can include only the **Lock** button. Soft panels that have their **Protection Operation** set to **Enable** also display these buttons (depending on the panel type).

**For More Information on...**
- the **Protection Operation**, refer to Table 19.26 on page 211.

### Using a Lock

If your soft panel includes a **Lock** button, you have the option to protect source/level and destination/level pairs. When another control panel or DashBoard client attempts to switch that combination, the request will be denied.

**To lock a source/level pair**
1. Display the soft panel in the DashBoard window.
2. Select the source/level pairs from the soft panel interface.
3. Click **Lock**.

The label on the button changes to **Unlock** and the button remains lit.

**To lock a destination/level pair**
1. Display the soft panel in the DashBoard window.
2. Select the destination/level pairs from the soft panel interface.
3. Click **Lock**.

The label on the button changes to **Unlock** and the button remains lit.

**To clear a lock**
- Click the **Unlock** button.

The label on the button changes to **Lock** and the button remains lit.

### Using a Protect

A soft panel can be locked by clicking the **Protect** button. The button is lit until pressed again. A protect alarm message is displayed in the System Status tab when an output is protected.

This feature protects the currently selected destination/level pair from use by other sources, as well as from other linked panels. The **Protect** button is especially useful in instances where a destination must be held after a switch has been made.

**To apply a protect**
- Click **Protect**.

The button is lit. Selecting crosspoints will not take effect and the panel does not update when buttons are pressed.

**To clear a protect**
- Click **Protect**.

The button is no longer lit and crosspoint switches can be initiated.
Using Matrix Panels

Matrix panels enable you to perform direct take transitions, and local salvo definitions using a grid of sources and destinations.

Panel Interface Overview

Each level is represented as a button in the color defined in the current database. Notice that the crosspoints are represented in the same color as the applicable level.

![Figure 13.2 Example of a Matrix Panel](image)

1. Crosspoints

   The number of Destinations and Sources available in the matrix is specified using the Destinations and Sources interfaces. Click within the matrix or click the Destination and Source buttons to select the crosspoints for switching the selected levels. In Figure 13.2 crosspoints were selected using the Advanced > Diagonal Presets option.

2. Levels Button

   Click a level button to include the level in the next crosspoint switch. A lit button indicates that the corresponding level will be included in the next transition. The color and name of the button are specified using the Levels interface. Figure 13.2 illustrates a Matrix panel with nine levels selected.

3. Follow Button

   Click this button to select all crosspoints in the matrix. Clicking TAKE after clicking Follow will then switch all crosspoints at the same time on all available levels.

4. TAKE Button

   Click this button to execute the switch between crosspoints. If you are using a soft panel with the Take Operation set to Direct, a TAKE button is not displayed because the transitions will occur automatically after a crosspoint switch is selected.

5. Lock Button

   Click this button to prevent switching of the selected crosspoints. If you are using a soft panel with the Protection Operation set to Disable, the Lock and Protect buttons are not displayed.

6. Protect Button

   Click this button to prevent switching of the selected crosspoints except in the DashBoard client session the Protect was initiated in.
7. Free Button
   Click this button to end a lock or protect on the selected crosspoints.

8. Salvo Button
   Click this button to display the Salvo menu. Refer to the “Salvo Menus” on page 224 for information on the menu options.

9. Advanced Button
   Click this button to display the Advanced menu. Refer to the section “Advanced Menus” on page 209 for information on the menu options.

10. Machine Control Button (not shown)
    If you are using a soft panel with the Machine Control set to Enabled, the MACHINE CONTROL button is displayed. Refer to the section “Enabling Machine Control” on page 108 for details on this button.

Crosspoint Switches via a Matrix Panel

Crosspoint selections can be made using the cross-hairs or clicking the required Destination and Source buttons on the panel. This section provides instructions using the cross-hairs for crosspoint selections.

To make a crosspoint switch using a single level
1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.
2. Double-click the node for a matrix soft panel.
   The Matrix Panel tab opens.
3. Select a level from the left toolbar.
   The button is now lit.
4. Select the source and destination intersection inside the matrix.
   The selection is represented as an icon set in the color that matches the level. In the example below, Level 2, Src 4 and Dest 2 are selected. The TAKE button is now lit.

5. Click Take.
   The icon on the matrix is solid in the color that matches the level and the TAKE button is no longer lit.
To make a crosspoint switch between multiple sources and destinations on a single level

1. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore.
2. Double-click the node for a matrix soft panel.
   The **Matrix Panel** tab opens.
3. Select a level from the left toolbar.
4. Select the first source and destinations inside the matrix.
5. Select the additional crosspoints to switch.

   In the example below, **Level 2** is selected but seven crosspoint switches are also selected (each is represented with a green icon on the matrix).

6. Click **TAKE**.

   The icons on the matrix is solid in the color that matches the level and the **TAKE** button is no longer lit.

To make a crosspoint switch on multiple levels

1. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore.
2. Double-click the node for a matrix soft panel.
   The **Matrix Panel** tab opens.
3. Select each level from the toolbar or select **Follow** to include all levels.
4. Select the first source and destination inside the matrix.
5. Select the additional crosspoints to switch.

   When multiple levels are selected, the circle on the crosspoint is divided into colored sections with each section representing a level. In the example below, Levels 2, 4, and 6 are selected with multiple crosspoint selections on the matrix.
6. Click **Take**.

   The icons on the matrix are solid in the color that matches the level and the **TAKE** button is no longer lit.

**To perform a crosspoint switch on multiple destinations with a single source**

1. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore.
2. Double-click the node for a matrix soft panel.
   
   The **Matrix Panel** tab opens.
3. Select each level from the toolbar or select **Follow** to include all levels.
4. Click **Select All** located at the top left corner of the interface.
   
   All the **Dest** buttons on the Matrix panel are now lit and selected. The **Select All** button is labeled **Clear All**.
5. From the top toolbar, select the **Src** button to switch.
   
   The matrix updates to indicate the crosspoint switches that will occur on the next transition to the same source. The **TAKE** button is now lit. For example, Levels 2, 4 and 6 are selected and all destinations switch to **Src 4**.

6. Click **TAKE**.

   The icons on the matrix are solid in the color that matches the level and the **TAKE** button is no longer lit.
Using a Default Preset

The Advanced menu provides two pre-configured presets: Diagonal and R-Diagonal.

Diagonal Presets

Crosspoint selection is organized into a diagonal line that starts with the top left corner of the matrix (e.g. **Src 1** and **Dest 1**), continues in single step intervals (e.g. **Src 2** and **Dest 2**, **Src 3** and **Dest 3** etc.) and ends with the bottom right corner of the matrix (e.g. **Src 16** and **Dest 16**).

To use the Diagonal Preset

1. Select each level from the toolbar or select **Follow** to include all levels.
2. Click **Advanced** > **Diagonal Presets**.
3. Click **TAKE**.

R-Diagonal Presets

Crosspoint selection is organized into a diagonal line that starts with the top right corner of the matrix (e.g. **Src 16** and **Dest 1**), continues in single step intervals (e.g. **Src 15** and **Dest 2**, **Src 14** and **Dest 3** etc.) and ends with the bottom left corner of the matrix (e.g. **Src 1** and **Dest 16**).

To use the R-Diagonal Preset

1. Select each level from the toolbar or select **Follow** to include all levels.
2. Click **Advanced** > **R-Diagonal Presets**.
3. Click **TAKE**.

**Creating an Automatic Switching Loop**

The Automation feature enables you to set up a crosspoint and create a continuous switch loop using the specified crosspoints.

**To set up an automated crosspoint selection loop**

1. Click **Advanced > Setup Automation**.

   The Automation Setup menu opens.

2. Use the **Repeat Interval** field to specify the number seconds the crosspoint switch will continuously loop for.
3. Use the **Levels** menu to specify the levels the crosspoint will include.
4. Use the **Destinations** menu to select the outputs on the router.
5. Use the **Sources** menu to select the input signals to route to the output for the switch.
6. Click **Start**.

   The menu closes and the crosspoint switch begins. The loop continues for the length of time specified in step 2.

   To stop the loop, click **Advanced > Stop Automation**.
Clearing the Matrix Selections
You can choose to clear all the crosspoint selections, or only the selected Destinations.

To clear all crosspoint selections on the matrix
• Click Advanced > Clear All Presets.

To clear only the Destination selections on the matrix
• Click Advanced > Clear Dest Presets, or
• Click Clear All.

Using MultiBus Panels
The MultiBus panel provides breakaway control and status monitoring of several destinations simultaneously.

Panel Interface Overview
Use the MultiBus Panel to send a source to multiple destinations.

![MultiBus Panel](image)

**Figure 13.3 Example of a MultiBus Panel**

1. Destination Bus
   Each button in this crosspoint row represents a configured output for the selected router. Selecting a button includes the destination in the next crosspoint switch. The number of destinations and label for each button is defined by its entry in the Destinations interface. A destination selected to be included in the next crosspoint switch will have a lit button. For example, Dest 2 is selected in Figure 13.3.

2. Lock Button
   Click this button to prevent switching of the selected crosspoints. If you are using a soft panel with the Protection Operation set to Disable, the Lock button is not displayed.

3. Take Button
   Click this button to execute the switch between the selected crosspoints. If you are using a soft panel with the Take Operation set to Direct, a TAKE button is not displayed because the transitions will occur automatically after a crosspoint switch is selected.
4. Preset Button

When this button is lit, a new crosspoint switch is set up on the soft panel. At least one source, once destination, and one level are selected on the interface (the Dest and Src buttons are lit blue to indicate their inclusion in the next switch).

* When this button is not lit, the crosspoint switch setup is still valid but is no longer indicated on the soft panel.

If you are using a soft panel with the Take Operation set to Confirm, the crosspoint switch will take effect the next time the TAKE button is selected. If you are using a soft panel with the Take Operation set to Direct, a TAKE button is not displayed because the transitions occurred automatically (hot-punch operation).

5. Clear Button

Clicking this button clears the selections made for the next crosspoint switch in the soft panel interface.

6. Multi Select Button

Clicking this button enables you to perform a switch on multiple crosspoint combinations. If you are using a soft panel with the Selection Operation set to Single, a Multi Select button is not displayed.

7. Level Button(s)

Click a level button to include the level in a crosspoint that you are configuring in the matrix. A lit button indicates that the corresponding level will be included in the next transition. The color and name of the button are specified using the Levels interface. Figure 13.3 illustrates a MultiBus panel with three levels selected.

8. Follow Button

Click this button to select all levels in the matrix. If you are using a soft panel with the Take Operation set to Confirm, pressing Take after pressing Follow will then switch all crosspoints at the same time on all available levels.

9. Source Bus

Each button in this crosspoint row represents a configured input for the selected router. Selecting a button includes the source in the next crosspoint switch. The label for the button is defined by its entry in the Sources tab of the Database. A source selected to be included in the next crosspoint switch will have a lit button. For example, in Figure 13.3 the Src 1 is selected for the next transition while the Src 4 is the current source in use.

10. Machine Control Button (not shown)

If you are using a soft panel with the Machine Control set to Enabled, the MACHINE CONTROL button is displayed. Refer to the section “Enabling Machine Control” on page 108 for details on this button.

Crosspoint Switches via a MultiBus Panel

The layout of a MultiBus panel is similar to a production switcher layout where the destinations are organized into a horizontal row of buttons near the top of the panel and the sources are on the row near the bottom.

To make a crosspoint switch on a single level using a MultiBus Panel

1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.
2. Double-click the node for a MultiBus Panel.
   The MultiBus Panel tab opens.
3. From the left toolbar, select the button for the level you want to perform the crosspoint switch.
4. Select a Src button from the Source bus located at the bottom of the interface.
   The button is now lit.
5. Select the Dest button(s) from the Destination bus located at the top of the interface.
6. Select a Dest button from the Destination bus located at the top of the interface.
   The Dest, Preset, and Take buttons are now lit.
In the example below, **Level 2** is selected and **Dest 4** will switch with **Src 6**. The **Src 1** button is lit green to indicate that Source 1 was used in the last crosspoint switch.

To make a crosspoint switch using multiple levels

1. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore.
2. Double-click the node for a MultiBus Panel.
   - The **MultiBus Panel** tab opens.
3. Select each level from the toolbar or select **Follow** to include all levels.
   - When multiple levels are selected, the center row of the panel reports the level status using a horizontal bar to represent the level.
4. Select a **Src** button from the Source bus located at the bottom of the interface.
   - The button is now lit.
5. Select the **Dest** buttons for the outputs to include in the crosspoint switch.
   - The **Dest, Preset**, and **Take** buttons are now lit. In the example below, **Follow** is selected and **Dest 5** will switch with **Src 4** on all levels.
6. Click **TAKE**.
Using the Multi Select Function

A MultiBus panel displays a Multi Select button on the vertical toolbar of the panel.

To use the Multi Select

1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.
2. Double-click the node for a MultiBus Panel.
   The MultiBus Panel tab opens.
3. Select the level(s) from the left toolbar.
4. Click Multi Select.
   The Multi Select button is now lit.
5. Select the Dest buttons from the Destination bus located near the top of the interface.
   The Dest buttons are now lit.
6. Select a Src button from the Source bus located near the bottom of the interface.
   The Src, Preset, and TAKE buttons are now lit. In the example below, Levels 2 and 3 are selected, and Dest 2, 3, and 5 will switch with Src 6.
7. Click TAKE.

Using Category Panels

Category panels organize sources, destinations and levels based on the settings in the Category tab. There are two types of category panels: group and classic. This section outlines both types.

For More Information on...

• legacy categories, refer to the RCP-QE User Guide.
Panel Interface Overview

The soft panel interface for each category type is similar in layout and available buttons.

![Image of a soft panel interface](image)

**Figure 13.4 Example of a Group Category Soft Panel for an Ultricore Router**

1. **Group Window**

   This area of the soft panel interface may include the following buttons:
   
   - **SOURCES, DESTINATIONS** Buttons — Clicking one of these buttons updates the button matrix to display the sources or destinations available as per the selected category. The button labels update to display the source or destination labels.
   - **BACK** Button — Click this button to return the navigation to the previous category selection (back one level).
   - **RESET** Button — Click this button to clear all selections on the interface. This button is only available on the Classic Category soft panels.
   - **SELECT** Button — This button is only available on the Classic Category soft panels.
   - **TOP** Button — This button is only available on the Group Category soft panels.

   *When using a Group Category soft panel and the **Info > Non-group Resources** setting is set to **Hide**, only the resources assigned to a group are displayed on the soft panel.*

2. **Status Window**

   The bottom right corner of each soft panel includes a status window. For each level in the list of available levels, a corresponding status indicator display will indicate the current source for the currently selected destination.

   The following buttons are located on the right-side of the soft panel interface:
   
   - Individual Level Buttons — Click a level button to include the level in a crosspoint that you are configuring in the matrix. A lit button indicates that the corresponding level will be included in the next transition. The color and name of the button are specified using the **Levels** interface.
   - **CURRENT** button — This button updates the level display area to show the current status for all displayed levels.
   - **FOLLOW** Button — Click this button to select all levels in the matrix. Clicking **TAKE** after clicking **Follow** will then switch all crosspoints at the same time on all available levels.
   - **PENDING** button — This button updates the level display area to show status for the currently pending operation (if selected source has not been switched yet. e.g. before **TAKE** is pressed). The user may clear individual source selections by selecting the levels to be cleared, then pressing **CLEAR SRC SEL** button.
   - **CLEAR** Button — Click this button to clear all selections on the interface.
USER button — This button shows current lock/protect status of each levels (and the soft panel name that is currently owned it). Since the soft panel does not recognize the names of remote control panels (RCP) to retrieve their name, a “owner #” name is used.

3. TAKE Control Area

The bottom toolbar of the soft panel interface includes the following buttons:

- **PROTECT** Button — Click this button to prevent switching of the selected destination except by the panel that initiated the protect. If you are using a soft panel with the Protection Operation set to Disable, the Protect button is not displayed.

- **LOCK** Button — Click this button to prevent switching of the selected destination by a control device. If you are using a soft panel with the Protection Operation set to Disable, the Lock button is not displayed.

- **VIEW** Button — Click this button to display the VIEW dialog. This dialog lists the current TAKE commands in the queue. Individual items may be removed from the queue via the options in the VIEW dialog.

- **CLEAR** Button — Click this button to clear the current TAKE queue.

- **PRESET** Button — This button is used to queue up multiple TAKE commands. Select a destination/source combination, then click PRESET. Select another destination/source combination then click PRESET. A following TAKE command will execute all the PRESET switches. To view the switch commands queued by the PRESET, click VIEW.

- **TAKE** Button — Click this button to execute the switch between the selected crosspoints. If you are using a soft panel with the Take Operation set to Direct, a TAKE button is not displayed because the transitions will occur automatically after a crosspoint switch is selected.

Crosspoint Switches via a Category Panel

The buttons and options in a Category soft panel are dependent on the categories defined for the current database, and how the soft panel was defined in the Panels tab. Instead of having access to all sources, destinations, and levels at one time, a Category soft panel provides access based on the categories and the tags you have created.

To make a crosspoint switch using a Group Category Panel

1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.
2. Double-click the node for the Category Panel.
   
   The Category Panel tab opens.
3. From the status window, highlight the level(s) you wish to include in the crosspoint switch.
   
   • Selected levels highlight in the level defined color.
   
   • Non-selected levels are indicated by a gray button with white text.
4. To select a destination:
   a. Click DEST from the category navigation tools.
   b. Navigate to the desired group using the displayed groups in the main group window.
   
   ★ Only groups containing destination assignments will be displayed unless the Non-group Resources option for this soft panel is set to Show.

   c. Select a DEST button from the available category destinations located in the main group window.

   The status title bar (if enabled) reports the currently selected destination. In the example below, the user has selected Level A1 and destination EDIT 3 from the EDIT group.

5. To select a source:
   a. Click SRC from the category navigation tools.
   b. Select a SRC button from the Source bus located in the middle of the interface.

   ★ If your Category soft panel was created with the Take Operation set to Confirm, the TAKE button is lit. Otherwise the crosspoint switch automatically occurs.

6. Click TAKE.
Using Push Button Panels

★ This soft panel type is not suitable for use on an Ultritouch hard panel. To control the Ultricore via an Ultritouch, you must create and load an Ultritouch PB soft panel as outlined in the *Ultritouch + Ultricore User Guide*.

Panel Interface Overview

The Push Button soft panel is organized into three distinct windows. The order and width of each window can be customized using the options in the Panels > Home View interface.

**Figure 13.7** is an example of a Push Button soft panel set to portrait.

![Figure 13.7 Example of the Default Push Button Soft Panel — Portrait](image)

**Figure 13.8** is an example of a Push Button soft panel set to landscape.

![Figure 13.8 Example of the Default Push Button Soft Panel — Landscape](image)
1. Destinations Area

The **Destinations** area displays the available destinations for router control. Select a **Destination** button to arm that destination for subsequent panel operations. Beneath each destination button is displayed the current source for that destination.

This area also includes the **Filter** field. A filter is available to match destination names against the entered text:

- Enter text in the **Filter** field.
- Click ☑️ (or press **Enter**). The destinations area updates to display only those destinations starting with the filter text.
- To clear the active filter, click ✗.

2. Sources Area

The Sources area displays the available sources for router control. Select a **Source** button to control the crosspoint for the currently selected destination.

This area also includes a **Filter** field. A filter is available to match source names against the entered text:

- Enter text in the field provided
- Click ☑️ (or press **Enter**). The sources area updates to display only those sources starting with the filter text.
- To clear the active filter, click ✗.

3. Current Destination

The currently selected destination label is displayed here. All subsequent panel operations operate on this destination until a new destination is selected.

- ![Not the same for all levels](image)
- ![Locked](image)
- ![Protected](image)

4. Levels Area

The Levels area displays the available router levels as individual buttons. The current source for a given router level is displayed each level button. Select a **Level** button to include this level in the next source selection operation. Select the button again to toggle the level selection setting.

- **FOLLOW** Button — toggles the selection for all displayed levels.
- **CLEAR** Button — toggles the currently active level buttons.

5. Operation Area

This area provides buttons for soft panel and router control.

- **PROTECT** Button — protect the current destination. The following occurs:
  - The destination button displays a blue border.
  - The **Current Destination** area displays ☳. When a destination is protected, only the panel that initiated the protect can change the destination status.
  - The **PROTECT** button is now labeled as **UNPROTECT**. Toggle the button to disable the protect.

  Only the panel that initiated the protect may change the protect status.
LOCK Button — locks the current destination. The following occurs:
- The destination button displays a red border.
- The current destination display area displays . When a destination is locked, no panel may change the destination status.
- The LOCK button is now labeled as UNLOCK.

* Only the panel that initiated the lock may change the lock status.

VIEW Button — displays the current crosspoint switch requests currently in the preset list. Individual crosspoints may be removed via the list view.

CLEAR Button — clear the preset list of all crosspoint selections.

PRESET Button — adds the current destination/source/level selection to a preset list. A crosspoint is added to the list for every level selected. This enables the user to add more switches and execute them all with a single take operation. The preset function is only available when the Take Mode is set to Confirm.

SALVO Button — reveals a list of predefined salvos. A salvo may be executed from the dialog. The salvo button is visible only when the panel configuration has one or more salvos assigned.

TAKE Button — is lit when the current destination/source selection is ready to be requested of the router. The Take operation is a configurable option and will only be activated if the soft panel Take Mode is set to Confirm.

Configuring a Push Button Soft Panel

The Push Button soft panel provides additional configuration options in addition to those outlined in the procedure “Creating a Soft Panel” on page 108.

To configure a Push Button soft panel
1. Create a new soft panel as outlined in the procedure “To create a soft panel” on page 108.
2. Select the Home View tab.
3. Use the Display Icons menu to specify whether buttons will display the default icons based on window type (Enable) or will only display the label text as determined by the database (Disable).
4. Use the Orientation menu to specify the layout on the monitor. Choose from the following:
   - Portrait — orients the soft panel in a horizontal layout, where the soft panel is taller than it is wide.
   - Landscape — orients the soft panel in a vertical layout, where the soft panel is wider than it is tall.
5. Specify the order that the windows will display in the completed soft panel layout as follows:

By default, the windows are organized in the following order (left to right): Destinations, Sources, and Status.

a. In the Home Windows table, select the row for the window you want to move to a different position on the soft panel layout.

b. Use the buttons in the toolbar to move the row to the desired position.

In the example below, the user moved the Status window to the top of the table so it will display on the far left of the soft panel.

6. Adjust a window size as follows:

   • Use the Percent field to specify the size of the window as a percentage of the total soft panel area.
   • Use the Rows field to specify the number of button rows the window will display.
   • Use the Columns field to specify the number of button columns the window will display

7. Click Apply to save your changes.

Crosspoint Switches via a Push Button Panel

The buttons and options in a Push Button soft panel are dependent on the current database, and how the soft panel was defined in the Panels tab. You can also use the Filter fields in the Destinations and Sources area of the panel to provides access based on the search criteria entered into each Filter field.

To make a crosspoint switch on a single level using the Push Button Panel

1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.

2. Double-click the node for the Push Button Panel.

   The Push Button Panel tab opens.

3. Select the Level you want to perform the crosspoint switch.

4. Select a DEST button from the Destinations window.

   The Status field reports the selected DEST button. In the example below, the user selected Level 6 and Dest 54.
5. Select a SRC button from the Sources window.

* If your soft panel was created with the Take Operation set to Confirm, the TAKE button is lit. Otherwise the crosspoint switch automatically occurs.

6. Click TAKE.

To make a crosspoint switch on multiple levels using the Push Button Panel

1. In the Basic Tree View, expand the Soft Panels node for the Ultricore.
2. Double-click the node for a Push Button Panel.
   The Push Button Panel tab opens.
3. Select each level from the Levels window or click Follow to include all levels.
   The Level buttons are lit in the toolbar.
4. Select a DEST button from the Destination window.
The Status area updates to display the selected DEST button. In the example below, the user selected Levels 2, 6, 8 and 11, then Dest 40.

5. Select a SRC button from the Source window.
   The Status area updates to display only the selected SRC button. In the example below, Src 6 is selected.
   ✴ If your soft panel was created with the Take Operation set to Confirm, the TAKE button is lit. Otherwise the crosspoint switch automatically occurs.

6. Click TAKE.

Using an Ultritouch PB Panel

An Ultritouch PB soft panel is organized into a pre-sized layout that can be loaded for use on an Ultritouch hard panel. Customize each soft panel by specifying the size of each window, the location of each window on the layout, and what operational buttons to include on the panel.

✴ The Ultritouch PB soft panel can only be loaded and used on an Ultritouch hard panel.
For More Information on...

- configuring and using an Ultritouch PB soft panel, refer to the Ultritouch + Ultrix User Guide.
Using Salvos

Salvos are a selected series of crosspoints to switch in the matrix that can be saved and later recalled for use.

Creating Salvos

The Salvos tab enables you to create, delete, re-name, and manage your salvos in an interface that is off-line. The Salvo tab layout is similar to the Matrix Panel layout where crosspoints are arranged in a grid layout with sources in columns and the destinations in rows.

To create a salvo

1. In the Basic Tree View, expand the Database node for the Ultricore.
2. Double-click the Salvos node.
   
   The Salvos tab opens.

3. Create a new salvo in the database as follows:
   
   a. Click Edit > Add.
      
      The Add Salvo dialog opens.
   
   b. Type a unique identifier in the Name field for the new salvo.
   
   c. Click Apply.
      
      The Add Salvo dialog closes and the Salvos list updates with the new salvo selected.
4. Select the Level(s) button for the level(s) to include in the salvo.
   
   The Level(s) buttons are lit.
5. To create a single crosspoint switch, use the cross-hairs to select the source/destination combination on the grid.
6. To assign multiple destinations to the same source.
   a. Click the button(s) in the **Destination** toolbar for each destination to include in the switch; or click **Select All** to include all the available Destinations.
   
   b. Click the button in the **Source** toolbar for the source to use for the switch.

   The grid updates to indicate the new selections. Notice that each level is represented by a corresponding slice of the crosspoint indicator. In the case below, there are seven crosspoint switches selected that will affect two levels.

7. Select the **Follow** button to enable the levels to automatically follow the switches.

   * Click **Advanced > Clear Dest Presets** to cancel the destination selections or click **Advanced > Clear All Presets** to clear the workspace.

8. Click **Apply**.

   The salvo settings are updated.
Savings the Current Crosspoint Status as a New Salvo

The Advanced menu in the Salvos tab provides the option to capture the current state of the crosspoint selections and save them as a salvo.

To create a salvo based on the current destination status

This procedure captures the status of all destinations.

1. Verify the current crosspoint state using one of the soft panels in your database. Refer to the chapter “Soft Panels in DashBoard” on page 107.

2. In the Basic Tree View, expand the Database node for the Ultricore router.

3. Double-click the Salvos node.

   The Salvos tab opens.

4. Create a new salvo in the database as follows:
a. Click **Edit > Add**.
   The Add Salvo dialog opens.

b. Type a unique identifier in the **Name** field for the new salvo.

c. Click **Apply**.
   The Add Salvo dialog closes and the Salvos list updates with the new salvo selected.

5. Click **Advanced > Capture System Status**.
   The matrix in the Salvos tab updates to reflect the current crosspoint state as verified in step 1.

6. Click **Apply**.

To create a salvo based on selected destinations

* This procedure captures the status of selected destinations.

1. Verify the current destination crosspoint states using one of the soft panels in your database. Refer to the chapter “Soft Panels in DashBoard” on page 107.

2. In the Basic Tree View, expand the Database node for the Ultricore router.

3. Double-click the Salvos node.
   The Salvos tab opens.

4. Create a new salvo in the database as follows:
   a. Click **Edit > Add**.
      The Add Salvo dialog opens.
   b. Type a unique identifier in the **Name** field for the new salvo.
   c. Click **Apply**.
      The Add Salvo dialog closes and the Salvos list updates with the new salvo selected.

5. Click **Advanced > Capture Dest Status**.
   The matrix in the Salvos tab updates to reflect the current Destination states as verified in step 1.

6. Select the **Level(s)** button for the level(s) to include in the salvo.
   The **Level(s)** buttons are lit.
7. Select the source(s) to use in the crosspoint switch.
8. Click Apply to update the salvo settings.

Copying and Pasting a Salvo

You can create a copy of a saved salvo and edit its settings or add crosspoint selections separately from the original salvo.

**To copy and paste a salvo**
1. In the Basic Tree View, expand the Database node for the Ultricore router.
2. Double-click the Salvos node.
   
   The Salvos tab opens.
3. Select the salvo to copy from the Salvos list.
4. Click Edit > Copy.
5. Click Edit > Paste.
   
   A new salvo displays at the bottom of the Salvos list in the Salvos tab. By default, the salvo is named Salvo # where # is an automatically assigned value.
6. Give the new salvo a unique identifier as outlined in the procedure “To re-name a salvo” on page 141.
7. Edit the settings of the new salvo as outlined in the procedure “To edit a salvo” on page 141.

Editing a Salvo

Once a salvo is created in the database, you can edit its crosspoint selections,

**To edit a salvo**
1. In the Basic Tree View, expand the Database node for the Ultricore router.
2. Double-click the Salvos node.
   
   The Salvos tab opens.
3. Select the salvo from the Salvos list.
   
   The grid updates to display the crosspoint selections currently saved for the salvo.
4. Perform steps 4 to 7 as outlined in the procedure “To create a salvo” on page 137.
5. Click Apply to save your changes.

**To re-name a salvo**
1. In the Basic Tree View, expand the Database node for the Ultricore router.
2. Double-click the Salvos node.
   
   The Salvos tab opens.
3. Select the salvo from the Salvos list.
   
   The grid updates to display the crosspoint selections saved for the salvo.
4. Click Edit > Rename.
   
   The Rename Salvo dialog opens.
5. Type a new name for the salvo in the Name field.
6. Click Apply.
   
   The Rename Salvo dialog closes and the salvo displays with the new name in the Salvos list.
Deleting a Salvo

Deleting a salvo removes it from the database. The corresponding button on any soft panels for the deleted salvo are also no longer displayed.

To delete a salvo from the database
1. In the Basic Tree View, expand the Database node for the Ultricore router.
2. Double-click the Salvos node.
   The Salvos tab opens.
3. From the Salvos list, select the salvo to delete.
4. Click Edit > Delete.
5. Click Apply to close the dialog.
   The salvo no longer displays in the Salvos list to the left of the workspace. If the salvo was assigned to a button in a soft panel, the button is automatically deleted from the panel.

Recalling a Salvo

Once you have saved a salvo, you can recall it for use on a soft panel in DashBoard.

★ You cannot recall salvos from a Category soft panel.

For More Information on…
• adding salvos to customized soft panels, refer to the section “Creating a Soft Panel” on page 108.

To recall a salvo from a Matrix panel
1. In the Basic Tree View, expand the Soft Panels node for the Ultricore router.
2. Double-click the node for a Matrix Panel.
   The Matrix Panel tab opens.
3. Click Salvo.
4. Click Recall.
   The Execute Salvo dialog opens. Notice that the Active column reports whether the salvo is currently in use (ON) or not (OFF).
5. Select the salvo to recall.
6. Click Apply to close the dialog.
7. Click Take to apply the salvo.
To recall a salvo from a MultiBus panel

1. In the **Basic Tree View**, expand the **Soft Panels** node for the Ultricore router.

2. Double-click a **MultiBus Panel** node.

   The **MultiBus Panel** tab opens. The salvo buttons are located at the bottom of the soft panel interface. If a salvo button is lit green, it is currently in use.

3. Click the button for the salvo you wish to recall.

   The salvo button and **Take** buttons are now lit on the soft panel.

4. Click **Take** to apply the salvo.

   The crosspoint switch is made, and the salvo button is no longer lit.
Operation with Ross Devices

The Ultricore Central Controller connects to Ross NK series routers and Remote Control Panels (RCPs). Ross NK series routers and RCP series devices may connect directly to the T-Bus port on the Ultricore, or via an NK-IPS/NK-NET over Ethernet. The Ross RCP-ME and RCP-QE panels communicate with Ultricore via Ethernet.

It is recommended for optimum performance to minimize device connections to the NK-NET.

For More Information on...
- defining connection points between Ultricore and external devices, refer to the chapter “Device Communication Setup” on page 51.

Overview

Introducing an Ultricore to an existing Ross NK system requires specific configuration to enable the Ultricore to manage the devices in the routing system.

*- Ultricore does not support Unicode characters.

Using RCP-NK Series Remote Control Panels

When adding the Ultricore router to an existing system with one or more RCP-NK devices, each remote control must:

- have the Virtual routing enabled on their Configuration page
- have the Comms Retry Delay Factor set to 80ms or greater
- ensure that the level numbers correspond to the Ultricore Level ID number

Be aware that the RCP-NK devices do not:

- support Ultricore salvos
- automatically get source and destination labels from the Ultricore. They must be entered manually or via a global labels file.

Using an Ross NK Series Router

The Ross NK router partitioning not supported. The logical mapping of the Ultricore control system is far more capable and should be implemented there if required.

Keep the following in mind:

- The NK-IPS requires version 2.23 or greater to communicate with an Ultricore.
- The SCP/A is not supported.
- The SCP/K2 is not supported.
- NK-A64 control level is not supported.

Table 15.1 outlines the nomenclature that Ultricore automatically uses for Ross NK devices.

<table>
<thead>
<tr>
<th>Ross NK Device</th>
<th>Matrix Name</th>
<th>Port Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NK-3Gxxx</td>
<td>deviceName.SDI</td>
<td>deviceName.slot1.in/out[socket number].SDI.ch1</td>
</tr>
<tr>
<td>NK-Axxx</td>
<td>deviceName.An Aud L</td>
<td>deviceName.slot1.in/out[socket number].An Aud L.ch1</td>
</tr>
<tr>
<td></td>
<td>deviceName.An Aud R</td>
<td>deviceName.slot1.in/out[socket number].An Aud R.ch1</td>
</tr>
<tr>
<td>NK-Dxxxx</td>
<td>deviceName.AES</td>
<td>deviceName.slot1.in/out[socket number].AES.ch1</td>
</tr>
</tbody>
</table>
Using Ross Analog Audio Devices (NK-A16, NK-A32, NK-A64)

The Ross NK Analog Audio devices (NK-A16, NK-A32, NK-A64) will present as two matrices: Left and Right respectively.

Connection Diagrams

**Figure 15.1** provides an example of a routing system with an Ultricore Central Controller, an NK-IPS, and several Ross NK devices. Communication between the NK-IPS and the Ross NK devices is over T-Bus, while the Ultricore communicates with the NK-IPS via Ethernet.

**Figure 15.2** provides an example of an Ultricore Central Controller, Ultrix router, NK-NET and various NK devices.

* The NK-NET requires phantom power from the T-Bus to operate. This is available from any Ross NK series router.

### Table 15.1 Default Ultricore Naming for Ross NK Devices

<table>
<thead>
<tr>
<th>Ross NK Device</th>
<th>Matrix Name</th>
<th>Port Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NK-Mxx</td>
<td>deviceName.Machine Control</td>
<td>deviceName.slot1.in/out[socket number].Machine Control.ch1</td>
</tr>
<tr>
<td>NK-MDxxx</td>
<td>deviceName.SDI</td>
<td>deviceName.slot1.in/out[socket number].SDI.ch1</td>
</tr>
<tr>
<td>NK-Vxxx</td>
<td>deviceName.An Vid</td>
<td>deviceName.slot1.in/out[socket number].An Vid.ch1</td>
</tr>
</tbody>
</table>

---

**Figure 15.1 Connection Example with an NK-IPS**
Figure 15.2 Connection Example with Two NK-NETs and an Ultrix Router
Ross RCP-NK Series Remote Control Panels

When adding the Ultricore to an existing system with one or more RCP-NK series devices, each panel must:

- have the **Virtual Routing** enabled on their **Configuration** page
- have the **Comms Retry Delay Factor** set to **80ms** or greater
- ensure that the **Level** numbers correspond to the Ultricore **Level ID number**

Be aware that the RCP-NK series devices do not:

- support Ultricore salvos
- automatically receive source and destination labels from Ultricore. They must be entered manually or via a global labels file.

Ross NK Series Routers

Ross NK Series routers can utilize two methods of connection to the Ultricore:

- Direct T-Bus connection
- Ethernet connection via an NK-IPS or NK-NET

All Ross NK routers are automatically discovered\(^1\) and appear in the available matrix list ready for label assignment.

Integrating Ross NK Series Devices with Ultricore

Keep the following in mind when integrating Ross NK Series devices with Ultricore:

- Ross NK partitioning is not supported across different levels. Use Ultricore to facilitate this operation.
- NK-Ax analog audio routers present as two routers (Left and Right).
- NK-A64 control level is not supported.
- NK-SCP/A is not supported.
- NK-SCP/K2 is not supported.

Adding Ross NK Series Routers to the Ultricore Routing System

Add a Ross NK series device to the Ultricore routing system requires the following steps:

1. Determine the connection method to the Ross NK router. Choose from the following:
   - Direct T-Bus
   - Ethernet via NK-IPS or NK-NET
2. If you are using a Direct T-Bus connection, verify that the Ross NK series router is listed in the **Connections** tab for the Ultricore. T-Bus devices are automatically discovered as T-Bus communication is always enabled on the Ultricore.
3. If you are using an ethernet connection, define a connection point between Ultricore and each NK-IPS or NK-NET. Refer to the section “**Connecting to Ross Ethernet Devices**” on page 54 for details.
4. Review the port label matrices for the Ultricore database.
5. Assign outputs to the logical destinations in the database as outlined in the section “**To map a physical output to a destination**” on page 71.
6. Assign inputs to the logical sources in the database as outlined in the section “**To map a physical input with a source**” on page 74.

---

\(^1\) Once an ethernet connection point has been established for ethernet connections.
Integrating Ross RCP-ME/RCP-QE Panels with Ultricore

RCP-QE and RCP-ME ethernet series remote control panels connect to Ultricore via the facility network. The panels offer some extra features not available to RCP-NK series control panels:

- automatic source and destination labeling
- automatic level and salvo labeling
- the ability to trigger system wide salvos
- Category index source/destination selection method (*RCP-QE only*)

Adding a Ross RCP-ME or RCP-QE Panel to the Ultricore Routing System

The **Connection Editor** interface for an RCP-ME or RCP-QE enables you to configure the connection point from the panel to Ultricore. You will need DashBoard installed and running to access the Connection Editor interface.

**To add an RCP-ME or RCP-QE**

1. Connect the RCP to facility network and configure the network settings as outlined in the user guide for your remote control panel.

2. Open the **Connection Editor** in DashBoard for your panel as follows:
   a. In the Basic Tree View of DashBoard, expand the tree view for the remote control panel.
   b. Double-click the **Connection** icon within the device tree.

      The **Connection Editor** opens.

3. Locate the **Servers to connect to** area.

4. In a row of the provided table, type the **IP Address** of the Ultricore you want to establish a connection to.

   Upon a successful connection and a refresh of the current DashBoard view (click the **Refresh** button), a check mark displays next to the successful connection. In the above example, an IP Address is entered for Server 1.

5. Verify in the **Connections** area that a connection is establish.

6. Configure the Remote Control Panel layout as outlined in the user guide for your panel.
Machine-Control (RS-422) Logical Mapping

Connecting an NK-M series router to Ultricore requires some special consideration.

Machine control routing requires two crosspoints for a point to point connection due to the bi-directional nature of the signal. Each physical socket contains a transmit/receive pair. This can be thought of as a source-destination combination and is known as a port.

It is necessary to configure the input and output of the machine control port on the same row ID on the logical mapping tables.

It does not matter where the machine control is mapped (either row 3 or 300), but the input and outputs physical ports must be mapped to the same row ID.

Conditions for Machine Control

Three conditions must be met before machine control can be switched.
1. The NK machine control router is attached and configured within Ultricore (level, destination. and source maps).
2. Selected breakaway or level must include the machine control level.
3. Machine control reciprocal must be enabled on the controller.

Configuring T-Bus Devices

Configuration of T-Bus devices connected to an Ultricore T-BUS port may be achieved by opening an IPS style connection to the Ultricore Central Controller. This allows configuration and review of device settings in the same manner as legacy system with an NK-IPS.

Adding an NK-IPS Connection to Ultricore

An NK-IPS connection must be manually added to DashBoard so the T-Bus devices may be configured.

To add an IPS connection to Ultricore
1. Note the TCP/IP Address of the Ultricore that you want to establish a connection to:
   - In the Basic Tree View of DashBoard, hover your mouse cursor over the main Ultricore node; or
   - In the Basic Tree View of DashBoard, right-click the main Ultricore node in the tree view and select View Frame Information to display the Connection Information dialog.
2. Configure DashBoard to open an NK-IPS Connection to that TCP/IP address as follows:
   a. In the Basic Tree View toolbar, click to display the Add New Connection dialog.

   ![Add New Connection dialog]

   b. Select NK-IPS Connection.

   The New TCP openGear Frame Connection dialog opens.

   ![New TCP openGear Frame Connection dialog]

   c. In the IP Address field, enter the IP Address of the Ultricore you noted in step 1.
   d. Click Finish to apply your change and close the dialog.

3. Verify that a new node displays in the Basic Tree View. Note that the new node will have the same name as your Ultricore device (where the default name is Ultricore).

4. Complete the device configuration by double-clicking the device under the IPS node in the tree view. Refer to the user guide that accompanied your device for configuration details.

**Operation with an Ultrix Router**

Keep the following in mind when operating an Ultrix router within the Ultricore routing system:

- The Ultrix hardware is configured on the Ultrix router in DashBoard. Device specific functions such as hardware setup, installed license keys, and Ultriscape setup remain in the DashBoard node of the Ultrix router.
- The Ultriscape (Multiviewer) licensed feature is configured on the Ultrix router in DashBoard.
- All crosspoint changes (including salvos) must originate from the master Ultricore database.
- All routing commands are sent to and executed by the master Ultricore. This includes any third-party communications (GVG, Probel, TS, etc.). The Ultrix router will ignore any routing commands not originating from the master Ultricore database while in this connected mode.

- If more than one Ultrix router is to be controlled from the Ultricore, ensure that you assign unique device names for the Ultrix routers via the front panel. This will help to quickly identify the routers within the Ultricore system. Refer to the section “Connecting to an Ultrix Router” on page 51 for details.

- Each Ultrix router must be configured for remote control mode.

- All Remote Control Panels (RCP) must be configured to connect with the master Ultricore.

---

**Figure 15.5** Example Setup Using an Ultricore and an Ultrix
System Integration Examples

There are many aspects of Ultricore that you can configure to suit the needs of your organization. The properties that you are able to configure depends on your user permissions. Note that the information provided is for illustration purposes only, and the requirements for your facility may differ from what is presented.

Adding Ultricore to Legacy Systems

In this example, you have legacy NK routers without remote control panels but you want to add the Ultricore as a system controller.

Figure 16.1  Routing System with Legacy Routers and No Remote Control Panels
You can use Ultricore and a series of NK-NETs to provide ethernet connectivity for T-Bus based legacy systems.

Figure 16.2 Adding Ethernet Communications via an Ultricore
Integrating Third Party Routers with an Existing System

Ultricore integrates supported third-party routers using GVG protocol translation. In this configuration, the Ultricore or the Ross router is the system master.

Figure 16.3 Integrating Third-Party Routers with an Ultricore
Integrating Routers with a Third Party Control System

Ultricore is integrated with an existing third-party routing system to add an NK router as a matrix within and under control of the third-party system. In this case, the Ultricore acts primarily as a protocol translator.

*Figure 16.4 Using Ultricore to Integrate Existing Routers with a Third-Party Controller*
Adding Third Party Control to Existing Systems

If you have an existing Ross routing system, you can add an external controller, such as an automation device, that is compatible with a supported third-party protocol. In this example, the Ultricore acts as the system controller and provides a protocol translation for the external third-party control device.

To add the third-party controller to your router system, connect the external controller to Ultricore and configure Ultricore to translate between the third-party controller and the rest of your Ross routing system.
Monitoring of the Routing System and Communications

If you have an existing complex routing system with integration between the Ross products and third-party equipment connected using a variety of communication protocols. This requires the monitoring and/or logging of the communications streams to troubleshoot issues that could arise with system-level interactions.

In this case, the Ultricore acts as the system controller and provides system logging and monitoring functions because it provides protocol translations and communications ports to enable communications between all the devices in your system.

![Diagram of Monitoring an Existing Routing System with an Ultricore](Image)

*Figure 16.6 Monitoring an Existing Routing System with an Ultricore*
Replacing an NK-IPS

You are replacing legacy remote control panels but still T-Bus power and communication for one or more legacy NK products. In this case, the Ultricore acts as the system controller, and provides power to T-Bus. The remote control panels use virtual switch commands to control the router system.

**Caution** — Observe T-Bus power limitations. Ultricore has one loop through T-Bus port where the NK-IPS has eight.

![Figure 16.7 Replacing an NK-IPS with an Ultricore](image)
Replacing an NK-3RD

If you have a system without an NK-IPS or an NK-3RD but you still require external control system that uses GVG protocol. In this case, the Ultricore acts as the system controller and provides T-Bus connection to the NK routers. The remote control panels/clients use virtual switch commands to control the routing system. Other attached clients may use third-party protocols to control the routers. The Ultricore translates the third-party protocol to enable control of the entire NK routing system.

Figure 16.8 Replacing an NK-3RD with an Ultricore
External Control

This chapter lists the third-party protocols the Ultricore supports.

Ultricore Control with Third-Party Systems

Ultricore may be controlled by third-party control or automation systems via the GVG Native Series 7000 or Probel SW-P-08 protocols.

Ethernet Communication

The Ethernet interfaces to these protocols are automatically started with Ultricore and no further configuration is necessary. However, you must configure your external control systems to match the settings outlined in Table 9.2.

For More Information on...
- defining an ethernet connection between Ultricore and an external device, refer to the section “Incoming Ethernet Connections” on page 57.

Serial Communication

If you are using a serial connection, you must first define the serial connection point as outlined in the section “Defining a Serial Connection” on page 59 and selecting GVG Native or Probel SW-P-08 from the Protocol menu and the settings as outlined in Table 9.3.

Third-Party Matrix Control with Ultricore

The Ultricore control system is able to control third-party matrix devices. Two popular routing protocols are available to enhance compatibility: GVG Series 7000 and Probel SW-P-08.

To configure third-party matrix control
1. Create an outgoing connection point from the Ultricore to the third-party matrix device.
2. Define the external matrix.
3. Mapping the external matrix inputs and outputs.
4. Define the Ultricore operating level.
5. Assign external matrix to the Ultricore source and destination levels.

The following sub-sections outline each step required to configure third-party matrix control.

Create an Outgoing Connection Point

You must define an interface for the system to access third-party matrix devices. The connection point must be compatible with the settings of the external device you are trying to control.

Before proceeding, ensure that you have the following connection specifics:
- Communication protocol (GVG Native Series 7000 or Probel SW-P-08)
- Communication type (TCP/IP or serial1)

Refer to the section “Connecting to Third-Party Devices” on page 57 details.

---

1. Only available natively on the Ultricore Central Controller. Serial connections from Ultrix requires an external USB-serial converter.
Defining the External Matrix

The system does not automatically know the details of any connected third-party matrix. The user must manually define the size and operating level within the Ultricore database.

Creating a Logical Matrix for an External Device

Once you establish a valid connection point between the Ultricore router and an external device, you can create logical matrices in an Ultricore database using the device inputs and outputs. Creating a logical matrix from the external device enables Ultricore to include the inputs and outputs for selection in the Sources and Destination tabs of the Ultricore database.

The input/output range and level you specify in the Ultricore database must match the settings within the external matrix.

To create a logical matrix from an external device

1. Expand the Database node.
2. Double-click the Third Party Matrices node located under the Database node.
   
   The Third Party Matrices tab opens.
3. Click Edit > Insert to display the Insert Matrix dialog.
4. In the Name field, type a unique identifier for the third-party matrix. This name is used to identify the matrix within the Ultricore database.
5. Click Apply to close the Insert Matrix dialog and add a blank row to the Third Party Matrices table.

   In the example below, a new matrix named “Matrix 2A” was added.

6. From the Device ID drop-down menu, select the device you want to define the logical matrix for. This is the name given to the device when you established a connection point with it on the Connections tab.

   The Device ID menu lists only the third-party devices that have a valid connection point with the Ultricore router.
7. Define the matrix size as follows:
a. Use the **First Output** and **Last Output** fields to define the range of destinations from the device within the Ultricore database.

b. Use the **First Input** and **Last Input** fields to define the range of sources from the device within the Ultricore database.

★ These created inputs and outputs will use the nomenclature **DeviceID.Slot.Port.Type.Channel** where **DeviceID** represents the Name assigned to the external device on the Connections tab.

8. Use the **Level** field to specify the number of levels for the device within the Ultricore database.

9. Use the **Type** field to specify the signal type for the matrix.

10. Click **Apply** to save the new matrix to the database and add it to the list of available matrices in the **Port Labels** tab.

**Mapping the External Matrix Inputs and Outputs**

Once the connection point and matrix are defined in the Ultricore database, you can map the external matrix inputs and outputs in the same manner as we do with Ross device matrices. However, you will instead select an external matrix output from the **Outputs** list (or an external matrix input from the **Inputs** list) in the database interfaces. The available inputs and outputs will display in the format of **DeviceID.slot#.in[x].Type.ch#** or **DeviceID.slot#.out[x].Type.ch#**.

★ It may be necessary to create a new level in the Ultricore database for the assignment of inputs and outputs to logical labels. Refer to the section “**Defining the Levels in a Database**” on page 116 for details.

**For More Information on...**

• assigning destinations, refer to the section “**Defining the Destinations in a Database**” on page 69.

• assigning sources, refer to the section “**Defining the Sources in a Database**” on page 73.

**Using Index Numbers**

Some protocols refer to source and destinations with a numerical index number. This number is listed in the ID column of the **Source** and **Destination** tabs of the Ultricore database.

For example, the GVG protocol reference to destination ‘00h’ correlates to Ultricore destination ID 1 in the case shown below for the Dest 1 entry in the table.

![Figure 17.1 Example of ID Numbers Listed in a Destinations Tab](image)

**Protocol Options**

Some protocols provide additional configuration options via the **Protocol Options** dialog. These options can be accessed via the **Protocol Servers** table on the **Database > Connections** interface. Selecting an **Options** button to on the table opens this dialog.

The **Protocol Options** are outlined with the respective protocol details in the following sections.

**GVG Series 7000 Native Protocol Commands**

Ultricore supports the GVG Series 7000 Native protocol and is available over an RS-422 or RS-232 serial connection, as well as Ethernet connection.
Table 17.1 Default GVG Native Connection Types

<table>
<thead>
<tr>
<th>Setting</th>
<th>Serial</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Type</td>
<td>RS422 or RS232</td>
<td>Port 12345(^a)</td>
</tr>
<tr>
<td>Baud</td>
<td>38400</td>
<td></td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Port 12345 is the default value but is user configurable.

Table 17.2 summarizes the settings in the Protocol Options dialog for the GVG Series 7000 Native protocol.

Table 17.2 Protocol Options — GVG Series 7000 Native

<table>
<thead>
<tr>
<th>Option</th>
<th>Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>L4 Echo</td>
<td>Yes</td>
<td>Send command acknowledgments on protocol layer 4 (Ethernet only)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Do not send acknowledgments. This is the default.</td>
</tr>
</tbody>
</table>

Table 17.3 lists the GVG Native Protocol commands the Ultricore supports.

Table 17.3 GVG Native Protocol Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK[,parameter]</td>
<td>Force next QD command to return status of all destinations</td>
<td>Clears the flags associated with the D,no,parameter command. After BK,D is sent, the next QD,no,parameter command will result in destination statuses or all destinations being returned.</td>
</tr>
<tr>
<td>BK,D</td>
<td>Request status of level 4 echo setting</td>
<td></td>
</tr>
<tr>
<td>BK,E</td>
<td>Set level 4 echo to on</td>
<td>An err=00 response will be returned for successful commands that do not generate their own response (eg. Take commands). This is a per session setting.</td>
</tr>
<tr>
<td>BK,E,ON</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BK,E,OFF</td>
<td>Set level 4 echo to off (default)</td>
<td>No response will be given for commands that do not generate their own response.</td>
</tr>
<tr>
<td>PR,dest_name,level_bitmap</td>
<td>Protects a specific destination from having its source changed</td>
<td>ER error-code response is currently not supported.</td>
</tr>
<tr>
<td>QC[,dest_name]</td>
<td>Query Combined Destination status by name</td>
<td></td>
</tr>
<tr>
<td>QD[,dest_name]</td>
<td>Query Destination status by name</td>
<td>No information is returned for unmatched destination levels</td>
</tr>
<tr>
<td>Qd[,dest_name]</td>
<td>Query Destination status by name</td>
<td>Sets response src_name to NO_XPT for unmatched destination levels</td>
</tr>
</tbody>
</table>
For More Information on...

- these commands, refer to the GVG protocol documentation.

RossTalk Commands

The RossTalk protocol is a plain text based protocol that allows control of Ross Video equipment.

★ Each command should be terminated by a carriage return and a line feed (CR/LF).

To send RossTalk commands to Ultricore

1. Create a network connection to the Ultricore router on Port 7788.
2. At the prompt, enter the commands you wish to send. Refer to Table 17.4 for a list of supported commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>QT</td>
<td>Query date and time</td>
<td></td>
</tr>
<tr>
<td>T,dest_name,src_name_entry1[,....src_name_entryn]</td>
<td>Takes sources (on specified levels) to specified destination, by name rather than index</td>
<td>Src_name_entryn = src_name,level_bitmap</td>
</tr>
<tr>
<td>TD,dest_name,src_name_entry</td>
<td>Takes same source to all or specified levels</td>
<td>Src_name_entryn = src_name[,levelbitmap] No levelbitmap=all destination levels</td>
</tr>
<tr>
<td>TI,destIndex,srcIndex[,levelIndex]</td>
<td>Request take by index with level index (^a)</td>
<td></td>
</tr>
<tr>
<td>TJ,destIndex,nbr_sources,srcIndex,level_bitmap[,...,srcIndex,level_bitmap]</td>
<td>Takes sources (on specified levels) to specified destinations by index rather than name; allows breakaways</td>
<td></td>
</tr>
<tr>
<td>TS,salvo_name</td>
<td>Request Take Salvo</td>
<td></td>
</tr>
<tr>
<td>UP,dest_name,level_bitmap</td>
<td>Removes Protect from specified destination</td>
<td>ER, error-code response is currently not supported.</td>
</tr>
</tbody>
</table>

- \(^a\) Zero-based hex logical index numbering.
Table 17.4 RossTalk Protocol Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Message</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPI ##</td>
<td></td>
<td>Execute the salvo number corresponding to the numerical ## extension of the command</td>
<td>For example, GPI 04 triggers the salvo &lt;salvo_name&gt;[4] as listed in the Ultricore database</td>
</tr>
<tr>
<td>TIMER ##:RUN</td>
<td></td>
<td>Request Timer ID to start/resume</td>
<td></td>
</tr>
<tr>
<td>TIMER ##:STOP</td>
<td></td>
<td>Request Timer ID to stop</td>
<td></td>
</tr>
<tr>
<td>TIMER ##:PAUSE</td>
<td></td>
<td>Request Timer ID to pause</td>
<td></td>
</tr>
<tr>
<td>TIMER ##:END</td>
<td></td>
<td>Request Timer ID to end</td>
<td></td>
</tr>
<tr>
<td>XPT D:&lt;dest&gt; S:&lt;source&gt; I:&lt;user_id&gt; [L:&lt;levels&gt;]</td>
<td>Crosspoint command for a router TAKE where:</td>
<td>Range start value must be less than the end value</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• &lt;dest&gt; is the logical destination ID from the active database (1-based)</td>
<td>Single levels and ranges can be mixed in the list (eg. L:1,3,4-8,12-17)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• &lt;source&gt; is the logical source ID from the active database (1-based)</td>
<td>There are no spaces between numbers or ranges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• &lt;user_id&gt; is the numeric user/panel ID that will be used to request the switch</td>
<td>Invalid numbers or improperly specified ranges will be ignored</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• &lt;levels&gt; is an optional parameter specifying comma-separated list of 1-based level IDs to switch (for breakaway, e.g. L:1,2,4). If no levels are specified, a follow switch (all valid levels) is requested.</td>
<td>An argument is separated from its value using a single colon (:)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• &lt;levels&gt; supports ranges specified by two numbers separated by dash (e.g. L:1-16)</td>
<td>Command arguments are separated single spaces</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range start value must be less than the end value</td>
<td>The arguments may be specified in any order, (e.g. these are equivalent: XPT D:1 S:4 I:2 and XPT S:4 I:2 D:1)</td>
<td></td>
</tr>
</tbody>
</table>

Examples:

- ID 7 requesting to switch Dest 2 to Source 1 on Levels 1,3,5 and 12-16
- XPT I:7 D:2 S:1 L:1,3,5,12-16

Probel SW-P-08 Protocol Commands

Ultricore supports the Probel SW-P-08 protocol and is available over an RS-422 or RS-232 serial connection, as well as ethernet connection. Table 17.5 provides the default values for this protocol.

Table 17.5 Default Probel SW-P-08 Connection Types

<table>
<thead>
<tr>
<th>Setting</th>
<th>Serial</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Connection Type</td>
<td>RS422 or RS232</td>
</tr>
<tr>
<td></td>
<td>Baud</td>
<td>38400</td>
</tr>
<tr>
<td></td>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Port</td>
<td>Ethernet Port</td>
<td>8910#</td>
</tr>
</tbody>
</table>

a. Port 8910 is the default value but is user configurable.
When Ultricore is the controller, Probel SW-P-08 System 1 is implemented. When Ultricore is not the controller, Probel SW-P-08 System 3 is implemented (where equipment functions exist).

Table 17.6 summarizes the settings in the Protocol Options dialog for the Probel SW-P-08 protocol.

**Table 17.6 Protocol Options — Probel SW-P-08 protocol**

<table>
<thead>
<tr>
<th>Option</th>
<th>Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol Variant</td>
<td>Non-extended</td>
<td>Use non-extended commands only</td>
</tr>
<tr>
<td></td>
<td>Extended</td>
<td>Use extended commands only</td>
</tr>
<tr>
<td></td>
<td>Use Last Request</td>
<td>Use command set as per last received command format (e.g. if received a non-extended command, reply in a non-extended format). This is the default.</td>
</tr>
<tr>
<td>Matrix Mode</td>
<td>Yes</td>
<td>Swap matrix and level fields</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Do not swap matrix and level fields. This is the default.</td>
</tr>
<tr>
<td>Unused Field</td>
<td>#</td>
<td>Send number (0-15) in either Level or Matrix field - which ever is not used as per Matrix Mode setting. The default is 0.</td>
</tr>
</tbody>
</table>

Table 17.7 lists the Probel SW-P-08 Serial Protocol commands the Ultricore supports.

**Table 17.7 Probel SW-P-08 Native Protocol Commands**

<table>
<thead>
<tr>
<th>Cmd ID</th>
<th>Request Message</th>
<th>Response Message</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Crosspoint Interrogate</td>
<td>Crosspoint Tally</td>
<td>Get single crosspoint status</td>
</tr>
<tr>
<td>02</td>
<td>Crosspoint Connect</td>
<td>Crosspoint connected</td>
<td>Take single crosspoint</td>
</tr>
<tr>
<td>10</td>
<td>Protect Interrogate</td>
<td>Protect Tally</td>
<td>Get destination protect status</td>
</tr>
<tr>
<td>12</td>
<td>Protect Connect</td>
<td>Protect connected</td>
<td>Set destination protect</td>
</tr>
<tr>
<td>14</td>
<td>Protect Disconnect</td>
<td>Protect dis-connected</td>
<td>Turn off destination protect</td>
</tr>
<tr>
<td>17</td>
<td>Protect Device Name Request</td>
<td>Protect Device Name Response</td>
<td>Get name of device that hold protect</td>
</tr>
<tr>
<td>19</td>
<td>Protect Tally Dump Request</td>
<td>Protect Tally</td>
<td>Get all protect status</td>
</tr>
<tr>
<td>21</td>
<td>Crosspoint Tally Dump Request</td>
<td>Crosspoint Tally</td>
<td>Get all crosspoint status</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cmd22: Byte max dest 191</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cmd23: Word max. dest. 65535</td>
</tr>
<tr>
<td>97</td>
<td>Implementation Request</td>
<td>Implementation Status</td>
<td>Get list of commands supported</td>
</tr>
<tr>
<td>100</td>
<td>All Source Names Request</td>
<td>Source Name Response</td>
<td>Get all source names (8 char. max.)</td>
</tr>
<tr>
<td>101</td>
<td>Single Source Name Request</td>
<td>Source Name Response</td>
<td>Get single source names (8 char. max.)</td>
</tr>
<tr>
<td>102</td>
<td>All Destination Association Name Request</td>
<td>Destination Association Name Response</td>
<td>Get destination names (8 char. max.)</td>
</tr>
<tr>
<td>103</td>
<td>Single Destination Association Names Request</td>
<td>Destination Association Name Response</td>
<td>Get single destination name (8 char. max.)</td>
</tr>
</tbody>
</table>
NVISION Commands

Ultricore supports the NVISION NP16 Ethernet protocol.

* Ensure that the Ultrix router has the Ultricore-NVISION license installed. Refer to the *Ultrix User Guide* for details.
Table 17.6 summarizes the settings in the **Protocol Options** dialog for the NVISION protocol.

<table>
<thead>
<tr>
<th>Option</th>
<th>Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offset</td>
<td>0</td>
<td>The Ultricore level matches the NVISION level</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>The Ultricore level is the NVISION level plus 1</td>
</tr>
</tbody>
</table>

**NVISION NP16 Ethernet Protocol**

Ultricore supports the NVISION NP16 Ethernet protocol. Table 17.9 outlines the default values for the Ultricore when using NP16.

<table>
<thead>
<tr>
<th>Setting</th>
<th>TCP Port</th>
<th>5194</th>
</tr>
</thead>
</table>

**NP16 Commands**

The NP16 protocol defines the message format: Protocol ID | Sequence Number | byte count | Command

Each field consists of a 32bit number where:

- Protocol ID — 0x0000000C (Router Control Protocol)
- Sequence number — controller generated and added to Ultricore response message
- byte count — total number of bytes in message including header (<8176)
- Command — refer to Table 17.10

The protocol is zero based, meaning that destination 0 in the protocol relates to destination ID#1 in Ultrix. This is true for sources, destinations, and level values.

Refer to Table 17.10 for a list of supported NP16 commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Message</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x0000 0050</td>
<td></td>
<td>Performs a TAKE</td>
<td></td>
</tr>
<tr>
<td>0x0000 0051</td>
<td></td>
<td>Set Output LPR</td>
<td>Sets or releases a lock or protect on a destination</td>
</tr>
<tr>
<td>0x0000 0052</td>
<td></td>
<td>Get Status of Outputs</td>
<td>Retrieves the crosspoint status</td>
</tr>
<tr>
<td>0x0000 0059</td>
<td>Router Partition Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0x0000 005E</td>
<td>Crosspoint Tally</td>
<td></td>
<td>Retrieves the crosspoint status</td>
</tr>
<tr>
<td>0x0000 0070</td>
<td>Machine Control Take</td>
<td></td>
<td>Format 1 only</td>
</tr>
</tbody>
</table>
NVISION NP0010 Serial Protocol

Ulricore supports a limited sub-set of the NVISION serial NP0010 protocol. 

Table 17.11 outlines the default values for the Ulricore for an NP0010 serial connection.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Connection Type</th>
<th>Baud</th>
<th>Data Bits</th>
<th>Parity</th>
<th>Stop Bits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RS232, RS422</td>
<td>9600, 19200, 38400, 56700, 115200</td>
<td>8</td>
<td>No</td>
<td>1</td>
</tr>
</tbody>
</table>

Refer to Table 17.12 for a list of supported NP0010 commands.

<table>
<thead>
<tr>
<th>Command</th>
<th>Message</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x50</td>
<td>Take</td>
<td></td>
<td>Non-timestamped version only</td>
</tr>
<tr>
<td>0x51</td>
<td>Destination status</td>
<td></td>
<td>Get destination status</td>
</tr>
<tr>
<td>0x55</td>
<td>Lock destination</td>
<td></td>
<td>Assert a destination lock</td>
</tr>
<tr>
<td>0x56</td>
<td>Protect destination</td>
<td></td>
<td>Assert a destination protect</td>
</tr>
<tr>
<td>0x58</td>
<td>Release destination lock/protect</td>
<td></td>
<td>Releases the destination lock and protect</td>
</tr>
<tr>
<td>0x66</td>
<td>Destination LPR state</td>
<td></td>
<td>Get destination locked/protect/released status</td>
</tr>
</tbody>
</table>

TSL UMD Protocol v3.1 Commands

Table 17.13 outlines the default values for the Ulricore when using TSL UMD v3.1.

<table>
<thead>
<tr>
<th>Setting</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial</td>
<td>Connection Type</td>
<td>RS422</td>
</tr>
<tr>
<td></td>
<td>Baud</td>
<td>38400</td>
</tr>
<tr>
<td></td>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Parity</td>
<td>Even</td>
</tr>
<tr>
<td></td>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Ethernet</td>
<td>TCP Port</td>
<td>5727</td>
</tr>
<tr>
<td></td>
<td>UDP Port</td>
<td>4490</td>
</tr>
</tbody>
</table>
Protocol Implementation

Ultricore implements the protocol with the following structure: DisplayID | Control | DisplayData.

Table 17.14 lists the TSL UMD Protocol v3.1 commands the Ultricore supports.

<table>
<thead>
<tr>
<th>Protocol Breakdown</th>
<th>Description</th>
<th>Ultriscape System Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Address</td>
<td>0 - 126 display identification enumeration</td>
<td>DisplayID associated with source or destination</td>
</tr>
<tr>
<td>Control Byte</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit 0</td>
<td>Tally 1 status (1=on, 0=off)</td>
<td>Tally 1 (Red)a</td>
</tr>
<tr>
<td>Bit 1</td>
<td>Tally 2 status</td>
<td>Tally 2 (Green)</td>
</tr>
<tr>
<td>Bit 2</td>
<td>Tally 3 status</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 3</td>
<td>Tally 4 status</td>
<td>Not used</td>
</tr>
<tr>
<td>Bits 4-5</td>
<td>Brightness value</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 6</td>
<td>Reserved</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 7</td>
<td>0</td>
<td>Not used</td>
</tr>
<tr>
<td>Display Data</td>
<td>16 ASCII display characters (20h-3Eh)</td>
<td>UMD Display Text</td>
</tr>
</tbody>
</table>

a. Green/Red may be swapped by configuring the Global Tally Settings in the Ultriscape Head interface for an Ultrix router. Refer to the Ultrix User Guide for details on these settings.

TSL UMD Protocol v4.0 Commands

Table 17.15 outlines the default values for the Ultricore when using TSL UMD v4.0.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Serial</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Type</td>
<td>RS422</td>
<td>TCP Port</td>
</tr>
<tr>
<td>Baud</td>
<td>38400</td>
<td>5728</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>Even</td>
<td>UDP Port</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
<td>4491</td>
</tr>
</tbody>
</table>

Protocol Implementation

Ultricore implements the protocol with the following structure: Header | Control | DisplayData | VBC | XData.

Table 17.16 lists the TSL UMD Protocol v4.0 commands the Ultricore supports.
### Table 17.16 TSL UMD Protocol v4.0 Commands

<table>
<thead>
<tr>
<th>Protocol Breakdown</th>
<th>Description</th>
<th>Ultriscape System Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header</td>
<td>0x80 + 0 - 126 display address</td>
<td>DisplayID associated with source or destination</td>
</tr>
<tr>
<td>Control Byte</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit 0</td>
<td>Tally 1 status (1=on, 0=off)</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 1</td>
<td>Tally 2 status</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 2</td>
<td>Tally 3 status</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 3</td>
<td>Tally 4 status</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 4-5</td>
<td>Brightness value</td>
<td>Not used</td>
</tr>
<tr>
<td>Bit 6</td>
<td>0=display data, 1=command data</td>
<td>Display data only (0)</td>
</tr>
<tr>
<td>Bit 7</td>
<td>0</td>
<td>Not used</td>
</tr>
<tr>
<td>Display Data</td>
<td>16 ASCII display characters (20h - 7Eh)</td>
<td>UMD display text</td>
</tr>
<tr>
<td>VBC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bits 3-0</td>
<td>Byte count of XData</td>
<td></td>
</tr>
<tr>
<td>Bits 6-4</td>
<td>Minor protocol version (v4.0=0)</td>
<td></td>
</tr>
<tr>
<td>Bit 7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>XData1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bits 0-1</td>
<td>Right Hand tally value(^a)</td>
<td>Not implemented</td>
</tr>
<tr>
<td>Bits 2-3</td>
<td>Text display value(^a)</td>
<td>Sets PiP label (UMD) text background color</td>
</tr>
<tr>
<td>Bits 4-5</td>
<td>Left hand tally value(^a)</td>
<td>Displayed in either border or text background; can be either or both</td>
</tr>
<tr>
<td>Bit 6</td>
<td>Reserved</td>
<td></td>
</tr>
<tr>
<td>Bit 7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>XData2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bits 0-1</td>
<td>Right Hand tally value</td>
<td>Not implemented</td>
</tr>
<tr>
<td>Bits 2-3</td>
<td>Text display value</td>
<td>Not implemented</td>
</tr>
<tr>
<td>Bits 4-5</td>
<td>Left hand tally value</td>
<td>Not implemented</td>
</tr>
</tbody>
</table>

\(^a\) Where 0=off, 1=Red, 2=Green, 3=Amber

### TSL UMD Protocol v5.0 Commands

**Table 17.17 outlines the default values for the Ultricore when using TSL UMD v5.0.**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial</td>
<td></td>
</tr>
<tr>
<td>Connection Type</td>
<td>RS422</td>
</tr>
<tr>
<td>Baud</td>
<td>38400</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 17.17 Default Connection Types — TSL UMD v5.0

<table>
<thead>
<tr>
<th>Setting</th>
<th>Parity</th>
<th>Stop Bits</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity</td>
<td>Even</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 17.18 summarizes the settings in the Protocol Options dialog for the TSL UMD v5.0 protocol.

Table 17.18 Protocol Options — TSL UMD v5.0 protocol

<table>
<thead>
<tr>
<th>Option</th>
<th>Setting</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrapping</td>
<td>Yes</td>
<td>Wrap commands for TCP mode</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>Do not wrap commands (UPD mode). This is the default.</td>
</tr>
<tr>
<td>PBC in Count Value</td>
<td>Yes</td>
<td>Include the Packet Byte Count field when calculating the byte count value</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>Do not include the Packet Byte Count field in the byte count value. This is the default.</td>
</tr>
</tbody>
</table>

Protocol Implementation

Ultricore implements the protocol with the following structure: PBC | Ver. | Flags | Screen | DMSG (Index, Control, Length, Text).

Table 17.19 lists the TSL UMD Protocol v5.0 commands the Ultricore supports.

Table 17.19 TSL UMD Protocol v5.0 Commands

<table>
<thead>
<tr>
<th>Protocol Breakdown</th>
<th>Description</th>
<th>Ultrascape System Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBC</td>
<td>Total byte count of packet</td>
<td></td>
</tr>
<tr>
<td>Ver.</td>
<td>Minor version number (0=v5.00)</td>
<td></td>
</tr>
<tr>
<td>Flags</td>
<td>Display data only (0)</td>
<td></td>
</tr>
<tr>
<td>Bit 0</td>
<td>0=ASCII strings, 1=UTF-16LE</td>
<td></td>
</tr>
<tr>
<td>Bit 1</td>
<td>0=display data, 1=screen control</td>
<td></td>
</tr>
<tr>
<td>Bits 2-7</td>
<td>Reserved (0)</td>
<td></td>
</tr>
<tr>
<td>Screen</td>
<td>ScreenID associated with source or destination</td>
<td></td>
</tr>
<tr>
<td>DMSG</td>
<td>DisplayID associated with source or destination</td>
<td></td>
</tr>
<tr>
<td>Index</td>
<td>16bit Display Address</td>
<td></td>
</tr>
</tbody>
</table>
Enabling SNMP Support

Ultricores running software version 3v4 or higher provide optional support for remote monitoring and control of your router using SNMP (Simple Network Management Protocol). This protocol is compatible with many third-party monitoring and control tools.

Table 17.19  TSL UMD Protocol v5.0 Commands

<table>
<thead>
<tr>
<th>Protocol Breakdown</th>
<th>Description</th>
<th>Ultriscape System Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Minor protocol version (v5.0=0)</td>
<td></td>
</tr>
<tr>
<td>Bits 0-1</td>
<td>Right hand tally valuea</td>
<td>Sets right-hand tally indicator color (Ultriscape configuration dependent)</td>
</tr>
<tr>
<td>Bits 2-3</td>
<td>Text display valuea</td>
<td>Sets text background and border color</td>
</tr>
<tr>
<td>Bits 4-5</td>
<td>Left hand tally valuea</td>
<td>Sets left-hand tally indicator color</td>
</tr>
<tr>
<td>Bits 6-7</td>
<td>Brightness value (0-3)</td>
<td>Not implemented</td>
</tr>
<tr>
<td>Bits 8-14</td>
<td>Reserved (0)</td>
<td></td>
</tr>
<tr>
<td>Bit 15</td>
<td>0=display data, 1=command data</td>
<td>Display data only (0)</td>
</tr>
<tr>
<td>Length</td>
<td>Byte count of text</td>
<td></td>
</tr>
<tr>
<td>Text</td>
<td>Text as defined by Flag 0 setting</td>
<td>UMD display text</td>
</tr>
</tbody>
</table>

a. Where 0=Off, 1=Red, 2=Green, 3=Amber

Probel SW-P-08 Serial Protocol Commands

Table 17.20 lists the Probel SW-P-08 Serial Protocol commands that Ultricore supports.

Table 17.20  Probel SW-P-08 Native Protocol Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Response Message</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Crosspoint Interrogate</td>
<td>Crosspoint Tally</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Crosspoint Connect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Protect Interrogate</td>
<td>Protect Tally</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Protect Connect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Protect Disconnect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Protect Tally Dump Request</td>
<td>Protect tally Dump Response</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Crosspoint Tally Dump Request</td>
<td>Crosspoint Tally Dump (word) Response</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>Implementation Request</td>
<td>Implementation Status</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>All Source Names Request</td>
<td>Source Name Response</td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>Single Source Name Request</td>
<td>Source Name Response</td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>All Destination Association Name Request</td>
<td>Destination Association Name Response</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>Single Destination Association Names Request</td>
<td>Destination Association Name Response</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>All UMD Labels Request</td>
<td>UMD Label Response</td>
<td>Only one set of labels is currently supported. UMD Labels replicate source labels.</td>
</tr>
<tr>
<td>105</td>
<td>Single UMD Labels Request</td>
<td>UMD Label Response</td>
<td></td>
</tr>
</tbody>
</table>
The MIB file provides SNMP traps for the configurable alarms on Ultricore as well as on the power supplies and fans.

Enabling SNMP Support

The SNMP monitoring and control feature for your Ultricore is a software option that you enable in the System Status > Network tab.

To enable SNMP support on the Ultricore

1. Verify that the SNMP license key is installed for the router. Refer to the section “Installing a License Key” on page 32 for details.
2. In the Tree View of DashBoard, double-click the System Status node under the Ultricore node.
   The System Interfaces display in the DashBoard window.
3. Select the Network tab.
4. Locate the SNMP area of the tab.
5. Select the Enable SNMP box.
6. Ensure that the Alarms you want to monitor via SNMP are also enabled on the Ultricore router.
   - “Monitoring the Hardware” on page 297
   - “Monitoring the Communications” on page 317
   - “Monitoring the Signals” on page 321

Configuring the SNMP Agent using DashBoard

The SNMP Agent on the Ultricore uses SNMP version 2 to allow queries of the configured system alarms, and state changes to configured alarms will be sent out as SNMP traps to the specified Trap Destination IP Address(es).

Whenever the options in the SNMP area are edited, the SNMP Agent is restarted. It can take up to 10 seconds for all monitored states to be updated. This latency only applies once on startup.

To configure the SNMP Agent using DashBoard

1. In the Tree View of DashBoard, double-click the System Status node under the Ultricore node.
   The System Interfaces display in the DashBoard window.
2. Select the Network tab.
3. Locate the SNMP area of the tab.
4. Use the SNMP Community Name field to specify the SNMP password for GET requests. For example, public.
5. Use the SNMP Trap Destination IP Address field to specify the target address to which traps should be sent. An example of a valid target is provided in the SNMP area.
A maximum number of six strings are displayed in the SNMP Trap Destination IP Address field at one time. If at the maximum number, you must select a string from the field and delete it before adding a new target entry.

6. Press [Enter] to apply the changes.

Ember+ Registration and Discovery

This section provides information on the setup and operation for the Ultricore to communicate with a third-party control system via the Ember+ media distribution protocol.

Establishing a Connection

To establish a connection between the Ember+ client and the Ultricore

1. Configure your network streams as outlined in the Ultrix User Guide.
2. Configure your router database as outlined in “Database Configuration” on page 63.
3. Install the Ultricore-EMBER+ license on the Ultricore. Refer to “Software License Keys” on page 39. This enables the Ultricore to start an Ember+ server and listen to incoming connections.
4. Add the Ultricore in the Ember+ control system interface using the IP Address assigned to the Ultricore.
5. In the Ember+ controls system, set the TCP port to 9000 for the Ultricore.

Specifying the Operation Mode

Ultricore can be controlled via Ember+ in two modes: Virtual Mode (table mapped IO) or Physical Mode (direct socket control).

To specify the Ember+ operation mode on the Ultricore

1. Display the Connections tab for Ultrix as follows:
   a. Expand the Database node in the Tree View.
   b. Double-click the Connections node.
2. Click Options in the Protocol Servers area.
   The Server Options dialog opens.
3. Use the Ember Plus menu to specify the operation mode required by your Ember+ control system. Choose from the following:
   • Virtual Mode — each level is represented by a Matrix and the Labels will be the one defined in the Destinations and Sources tabs.
• **Physical Mode** — the whole router is represented as a single Matrix and the physical socket labels are used. The external control system using Ember+ commands bypasses the virtual IO mapping and directly controls the Ultrix physical socket connections. Therefore the Ultrix should not be switched by any other devices.

4. Click **Apply** to close the dialog.

5. Click **Apply** at the bottom of the **Connections** tab to apply the new setting.

**Supported Commands**

We support the **Get Directory** and **Connect** commands. The router is represented using the Ember+ Matrix object including Labels. This allows the Ember+ control system to see the number of levels, number of sources and destinations and their labels, the per destination status, and issue switch commands.

* If you make changes to the router database (such as Levels, Destinations and Sources) after establishing communications, you may need to refresh/reload/reconnect the connection.
Monitoring

The status of the Ultricore may be monitored via its fields in the DashBoard client software or the LEDs located on the front panel of the chassis.

Enabling Logging for the Ultricore

The Ultricore records events in non-volatile memory. Each event includes a timestamp, and information about the event. The following events and conditions are recorded in the logs:

- Configuration changes that affect the routing path.
- Input state changes such as video presence, audio presence, video formats. In the case of audio inputs, the log entry also includes the associated audio cluster.
- Power-on or reboot cycles.
- Error conditions reported by DashBoard.

You can also monitor the overall routing system status via the System Status tabs in DashBoard. Refer to the section “Status Tabs” on page 186 for details on these tabs.

To enable the Ultricore to log events

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Setup tab.
3. Select the Logging box.

Monitoring the Network Status

The Ethernet ports on the Ultricore rear panel are used to connect to an ethernet network for communications.

To verify the ethernet redundancy status via the System Status interface

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Network tab.
3. Refer to Table 19.3 on page 187 for a summary of the possible messages displayed in the Network tab.

Forcing an Ethernet Failover Switch

The failover feature enables the Ultricore to use the second Ethernet port when the primary Ethernet connection is lost or unavailable. The Active ENET field in the System Status > Network tab reports when Ultricore switches from one Ethernet port to the other.

To force an ethernet failover switch

1. In the Tree View of DashBoard, double-click the System Status node.
   The System Interfaces display in the DashBoard window.
2. Select the Network tab.
3. Click ENET Failover Force.
Monitoring the Ultricore Mode Status

The primary Ultricore passes all commands to each client device in the system. Each client device responds back to the primary in minute intervals.

Primary Status

If the Ultricore is configured as a primary, the Ultricore Clients table in the Communication Settings interface reports on the status between it and each client device connected to it. Each client is listed in the table, with the most recently connected device displayed at the bottom of the list.

![Figure 18.1 Ultricore Mode — Primary Status]

Client Status

If the Ultricore router is configured as a client, the Communication Settings interface reports on the communications between it and the primary.

Troubleshooting

If you have lost communication between the primary Ultricore and its clients:

1. Verify that each device is installed correctly.
2. Verify that each device is installed with a network connection to your facility.
3. Verify the Ethernet settings for each device are valid.
4. Verify that the primary Ultricore reports a list of valid connections to clients in its Ultricore Clients table.
5. Verify that each client Ultricore is running software compatible to the primary Ultricore.

Using the System Logs in DashBoard

An entry in each log includes a timestamp, a code number, and a description. Messages are written to the log when significant changes occur in the operation of the Ultricore. These could include: changes to video, reference, audio or time inputs; power-on or reboot cycles; configuration changes that can have an effect on the routing path; alarm conditions.

To access the system logs in DashBoard

1. Double-click the System Logs node located under the Database node.
2. To view the communication log for the Ultricore only, select the Routing System Log option.
3. To view the log for communications between the Ultricore and other devices, select the Controller Device Log option.
4. To view the log for executed tasks in DashBoard for the Ultricore, select the DashBoard Communications Log option.
5. Click Refresh to update the entries for the currently selected log.
Saving the Current Settings for the Ultricore

You can save the Ultricore settings to a configuration file that can be used by Ross Technical Support for troubleshooting. Use this procedure only under the guidance of Ross Technical Support.

To save your setup a new file

1. In the Tree View of DashBoard, right-click the node for the Ultricore that you want to save the settings for.
2. Select Save Configuration to File. The Save Configuration to File dialog opens.
3. Navigate to the folder on your DashBoard computer in which you want to save the configuration file. The default location is Desktop\My Documents.
4. Click Save.

Monitoring the Devices in a Routing System

Devices with an established and valid communication point with Ultricore are displayed under the Devices node in the Tree View. Ultricore aggregates all the devices in a system under the Devices node to provide system wide monitoring capabilities.

If you cannot expand a Devices sub-node, there are currently no devices of that type communicating with the Ultricore.

To view the external devices communicating with an Ultricore

1. Expand the Devices node.
2. Expand the Controllers + Matrices sub-node to display a list of routers communicating with Ultricore. All routers and matrix devices communicating with Ultricore are listed under the Controllers and Matrices sub-node.
3. Expand the Panels sub-node to display a list of remote control panels communicating with Ultricore. All remote control devices communicating with Ultricore are listed under the Panels sub-node.
4. Double-click the node for the device you want to verify. The interface for the device displays in the DashBoard window. In the example below, the interface for an Ultrix Router is displayed in the DashBoard window.
Monitoring via the Front Panel

The LCD Display on the Ultricore front panel reports the IP Address of the Ultricore and reports when an error or warning condition is occurring on the Ultricore panel.

Navigating the Menus

The front panel includes a five-direction round finger joystick that is used to navigate the Ultricore messages on the LCD Display.

![Figure 18.2 Positioner Movement](image)

Use the following actions to navigate the parameters:

- **In** — pressing once brings the menu system onto the monitor output; holding for two seconds exits the menu system. This position is also used to enter the menu values/parameters.
- **Up** — pressing once selects the menu, item, or value above the current selection; holding scrolls to the top of the available selections.
- **Down** — pressing once selects the menu, item, or value below the current selection; holding scrolls to the bottom of the available selections.
- **Forward** — pressing once moves from menu to item to value.
- **Back** — pressing once moves from value to item to menu.

Monitoring the Ethernet LEDs on the Rear Panel

Each RJ45 connector on the Ultricore rear panel include two LEDs that report the ethernet communication activity and speed. Refer to Figure 18.3 for LED locations on the Ultricore rear panel.

![Figure 18.3 ENET Ports on Rear Panel — LEDs](image)
Table 18.1 provides basic LED descriptions.

Table 18.1 ENET Port LEDs

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENET # - Link/Activity</td>
<td>Green</td>
<td>When lit green, this LED indicates a valid link is established on the specified ENET port.</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>When flashing green, this LED indicates communication activity is occurring on the specified ENET port.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>When unlit, this LED indicates an invalid link is detected on the specified ENET port. Verify the cable connection on the rear module port and your network connections.</td>
</tr>
<tr>
<td>ENET # - Port Speed</td>
<td>Green</td>
<td>When lit green, this LED indicates the ENET Port communication speed is at 1Gbps.</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>When lit orange, this LED indicates the ENET Port communication speed is at 100Mbps.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>When unlit, this LED indicates the ENET Port communication speed is at 10Mbps.</td>
</tr>
</tbody>
</table>

If you have any questions pertaining to the installation or operation of Ultricore, please contact us at the numbers listed in the section “Contacting Technical Support” on page 16. Our technical staff is always available for consultation, training, or service.

Upgrading the Software

Ultricore is upgraded through the DashBoard client. To obtain the most recent upgrade package, contact Ross Technical Support.

Ensure that you are running DashBoard software version 8.0.0 or higher and that the computer running the DashBoard client is located on the same network as the Ultricore panel.

To upgrade the Ultricore software

2. Ensure the Ultricore has a valid Ethernet connection.
3. Launch DashBoard by double-clicking its icon on your computer desktop.
4. Locate the Ultricore in the Tree View of DashBoard.
5. Expand the node for the Ultricore to display a list of sub-nodes in the Tree View.
6. Double-click the System Status node.
   The System Status tabs display in the DashBoard window.
7. Click Upload, located near the bottom of the tab.
   The Select File to Upload dialog opens.
8. Navigate to the *.bin file you want to upload.
9. Click Open.
10. Click Finish to start the upgrade.
11. Monitor the upgrade.
   An Upload Status dialog enables you to monitor the upgrade process.
Avoid clicking **Reboot** until the Ultricore has successfully completed the file upload process and the **OK** button, located in the bottom right corner of the dialog, is enabled.

12. Click **OK** to reboot the Ultricore.

   The **Reboot Confirm** dialog opens, indicating the Ultricore will reboot.

13. Click **Yes** to continue the upgrade process.

** Ultricore is temporarily taken off-line during the reboot process. The process is complete once the status indicators for the Ultricore return to their previous status.
DashBoard Interface Overview

The DashBoard client software enables you to monitor, configure, and operate your Ultricore Central Controller. Using the interfaces provided via the DashBoard client software, you can:

- Configure the network connection for your Ultricore
- Configure the connections to Ross NK Series routers via NK-NET or NK-IPS devices
- Configure the connections to Ross Ethernet routers and remote control panels
- Specify which attached routing devices or matrices to use
- Configure system levels and assign level names
- Assign physical router inputs and outputs to logical sources and destinations
- Configure source and destination labels
- Perform crosspoint preset/takes
- Monitor the status of multiple levels
- Create and use salvos

Ultricore in DashBoard

Ultricore groups the configuration, monitoring, and operating features in a Tree View in the DashBoard client window. Each node of the tree opens to reveal one or more sub-nodes, giving access to the configuration options for your system.

Ultricore includes the following interfaces, as separate nodes, in the DashBoard Tree View.

System Status

Double-clicking the System Status node displays two types of tabs within the same DashBoard window: Status (read-only) tabs located on the left, and a series of Configuration tabs located on the right. This interface is similar to an openGear® card tab system.

Database

Expanding the Database node enables you to configure the connection points, matrices, destinations, sources, groups, levels, soft panels, and salvos for the system. The settings are saved locally on the Ultricore.

Devices

The sub-nodes under Devices provide a list of external devices in the routing system currently communicating with the Ultricore.

Soft Panels

The Soft Panels tree provides access to the Matrix, MultiBus, and Category soft panels for the Ultricore. From these panels you can perform crosspoint switches, and manage salvos via a DashBoard interface.
Terminology

Throughout the DashBoard interface, actual sockets (inputs and outputs) of a router (or matrix) are referred to by hierarchical dotted notation: \texttt{Frame.Slot.Port.Type.Channel} where:

- \texttt{Frame} identifies the physical router/device housing the matrix/matrices.
- \texttt{Slot} identifies which slot of the matrix is located.
- \texttt{Port} identifies the physical input or output socket.
- \texttt{Type} identifies the generic signal type (e.g. SDI, audio).
- \texttt{Channel} identifies the audio channel within an SDI stream.

These designators may be assigned more user friendly names if required by editing the \texttt{Port Labels} interface.

System Status Interfaces

The System Status interface provides hardware information, IP Address settings, and general database management for your Ultricore. The interface is organized into two distinct areas in the DashBoard window: Status tabs (located on the left), and Configuration tabs (located on the right).

![Figure 19.1 Example of a System Status Interface](image)

Status Tabs

The Status tabs display read-only information about the Ultricore hardware and software.

Product Tab

Table 19.1 summarizes the read-only information displayed in the Product tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td></td>
<td>Indicates the Ultricore product name</td>
</tr>
<tr>
<td>Vendor</td>
<td></td>
<td>Indicates the supplier/manufacturer of the device</td>
</tr>
<tr>
<td>System Version</td>
<td></td>
<td>Indicates the build version of the Ultricore panel</td>
</tr>
<tr>
<td>Serial Number</td>
<td></td>
<td>Indicates the serial number of the Ultricore panel</td>
</tr>
</tbody>
</table>
Other Tab

Table 19.2 summarizes the read-only information displayed in the Other tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frontend SW Rev</td>
<td>#</td>
<td>Read-only information used by Ross Technical Support.</td>
</tr>
<tr>
<td>Backend SW Rev</td>
<td>#</td>
<td></td>
</tr>
<tr>
<td>Device FW Rev</td>
<td>#</td>
<td></td>
</tr>
</tbody>
</table>

Configuration Tabs

The Configuration tabs of the DashBoard window provide network setup options for the Ultricore panel and managing the Ultricore databases.

Network Tab

Table 19.3 summarizes the fields and menus displayed in the Network tab. The options in the Network tab are organized into two sections: Settings (editable fields), and Ethernet Redundancy (read-only fields).

<table>
<thead>
<tr>
<th>Information</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active ENET</td>
<td>ENET #</td>
<td>Indicates which Ethernet port on the rear panel is the primary Ultricore network connection</td>
</tr>
</tbody>
</table>
| ENET # LINK            | Connected (x, y) | Indicates that a valid network link is configured on the specified Ethernet port of the Ultricore rear panel where:  
  • x represents the speed in number of Mbps  
  • y represents the link type (e.g. full duplex) |
|                        | Not Connected   | Ethernet communications for the Ultricore are invalid. The Ethernet cable may be disconnected on the rear panel or the Ethernet network may be down or experiencing problems. |
| ENET MAC (read-only)   | ###.###.###.### | Indicates the MAC Address for the Ultricore |
### Table 19.3 Network Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force ENET Failover</td>
<td></td>
<td>Switches the primary Ultricore network connection to other Ethernet port on the rear panel</td>
</tr>
<tr>
<td><strong>Settings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>###.###.###.###</td>
<td>Specifies the IP address for the Ultricore panel</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>###.###.###.###</td>
<td>Specifies the subnet mask for the Ultricore panel</td>
</tr>
<tr>
<td>Gateway</td>
<td>###.###.###.###</td>
<td>Specifies the gateway for communication outside of the local area network (LAN)</td>
</tr>
<tr>
<td>Apply</td>
<td>###.###.###.###</td>
<td>Updates the Address, Subnet Mask, and Gateway settings</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>Ignores any unsaved changes made to the Address, Subnet Mask, and Gateway settings and reverts back to the current running values.</td>
</tr>
<tr>
<td><strong>SNMP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable SNMP</td>
<td>Selected</td>
<td>Enables the SNMP Agent on the Ultricore</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables the SNMP Agent on the Ultricore</td>
</tr>
<tr>
<td>SNMP Community Name</td>
<td>#</td>
<td>Specifies the SNMP Agent identifier for communications</td>
</tr>
<tr>
<td>SNMP Trap Destination IP Address</td>
<td>###.###.###.###</td>
<td>Specifies the target address the Ultricore sends SNMP traps to</td>
</tr>
<tr>
<td><strong>Permitted Clients</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DashBoards:</td>
<td>###.###.###.###</td>
<td>Lists the IP Address of each DashBoard client that is allowed to communicate with this Ultricore</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Enables you to add a new DashBoard client to the Permitted Clients list</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td>Deletes the selected DashBoard client from the Permitted Clients list</td>
</tr>
<tr>
<td>Delete All</td>
<td></td>
<td>Clears all entries in the Permitted Clients list</td>
</tr>
<tr>
<td>Edit</td>
<td></td>
<td>Enables you to modify the selected entry in the Permitted Clients list</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>Ignores any unsaved changes made to the Permitted Clients list and reverts back to the current running values.</td>
</tr>
<tr>
<td>Apply</td>
<td></td>
<td>Updates the Permitted Clients list settings</td>
</tr>
</tbody>
</table>
Database Tab

Table 19.4 summarizes the fields and menus displayed in the Database tab. The options in the Database tab are organized into two sections: Current Database, and Database Management.

### Table 19.4 Database Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Database</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote Controller Mode</td>
<td>Selected</td>
<td>This UltraCore will be controlled by a remote (primary) UltraCore router. You must reboot this UltraCore before the change can take effect.</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>This UltraCore is a standalone or is the primary system controller for the routing system.</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Indicates the database currently loaded in UltraCore</td>
</tr>
<tr>
<td>Levels</td>
<td></td>
<td>Indicates the number of levels the database is configured for</td>
</tr>
<tr>
<td>Sources</td>
<td></td>
<td>Indicates the number of inputs the database is configured for</td>
</tr>
<tr>
<td>Destinations</td>
<td></td>
<td>Indicates the number of outputs the database is configured for</td>
</tr>
<tr>
<td>Enable Tally</td>
<td>Selected</td>
<td>Select this box to enable UltraCore to read tally identifiers from the input signals. This information is passed through to any assigned outputs. Selecting this box also updates the Sources and Destinations tabs with a new column “Tally” that is used to assign Tally IDs to sources and/or destinations.</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Tally information from the input signals is not read into the database.</td>
</tr>
<tr>
<td>I/O Ports</td>
<td>Refresh</td>
<td>Updates the Matrix Inputs and Outputs lists in the Sources and Destinations tabs respectively</td>
</tr>
<tr>
<td>Crosspoint Status</td>
<td>Refresh</td>
<td>Updates the Status field located directly below this button</td>
</tr>
<tr>
<td>Status (read-only)</td>
<td>Loaded</td>
<td>The active database was successfully loaded.</td>
</tr>
<tr>
<td></td>
<td>Error(^b)</td>
<td>One of the following has occurred:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• the selected database is no longer available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• an attempt was made to delete a non-existent database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• an attempt was made to save a database with an existing name</td>
</tr>
<tr>
<td><strong>Database Management - Load Database</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Selects the database to load for the UltraCore</td>
</tr>
<tr>
<td>Database</td>
<td>Load</td>
<td>Loads the specified database to the UltraCore</td>
</tr>
<tr>
<td>Database to RCPs</td>
<td>Send</td>
<td>Forces the currently loaded database settings to the connected Remote Control Panels (RCPs)</td>
</tr>
</tbody>
</table>

\(^a\) Indicates the database currently loaded in UltraCore

\(^b\) One of the following has occurred:
• the selected database is no longer available
• an attempt was made to delete a non-existent database
• an attempt was made to save a database with an existing name
Table 19.4 Database Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
</table>
| Include I/O Maps|            | Creates a database to match the quantity of BNC I/O fitted in the router. Each input / output SDI port will be mapped to default labels of SRC xx and DST xx respectively.  
|                 |            | • I/O mapping occurs for Level 1 only (SDI)  
|                 |            | • the Sources field is ignored  
|                 |            | • the Destination field is ignored  
|                 |            | • the Level field is applied  
| Name            | <name>     | Provides a unique identifier for the new database (up to 32 characters)    |
| Levels          | #          | Specifies the total number of levels the database will make available        |
| Sources         | #          | Specifies the total number of sources the database will make available       |
| Destinations    | #          | Specifies the number of levels the database will make available              |
| Database        | Add        | Uses the settings in the Database Management fields to create a new database |

Database Management - Delete Database

| Name            | <name>     | Selects the database to delete                                              |
| Database        | Delete     | Deletes the currently selected database                                     |

a. The Levels, Sources, and Destinations fields indicate the initial values when the database was created. Levels, Sources, and Destinations can be removed from or added to the database on their respective configuration tabs. Doing so will not alter the fields in the Database tab.

b. This message displays for a maximum of 10 seconds only.

Transfer Tab

Table 19.5 summarizes the options displayed in the Transfer tab.

Table 19.5 Transfer Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database:</td>
<td>&lt;database name&gt;</td>
<td>Selects the database to be exported</td>
</tr>
<tr>
<td>Save As:</td>
<td>*.uda</td>
<td>Automatically updates with the name of the database archive</td>
</tr>
<tr>
<td>Browse...</td>
<td>*.uda</td>
<td>Enables you to save or re-name the database to a specific location. The default location is</td>
</tr>
<tr>
<td>Apply</td>
<td></td>
<td>Click to begin exporting the file to specified location</td>
</tr>
</tbody>
</table>

Import

| Archive File:   | *.uda      | Indicates the last file that was imported                                   |
| Browse...       |            | Enables you to specify the database to import                              |
| Retrieve Database As: | <database name> | Indicates the file currently selected for importing                        |
| Apply           |            | Click to begin the import                                                  |
Setup Tab

Table 19.6 summarizes the options displayed in the Setup tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Name</td>
<td>&lt;name&gt;</td>
<td>Provides a unique identifier for the Ultricore in the Tree View</td>
</tr>
<tr>
<td>System Name</td>
<td>&lt;name&gt;</td>
<td>Provides a unique identifier for the routing system</td>
</tr>
<tr>
<td>Logging</td>
<td>Selected</td>
<td>Enables the Ultricore to update the entries in the System Logs interface</td>
</tr>
<tr>
<td></td>
<td>Cleared</td>
<td>Disables this feature</td>
</tr>
<tr>
<td>Output Debug</td>
<td>Selected</td>
<td>Only use this feature under the guidance of Ross Technical Support.</td>
</tr>
<tr>
<td>Messages</td>
<td>Cleared</td>
<td></td>
</tr>
<tr>
<td>DashBoard Timeout</td>
<td>10-300s</td>
<td>Sets the maximum number of seconds that DashBoard waits until it queries the Ultricore. The default is 10 seconds. This value is reset after a power-cycle.</td>
</tr>
<tr>
<td>Timeout</td>
<td>Update</td>
<td>Applies the new value in the DashBoard Timeout menu.</td>
</tr>
<tr>
<td>Status</td>
<td>mm/dd/yy</td>
<td>Reports when multiple devices, with the same name, are communicating with the Ultricore where:</td>
</tr>
<tr>
<td></td>
<td>ERROR:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Duplicate device name [abc] for ID [#]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clear</td>
<td>Clears the Status field entry</td>
</tr>
</tbody>
</table>

Logs Tab

This tab includes the System Log, Controller Communications Log, and DashBoard Communications Log. The read-only information displayed in the logs is used by Ross Technical Support for diagnostic purposes.

Database Interfaces

The Database interfaces enable you to configure devices in your routing system and configure control aspects for Ultricore. Note that the currently active database name is displayed in parentheses in the tree view. Unicode names are also supported so that names may be defined in other languages or writing systems.

Most of the interfaces are organized into a table format with a row of buttons at the bottom of the interface. You can select individual cells, columns, or rows of entries to define.

A summary of each interface is provided in the following sub-sections.
Database Builder

The Database Builder interface helps you to quickly create a database by grouping basic controls on four pages: Quick Start, Levels, Destinations, and Sources. The same controls are available as sub-nodes of the Database interface.

Quick Start

The Quick Start options display by default when the Database Builder displays in DashBoard. From this page you can define the database properties including: type of signals (video, audio) the number of Ultricore routers that the database includes, the audio elements of the database, and basic UltriScape parameters.
Table 19.8 summarizes the fields displayed in the options in the Quick Start page.

### Table 19.7 Database Builder — Quick Start

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the device in the routing system. This name is also used when matrices are defined in the Ultricore system.</td>
</tr>
<tr>
<td>Frame select table</td>
<td></td>
<td>Displays a list of detected routers in your network. Select a box to apply the database to the specified router.</td>
</tr>
<tr>
<td>Include AUX ports</td>
<td>None</td>
<td>Do not create entries for AUX ports in the database</td>
</tr>
<tr>
<td>Insert at slot</td>
<td></td>
<td>Create AUX port entries as they are physically located within the Ultricore chassis (e.g. ports 17 and 18).</td>
</tr>
<tr>
<td>At the end</td>
<td></td>
<td>Create AUX ports after BNC entries</td>
</tr>
<tr>
<td>Video support</td>
<td>Yes</td>
<td>Creates a database that includes video and audio signals</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Creates an audio-only database</td>
</tr>
<tr>
<td>Audio channels</td>
<td>#</td>
<td>Specifies the quantity of audio channels (levels) required</td>
</tr>
<tr>
<td>Breakaway source support</td>
<td>Yes</td>
<td>Create sources for audio breakaways/shuffles</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Audio breakaways are not included in this database</td>
</tr>
<tr>
<td>SDI audio per channel</td>
<td></td>
<td>Creates audio breakaway sources using the selected audio channel grouping size</td>
</tr>
<tr>
<td>MADI channels per source</td>
<td></td>
<td>Creates MADI sources using the selected audio channel grouping size</td>
</tr>
<tr>
<td>Disconnect source?</td>
<td>Yes</td>
<td>Creates a source that will disconnect (mute) SDI and audio channels</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>This option is not included in the database</td>
</tr>
<tr>
<td>Passthrough source?</td>
<td>Yes</td>
<td>Sources are routed without changes/edits</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>This option is not included in the database</td>
</tr>
</tbody>
</table>
Levels

Once you defined the options on the Quick Start interface, you can proceed to preview and customize the levels, destinations, and sources this database will include. Clicking Next on the Quick Start page displays the Levels page. (Figure 19.5)

The options in the Levels page are organized into a table where each row represents a level and the columns provide the options for configuring that level. From this page you assign a unique name to each level, a color that represents the level to make it easier to identify the level in a soft panel.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultriscape support?</td>
<td>Yes</td>
<td>Enables Ultriscape heads and PiPs to be included in the database</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Ultriscape heads and PiPs are not included in the database</td>
</tr>
<tr>
<td>Number of Multiviewer heads</td>
<td>#</td>
<td>Specifies the number of Ultriscape heads the database will support</td>
</tr>
<tr>
<td>Number of Multiviewer pips per head</td>
<td>#</td>
<td>Specifies the maximum number of PiPs available per layout</td>
</tr>
<tr>
<td>Include detected Multiviewer layout</td>
<td></td>
<td>Creates sources for detected Ultriscape layouts to enable layout changing from control panels</td>
</tr>
</tbody>
</table>

Destinations

Clicking Next on the Levels page displays the Destinations page. (Figure 19.6)

The Destinations page enables the assignment of logical labels (used by remote control panels and soft panels) to physical outputs of the attached matrices or routers. The options in the Destination page are organized into a table where each row associates a name of the destination with one or more logical matrix output sockets.
Sources

Clicking **Next** on the Destinations page displays the **Sources** page. *(Figure 19.7)*

The Sources page enables the assignment of labels (used by remote control panels and soft panels) to inputs of the attached matrices or routers. The options in the Sources page are organized into a table where each row associates a name of the source with one or more logical matrix input sockets.
Connections Tab

Ross Video devices are automatically discovered and available for connection in this tab. Third-party devices that are not discoverable via their protocol must be manually added. This tab is divided into two tables: Clients and Servers.

Figure 19.8 Example of Entries in a Connections Tab

Clients Table

The Clients table lists the connection details of remote client devices (e.g. external devices connecting to this Ultricore) currently communicating with the Ultricore.

Table 19.8 summarizes the read-only fields displayed in the Clients table in the Connections tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device ID</td>
<td>&lt;name&gt;</td>
<td>Specifies the external device for the connection point</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the device in the routing system. This name is also used when matrices are defined in the Ultricore system.</td>
</tr>
<tr>
<td>Protocol</td>
<td>GVG Native</td>
<td>The device uses the third-party GVG protocol to communicate. Refer to “GVG Series 7000 Native Protocol Commands” on page 163.</td>
</tr>
<tr>
<td></td>
<td>NVISION</td>
<td>This device communicates via the third-party NVISION protocol. Refer to “NVISION Commands” on page 168.</td>
</tr>
<tr>
<td></td>
<td>OGP</td>
<td>This device uses the openGear Protocol to communicate with Ultricore.</td>
</tr>
<tr>
<td></td>
<td>Probel SW-P-08</td>
<td>The device uses the third-party protocol known as Probel SW-P-08.</td>
</tr>
</tbody>
</table>
The Servers table lists the connection details of external devices that Ultricore has established a connection point to (e.g. devices that are controlled by this Ultricore). Entries in the Servers table are managed by the user as outlined in the chapter “Device Communication Setup” on page 51.

### Table 19.9 Connections Tab — Servers

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol</td>
<td>Ross NK</td>
<td>The device uses the Ross NK protocol to communicate. Refer to “Connecting to Ross NK Series Devices” on page 55.</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v3.1</td>
<td>The device uses TSL UMD protocol version 3.1</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v4.0</td>
<td>The device uses TSL UMD protocol version 4.0</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v5.0</td>
<td>The device uses TSL UMD protocol version 5.0</td>
</tr>
<tr>
<td></td>
<td>Ultrix</td>
<td>The device uses the Ross Ultrix protocol to communicate (TCP only).</td>
</tr>
<tr>
<td>Communication</td>
<td>type: t-bus</td>
<td>The device is physically connected to a T-BUS port on the Ultricore rear panel. Communication is via the Ross T-BUS protocol.</td>
</tr>
<tr>
<td></td>
<td>type: tcp</td>
<td>The device is communicating over a network connection. Note that the DashBoard client computer, the Ultricore, and the external device must be on the same network.</td>
</tr>
<tr>
<td></td>
<td>type: serial</td>
<td>The device is physically connected to a COM port on the Ultricore rear panel. The device is communicating with the Ultricore via a serial protocol.</td>
</tr>
<tr>
<td></td>
<td>ip: ########.###</td>
<td>Specifies the IP Address of the device on the network</td>
</tr>
<tr>
<td></td>
<td>ip: localhost</td>
<td>Indicates that the device is the one you are currently configuring</td>
</tr>
<tr>
<td></td>
<td>port: ########.###</td>
<td>Specifies the ethernet port the device is associated with on the network.</td>
</tr>
<tr>
<td>Communication</td>
<td>...</td>
<td>This button opens a dialog allowing further connection point setting adjustments such as specifying an IP address, IP port, etc.</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td>Provides additional information on the device such as device type, and firmware version</td>
</tr>
</tbody>
</table>

Servers Table

The Servers table lists the connection details of external devices that Ultricore has established a connection point to (e.g. devices that are controlled by this Ultricore). Entries in the Servers table are managed by the user as outlined in the chapter “Device Communication Setup” on page 51.

### Table 19.8 Connections Tab — Clients

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Parameters</td>
<td>Description</td>
</tr>
<tr>
<td>Protocol</td>
<td>Ross NK</td>
<td>The device uses the Ross NK protocol to communicate. Refer to “Connecting to Ross NK Series Devices” on page 55.</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v3.1</td>
<td>The device uses TSL UMD protocol version 3.1</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v4.0</td>
<td>The device uses TSL UMD protocol version 4.0</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v5.0</td>
<td>The device uses TSL UMD protocol version 5.0</td>
</tr>
<tr>
<td></td>
<td>Ultrix</td>
<td>The device uses the Ross Ultrix protocol to communicate (TCP only).</td>
</tr>
<tr>
<td>Communication</td>
<td>type: t-bus</td>
<td>The device is physically connected to a T-BUS port on the Ultricore rear panel. Communication is via the Ross T-BUS protocol.</td>
</tr>
<tr>
<td></td>
<td>type: tcp</td>
<td>The device is communicating over a network connection. Note that the DashBoard client computer, the Ultricore, and the external device must be on the same network.</td>
</tr>
<tr>
<td></td>
<td>type: serial</td>
<td>The device is physically connected to a COM port on the Ultricore rear panel. The device is communicating with the Ultricore via a serial protocol.</td>
</tr>
<tr>
<td></td>
<td>ip: ########.###</td>
<td>Specifies the IP Address of the device on the network</td>
</tr>
<tr>
<td></td>
<td>ip: localhost</td>
<td>Indicates that the device is the one you are currently configuring</td>
</tr>
<tr>
<td></td>
<td>port: ########.###</td>
<td>Specifies the ethernet port the device is associated with on the network.</td>
</tr>
<tr>
<td>Communication</td>
<td>...</td>
<td>This button opens a dialog allowing further connection point setting adjustments such as specifying an IP address, IP port, etc.</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td>Provides additional information on the device such as device type, and firmware version</td>
</tr>
</tbody>
</table>
## Table 19.9 Connections Tab — Servers

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabled</td>
<td>Enable</td>
<td>Direct communication is established between Ultricore and the device.</td>
</tr>
<tr>
<td></td>
<td>Disable</td>
<td>Communication between Ultricore and the device is unavailable.</td>
</tr>
<tr>
<td>Connected (read-only)</td>
<td>Connect</td>
<td>A valid connection is established between the device and the Ultricore on your network. This box is automatically selected when communication is established.</td>
</tr>
<tr>
<td></td>
<td>Disconnect</td>
<td>The connection is invalid or absent between the device and the Ultricore on your network.</td>
</tr>
<tr>
<td>Protocol (read-only)</td>
<td>GVG Native</td>
<td>The device uses the third-party GVG protocol to communicate. Refer to “GVG Series 7000 Native Protocol Commands” on page 163.</td>
</tr>
<tr>
<td></td>
<td>NVISION</td>
<td>This device communicates via the third-party NVISION protocol. Refer to “NVISION Commands” on page 168.</td>
</tr>
<tr>
<td></td>
<td>Probel SW-P-08</td>
<td>The device uses the third-party protocol known as Probel SW-P-08.</td>
</tr>
<tr>
<td></td>
<td>Ross NK</td>
<td>The device uses the Ross NK protocol to communicate. Refer to “Connecting to Ross NK Series Devices” on page 55.</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v3.1</td>
<td>The device uses TSL UMD protocol version 3.1</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v4.0</td>
<td>The device uses TSL UMD protocol version 4.0</td>
</tr>
<tr>
<td></td>
<td>TSL UMD v5.0</td>
<td>The device uses TSL UMD protocol version 5.0</td>
</tr>
<tr>
<td></td>
<td>Ultrix</td>
<td>The device uses the Ross Ultrix protocol to communicate (TCP only).</td>
</tr>
<tr>
<td>Communication</td>
<td>type: t-bus</td>
<td>The device is physically connected to a T-BUS port on the Ultricore rear panel. Communication is via the Ross T-BUS protocol.</td>
</tr>
<tr>
<td></td>
<td>type: tcp</td>
<td>The device is communicating over a network connection. Note that the DashBoard client computer, the Ultricore, and the external device must be on the same network.</td>
</tr>
<tr>
<td></td>
<td>type: serial</td>
<td>The device is physically connected to a COM port on the Ultricore rear panel. The device is communicating with the Ultricore via a serial protocol.</td>
</tr>
<tr>
<td></td>
<td>ip: ###.###.###</td>
<td>Specifies the IP Address of the device on the network</td>
</tr>
<tr>
<td></td>
<td>ip: localhost</td>
<td>Indicates that the device is the one you are currently configuring</td>
</tr>
</tbody>
</table>
Once connection points are established with the devices in your routing system, use the **Third Party Matrices** tab to import the logical matrices from those devices into the Ultricore database.

![Figure 19.9 Example of Entries in a Third Party Matrices Tab](image)

**Table 19.10** summarizes the options displayed in the Third Party Matrices tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>#</td>
<td>Auto-numbered field (read-only).</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the imported third party matrix to be used by the Ultricore database.</td>
</tr>
<tr>
<td>First Output</td>
<td>#</td>
<td>Specifies the first destination for the device within the Ultricore database</td>
</tr>
<tr>
<td>Last Output</td>
<td>#</td>
<td>Specifies the last destination for the device within the Ultricore database</td>
</tr>
<tr>
<td>First Input</td>
<td>#</td>
<td>Specifies the first source for the device within the Ultricore database</td>
</tr>
<tr>
<td>Last Input</td>
<td>#</td>
<td>Specifies the last source for the device within the Ultricore database</td>
</tr>
<tr>
<td>Level</td>
<td>#</td>
<td>Specifies the number of levels for the device in the Ultricore database</td>
</tr>
</tbody>
</table>
Port Labels Tab

The Port Labels tab lists the matrices discovered by the connection points on the Connections tab and imported via the Third Party Matrices tab. A matrix (or router) socket is identified via the Frame.Slot.Port.Type.Channel nomenclature. Custom labels may be applied to the ports if required. These may be also known as actual labels in other terminology (the name the cable would be assigned). This re-naming is not necessary for operation, but it may make your assignment of source and destination labels easier when using your internal cable naming conventions.

Table 19.8 summarizes the options displayed in the main area of the Port Labels tab (from left to right on the interface).

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix:</td>
<td>Provides a list of configured matrices for the currently loaded database.</td>
</tr>
<tr>
<td></td>
<td>Double-click an item in the list to update the table in the Port Labels tab.</td>
</tr>
<tr>
<td></td>
<td>By default, each router is represented by a read-only matrix in this list.</td>
</tr>
<tr>
<td></td>
<td>This read-only matrix lists all the SDI signals available to the Ultricore</td>
</tr>
<tr>
<td></td>
<td>via that router. If you have multiple routers, each router is represented</td>
</tr>
<tr>
<td></td>
<td>with a separate read-only matrix with the device name in the matrix name</td>
</tr>
<tr>
<td></td>
<td>(e.g. NK-3G16.SDI [read-only], or NK-3G144.SDI [read-only]).</td>
</tr>
</tbody>
</table>

Table 19.10 Third Party Matrices Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
<td>Specifies the signal type of inputs and outputs this device provides within the Ultricore database</td>
</tr>
<tr>
<td>Device ID</td>
<td></td>
<td>Specifies the external third-party device the imported logical matrix applies to</td>
</tr>
</tbody>
</table>

Figure 19.10 Example of Entries in a Port Labels Tab
Bottom Toolbar

Refer to Table 19.35 for a summary of the buttons displayed in the Bottom toolbar of the Database interfaces.

Levels Tab

A level is a specific grouping of signal input and output ports, that may be controlled separately from other groups (a breakaway). Typically a level is associated with input/output ports that are used with sets of similar or related signals, such as SDI Video, AES Audio, Analog Video, Analog Audio, Timecode, or Machine control, and often include routing matrices that are dedicated to controlling that specific type of signal.

The options in the Levels tab are organized into a table where each row represents a level and the columns provide the options for configuring that level. From this tab you can assign a unique name to each level, a color that represents the level, and a textual description of the level to make it easier to identify the level in the soft panels.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Indicates the physical socket on the external device that is included in the currently selected logical matrix using the nomenclature <strong>Frame.Slot.Port.Type.Channel</strong>.</td>
</tr>
<tr>
<td>Label</td>
<td>Provides a text label that identifies the physical port in other interfaces of the database. This virtual label is used instead of the <strong>Frame.Slot.Port.Type.Channel</strong> format. For example, you might re-name port NK-S34.slot1.in[1].SDI.ch1 to NK-234 SDI IN 1-1.</td>
</tr>
</tbody>
</table>

![Figure 19.11 Example of Entries in a Levels Tab](image-url)
Destinations Tab

The Destination tab enables the assignment of labels (used by control panels) to outputs of the attached matrices or routers. The options in the Destination tab are organized into a table where each row associates the name of the destination with one or more logical matrix output sockets.

![Figure 19.12 Example of Entries in a Destinations Tab](image)

Table 19.12 summarizes the options displayed in the Destinations tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>#</td>
<td>Auto-numbered field (read-only).</td>
</tr>
<tr>
<td>Tally</td>
<td>TSL v3.1, &lt;displayID&gt;</td>
<td>Displays the TSL protocol Tally ID entry. The Enable Tally box is selected in the Database tab.</td>
</tr>
<tr>
<td></td>
<td>TSL 4.0, &lt;displayID&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TSL v5.0, &lt;screenID&gt;:&lt;displayID&gt;</td>
<td></td>
</tr>
<tr>
<td>Tally Redirect</td>
<td></td>
<td>Enables/disables the re-direction of connected source Tally ID to destination Tally ID as set by the Tally field</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the destination in the routing system. This name is also used when matrices are defined in the Ultricore system.</td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td>Provides additional information or user entered notes about the output.</td>
</tr>
<tr>
<td>Level #</td>
<td></td>
<td>Specifies the physical output port associated with the destination and assigns it to the specified level. Unless you have given the port a different label via the Port Labels tab, the port is labeled as Frame.Slot.Port.Type.Channel.</td>
</tr>
</tbody>
</table>
For More Information on...

- the buttons located on the bottom toolbar for the Destinations tab, refer to Table 19.35.

Sources Tab

The Sources tab enables the assignment of labels (used by remote control panels and soft panels) to physical input sources to specific sources based on the routers connected to the Ultricore (and listed in the Database interface). The rows in the table are dependent on the database that is currently loaded. The Sources tab is organized into a table where each row associates a name of the source with one or more logical matrix input sockets.

Table 19.13 summarizes the options displayed in the Sources tab.

Table 19.12 Destinations Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix Outputs</td>
<td>#</td>
<td>Lists all the physical output ports available that can be assigned as a destination in the routing system</td>
</tr>
<tr>
<td>Assign</td>
<td></td>
<td>Click this button to add the selected physical output port(s) to the list of Destinations for the database.</td>
</tr>
</tbody>
</table>

Table 19.13 Sources Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>#</td>
<td>Auto-numbered field (read-only).</td>
</tr>
<tr>
<td>Tally</td>
<td>&lt;displayID&gt; or &lt;screenID&gt;:&lt;displayID&gt;</td>
<td>Displays the TSL protocol tally ID entry. The Enable Tally box is selected in the Database tab.</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Assigns a unique identifier for the source in the routing system. This name is also used when matrices are defined in the Ultricore system.</td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td>Provides additional information or user entered notes about the input.</td>
</tr>
</tbody>
</table>
Cat/Index Categories Tab

The Cat/Index Categories tab enables you to categorize sources, destinations, and levels via a hierarchal system of tags. You can use categories to filter sources, destinations or levels into manageable groups for a Category soft panel. Refer to the section “Using Category Panels” on page 125 for more information.

**Table 19.13 Sources Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level #</td>
<td></td>
<td>Specifies the physical input port associated with the source and assigns it to the specified level. Unless you have given the port a different label via the Port Labels tab, the port is labeled as Frame.Slot.Port.Type.Channel.</td>
</tr>
<tr>
<td>Matrix Inputs</td>
<td>#</td>
<td>Lists all the physical input ports available that can be assigned as a source in the routing system</td>
</tr>
<tr>
<td>Assign</td>
<td></td>
<td>Click this button to add the selected physical input port to the Source label in the database</td>
</tr>
</tbody>
</table>

**Categories Area**

Table 19.14 summarizes the options displayed in the Categories area of the Cat/Index Categories tab.

**Table 19.14 Cat/Index Categories — Categories Area**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories:</td>
<td></td>
<td>Lists the category tags defined for this database</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Adds a category tag</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td>Deletes the selected tag</td>
</tr>
<tr>
<td>Delete All</td>
<td></td>
<td>Deletes all tags listed in the Categories: pane</td>
</tr>
<tr>
<td>Generate</td>
<td></td>
<td>Automatically generates category tags based on the entires in your database</td>
</tr>
</tbody>
</table>
Affected Resources Area

Table 19.15 summarizes the options displayed in the Affected Resources area of the Cat/Index Categories tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations:</td>
<td>&lt;text&gt;</td>
<td>Lists the destinations that are tagged</td>
</tr>
<tr>
<td>Find</td>
<td></td>
<td>Performs a search for destinations in the database to add to the category</td>
</tr>
<tr>
<td>Sources:</td>
<td>&lt;text&gt;</td>
<td>Lists the sources that are tagged</td>
</tr>
<tr>
<td>Find</td>
<td></td>
<td>Performs a search for sources in the database to add to the category</td>
</tr>
<tr>
<td>Levels:</td>
<td>&lt;text&gt;</td>
<td>Lists the levels that are tagged</td>
</tr>
<tr>
<td>Find</td>
<td></td>
<td>Performs a search for level in the database to add to the category</td>
</tr>
</tbody>
</table>

Indexes Area

Table 19.16 summarizes the options displayed in the Indexes area of the Cat/Index Categories tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indexes:</td>
<td></td>
<td>Creates search terms to define category tags</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Adds a new entry to the Indexes list</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td>Deletes the selected entry from the Indexes list</td>
</tr>
<tr>
<td>Delete All</td>
<td></td>
<td>Deletes all entries from the Indexes list</td>
</tr>
<tr>
<td>Default</td>
<td></td>
<td>Creates indexes 0-9 and A-F</td>
</tr>
</tbody>
</table>

Inaccessible Resources Area

Table 19.17 summarizes the options displayed in the Inaccessible Resources area of the Cat/Index Categories tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations:</td>
<td>&lt;text&gt;</td>
<td>Lists the destinations in the current database that are not included in any Cat/Index categories</td>
</tr>
<tr>
<td>Generate</td>
<td></td>
<td>Automatically generates category tags based on the destinations in your database</td>
</tr>
<tr>
<td>Create</td>
<td></td>
<td>Enables you to create a new Cat/Index filter for Destinations</td>
</tr>
<tr>
<td>Sources:</td>
<td>&lt;text&gt;</td>
<td>Lists the sources in the current database that are not included in any Cat/Index categories</td>
</tr>
<tr>
<td>Generate</td>
<td></td>
<td>Automatically generates category tags based on the sources in your database</td>
</tr>
<tr>
<td>Create</td>
<td></td>
<td>Enables you to create a new Cat/Index filter for Sources</td>
</tr>
</tbody>
</table>
Group Categories Tab

The Categories tab enables you to categorize sources, destinations, and levels via a hierarchal system of tags. You can use categories to filter sources, destinations or levels into manageable groups for a Category soft panel. Refer to the section “Group Categories Overview” on page 91 for more information.

The Group Categories tab is organized into three panels and a bottom toolbar. Table 19.18 summarizes the options displayed in the left panel of the Group Categories tab. This panel displays all the created groups and sub-groups, and/or resources in a top-down hierarchy. Note that the nodes are sorted by type and then by alphabetical order.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Categories:</td>
<td>Displays the groups as folders arranged in a tree view</td>
</tr>
<tr>
<td>Find</td>
<td>Displays the Find dialog that enables you to search for a category or resource name</td>
</tr>
<tr>
<td>Move</td>
<td>Displays the Move dialog that enables you to move a selected group and its contents to another group</td>
</tr>
<tr>
<td>Rename</td>
<td>Renames a selected group; the resource type will be not re-named</td>
</tr>
<tr>
<td>Delete</td>
<td>Deletes a selected group and all of its contents</td>
</tr>
<tr>
<td>Add</td>
<td>Adds a new group to the selected group</td>
</tr>
</tbody>
</table>

Table 19.18 Group Categories Tab — Left Panel
Table 19.19 summarizes the options displayed in the middle panel of the Group Categories tab. This panel shows the assigned contents (groups and/or resources) of the currently selected item from the tree view (in the left panel).

### Table 19.19 Group Categories Tab — Middle Panel

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Indicates the name of a resource</td>
</tr>
<tr>
<td>Type</td>
<td>Indicates the type of resource</td>
</tr>
<tr>
<td>Delete</td>
<td>Deletes the selected resource(s) from the currently selected group</td>
</tr>
</tbody>
</table>

Table 19.20 summarizes the options displayed in the right panel of the Group Categories tab. This panel displays the available destinations, sources, and levels that can be arranged into group categories.

### Table 19.20 Group Categories Tab — Right Panel

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>Displays the unassigned destinations in alphabetical order</td>
</tr>
<tr>
<td>Sources</td>
<td>Displays the unassigned sources in alphabetical order</td>
</tr>
<tr>
<td>Levels</td>
<td>Displays the unassigned levels in alphabetical order</td>
</tr>
<tr>
<td>Assign</td>
<td>Select the resource(s) and click Assign to assign it to the group selected in the left table</td>
</tr>
</tbody>
</table>

Table 19.21 summarizes the bottom toolbar.

### Table 19.21 Group Categories Tab — Bottom Toolbar

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Generate</td>
<td>Click to auto-generate group categories based on the resource names from the current database</td>
</tr>
<tr>
<td>Cancel</td>
<td>Ignores all unsaved changes and reverts the tab back to the last saved entries</td>
</tr>
<tr>
<td>Apply</td>
<td>Applies all change made in the Group Categories tab</td>
</tr>
</tbody>
</table>

### Legacy Categories Tab

The Legacy Categories tab enables you to categorize sources, destinations, and levels via a hierarchical system of tags. You can use legacy categories to filter sources, destinations, or levels into manageable groups for legacy RCP-QE panels. Refer to the RCP-QE User Guide for details.

Table 19.22 summarizes the options displayed in the top toolbar.

### Table 19.22 Legacy Categories Tab — Top Toolbar

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations</td>
<td>Lists the destination category/index assignments</td>
</tr>
<tr>
<td>Sources</td>
<td>Lists the source category/index assignments</td>
</tr>
<tr>
<td>Levels</td>
<td>Lists the level category/index assignments</td>
</tr>
</tbody>
</table>
Table 19.23 summarizes the options displayed when the Edit button is selected from the bottom toolbar.

### Table 19.23 Legacy Categories Tab — Bottom Toolbar

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy</td>
<td>Copies the selected cells in the tab</td>
</tr>
<tr>
<td>Paste</td>
<td>Pastes the previously copied items to the current cell selection</td>
</tr>
<tr>
<td>Clear</td>
<td>Clears the data from the selected cells</td>
</tr>
<tr>
<td>Clear All</td>
<td>Clears all category/index assignments</td>
</tr>
<tr>
<td>Fill</td>
<td>Auto fills a range of cells</td>
</tr>
<tr>
<td>Auto Generate</td>
<td>Auto fills the cells based on spaces in the source/destination names</td>
</tr>
</tbody>
</table>

**Salvos Tab**

A salvo is a set of pre-defined switch events. The Salvos tab provides a list of the global salvos available in the currently selected database. From this tab you can create salvos, rename, and delete salvos.

The workspace in the Salvos tab displays a grid pattern with sources at the top and the destinations along the left side. A list of currently available (saved) salvos displays on the far left-side of the tab. The toolbar on the far right-side displays a button for each level available in the database with each button set in the color specified for the level. The toolbar in the bottom right corner of the interface displays three buttons: Advanced, Cancel, and Apply.

![Figure 19.16 Example of a Salvos Tab](image)

Table 19.24 summarizes the options displayed in the Salvos tab.

### Table 19.24 Buttons on the Salvos Interface

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salvos:</td>
<td>Provides a list of configured salvos for the currently loaded database. Double-click an item in the list to update the grid in the Salvos tab.</td>
</tr>
<tr>
<td>Edit...</td>
<td>Displays the Edit dialog for the soft panel. Refer to “Edit Dialogs” on page 217.</td>
</tr>
</tbody>
</table>
Advanced Menus

Clicking the Advanced button in the Salvos tab displays the options outlined in Table 19.25.

### Table 19.25 Advanced Menu Items

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear All Presets</td>
<td>Clears the workspace in the Salvos tab and resets all settings to the default values.</td>
</tr>
<tr>
<td>Clear Dest Presets</td>
<td>Clears all selections made in the Destinations column of the workspace.</td>
</tr>
<tr>
<td>Capture System Status</td>
<td>Captures the current routing state of the Ultricore system.</td>
</tr>
<tr>
<td>Capture Dest Status</td>
<td>Updates the workspace to reflect only the status of the destinations of the Ultricore system.</td>
</tr>
</tbody>
</table>

Ulricore Profiles Tab

The Ulricore Profiles operate as a form of hierarchical database where user permissions are organized into a tree-like format. A profile determines which groups and pages that a user can access.

When the ULTRICORE-PRO license is enabled, the Ulricore Profiles interface is organized into five distinct areas. (Figure 19.17) Each area is briefly described in this section starting with the leftmost area of the DashBoard window.
Users

When the system is configured to use the user login mechanism, a list of all currently configured usernames along with their current online status displays in this area.

Profiles

A list of all currently configured profiles. Selecting a profile (row) in this area automatically updates the items displayed in the Profile Details, Device Tree, and Options areas.

Profile Details

This area displays the details of the profile showing the conditions under which the tree in the following section will be applied.

Tree Nodes

A visual representation of the tree view that is defined in the Profile Details. Note that certain entries that are specific to licenses or other conditions may be visible but not in the actual tree view. Should conditions change that enable those entries, they will appear as shown in this display. A profile also maintains the position of items in groups allowing the most relevant items to be the easiest to reach.

The tree nodes are organized in a hierarchy where the top level (blue icons) list system specific options, and secondary levels (yellow icons) list specific functions.

★ This area only displays when the ULTRICORE-PRO license is enabled.

Group Tabs

This area displays all the available items that have not yet been assigned to the currently selected profile but are available to define.

★ This area only displays when the ULTRICORE-PRO license is enabled.
Panels Tab

The Panels tab includes a series of sub-tabs that enable you to customize soft panels (control panels within the DashBoard environment). You can choose to assign the levels, sources, and destinations from an Ultricore database to the soft panel buttons.

The soft panels display as sub-nodes in the Soft Panels tree using the name specified in the Info tab. When you save a soft panel to the database, a node for the panel automatically displays under the Soft Panels node in the Tree View. The soft panels display in the tree according to their assigned Panel ID number (where an ID of 1 is the highest, and ID of 2 is the second highest etc.).

Panels Menu

The Panels menu displays on the left side of the interface. This menu provides a list of soft panels saved in the current database. Selecting a soft panel from the list updates the tab entries in the Panels tab with the settings for that soft panel.

Info Tab

Use the options in the Info tab to assign a panel a unique identifier, select the panel style template to use, and how the panel will perform tasks such as Take transitions. This is the default tab that the interface opens on. Table 19.26 summarizes the fields and menus displayed in the Info tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Style (read-only)</td>
<td>&lt;name&gt;</td>
<td>Specifies the panel type that was assigned to the soft panel when it was created.</td>
</tr>
<tr>
<td>Panel ID</td>
<td>&lt;integer&gt;</td>
<td>Specifies the ID of the panel.</td>
</tr>
<tr>
<td>Panel Name</td>
<td>&lt;name&gt;</td>
<td>Provides a unique identifier for the soft panel. This name also displays as a sub-node in the Soft Panels tree.</td>
</tr>
<tr>
<td>Description</td>
<td>#</td>
<td>Provides a textual summary of the soft panel or additional information about the panel.</td>
</tr>
</tbody>
</table>
Levels Tab

Use the options in the Levels tab to specify the number of levels for the panel, and organize them in a hierarchy for the panel. Table 19.27 summarizes the fields and menus displayed in the Levels tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection Operation</td>
<td>Lock</td>
<td>Displays only the Lock button in the panel interface</td>
</tr>
<tr>
<td></td>
<td>Protect</td>
<td>Displays only the Protect button in the panel interface</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>Displays the Lock and Protect buttons in the panel interface</td>
</tr>
<tr>
<td>Take Operation</td>
<td>Confirm</td>
<td>A TAKE button displays on the soft panel. You must click this button before the transition occurs</td>
</tr>
<tr>
<td></td>
<td>Direct</td>
<td>A Take transition occurs automatically when a Level, Destination, and Source are selected on the soft panel.</td>
</tr>
<tr>
<td>Selection Operation</td>
<td>Single</td>
<td>The Multi Select button does not display on the soft panel.</td>
</tr>
<tr>
<td></td>
<td>Multi</td>
<td>Displays the Multi Select button on the soft panel. Use this button to quickly select multiple destinations for a crosspoint switch. This button is only applicable for MultiBus and Category panels.</td>
</tr>
<tr>
<td>Machine Control</td>
<td>Enable</td>
<td>Displays a Machine Control button on the panel. When selected on the panel, this Machine Control button sends a Take request directed to a Ross NK-M series data router to automatically make the reciprocal port switch. On a video router, the connection is all one way from an input port to an output port (e.g. such as from IN 1 to OUT 2).</td>
</tr>
<tr>
<td></td>
<td>Disable</td>
<td>Does not display a Machine Control button on the panel.</td>
</tr>
<tr>
<td>Nongroup Resourcesa</td>
<td>Hide</td>
<td>Resources that are not assigned to a specific group are not displayed on the soft panel.</td>
</tr>
<tr>
<td></td>
<td>Show</td>
<td>All resources are displayed on the soft panel.</td>
</tr>
</tbody>
</table>

a. This menu is only available when the Panel Style is set to Group Category.

Table 19.27 Levels Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewable Levels</td>
<td>&lt;integer&gt;</td>
<td>Specifies the maximum number of levels, as selectable buttons, that can display on the panel interface</td>
</tr>
<tr>
<td>Available</td>
<td>&lt;integer&gt;</td>
<td>List all the levels in the current database</td>
</tr>
<tr>
<td>Assigned</td>
<td>&lt;integer&gt;</td>
<td>Specifies which levels will be available in the soft panel</td>
</tr>
</tbody>
</table>
Destinations Tab

Use the options in the Destinations tab to specify which router outputs will be available in Destination bus of the soft panel. Table 19.28 summarizes the fields and menus displayed in the Destinations tab.

**Table 19.28 Destinations Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewable Destinations</td>
<td>&lt;integer&gt;</td>
<td>Specifies the maximum number of destinations, as selectable buttons, on the panel. This field is not displayed when the Panel Style is set to Group Category or Cat/Index Category.</td>
</tr>
<tr>
<td>Available</td>
<td>&lt;integer&gt;</td>
<td>Lists all the destinations in the current database</td>
</tr>
<tr>
<td>Assigned</td>
<td>&lt;integer&gt;</td>
<td>Specifies which destinations will be available in the soft panel</td>
</tr>
</tbody>
</table>

Sources Tab

Use the options in the Sources tab to specify which router inputs will be available in Source bus of the soft panel, and their hierarchy. Table 19.29 summarizes the fields and menus displayed in the Sources tab.

**Table 19.29 Sources Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewable Sources</td>
<td>&lt;integer&gt;</td>
<td>Specifies the maximum number of sources, as selectable buttons, on the panel. This field is not displayed when the Panel Style is set to Group Category or Cat/Index Category.</td>
</tr>
<tr>
<td>Available</td>
<td>&lt;integer&gt;</td>
<td>Lists all the sources in the current database</td>
</tr>
<tr>
<td>Assigned</td>
<td>&lt;integer&gt;</td>
<td>Specifies which sources will be available in the soft panel</td>
</tr>
</tbody>
</table>

Salvos Tab

Use the options in the Salvos tab to specify the total number of salvos displayed in the soft panel and their hierarchy. Table 19.30 summarizes the fields and menus displayed in the Salvos tab.

**Table 19.30 Salvos Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewable salvos</td>
<td>#</td>
<td>Specifies the maximum number of salvos that will be listed on the Recall Salvos dialog for the panel. This field is not displayed when the Panel Style is set to Matrix.</td>
</tr>
<tr>
<td>Available</td>
<td>#</td>
<td>Lists all the salvos in the current database</td>
</tr>
<tr>
<td>Assigned</td>
<td>#</td>
<td>Specifies which salvos will be available in the soft panel</td>
</tr>
</tbody>
</table>

Favorites Tab

* The Favorites tab only displays when the Panel Style is set to Ultritouch PB.
Table 19.31 summarizes the fields and menus displayed in the Favorites tab.

**Table 19.31 Favorites Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>&lt;name&gt;</td>
<td>Provides a unique identifier for the type of Favorite for this soft panel.</td>
</tr>
<tr>
<td>Type</td>
<td>Crosspoint</td>
<td>Creates a Favorites button on the soft panel that recalls a specific crosspoints switch</td>
</tr>
<tr>
<td></td>
<td>Group</td>
<td>Creates a Favorites button on the soft panel that loads a specific Group Category in the database</td>
</tr>
<tr>
<td></td>
<td>Salvo</td>
<td>Creates a Favorites button on the soft panel that recalls a specific salvo in the database</td>
</tr>
<tr>
<td></td>
<td>Sources</td>
<td>Creates a Favorites button on the soft panel that selects a specific source in the database</td>
</tr>
<tr>
<td></td>
<td>Destinations</td>
<td>Creates a Favorites button on the soft panel that selects a specific destination in the database</td>
</tr>
<tr>
<td>Field 1</td>
<td></td>
<td>Specifies the first item for the Favorite. For example, if the type is set to Crosspoint, Field 1 reports the destination.</td>
</tr>
<tr>
<td>Field 2</td>
<td></td>
<td>Specifies the second item for the Favorite. For example, if the type is set to Crosspoint, Field 2 reports the source.</td>
</tr>
<tr>
<td>Up</td>
<td></td>
<td>Moves the selected row higher in the table</td>
</tr>
<tr>
<td>Down</td>
<td></td>
<td>Moves the selected row lower in the table</td>
</tr>
<tr>
<td>Top</td>
<td></td>
<td>Moves the selected row to the top of the table</td>
</tr>
<tr>
<td>Bottom</td>
<td></td>
<td>Moves the selected row to the bottom of the table</td>
</tr>
<tr>
<td>Sort</td>
<td></td>
<td>Sorts by window type</td>
</tr>
</tbody>
</table>

Home View Tab

* The Home View tab only displays when the Panel Style is set to Ultritouch PB or Push Button.

Table 19.32 summarizes the options displayed in the Home View tab.

**Table 19.32 Home View Tab**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Icons</td>
<td>Enable</td>
<td>The Destination and Source buttons on the soft panel display icons</td>
</tr>
<tr>
<td></td>
<td>Disabled</td>
<td>The Destination and Source buttons do not display icons; only the labels are displayed on each button.</td>
</tr>
<tr>
<td>Orientation</td>
<td>Portrait</td>
<td>The windows are organized into columns (vertical panes) on the soft panel</td>
</tr>
<tr>
<td></td>
<td>Landscape</td>
<td>windows are organized into rows (horizontal panes) on the soft panel</td>
</tr>
</tbody>
</table>

**Home Windows**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window (read-only)</td>
<td>&lt;text&gt;</td>
<td>Specifies the window type</td>
</tr>
<tr>
<td>Percent</td>
<td>#</td>
<td>Specifies the width of the window in a percentage of the overall soft panel size</td>
</tr>
<tr>
<td>Rows</td>
<td>#</td>
<td>Specifies the number of button rows in the window</td>
</tr>
</tbody>
</table>
Table 19.32 Home View Tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columns</td>
<td>#</td>
<td>Specifies the number of button columns in the window</td>
</tr>
<tr>
<td>Reset</td>
<td></td>
<td>Loads the default window layout and widths</td>
</tr>
<tr>
<td>Up</td>
<td></td>
<td>Moves the selected row higher in the table</td>
</tr>
<tr>
<td>Down</td>
<td></td>
<td>Moves the selected row lower in the table</td>
</tr>
<tr>
<td>Top</td>
<td></td>
<td>Moves the selected row to the top of the table</td>
</tr>
<tr>
<td>Bottom</td>
<td></td>
<td>Moves the selected row to the bottom of the table</td>
</tr>
<tr>
<td>Sort</td>
<td></td>
<td>Sorts by window type</td>
</tr>
</tbody>
</table>

Buttons

Table 19.33 summarizes the buttons displayed in all Panel sub-tabs.

Table 19.33 Button on the Panels Interface

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Alphabet Sort" /></td>
<td>In the Available area, clicking this button toggles the sorting order between alphabetical or database-index (based on the current order listed in the Levels, Destinations, or Sources tabs)</td>
</tr>
<tr>
<td><img src="image" alt="Database Sort" /></td>
<td>Moves the selected items in the Available list to the Assigned list.</td>
</tr>
<tr>
<td><img src="image" alt="Move Up" /></td>
<td>Moves the selected item(s) from the Assigned list back to the Available list. These items will not be available in the soft panel window.</td>
</tr>
<tr>
<td><img src="image" alt="Move Down" /></td>
<td>Moves all the available labels to the Assigned list</td>
</tr>
<tr>
<td><img src="image" alt="Remove" /></td>
<td>Removes all the items from the Assigned list back to the Available list. These items will not be available in the soft panel window.</td>
</tr>
<tr>
<td>Up</td>
<td>Moves the selected item in the Assigned list up one position. This changes the order of the displayed items on the soft panel.</td>
</tr>
<tr>
<td>Down</td>
<td>Moves the selected item in the Assigned list down one position. This changes the order of the displayed items on the soft panel.</td>
</tr>
<tr>
<td>Top</td>
<td>Moves the selected item in the Assigned list to the top of the list. This changes the order of the displayed items on the soft panel.</td>
</tr>
<tr>
<td>Bottom</td>
<td>Moves the selected item in the Assigned list to the bottom of the list. This changes the order of the displayed items on the soft panel.</td>
</tr>
<tr>
<td><img src="image" alt="Alphabet Sort" /></td>
<td>In the Assigned area, clicking this button arranges the items into alphanumerical order.</td>
</tr>
<tr>
<td><img src="image" alt="Database Sort" /></td>
<td>In the Assigned area, clicking this button arranges the items in the Assigned list according to the order established in the Levels, Destinations, or Sources tabs.</td>
</tr>
<tr>
<td>Edit...</td>
<td>Displays the Edit dialog for the soft panel</td>
</tr>
</tbody>
</table>
Destination Follow Tab

Table 19.34 summarizes the options displayed in the Destination Follow tab.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination</td>
<td>#</td>
<td>Specifies the Destination you want to configure</td>
</tr>
<tr>
<td>Following</td>
<td>#</td>
<td>Specifies the router output that the specified Destination will follow</td>
</tr>
</tbody>
</table>

Additional Dialogs, Menus, and Toolbars in the Database Interfaces

Each tab displays a toolbar located at the bottom that provides buttons that display additional editing dialogs (e.g. insert, cut, paste, search). Also, right-clicking a row in any tab also displays a menu of editing dialogs. This section briefly outlines those additional editing dialogs.

Bottom Toolbar

The bottom toolbar of each tab in the Database includes buttons for applying changes made to settings in the interface, or adding elements to the table in the interface. Table 19.35 summarizes the buttons displayed in the Bottom toolbar. Note that not all buttons display in all tabs.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Displays the Edit dialog for the tab. Refer to Table 19.36 for details.</td>
</tr>
<tr>
<td>Find</td>
<td>Displays the Find dialog that enables the entering of criteria for searching of the tab contents.</td>
</tr>
<tr>
<td>Fill Label</td>
<td>Applies a custom label to the selected port</td>
</tr>
<tr>
<td>Reset Label</td>
<td>Reverts the label content to the previously saved text</td>
</tr>
<tr>
<td>Delete</td>
<td>Removes the selected port from the list for the matrix</td>
</tr>
<tr>
<td>Add</td>
<td>Adds the selected port from the list for the matrix</td>
</tr>
<tr>
<td>Cancel</td>
<td>Discards any recent changes made in the tab, and reverts to the previously saved table settings.</td>
</tr>
<tr>
<td>Apply</td>
<td>Applies changes made in the tab and updates the Ultricore database</td>
</tr>
</tbody>
</table>
Edit Dialogs

Table 19.36 summarizes the buttons displayed in the Edit dialogs. Note that not all options display in all tabs.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td>In interfaces with lists on the left toolbar (e.g. Panels, Port Labels, Salvos), selecting a list item and then clicking Add creates a copy of the selected item. The name to the newly created item includes the name from the copied item with the prefix “New”.</td>
</tr>
<tr>
<td>Auto Generate</td>
<td>Automatically fills the cells in the table with a default value. For example, clicking this button in the Destinations tab automatically fills all the cells with the text “Dest”.</td>
</tr>
<tr>
<td>Clear</td>
<td>Removes the data from the selected cell.</td>
</tr>
<tr>
<td>Clear All</td>
<td>Removes the text or entry in all cells of the interface.</td>
</tr>
<tr>
<td>Copy</td>
<td>Copies the selected cell data to the clipboard. In some interfaces, such as in the Salvo tab, the salvo settings are copied in entirety.</td>
</tr>
<tr>
<td>Cut</td>
<td>Copies the cell data to the clipboard and then delete it from the table.</td>
</tr>
<tr>
<td>Delete*</td>
<td>When working in an interface with a table layout, clicking this button removes the currently active row from the table.</td>
</tr>
<tr>
<td></td>
<td>When working in an interface with lists on the left toolbar, clicking this button removes the selected item from the list. You will still need to click Apply to completely remove the item from the database.</td>
</tr>
<tr>
<td>Fill</td>
<td>A range of name cells may be filled with consecutive numerical data. For example, VTR1 to VTR4 may be entered quickly by defining a prefix (in this case VTR) and a suffix that will numerically increment. Selecting Fill from the Insert toolbar, a dialog displays prompting you to enter a prefix (alphanumeric) and the start/end numerical values. This method adds rows to the destination table inserting below the active row.</td>
</tr>
<tr>
<td>Fill &amp; Replace</td>
<td>Enables you to overwrite a range of cells in the table. Rows beneath the currently active row are overwritten with data from the Fill &amp; Replace dialog.</td>
</tr>
<tr>
<td>Insert Above</td>
<td>Inserts a new row above the currently active row in the table. Any existing data is moved down the table by one row.</td>
</tr>
<tr>
<td>Insert Below</td>
<td>Inserts a new row below the currently active row in the table. Any existing data is moved up one row.</td>
</tr>
<tr>
<td>Insert Series</td>
<td>Inserts a sequential range of labels below the currently selected row.</td>
</tr>
<tr>
<td>Paste</td>
<td>Pastes the copied cell data from the clipboard. In some interfaces, such as in the Salvo tab, the copied salvo settings are pasted in entirety.</td>
</tr>
<tr>
<td>Paste Below</td>
<td>Pastes the copied cell data, from the clipboard, to currently selected cell.</td>
</tr>
<tr>
<td>Rename</td>
<td>When working in an interface with lists on the left toolbar, clicking this button enables you to provide a different name/label to the selected item.</td>
</tr>
<tr>
<td>Reset All IDs</td>
<td>Resets the source/destination ID numbers based on their current row number. It is recommended to verify the interfaces that referenced IDs (such as Soft Panels, Salvos, etc.)</td>
</tr>
</tbody>
</table>

\* Ensure the ID numbers are correctly sequenced when deleting and inserting entries in the tabs. Refer to the Reset All IDs row in this table.
Find Dialogs

Table 19.37 summarizes the buttons displayed in the Find dialogs.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column</td>
<td>A pull-down menu that lists the columns available in the current interface. Select the column to perform the search within.</td>
</tr>
<tr>
<td>Find What:</td>
<td>Specifies the characters, or text, to search the table contents.</td>
</tr>
<tr>
<td>Direction</td>
<td>Begins the search by searching below the currently selected row (Down), or above the selected row (Up).</td>
</tr>
<tr>
<td>Match whole word only</td>
<td>Select the check box to search only for the characters in the Find What: field as they are typed in the field. For example, typing “put” will search for instances of the word “put” and not “input” or “output”.</td>
</tr>
<tr>
<td>Cancel</td>
<td>Cancels the search criteria and closes the Find menu.</td>
</tr>
<tr>
<td>Find</td>
<td>Performs a search through the table contents based on the specified criteria.</td>
</tr>
</tbody>
</table>

Advanced Fill Tool

The Advanced Fill tool is provided to create new destination and source labels that are automatically assigned to physical outputs and inputs depending on options set by the user. The audio routing features provided by the routers in your system can result in an extensive source and destination definition map requiring some time to manually enter. The Advanced Fill tool will speed the assignment of physical sockets greatly.

For More Information on...

- using the tool to set up your database, refer to the section “Using the Advanced Fill Tool” on page 75.

Breakaway Fill Dialog

The Breakaway Fill dialog is the Advanced Fill tool for the Sources tab. This dialog is displayed when you click Edit > Fill.

Figure 19.19 Example of a Breakaway Fill Dialog
Table 19.38 summarizes the options displayed in the **Breakaway Fill** dialog.

### Table 19.38  Breakaway Fill Dialog

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fill</td>
<td>Custom</td>
<td>Insert labels with assignments for a custom range defined by the Range setting</td>
</tr>
<tr>
<td>Entire Slot</td>
<td></td>
<td>Insert labels with assignments for a single router slot (including the AUX ports on the Ultrix router)</td>
</tr>
<tr>
<td>Entire Device</td>
<td></td>
<td>Insert labels with assignments for the entire router (including the AUX ports on the Ultrix router)</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;text&gt;</td>
<td>The prefix for the label creation. For example, typing <strong>VTR</strong> results in labels <strong>VTR1, VTR2</strong>, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Take care when determining label names. While a long name may be nice and descriptive for the Source tab, many control devices have limited screen space and labels may be truncated.</td>
</tr>
<tr>
<td>Starting</td>
<td>#</td>
<td>The starting numerical extension for the label creation. For example, typing <strong>3</strong> results in labels <strong>Name3, Name4</strong>, etc.</td>
</tr>
<tr>
<td>Range</td>
<td>#</td>
<td>The quantity of labels for custom fill range</td>
</tr>
<tr>
<td>Slot</td>
<td>#</td>
<td>The Ultrix slot number to start the label assignment from&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>The Ultrix port to start the label assignment from&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Starting Channel</td>
<td>#</td>
<td>The Ultrix channel to start the label assignment from&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Level</td>
<td>#</td>
<td>This column lists the levels defined as per user entries in the system Levels setup table</td>
</tr>
<tr>
<td>I/O Assignment</td>
<td>#</td>
<td>This column lists the starting assignment for the given Level row</td>
</tr>
<tr>
<td>Fixed</td>
<td></td>
<td>Select the box to fix the I/O assignment selection even though it may be out of natural order compared to other I/O assignments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For example, <strong>Ultricore.slot1.in[1].audio.ch1</strong> and <strong>Ultricore.slot2.in[1].audio.ch1</strong>.</td>
</tr>
<tr>
<td>BRK I/O</td>
<td></td>
<td>Select the box to insert a label with this I/O assignment on all BRK Level selections.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For example, **IN 1 ch1</td>
</tr>
<tr>
<td>BRK Level</td>
<td></td>
<td>Select the box to include this level when creating a breakaway label. For example, <strong>IN 1 ch1</strong>.</td>
</tr>
<tr>
<td>BRK Suffix</td>
<td>&lt;text&gt;</td>
<td>By default, breakaway label naming uses the chx part of the Ultricore name. A user defined suffix may be entered here.</td>
</tr>
<tr>
<td>Assign</td>
<td></td>
<td>Click this button to automatically fill the I/O Assignment column based on the <strong>Slot, Port, Starting Channel</strong> settings to the selected row(s).</td>
</tr>
</tbody>
</table>
Destinations Fill Dialog

The Destinations Fill dialog is the Advanced Fill tool for the Destinations tab. This dialog is displayed when you click Edit > Fill.

Table 19.39 summarizes the options displayed in the Destinations Fill dialog.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fill</td>
<td>Custom</td>
<td>Insert labels with assignments for a custom range defined by the Range setting</td>
</tr>
<tr>
<td></td>
<td>Entire Slot</td>
<td>Insert labels with assignments for a single router slot</td>
</tr>
<tr>
<td></td>
<td>Entire Device</td>
<td>Insert labels with assignments for the entire router/device</td>
</tr>
<tr>
<td>Name</td>
<td>&lt;text&gt;</td>
<td>The prefix for the label creation. For example, typing VTR results in labels VTR 1, VTR 2, etc. Take care when determining label names. While a long name may be nice and descriptive for the Destination tab, many control devices have limited screen space and labels may be truncated.</td>
</tr>
<tr>
<td>Starting</td>
<td>#</td>
<td>The starting numerical extension for the label creation. For example, typing 3 results in labels Name3, Name4, etc.</td>
</tr>
<tr>
<td>Range</td>
<td>#</td>
<td>Specifies the quantity of labels for custom fill range</td>
</tr>
<tr>
<td>Slot</td>
<td>#</td>
<td>The Ultricore slot number to start the label assignment froma</td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>The Ultricore port to start the label assignment froma</td>
</tr>
</tbody>
</table>

a. The Breakaway Fill dialog uses the default naming convention of FrameName.slot n.in/out[p].type.chx.
Devices Interface

The Devices node summarizes the hardware components of the routing system. The nodes represent a hierarchy of the routing system communicating with the Ultricore.

Frame Configuration Interface

The Frame Configuration interface is divided into four areas, each accessed by clicking the corresponding button on the left toolbar of the interface.

Frame Information

Below the Frame Inventory table are the fields that report status information on the Ultricore hardware such as the version of the system firmware and reporting the current date and time. From this area you can also specify the NTP Server to be used as the time source for the Ultricore.

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Channel</td>
<td>#</td>
<td>The Ultricore channel to start the label assignment from(^a)</td>
</tr>
<tr>
<td>Level</td>
<td>#</td>
<td>This column defines the levels as per user entries in the system levels setup table</td>
</tr>
<tr>
<td>I/O Assignment</td>
<td>#</td>
<td>Starting assignment for the given level row</td>
</tr>
<tr>
<td>Assign</td>
<td></td>
<td>Click this button to automatically fill the I/O Assignment column based on the Slot, Port, and Starting Channel settings to the selected row/s</td>
</tr>
<tr>
<td>Apply</td>
<td></td>
<td>Click this button to insert labels with assignments based on dialog settings into the source assignment table below the current selected row.</td>
</tr>
<tr>
<td>Cancel</td>
<td></td>
<td>Click this button to cancel the settings and close the dialog. No changes to the Destination table will be made.</td>
</tr>
</tbody>
</table>

\(^a\) The Fill Destination dialog uses the default naming convention of FrameName.slot n.in/out[p].type.chx.
Licenses

Use the options in the Licenses area to manage the licensed features for your Ultricore. From here you can view which licensed features are enabled, and enter license keys for new features.

Alarms

From the Alarms table you can specify what components the Ultricore monitors such as the SD Card, the chassis battery, and the ENET ports.

By default, the Ultricore monitors the following components (these options in the Alarms table are enabled):

- SD Card Free Space
- SD Card Presence
- Battery

The Alarms table also displays read-only State column that reports the status of each enabled alarm using color indicators which vary in severity from green (valid), yellow (caution), to red (alarm). For example, if the SD Card status is set to red in the Alarms table, an SD Card is not detected or the SD Card not mounted correctly inside the chassis.

Communication Settings

The Frame Communications area enables you to monitor the status of the Ethernet connections of the Ultricore. From here you can verify the network settings of the active Ethernet port on the chassis, and view the mode of the control system (primary/client).

Serial Ports

The Serial Ports area enables you to monitor the COM1 and COM2 ports on the Ultricore chassis. Each enabled alarm using color indicators which vary in severity from green (valid), yellow (caution), to red (alarm).

Controllers and Matrices

Under the Controllers + Matrices node provides an inventory of remote control devices and routers that make up your routing system, and have a defined connection to Ultricore.

- A Matrix is, generally speaking, a simple router consists of a matrix and a limited control system.
- A Controller is a complex router consisting of many matrices and its own control system.

Expanding the Controllers and Matrices reveals devices defined by rows in the Database Matrices tab. Double clicking the node for the device opens the setup options for that particular device in DashBoard.

Ross Video devices that previously displayed in the Tree View as a sub-node of their IP connection point (i.e. NK-NET or IPS), are now relocated to the Controllers and Matrices node of Ultricore once they are defined in the Database Matrices tab. This indicates the device in question is now part of the Ultricore control system.

Panels

The Panels node provides a list of physical remote control panels within the routing system. For example, if you have any RCP-ME or an RCP-QE setup in your system, each device would display as a sub-node under the Panels node. Double-clicking the sub-node updates the DashBoard client window with the interface for that remote control panel.

Soft Panels Interfaces

The Soft Panels interface represents the routing system crosspoint control in the virtual space of the Ultricore. Each available soft panel in the database displays as a sub-node under the Soft Panels main node in a tree layout. The soft panels display in a hierarchy based on their Panel ID. Double-click a soft panel node to display its interface in the DashBoard window. There are three types of soft panels: Matrix, MultiBus, and Category.
You must configure your connections, sources, destinations, and levels, before you can create a soft panel and perform crosspoint switches.

For More Information on...

- creating a database for your routing system, refer to the section “Creating a New Database” on page 64.
- the interface for creating soft panels, refer to the section “Soft Panels Interfaces” on page 222.
- using soft panels, refer to the chapter “Soft Panels in DashBoard” on page 107.
- creating and using salvos, refer to the chapter “Using Salvos” on page 137.

Matrix Panel

The Matrix Panel provides a visual representation of multi-level crosspoints, in a grid layout, and offers a convenient and easy way to select and switch crosspoints. The columns of the grid represent the configured Sources and are labeled with the labels specified in the Input Name cells of the Sources tab. The rows of the grid represent the configured Destinations and display the labels specified in the Destination tab.

![Example of a Matrix Panel](image)

**Figure 19.22 Example of a Matrix Panel**

Right-side Toolbar

Table 19.40 summarizes the buttons displayed in the toolbar on the right-side of the interface.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level #</td>
<td>Each configured level in the currently active database is represented with a button. When selected, the button is lit with the color assigned to the level. Crosspoint selections on the matrix are also lit this color when the level is included in the next switch.</td>
</tr>
<tr>
<td>Follow</td>
<td>Automatically selects all the Level buttons listed on the Matrix panel (buttons are now lit). All levels are now included in next crosspoint selection.</td>
</tr>
<tr>
<td>TAKE</td>
<td>Performs a Take transition to the next crosspoint selection.</td>
</tr>
<tr>
<td>Lock</td>
<td>Locks the Matrix panel from all switches or function button operation.</td>
</tr>
<tr>
<td>Protect</td>
<td>Protects the currently selected source/destination level pair from use by other sources, as well as from other linked panels.</td>
</tr>
<tr>
<td>Free</td>
<td>Removes the Lock and Protect from the next crosspoint switch.</td>
</tr>
</tbody>
</table>
Table 19.40 Matrix Panel Toolbar Items

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salvo</td>
<td>Displays the options for managing the salvos for your soft panel. Refer to the section “Salvo Menus” on page 224 for details.</td>
</tr>
<tr>
<td>Advanced</td>
<td>Displays the options for managing crosspoint switches on your soft panel. Refer to the section “Advanced Menus” on page 209 for details.</td>
</tr>
</tbody>
</table>

Salvo Menus

Table 19.41 summarizes the options displayed in the Salvo menu.

Table 19.41 Matrix Panel — Salvo Menus

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>Recalls and applies the last saved salvo settings.</td>
</tr>
<tr>
<td>Edit</td>
<td>Enables you to load a salvo, update its settings, and then save your changes.</td>
</tr>
<tr>
<td>Save</td>
<td>Saves the current crosspoint selection as a local salvo.</td>
</tr>
<tr>
<td>Capture Current Status</td>
<td>Automatically creates a salvo based on the currently selected destination and source positions.</td>
</tr>
<tr>
<td>Capture Dest Status</td>
<td>Automatically creates a salvo based on the currently selected destination positions.</td>
</tr>
</tbody>
</table>

Advanced Menus

Table 19.42 summarizes the options displayed in the Advanced menu.

Table 19.42 Matrix Panel — Advanced Menus

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear All Presets</td>
<td>Removes all selections currently made on the soft panel and returns the panel to its default destination and source selections.</td>
</tr>
<tr>
<td>Clear Dest Presets</td>
<td>Removes only the selections made on the Destinations bus. No destination buttons are selected.</td>
</tr>
<tr>
<td>Diagonal Presets</td>
<td>The destination and source crosspoint selections are automatically made starting at the top left corner and progressively moving down the grid in a 1:1 pattern. For example, Src1 and Dest1, Src2 and Dest2, Src3 and Dest3 etc.</td>
</tr>
<tr>
<td>R-Diagonal Presets</td>
<td>The destination and source crosspoint selections are automatically made starting at the top right corner and progressively moving down the grid in a 1:1 pattern. For example, Src10 and Dest1, Src9 and Dest2, Src8 and Dest3 etc.</td>
</tr>
<tr>
<td>Setup Automation</td>
<td>Automatically loops the crosspoint switches for the specified length of time.</td>
</tr>
<tr>
<td>Stop Automation</td>
<td>Stops the automatic loop of crosspoint switches that was initiated using the Setup Automation option.</td>
</tr>
</tbody>
</table>

MultiBus Panel

The MultiBus Panel provides breakaway control and status monitoring of several destinations simultaneously. The MultiBus Panel interface is organized into two buses with a central status row of indicators for the levels. The toolbar on the far left of the interface provides options for locking and protecting crosspoints, setting up the transition, and selecting the levels. The bottom row of the interface is populated with buttons for the salvos defined in the database.
Table 19.43 summarizes the fields and information displayed in the left toolbar of the MultiBus Panel.

**Table 19.43 MultiBus Panel — Left Toolbar Items**

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock</td>
<td>Locks the MultiBus panel from all switches or function button operation.</td>
</tr>
<tr>
<td>Take</td>
<td>Performs a Take transition to the next crosspoint selection.</td>
</tr>
<tr>
<td>Preset</td>
<td>Enables you to configure a crosspoint switch that will not take effect until the Take button is selected.</td>
</tr>
<tr>
<td>Clear</td>
<td>Clears the selections in the crosspoint buses. No buttons are lit and the fields in the Destination buses are blank.</td>
</tr>
<tr>
<td>Multi Select</td>
<td>Enables you to assign a single source to multiple destinations for a multi-switch configuration.</td>
</tr>
<tr>
<td>Level #</td>
<td>Each configured level in the currently active database is represented with a button. When selected, the button is lit with the color assigned to the level. Crosspoint selections on the matrix are also lit this color when the level is included in the next switch.</td>
</tr>
<tr>
<td>Follow</td>
<td>Automatically selects all the Level buttons listed on the Matrix panel (buttons are now lit). All levels are now included in next crosspoint selection.</td>
</tr>
</tbody>
</table>

Destinations Bus

Each Destination is represented as a distinct box on the top bus of the MultiBus Panel. Figure 19.24 provides an example of a Destination bus. The Destination bus only displays the destinations specified when the soft panel was configured.
Table 19.44 summarizes the buttons displayed for each Destination in the MultiBus Panel.

Table 19.44 MultiBus Panel — Destination Items

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The Destination name/label is reported at the top of each area and displays as a selectable button. This enables for quick identification on the bus when selecting crosspoint switches. The Destinations available on the bus is dependent on the database currently loaded on the router and how many destinations were specified when the soft panel was configured.</td>
</tr>
<tr>
<td>Level #</td>
<td>This field reports the level(s) that the destination was associated with on the last crosspoint switch.</td>
</tr>
<tr>
<td>Source #</td>
<td>This field reports the source(s) currently selected on the Source bus located near the bottom of the MultiBus Panel interface.</td>
</tr>
<tr>
<td>Lock</td>
<td>Locks the Destination from all switches or function button operation.</td>
</tr>
<tr>
<td>Protect</td>
<td>Protects the currently selected Destination from use by other sources, as well as from other linked panels.</td>
</tr>
</tbody>
</table>

Sources Bus

Each Source is represented as a distinct button on the bottom bus of the MultiBus Panel. Figure 19.25 provides an example of a Source bus. The Source bus only displays the sources, and in the hierarchy, specified when the soft panel was configured.

Category Panel

There are two types of Category Panels: Classic and Group. Each Category Panel organizes the sources and destinations according to the definitions set in the applicable Category interface for the database. The top toolbar is used in conjunction with the central button matrix for selecting sources and destinations. The left side of the interface provides access to level selection, and reports on the breakaway status with fields for each level. Some functions are category type specific. Refer to the section “Using Category Panels” on page 125 for details.
Ultritouch PB Panels

You can control an Ultrix router via Ultritouch by loading a saved soft panel using the Ultritouch hard panel interface. Loading a soft panel to Ultritouch requires a similar method as loading a soft panel in the Ultrix and/or Ultricore menu system. You select the device in the Ultritouch > All Connections interface, navigate to the specific soft panel you wish to load, and select it from the provided list.

For More Information on...
- the creating and using Ultritouch soft panels, refer to the Ultritouch + Ultricore User Guide.

Push Button Panels

The Push Button Panel interface is organized into four distinct areas. The top area displays the Destinations, the middle row includes the Source buttons, and each area includes an independent method for filtering the buttons. A toolbar displays on the right to provide access to the level buttons, and includes a status field. The bottom toolbar provides options for locking and protecting crosspoints, setting up the transition, selecting salvos, and other functions.
For More Information on...

- the creating and using Push Button soft panels, refer to the section “Using Push Button Panels” on page 129.

Using Walkabout in DashBoard

Walkabout is a Ross router utility operating within DashBoard, as of DashBoard version 6.2, that enables you to configure the network settings for NK devices. Once a valid connection is established with Walkabout, the device is listed in the Tree View of DashBoard and available for monitoring and configuration via DashBoard.

Ultricore supports a basic configuration mode via the Walkabout system for initial configuration of IP settings:

- specify device IP settings and names
- specify a name for your routing system
- specify the system role (e.g. primary, backup, device)
- select a system to join from a list of valid system names assigned to controllers
- set communications server from a list of valid communication server devices (or IP)

For More Information on...

- the features of Walkabout, refer to the Ross Video document Configuring Devices Using Walkabout.
- using Walkabout and Ultricore, refer to the section “Using Walkabout to Assign an IP Address to the Ultricore Panel” on page 32.
Technical Specifications

This chapter provides technical information for Ultricore. Note that specifications are subject to change without notice.

Ethernet Ports

Each Ethernet port uses a single 9-pin, RJ45 connector to interface with a local network, RCP-ME, RCP-QE, and other devices that use an ethernet protocol for communications. The Ethernet ports are operated in a link aggregated or bonded configuration to provide failover functionality.

Specifications

<table>
<thead>
<tr>
<th>Table 20.1 Technical Specifications — Ethernet Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>Standards Accommodated</td>
</tr>
<tr>
<td>Connection</td>
</tr>
</tbody>
</table>

ALARM Connector

The ALARM connector on the Ultricore rear panel is used to configure alarm during loss of power to the panel.

Specifications

<table>
<thead>
<tr>
<th>Table 20.2 Technical Specifications — GPO Alarm Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>Alarm</td>
</tr>
<tr>
<td>Connection</td>
</tr>
</tbody>
</table>

Pinouts

Refer to Figure 20.2 and Table 20.3 for the pinout assignment of the ALARM port on the Ultricore rear panel.

Refer to Figure 20.2 for the signal pinouts for the 3-pin connector plug.
Serial Ports

The COM 1 and COM 2 ports on the Ultricore rear panel are used to connect to a third-party device that communicates via a supported serial protocol.

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards Accommodated</td>
<td>RS-232/RS-422 (switchable) serial</td>
</tr>
<tr>
<td>Maximum Baud</td>
<td>115200</td>
</tr>
<tr>
<td>Connection</td>
<td>DB9 female</td>
</tr>
</tbody>
</table>

Pinouts

This section outlines the signal pinouts for the two COM ports.

<table>
<thead>
<tr>
<th>Pin Number</th>
<th>RS-232 Function</th>
<th>RS-422 Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N/C</td>
<td>N/C</td>
</tr>
<tr>
<td>2</td>
<td>Tx</td>
<td>-Rx</td>
</tr>
<tr>
<td>3</td>
<td>Rx</td>
<td>+Tx</td>
</tr>
<tr>
<td>4</td>
<td>N/C</td>
<td>N/C</td>
</tr>
<tr>
<td>5</td>
<td>Ground/shield</td>
<td>Ground/shield</td>
</tr>
<tr>
<td>6</td>
<td>N/C</td>
<td>N/C</td>
</tr>
<tr>
<td>7</td>
<td>N/C</td>
<td>+Rx</td>
</tr>
<tr>
<td>8</td>
<td>N/C</td>
<td>-Tx</td>
</tr>
<tr>
<td>9</td>
<td>N/C</td>
<td>N/C</td>
</tr>
</tbody>
</table>
T-Bus Ports

The T-Bus ports on the Ultricore rear panel are used to connect to NK Series devices that communicate via the T-Bus protocol.

Specifications

Table 20.6 Technical Specifications — T-Bus Ports

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards Accommodated</td>
<td>Ross Video proprietary T-Bus</td>
</tr>
<tr>
<td>Cabling Type</td>
<td>CAT3 or better</td>
</tr>
<tr>
<td>Connection</td>
<td>8P8C modular jack</td>
</tr>
</tbody>
</table>

Pinouts

This section outlines the signal pinouts for the two T-Bus ports.

Table 20.7 T-Bus Pinouts

<table>
<thead>
<tr>
<th>Pin Number</th>
<th>Function</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>+Tx/Rx</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>N/C</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>-Tx/Rx</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>+15 VDC\textsuperscript{a}</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>+15 VDC\textsuperscript{a}</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} 7W total for both ports and not 7W each.
Power

The two power ports on the Ultricore rear panel deliver AC power.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>15VDC @ 4A</td>
</tr>
<tr>
<td>Output Power</td>
<td>60W</td>
</tr>
<tr>
<td>Input</td>
<td>100-240V~, 50-60Hz, 1.5A</td>
</tr>
</tbody>
</table>
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zlib

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files ftp://ds.internic.net/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format).
Glossary

The following terms are used throughout this guide:

**Breakaway** — an act of performing a switch on only some of the signals grouped together under one label.

**Connection Point** — setting to define a communication connection between Ultricore and a device in the routing system.

**Crosspoint** — a switch within a matrix. For example, the connection of signal IN 1 to OUT 1 requires one crosspoint.

**Destination** — a signal output from the routing system.

**IP Address** — a setting that defines the Internet protocol address of a device within a network.

**Label** — text that is used by control displays to identify a signal as an input or output.

**Level** — refers to a section of a routing system. For example, a video router would be one level and an audio router would be a second level.

**Logical (virtual) Label** — a name for a group of routing system inputs or outputs.

**Logical (virtual) Routing** — the action of switching a group of otherwise unrelated signals via a common label (name).

**Macro** — a recorded sequence of Remote Control Panel operations (local to the panel).

**Map** — a table that defines the allocation of names (labels) to router input and output sockets.

**Matrix** — the part of the routing system that performs the actual signal switching tasks.

**Partition** — matrices may be partitioned to behave as smaller independent matrices.

**Remote Control Panel** (RCP) — a physical hardware panel of buttons that is used to control the routing system.

**Resource** — a source or destination of a router configuration; an external device providing some conversion functionality for use within the routing control system.

**Salvo** — a system wide sequence of matrix control operations and crosspoint actions.

**Soft Panel** — a DashBoard interface that represents a panel of buttons that is used to control the routing system.

**Source** — a signal input to the routing system.

**T-Bus** — the Ross Video proprietary routing communication method via a defined physical interface.

**Virtual Label** — a name for a group of routing system inputs or outputs.

**Virtual Routing** — the action of switching a group of otherwise unrelated signals via a common label (name).