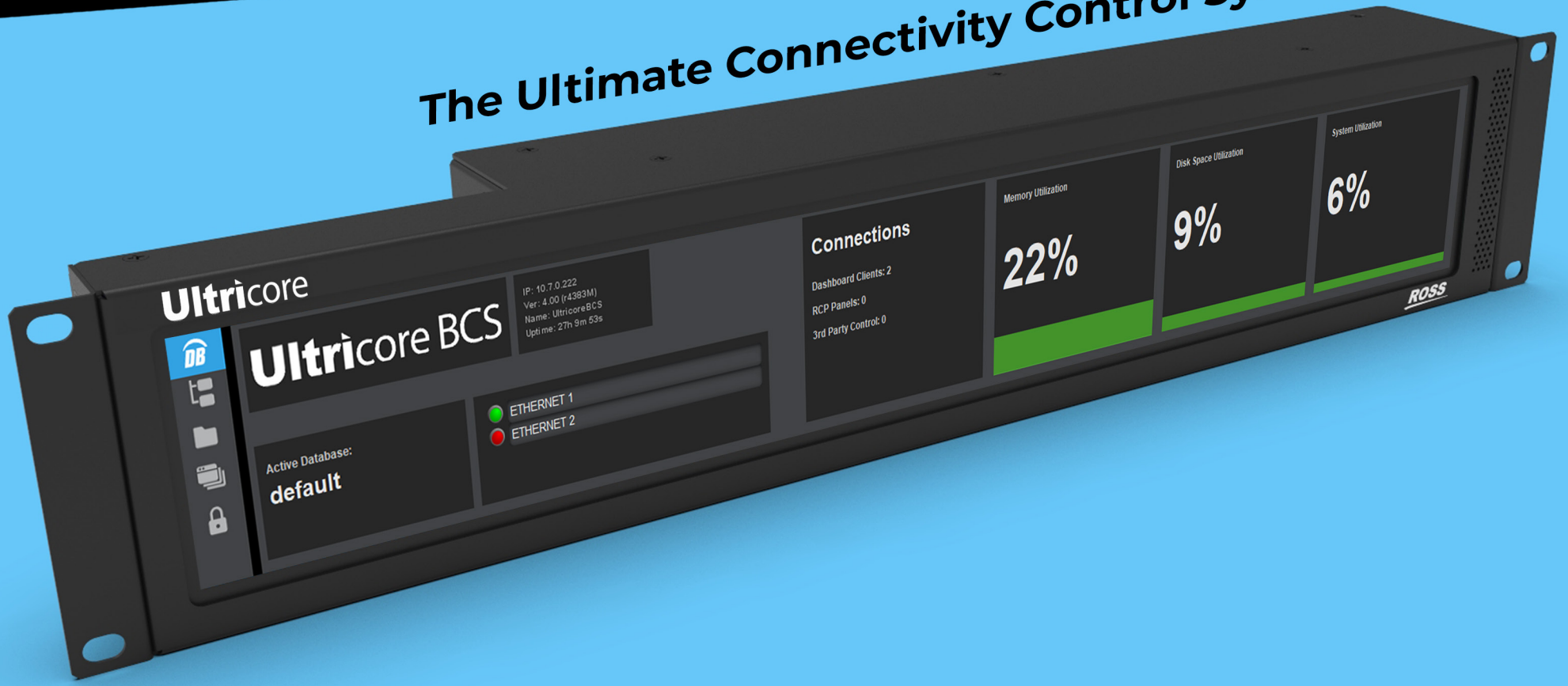
Ultricore

The Ultimate Connectivity Control System



ROSS

Ultrìcore

FULL FEATURED CONTROL SYSTEM

Great hardware is only as good as the control system running it. Ultricore is a fully featured connectivity control system that goes beyond traditional routing configuration and control. It is designed to handle all the usual router requirements as well as harnesses the power of Ultrix, a new breed of modern connectivity platform which is much more than just routing and includes major features like audio and video processing, Multivewers, IP processing, routing and more. Ultricore makes it quick and easy to configure a system and gives your staff an intuitive and powerful set of controls to make operations run smoothly.

The Primary Benefits of Ultricore are:

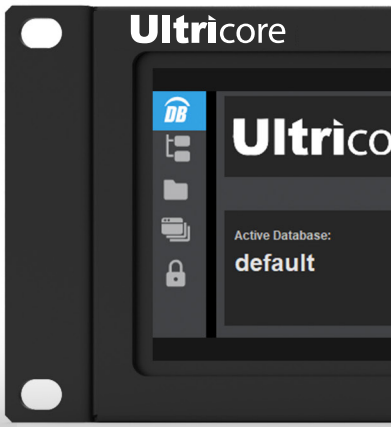
- Significant Reduction in Setup Time
- Simple Configuration
- Enhanced User Experience
- Seamless IP Usability

SCALABLE CONTROL

Different systems require various levels of complexity and connectivity, which is why you have two options with Ultricore. All Ultrix router frames ship standard with the complete version of the Ultricore control system within the frame. The physical interfaces to the frame include redundant Ethernet ports, and a USB port that can support Serial communication with the addition of a USB to serial adaptor. System configuration and discovery, database editor, salvo editor, and customizable software panels are all included. This integrated version is great for small systems, as it does not require the use of a central controller. For larger or more sophisticated systems, the Ultricore BCS 2RU central controller is available to provide for greater client (router frames, control panels, DashBoard and 3rd party connections) integration as well as enhanced control and connectivity capabilities. Ultricore BCS allows you to scale your control topology based on your system growth. In addition, it provides a powerful platform for adding sophisticated software licenses for things like integrated IP discovery and control, tielines and more. The The 2RU Ultricore BCS physical interfaces include (2) redundant Ethernet ports, USB ports and an integrated touchscreen for control and monitoring.

STANDARD INTERCONNECTIVITY

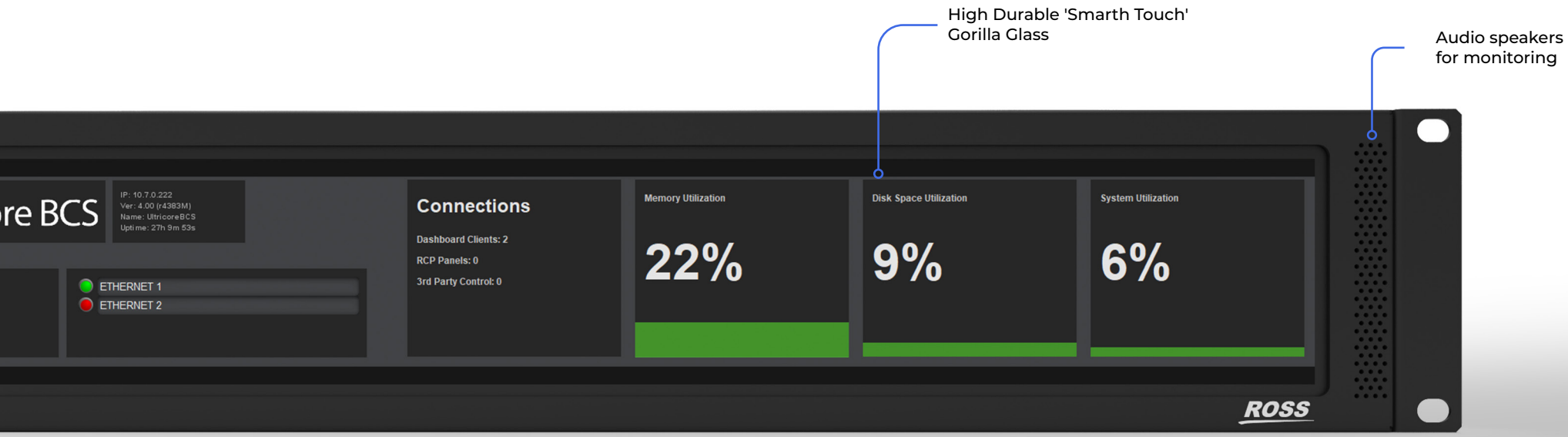
To ensure interoperability and easy interfacing to other devices within the facility, Ultrix uses industry standard protocols (GV Native, Probel SW-P-08, TSL Tallyman for MultiViewers) and NV9000 through an optional license. Ultricore can interface with existing Ross NK series routers via to be backward compatible. The Ultricore user interface is a Ross DashBoard application, making it familiar and consistent and delivering a smooth user experience. To state it simply, Ultricore has been designed to maximize efficiency. So dive in, and catch the power of this next generation control system.



Ultrix Frame

You Choose:
When is Ultricore BCS Required?

SPECIFICATIONS	ULTRIX STANDARD	ULTRICORE BCS
Control Panels & Ultrix Frames	Any combination up to 50 HW panels & Ultrix frames Up to 25 DashBoard clients	Up to 100 clients
Control of 3rd Party Router	Yes	Yes
IP Control		The innovative Ultricore IP SW license allows for scalable, easy integration of IP signals into hybrid or pure IP environments
Serial Ports	With USB to Serial adaptor	WIth USB to Serial adaptor
Form Factor	Integrated	2RU frame with integrated touchscreen control



ULTRICORE & ADVANCED CONTROL

The industry is going through rapid change. New signal transport standards and network topologies are bringing systemic challenges as these are being adopted. What is extremely critical is that even with these changes the speed, workflows, and configurations of these system remain easy, fast, reliable, and intuitive. Ultricore BCS is built on decades of experience in optimizing and understanding user workflows. Most importantly, it has been designed to harness the best of these new emerging technologies while maintaining the best of traditional workflows. The result is a powerful, scalable, control system that is easy to adopt and use and can grow as your needs evolve.

ULTRICORE IP

- Optional Powerful SW License that runs on the NEW Ultricore BCS System Controller
- Scalable based on the number of streams required for control in the system
- Use same routing workflows regardless of transport to enable easier integration in hybrid operations
    - **SAME** logical configuration
    - **SAME** control surfaces
    - **SAME** operator confidence

ULTRICORE-TLX

- Optional SW license for Ultricore-BCS to enable advanced tie line management
- Supports shortest-available-path multi-hop routing
- Works in conjunction with Ultrix-IP/Ultricore-IP to route SDI or IP Video seamlessly.
- Allows tie lines between supported router types (e.g. Ultrix, NK, supported Third party matrices) to connect between sites or expand system IO
    - Simple, DashBoard based tie-line configuration and status/monitoring GUI (table based)

ULTRICORE BCS & IP SYSTEMS

ROSS Direct (Using Ultricore IP)

- Ultricore IP discovers, registers, and exposes multicast streams
- Streams added into the Ultrix database as available ports
- Control & configuration with Dashboard and/or Ross control panels
- 3rd party router control via GVG, Nvision, and Probel protocols

ULTRICORE TALLY

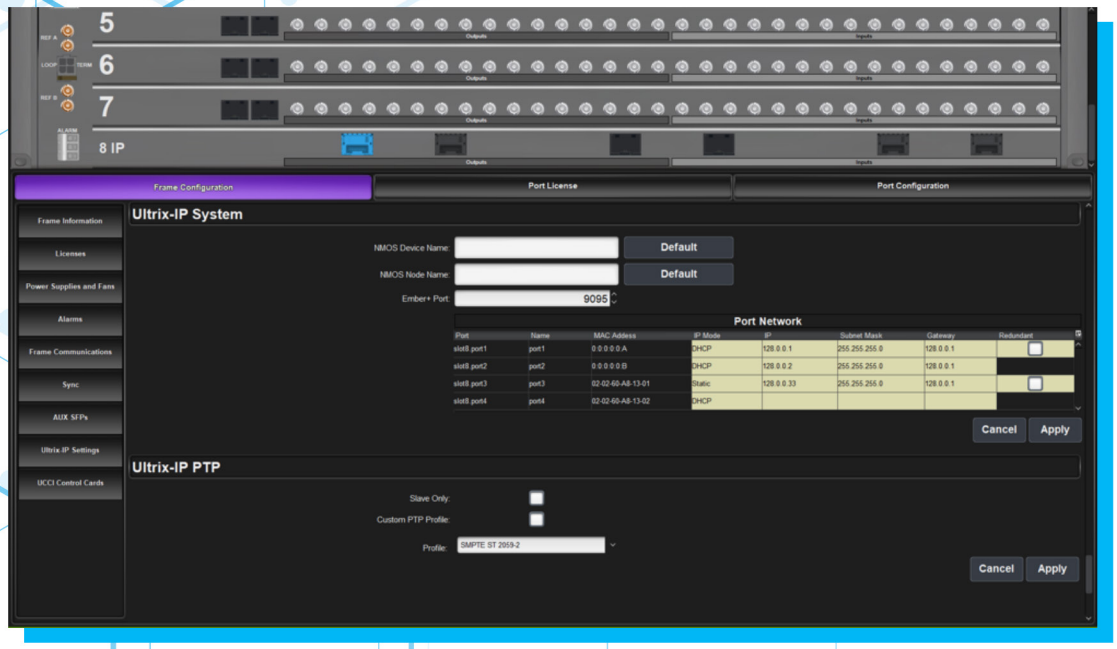
Ultricore Tally is a comprehensive tally control and management solution designed for efficient coordination and collaboration in production environments. Essential for live broadcasting, Ultricore-Tally provides status updates to control room personnel and on-air talent, ensuring a smooth and professional presentation.

Key Features:
Extensive Interoperability, Versatile Display Options, Comprehensive Equipment Control, Scalability for Any Environment, Advanced Configuration Capabilities, Simple to License and Deploy.

IP
tricore BCS
ROSS

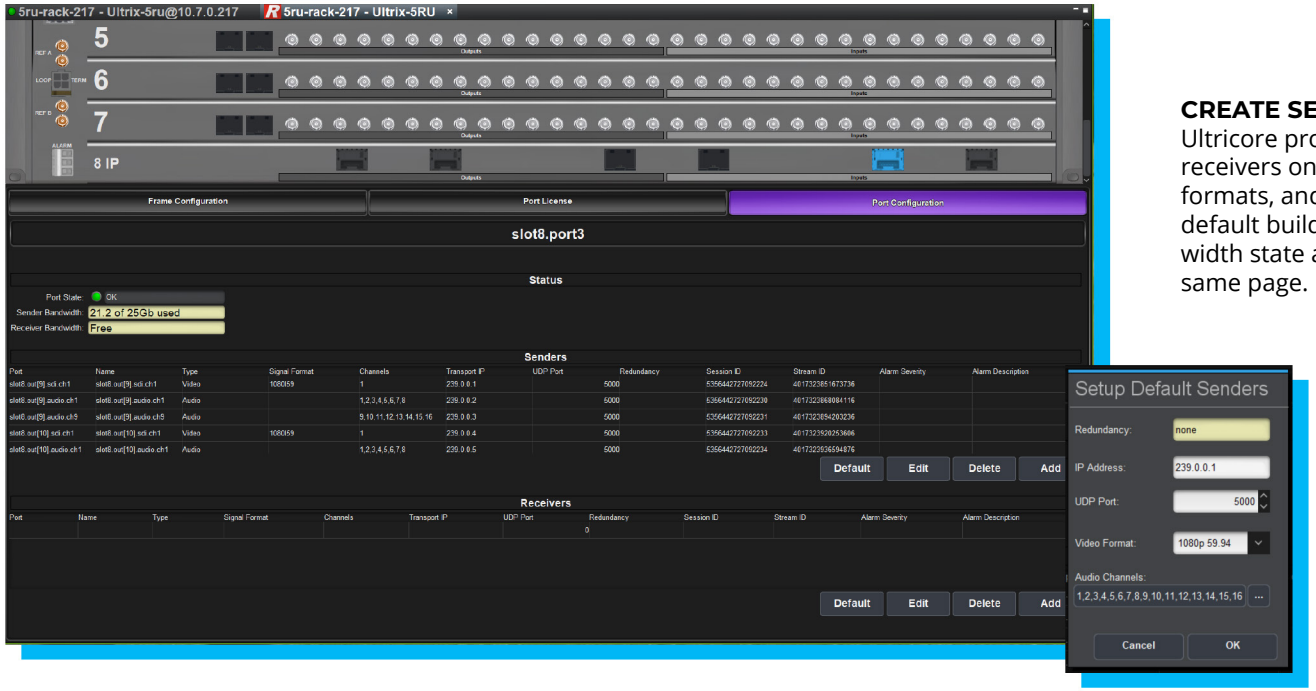
IP CONNECTIVITY MADE EASY

Simple, familiar configuration paired with sophisticated discovery and registration makes adding IP into systems straightforward.

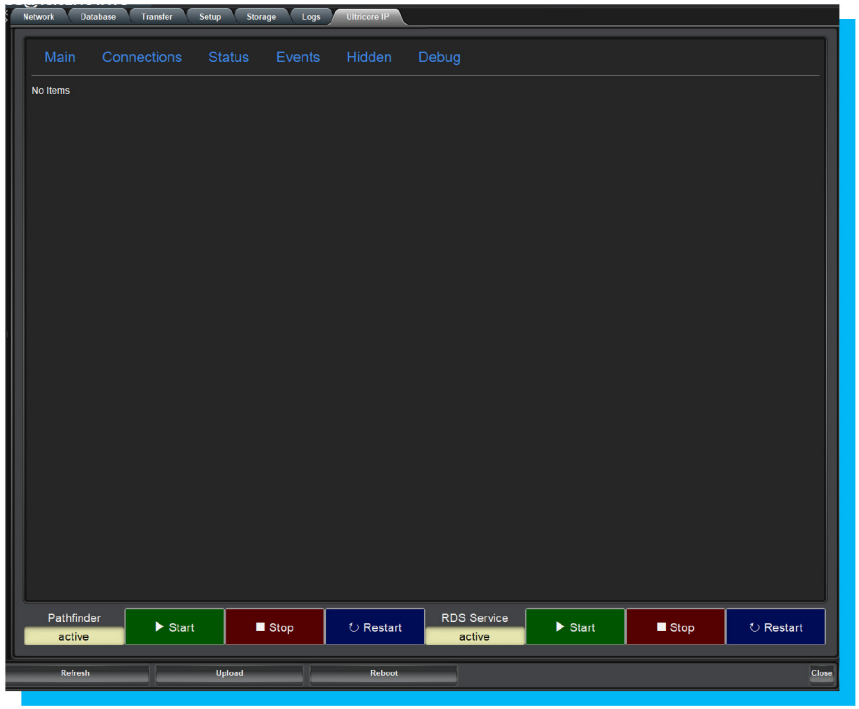


SIMPLE PORT SETUP

Ultricore permits users to quickly set up ports for all of the Ultrix-IP-IO boards. Set communications, ranges of IP addresses or set to DHCP, and set up redundant/non redundant ports from one screen.



CREATE SENDERS & RECEIVERS
Ultricore provides several ways to create senders and receivers on each port. You can set IP addresses, signal formats, and channel counts manually, or use the default builder to quickly allocate an entire port. Bandwidth state and alarms are readily accessed from the same page.



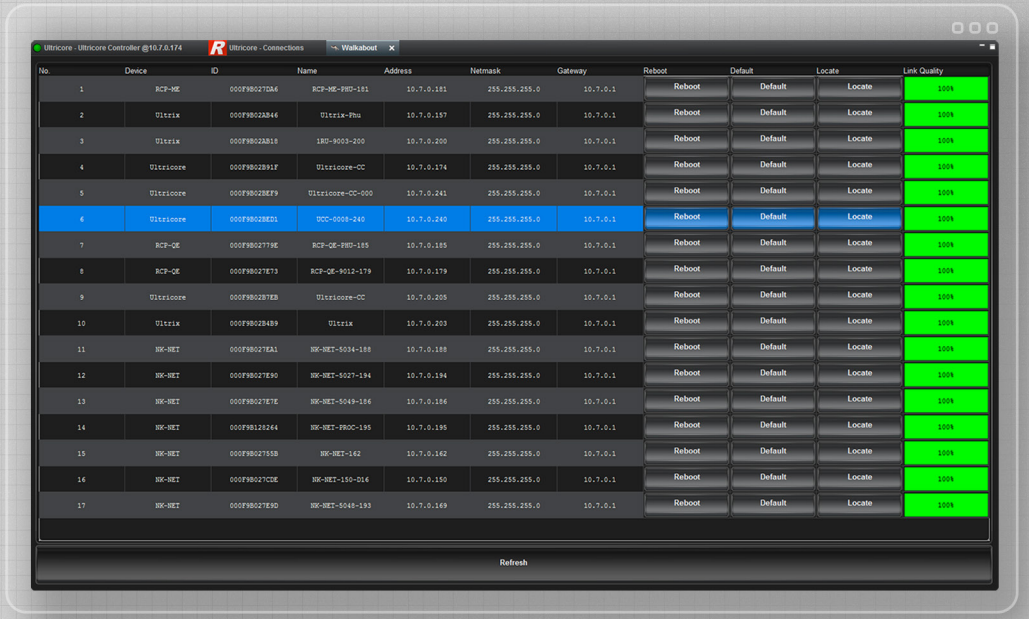
POWERFUL IP NETWORK DISCOVERY
With the Ultricore IP license, users can discover their entire network using NMOS IS-04/05 registration and discovery. All devices are added to the Ultricore ports list to allow for control from common hardware and software control surfaces.

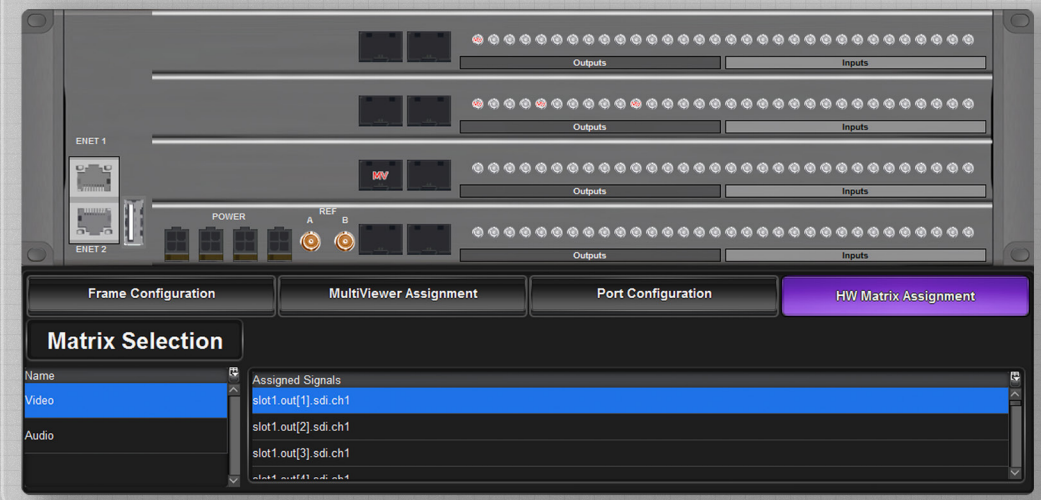
REDUCTION IN SETUP TIME

Ultricore is designed to provide maximum flexibility to you in designing your systems, while providing tools to make things easier.

WALKABOUT AUTO DISCOVERY TOOL >

Ultricore's superior experience begins with the Walkabout tool. Walkabout is a device discovery and configuration tool that gives you the ability to discover, apply network settings, and group Ross Video routers and associated hardware control panels into systems. This can be performed quickly without having to know current IP settings, saving valuable time.



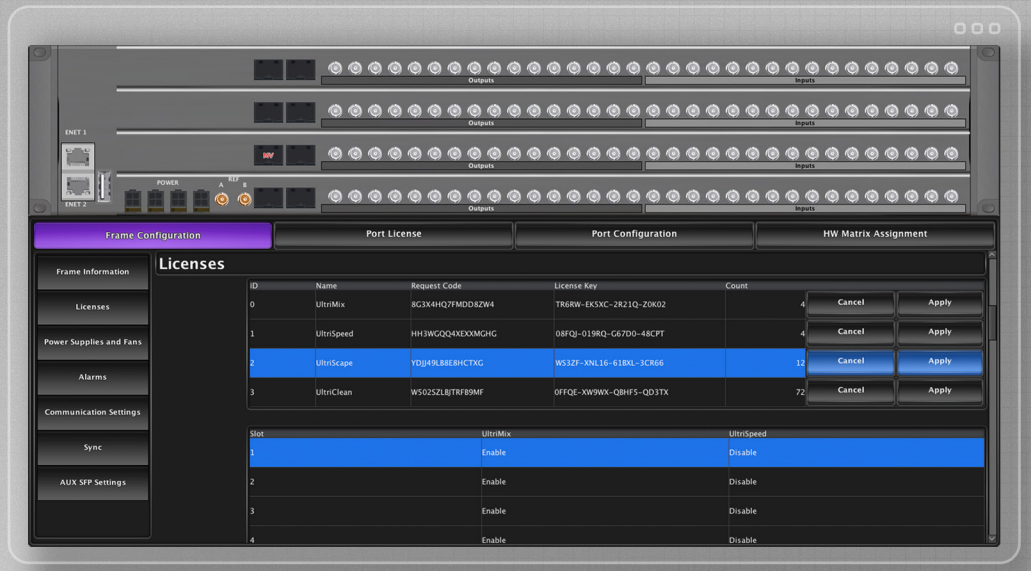


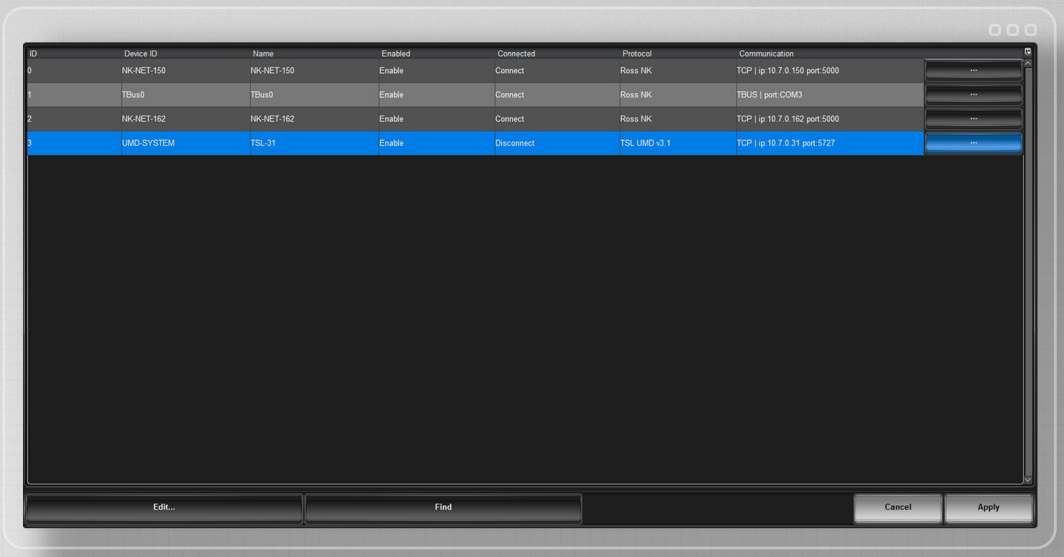
< HARDWARE PORT MAPPINGS

Ultricore provides a visual replica of the I/O of the Ultrix chassis. This makes it easy to assign attributes and licenses to ports. Create MultiViewer heads, clean switch video outputs, and more simply by clicking on the desired port and enabling the license. Additionally, attributes like linking ports together for Gearbox, setting failover behaviors for clean switch outputs, and configuring hardware partitions are all done within this elegant graphical user interface.

SOFTWARE LICENSE MANAGEMENT >

Ultrix has a powerful series of software licenses. These licenses enable features like integrated MultiViewers, advanced audio processing and routing, video clean switching, and 12 Gb/s signal support. Ultricore makes it easy to enable and manage all of these licenses with an easy to navigate user interface.



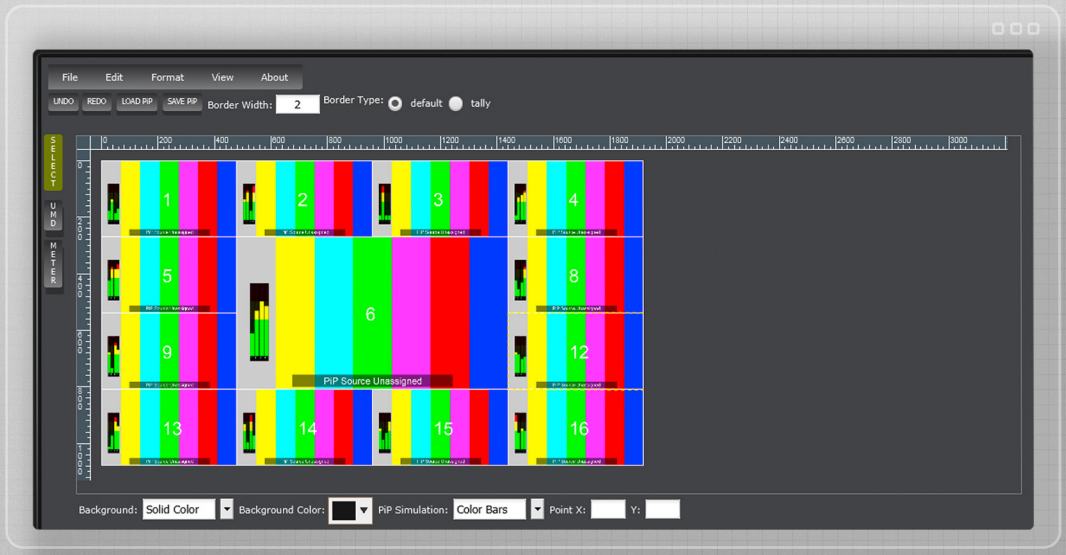


< 3RD PARTY DEVICE INTEGRATION

Ultricore permits users to add third party routers easily. Simply add the device, protocol and port information, and matrix size.

SIMPLE CONFIGURATION

One of Ultricore's real strengths is how easy it makes configuring a system. The configuration tools draw on decades of experience by people that actually know routers and connectivity. You will find Ultricore visually and logically easy to understand, use and be productive with.

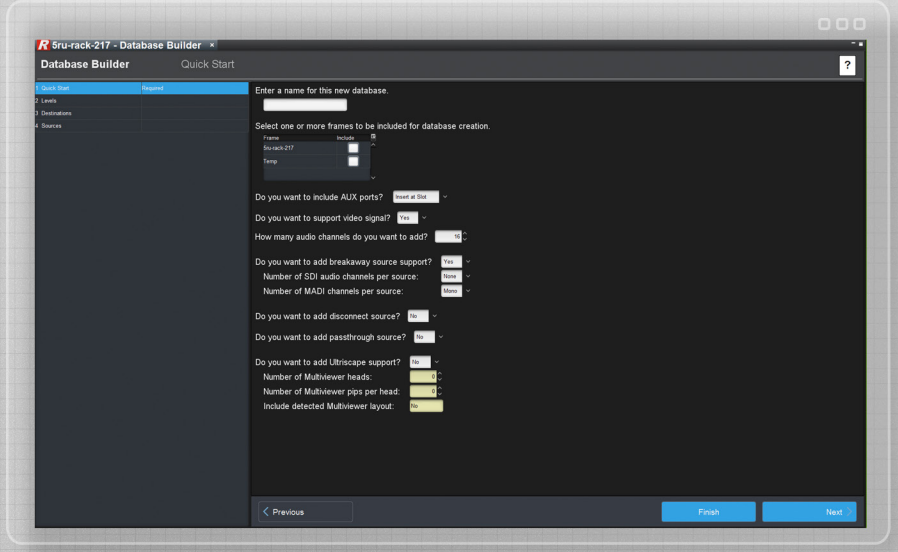


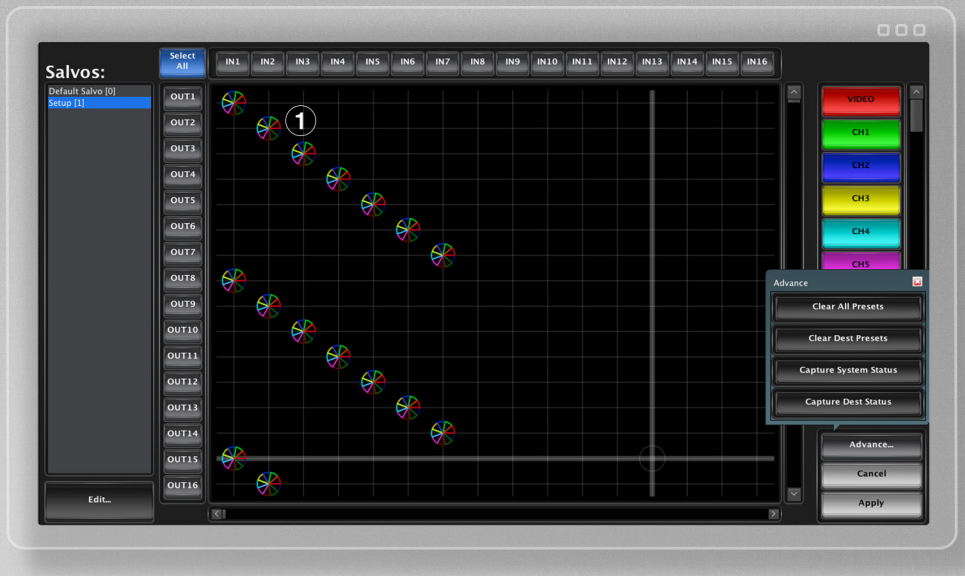
< MULTIVIEWER EDITOR

Create layouts with user definable labels (UMD's), audio meters, and tally support. Layouts can be recalled to any MultiViewer output within the system.

DATABASE BUILDER >

The Database Builder makes it easy to create an Ultrix system. Simply choose the frames you want to be part of the system and follow the steps. The database Builder then creates all your logical entries for you. Create a complete database that has you up and running in minutes.





< SALVO EDITOR

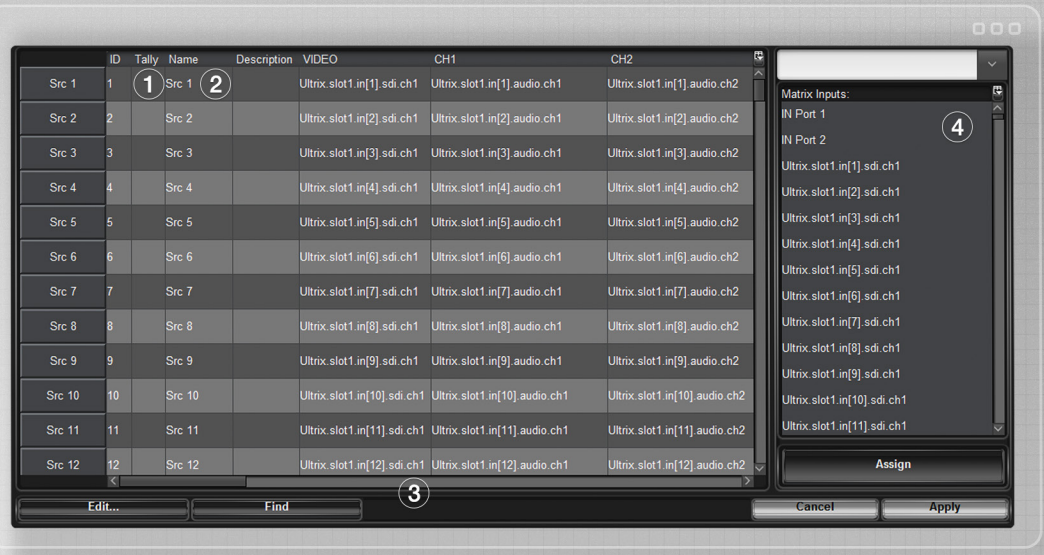
Ultricore has a number of features that your operational staff will find quite useful, one of those is Salvos. A Salvo is the ability to execute a collection of crosspoint switches all at once with a single command. Ultricore's integrated salvo editor provides an easy, visual way to create salvos. This can be done from a blank configuration, from an entire system status capture, or from the current status of the router's destinations. Additionally, you can capture and create salvos from within the software control
panels of Ultricore, making it simple to store and retrieve snapshots of systems.

1. View Salvo configuration based on level assignment for each crosspoint

DATABASE EDITOR >

One of the most powerful features of Ultricore is its database editor. The editor is a logical switching based system, which means you are able to interact with the inputs and outputs of the system by the names created in the database. Even more compelling is that you can then assign different ports and channels under a single database entry, with no real restrictions on how they are grouped together. Not only does this capability provide for a
tremendous amount of flexibility, but changing a source or destination configuration is as simple as assigning new ports. There is no need to create entire new entries, which saves an enormous amount of time.

1. Tally ID Column
2. Status name for each source / destination
3. View the physical port assignment by level for each source and destination
4. Physical ports available to be used in the system



ENHANCED USER EXPERIENCE

Ultricore provides integrated, completely customizable software panels free of charge.
This gives users flexibility to create panels tailored in type and function for specific applications.

SINGLE-BUS >

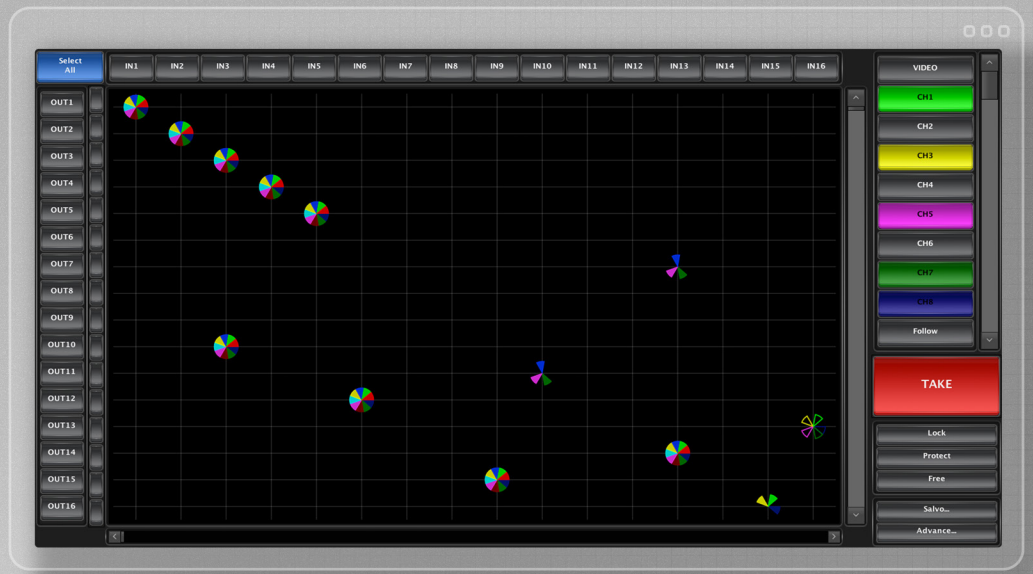
A panel that controls a single, user defined output. Ideal for applications where speed, or security concerns are important.

< CATEGORY

A panel that groups sources, destinations, and levels into categories for quick access. Great for systems with large databases, or where breakaway switching is required.

MATRIX >

A panel designed to provide a visual representation of the status of crosspoints. Ideal for applications like breakaway audio switching, 1 to many, salvo creation and statusing.



< MULTI-BUS

A panel that controls multiple, user defined outputs. Provides ability to control a subset of router outputs from a single panel. Gives the ability to switch a single output at a time, or the ability to switch a source to multiple outputs simultaneously.

UNIFY YOUR OPERATION

Ultricore is a DashBoard application, making it part of the DashBoard ecosystem. This makes possible a range of CustomPanels tailored to your specific needs that go far beyond just connectivity control to include everything in your facility.

DashBoard is an open platform for facility control and monitoring that enables users to quickly build unique, tailored CustomPanels that make complex operations simple. DashBoard provides control and monitoring to hundreds of products from over 50 partners within the openGear and DashBoard Connect ecosystem, or any 3rd party IP-based device. Its ability to craft application specific solutions across this breadth of products is what makes DashBoard so special.

DashBoard Connects

Carbonite Production Switchers

XPression Graphics Systems

Furio Robotics

PivotCam and Acid Cameras

openGear

CamBot Robotics

Abekas Mira Replay Servers

Acuity Production Switchers

3rd Party IP Devices

NK Routers

MC1 Master Control

OverDrive Automation Systems

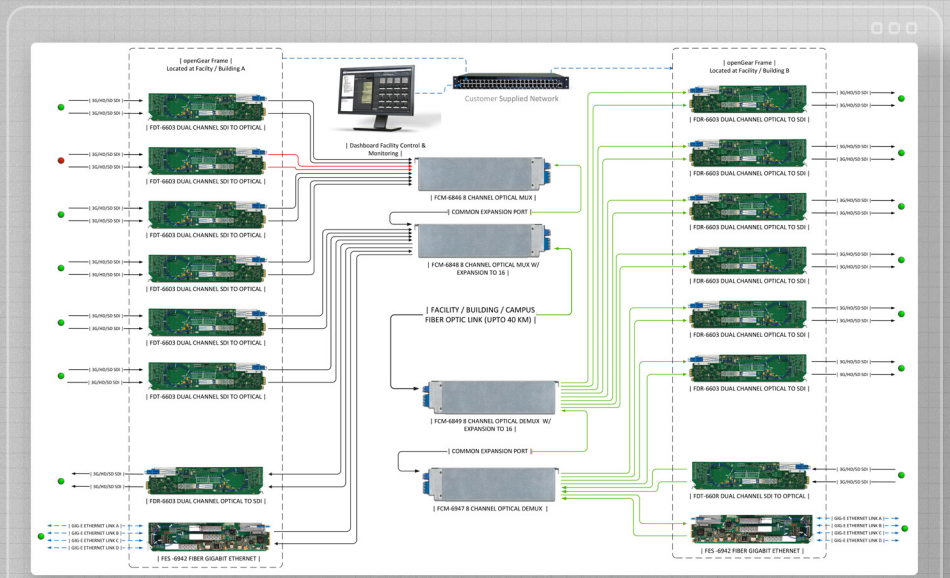
Ultrix Routers

DASHBOARD PANELS

DashBoard is a control system that can be molded to fit the needs of a variety of applications. Standard user interfaces allow quick access to control and monitor Ross equipment with minimal setup required. Additionally, DashBoard can be configured for sophisticated workflows, applications, and user groups, with fully customized graphics, alarming, control access, and reporting for the most demanding environments.

STREAMLINE PRODUCTION >

DashBoard can be used to build an easy to use, simple interface for the entire production. Switchers, graphics, routing, and infrastructure can all be controlled and monitored from a single, customized panel.



< SYSTEM MONITORING

DashBoard provides a powerful interface to monitor your facility. By importing facility signal flow diagrams as a background, hotspots can be placed that allow for control, alarming, and monitoring of specific devices and signal chains. This provides users a single interface to make and correct problems and monitor failures.

DASHBOARD SPECIALIZED APPLICATIONS >

DashBoard can be used to build specialized applications like the one on the right, the Legislative Control System (LCS). It was created to meet the needs of legislatures around the world to produce an increasing amount of video coverage. LCS makes it easy for a single operator to control all of the production equipment including graphics, video switching, and cameras via an intuitive, visual user interface.

< CUSTOM PANELS

Facility control rooms have many different pieces of equipment to configure, manage, and control. The Ross DashBoard platform is a way to manage multiple components quickly with the control interfaces served by the devices themselves. Users can create custom panels to provide access to only the desired parameters for specific users or applications. This improves workflows by creating a consolidated view of multiple devices to a single interface.

DashBoard

ULTRITOUCH CONTROL PANEL

OVERVIEW

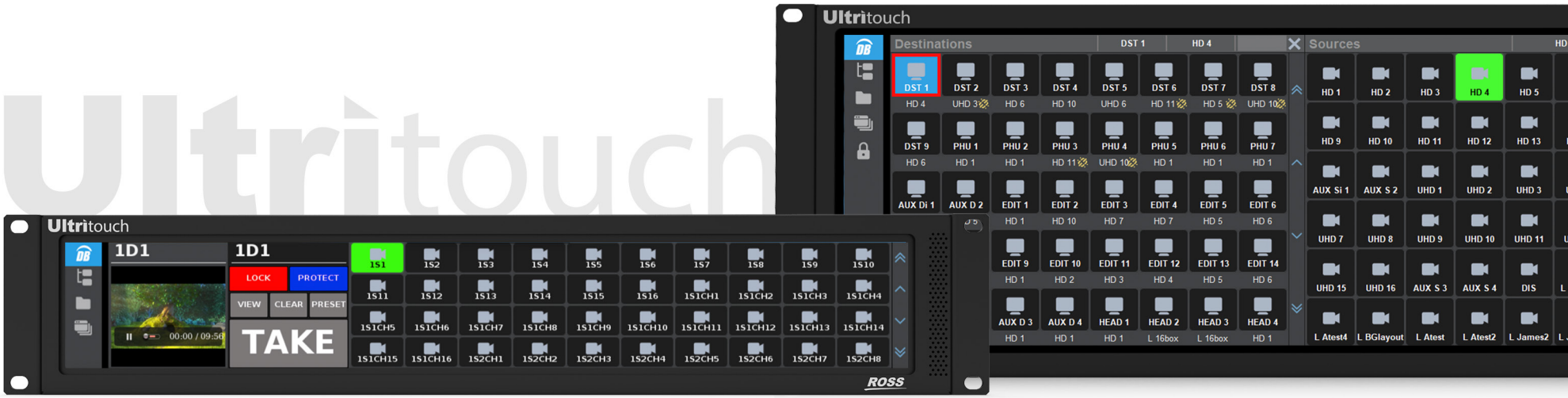
Ultritouch is a powerful system control panel from Ross Video that is totally customizable and has been designed around you. The panels are a 2RU or 4RU rack-mountable touchscreen that builds on the functionality of traditional control products by adapting to your workflows, and it features a user interface that has more in common with a modern smartphone than a broadcast control panel. The magic of Ultritouch lies in its powerful Smart Touch capabilities. Ultritouch supports Ross Video's DashBoard platform natively, giving users unlimited flexibility to build panels that meet their working needs without any restrictions on numbers of buttons, button placement or display windows.

Smart Touch was developed to address the growing need for control surfaces that support traditional functionality but also offer greater levels of customization for the very precise and complex workflows of our most demanding customers. At its heart, Ultritouch features a full version of DashBoard – Ross Video's open control platform – which enables users to:

- Control a wide range of Ross products including production switchers, XPression graphics, Overdrive APC, openGear and Ross Routing systems, among others.
- Quickly change between panel styles and layouts, maximizing the usability of the panel and making your operations more efficient.
- Create and import custom panels
- NDI stream monitoring
- Control of 3rd party products via OGP

In addition, Ultritouch combined with Ultrix routers gives users a tremendous amount of flexibility and advanced power including:

- Quick setup using the Ultricore soft panel wizard
- Custom panel layouts using flexible Windows and Drawers based on user preference
- Button per source, Cat/Idx, Grouping, Favorites, Advanced Statusing, Salvo operations and more
- Destination follow monitoring with video using NDI streaming direct on the panel
- A multiviewer control panel that allows for control of layouts, pips, and pip behavior. This graphics intensive panel simplifies use and makes it very easy to control large amounts of multiviewers from a single control surface.



FEATURES

- 2RU and 4RU Touch-enabled Dashboard based RCP
- Shallow depth(2.5”) with sideways connector layout (to maximize leg room in desk applications)
- Redundant Power Supply (optional)
- Integrated Speakers for monitoring (future application)
- HDMI & USB ports
- System wide discovery via Walkabout
- Dashboard based for easy & fast configuration
- Full control of most Ross Products - Routers, Multi-viewers, Switchers, Graphics, APC, Processing Platforms, and more
- Dashboard tree & system management support
- Ability to store multiple panel types with intuitive navigation based on desired workflow
- Fast Reboot and control for mission critical operations
- Seamlessly fits into the current Ross control ecosystem
- Backed by famous Ross support
- Optional VESA mount for 4RU panel

Ultritouch-RTR Features:

- Touch-based router soft panels optimized for comprehensive and intuitive operations
- Drawer and Window creation for completely customized workflow and panel layout
- Additional Ultritouch optimized panel for enhanced menuing, status, and control
- Standardized BPS, Enhanced BPS, Monitoring, Cat/Idx panels and more
- Fast, highly visual multiviewer specific control
- Automatically retrieve databases
- Ability to support up to 25 panels per Ultrix frame, up to 100 when using Ultricore BCS

ORDERING INFORMATION

ULTRITOUCH 2 - 2RU Touchscreen control panel
ULTRITOUCH 4 - 4RU Touchscreen control panel
ULTRITOUCH-PS Optional redundant power supply

RCPME

OVERVIEW

The RCP-ME is the most popular NK Series control panel and finds a home in a wide range of applications due to its familiarity, flexibility and cost-effectiveness. The RCP-ME has all of the same button programmability as the RCP-NK1 (source, destination, break-away, level select, macro, protect, take and panel lock), and adds salvos, direct Ethernet connection, and a backlit 16x2 LCD display for display of source and destination names, system warnings and errors.

The RCP-ME is an Ethernet based panel, which means improved ease of configuration, and a more flexible control architecture. When used in systems with Ultrix, it stays constantly in sync with the Ultricore controller, so any changes to the system database are automatically pushed to the panel, making it seamless to update.

Additionally, the RCP-ME adds the ability to create menus which enables the grouping of sources and destinations based on physical requirements (studios, edit suites, QC racks) or categories (servers, cameras, monitors). Menu navigation buttons programmed onto the RCP-ME also enable quick access between menus.

Multiple RCP-MEs can be tied together to operate as a single, larger panel. By doing this, the tied RCP-MEs can operate as a larger menu driven source / destination switching panel or a larger cut bus panel with a single button per source access. The variable backlight permits labels to be read in low light control room conditions, making this panel ideal for a wide range of environments.

FEATURES

- 40 fully illuminated LED backlit buttons
- Backlit 16x2 LCD display
- Ethernet connectivity
- Ability to connect to primary and backup IP addresses for control redundancy
- Slim design: 1RU, depth 4.4cm
- Full function, programmable control panel
- Configurable as cut-bus, multi-cut bus or menu driven source / destination switching control panel
- Control up to 32 levels
- Removable keycaps for labeling of button functions using transparent inserts
- Universal power supply included
- 5-year transferable warranty

ORDERING INFORMATION

RCP-ME Ethernet based Ross Routing 40 Button and LCD Display Control Panel
NK-5V2A Shelf Spare Power Supply for the RCP-ME

RCPQE SERIES

OVERVIEW

The RCP-QE Series offers unmatched flexibility and ease-of-use. They are ideal for use in OB vans or production houses where configurations change regularly, and are equally useful in studios where unlimited configurations enable fast and simple customized setups of each panel.

Ethernet based connectivity means increased ease of configuration, and provides for more flexible control architectures. The RCP-QE Series remote control panel offers 18 or 36 colored backlit graphic LCD keys with multiple menus, enabling users to easily navigate through the system with just a few key presses.

Using the category function, users can quickly navigate through hundreds of sources and destinations, making it an ideal menu driven source / destination switching panel for any size router.

As with all the other control panels, each button can be programmed to function as a source, destination, breakaway, level select, salvo, protect, take and panel lock button. Custom key labels (up to 10 characters across 2 lines) and colors are all user-definable. Source / destination names are automatically updated on the panel as changes are made and saved within the Ultricore Database Editor, making panel updates quick and seamless.

FEATURES

- 18 (RCP-QE18) or 36 (RCP-QE36) backlit graphic LCD keys
- 8 programmable function keys
- Slim design: 1RU, depth 4.4cm
- Ethernet based control
- Ability to connect to primary and backup IP addresses for control redundancy
- Full function, programmable control panel
- Menu driven and single key configurations
- Unique multi-level menu programming
- Configure with DashBoard Control System
- Universal power supply included
- 5-year transferable warranty

ORDERING INFORMATION

RCP-QE18 Ethernet based Ross Routing 18 LCD Illuminated Button Control Panel
RCP-QE36 Ethernet based Ross Routing 36 LCD Illuminated Button Control Panel
NK-5V2A Shelf Spare Power Supply for the RCP-QE Series

A CONTROL SOLUTION FOR ULTRIX AND NK

During development, it was important that the needs of tomorrow's connectivity systems were squarely in focus. However, it was also a desire to be able to use the advanced features of Ultricore with all Ross Video routing solutions. As such, there is a full line of NK products that can be used within an Ultricore controlled system. These include hardware control panels, GPI boxes, and bidirectional interface translators that convert native Ross routing NK protocol over T-Bus to Ethernet. This means that Ultrix can fit seamlessly into facilities with existing NK routers, as well as permitting the reuse of panels, protocol translators, and other legacy control components.

RCPNK1

The RCP-NK1 is a simple and cost-effective control panel that can be used in a wide variety of applications. Ideally suited as a menu driven source / destination switching control panel for small routers or as a cut-bus or multi-cut bus control panel for any sized router, the RCP-NK1 features 40 soft, fully programmable backlit keys arranged in a 32 + 8 configuration for convenient function key layout.

FEATURES

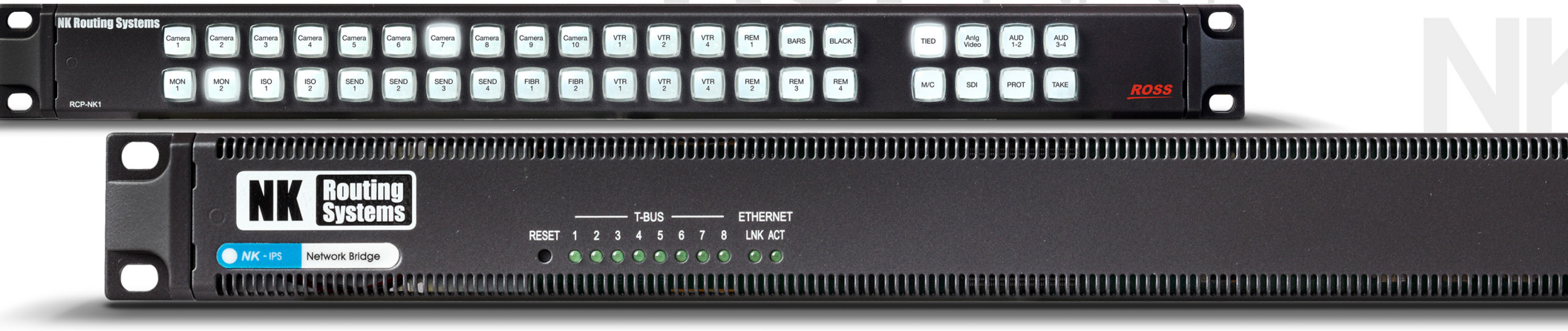
- 40 fully illuminated LED backlit buttons
- Slim design: 1RU, depth 4.4cm
- Full function programmable control panel
- Configurable as cut-bus, multi-cut bus or menu driven source / destination switching control panel
- Control up to 8 levels, across 16 breakaways
- Removable keycaps for labeling of button functions using transparent inserts
- Can be mounted on the front of any NK-16 router, providing an integrated 1RU routing and control solution
- Phantom-powered via T-Bus (requires an NK-IPS or Ultricore-CC to be used with Ultrix)
- 5-year transferable warranty

NKIPS

The NK-IPS Network Bridge is
devices for configuration, firm
control. It can also be used a
abled NK devices to Ultrix rou

FEATURES

- Compact size: 1RU, depth 2.4
- Password protection to prev
- Front panel status and comm
- 8 port hub for T-Bus connect
- 10/100 Ethernet port
- Supports static or DHCP assi
- Universal power supply inclu
- Optional redundant power
- 5-year transferable warranty



s the external gateway to all NK Series
ware upgrades, monitoring and remote
s a bridge to connect legacy T-Bus en-
ting systems.

4cm
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uded

NKNET

In an effort to simplify NK routing solutions, and provide significant cost savings for a more cost-effective routing solution, Ross offers the NK-NET configuration dongle. This simple, unobtrusive dongle provides users the ability to configure an NK router, and up to 4 NK remote control panels via DashBoard, without the need of an NK-IPS.

Restrictions of NK-NET Applications:

- NK-NET requires the router to host the connection. Use NK-IPS to support panels directly.
- NK-NET does not support advanced mapping.
- NK-NET only allows a single DashBoard connection.
- NK-NET does not support MC-1 or Carbonite eXtreme.

FEATURES

- Enables Ethernet configuration of any NK Router from DashBoard
- Ships as standard and is automatically included with every NK router (orderable separately as well for legacy installations)
- Configures both the router and up to 4 T-Bus connected NK panels
- Replaces the need for an IPS for simple, router installations – saves costs, saves space, saves complexity
- Powered by T-Bus connection, no external power supply required

NKGPI

The NK-GPI is a stand-alone, universal, general purpose interface for the Ross Video NK and Ultrix Series family of routers. Providing GPI inputs and outputs, the NK-GPI enables flexible GPI control, configured from a web browser or the DashBoard Control System, via the NK-IPS or Ultricore-CC external controllers. The NK-GPI also supports both GPI input return and latch modes.

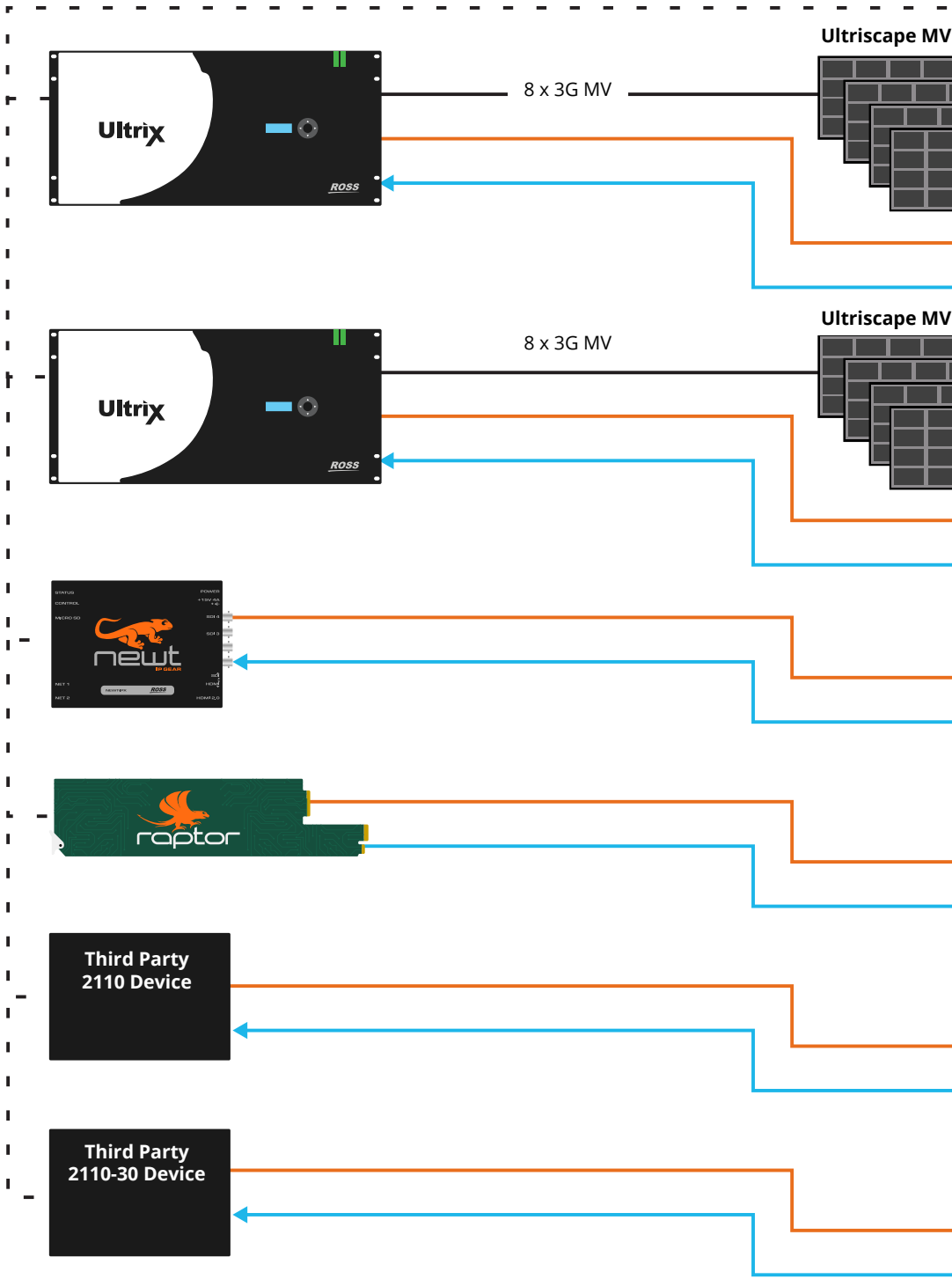
FEATURES

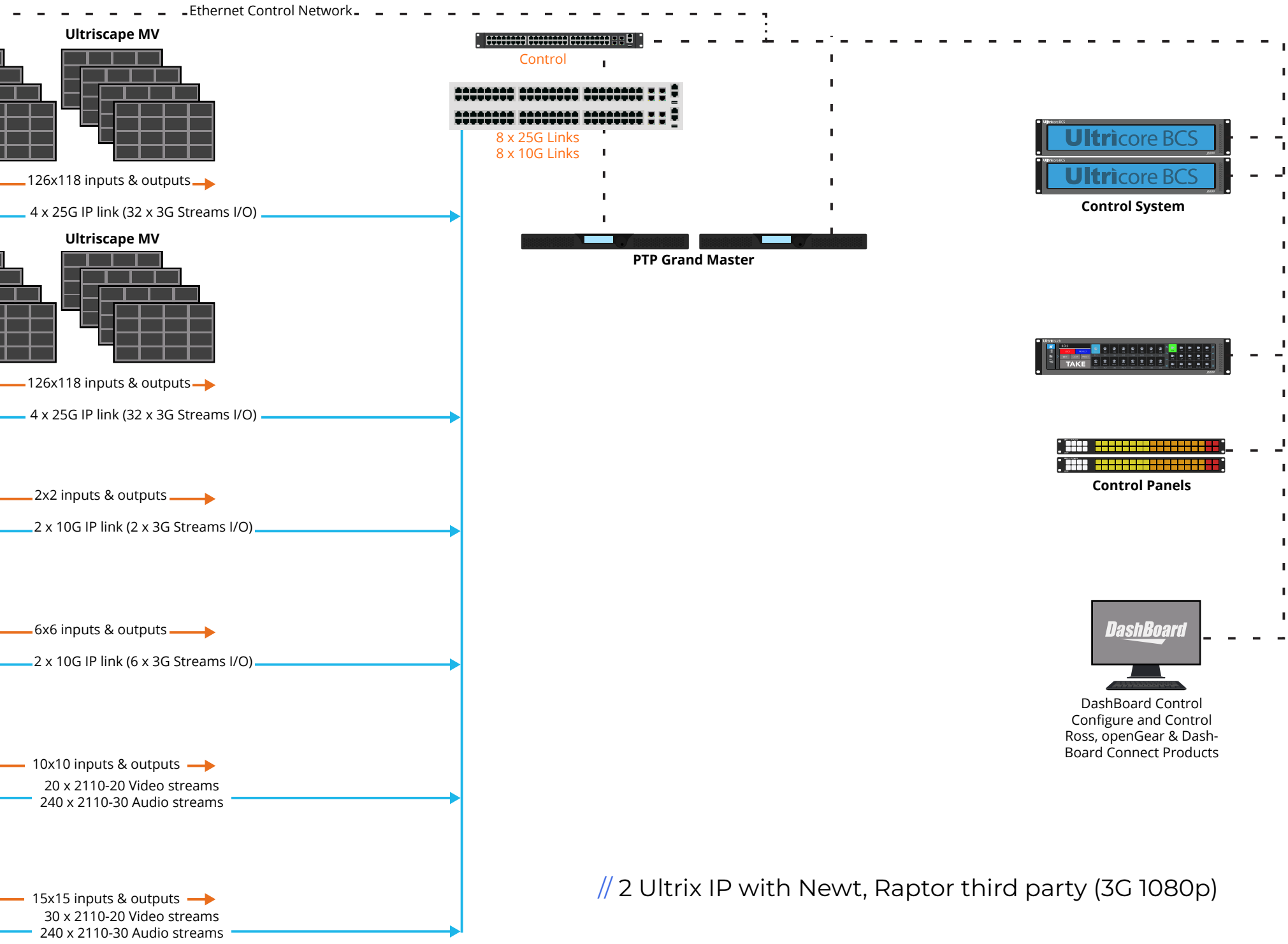
- 16 GPI inputs and outputs
- Return / latch mode
- Easy to install and operate
- Phantom-powered via the T-Bus (Requires either an NK-IPS or Ultricore-CC to be used with Ultrix routers)
- 5-year transferable warranty

**For a full description of NK Products, please see the Infrastructure Catalogue.*

SYSTEM CONNECTION BASICS

There are many ways to build the connectivity of a routing system. Included here are some of the more common system designs that are used for building Ultrix systems. These layouts are not exhaustive, but are meant to provide guidelines to follow when configuring a system. Please contact Ross Video for more information on specific system designs.





// 2 Ultrix IP with Newt, Raptor third party (3G 1080p)

Ultricore

Ross Video has a complete range of technical services available to ensure that your Ultricore installation is a success.

Operational Training can be provided at Ross Video, on-site, or on the web. Experienced Ross operators will teach your staff to get the most out of your new system and enhance your productions.

Commissioning is a service to help get your production system properly configured, connected, and installed. This service is performed by factory-trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site, or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Ultricore comes standard with a 1 year comprehensive warranty. Extended Warranties on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – Included for the life of your system.

Contact Us

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