

# Caprica

User Guide for Quorum

Version 4.0

**ROSS**



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You've made a great choice. We expect you will be very happy with your purchase of Ross Technology. Our mission is to:

1. Provide a Superior Customer Experience
  - offer the best product quality and support
2. Make Cool Practical Technology
  - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at [solutions@rossvideo.com](mailto:solutions@rossvideo.com).



David Ross  
CEO, Ross Video  
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## Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*



# Caprica · User Guide

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## Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

## Notice

The material in this manual is furnished for informational use only. It is subject to change without notice and should not be construed as commitment by Ross Video Limited. Ross Video Limited assumes no responsibility or liability for errors or inaccuracies that may appear in this manual.

## Important Regulatory and Safety Notices to Service Personnel

Before using this product and any associated equipment, read all the Important Safety Instructions listed below so as to avoid personal injury and to prevent product damage.

The Quorum system makes use of a number of individual component products to make up a complete turnkey system. The Important Safety Instructions section of this manual is intended to compliment individual OEM product manuals and the User must refer to, and heed, any safety instruction outline in these supplementary product manuals. Separate manuals are included for the following component products:

- Server PC(s)
- LCD Flat Screen Display(s) & Power Supply

This system may also require specific equipment, and /or installation procedures be carried out to satisfy certain other regulatory compliance requirements. Notices have been included in this publication to call attention to these specific requirements.

## Symbol Meanings



**Protective Earth** — This symbol identifies a Protective Earth (PE) terminal, which is provided for connection of the supply system's protective earth (green or green/yellow) conductor.

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This symbol on the equipment refers you to important operating and maintenance (servicing) instructions within the Product Manual Documentation. Failure to heed this information may present a major risk of damage or injury to persons or equipment.

---



**Warning** — The symbol with the word “**Warning**” within the equipment manual indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

---



**Caution** — The symbol with the word “**Caution**” within the equipment manual indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

---



**Warning Hazardous Voltages** — This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons.

---



**ESD Susceptibility** — This symbol is used to alert the user that an electrical or electronic device or assembly is susceptible to damage from an ESD event.

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## Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warning.
- Follow all instructions.



### Warning

The safe operation of this product requires that a protective earth connection be provided. A grounding conductor in the equipment's supply cord provides this protective earth. To reduce the risk of electrical shock to the operator and service personnel, this ground conductor must be connected to an earthed ground.

Use only power cords specified for this product and certified for the country of use. Refer to the Product Power Cord Requirement Section that follows.

Do not defeat safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit in to your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinching particularly at plugs, convenience receptacles, and point where they exit from the apparatus.



### Warning

Indoor Use: “WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE”

Do not use this apparatus near water.

Do not block any ventilation openings. Install in accordance with manufacturer's instructions.

Do not install near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Only use attachments/accessories specified by the manufacturer.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Clean only with a dry cloth.



### Warning

Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug damage, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



### Caution

To reduce the risk of fire, replacement fuses must be the same type and rating.



### Warning

This product contains safety critical parts, which if incorrectly replaced may present a risk of fire or electrical shock. Components contained within the product's power supplies and power supply area, are not intended to be customer serviced and should be returned to the factory for repair

## Product Power Cord Requirements



### **Warning North American Line Voltages 100 - 120 Volt**

This product is supplied with certified 10A/125V SVT type supply cords.

Conductors are color coded white (neutral), black (line) and green or green/yellow (ground).

Operation of this equipment at line voltages exceeding 130V requires that alternative supply cords with appropriate voltage and current ratings be used.



### **Warning International Line Voltages 200 - 240 Volt**

This product has been designed for use with certified IEC 320- C13 10A/250V - H03 VV-F3G 1.00mm<sup>2</sup> type line cord.

International product orders are supplied with a certified 10A/250V line cords, utilizing a molded 3-pin IEC 320-C13 type connector at one end and stripped conductors on the other. One line cord is provided. Conductors are CEE color coded; blue (neutral), brown (line), and green/yellow (ground).

Installation by a qualified Electrician, of an appropriately approved A/C wall plug certified for the country of use, is required.

Alternatively, other IEC 320 C-13 type power cords may be used, provided that they meet the necessary safety certification requirements for the country in which they are to be used. Refer to the correctly specified line cord above.

## EMC Notices

### **US FCC Part 15**

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.



**Notice** Changes or modifications to this equipment not expressly approved by Ross Video Ltd. could void the user's authority to operate this equipment.

### **CANADA**

This Class "A" digital apparatus complies with Canadian **ICES-003**.

Cet appareil numérique de la classe "A" est conforme a la norme **NMB-003** du Canada.

### **EUROPE**

This equipment is in compliance with the essential requirements and other relevant provisions of **CE Directive 93/68/EEC**.

### **INTERNATIONAL**

This equipment has been tested to **CISPR 22:1997** along with amendments **A1:2000** and **A2:2002** 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.

## Warranty and Repair Policy

The Quorum Live and Quorum News systems are backed by a comprehensive one-year warranty on all components.



**Notice** — *Changes or modifications to this equipment not expressly approved by Ross Video Limited could void the user's authority to operate this equipment.*

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.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

### Extended Warranty

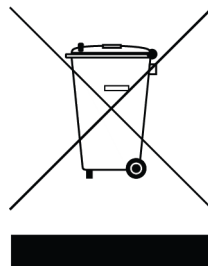
For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your Quorum system, contact your regional sales manager.

### Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

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



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

## Use of Hazardous Substances in Electrical and Electronic Products (China RoHS)

Ross Video Limited has reviewed all components and processes for compliance to:

“Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products” also known as China RoHS.

The “Environmentally Friendly Use Period” (EFUP) and Hazardous Substance Tables have been established for all products. We are currently updating all of our Product Manuals.

The Hazardous substances tables are available on our website at:

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>

## 电器电子产品中有害物质的使用

Ross Video Limited 按照以下的标准对所有组件和流程进行了审查:

“电器电子产品有害物质限制使用管理办法” 也被称为中国RoHS。

所有产品都具有“环保使用期限”(EFUP)和有害物质表。目前,我们正在更新我们所有的产品手册。

有害物质表在我们的网站:

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>

## Company Address

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# Introduction

Thank you, and congratulations on choosing the Caprica Server to control your third-party devices. A Caprica Server acts as a timing engine and device control hub, which is inserted between Quorum and the production switcher. Quorum talks to Caprica, which in turn talks to video servers, graphics, cameras, audio, and other broadcast devices – including the production switcher of course. Caprica accomplishes this by using an application that essentially runs switcher software, giving it access to all 200+ device drivers that exist today.

## About This Guide

This guide covers the installation and configuration of your Caprica Server. The following chapters are included:

1. **“Introduction”** provides a summary of important terms, conventions, and features.
2. **“Installation Notes”** provides general instructions about the Caprica system.
3. **“Software Installation”** provides procedures for installing Caprica Server software after a system re-image, or to upgrade to a newer software version.
4. **“Cockpit HTTPS Connection”** provides procedures to configure Cockpit to manage your Caprica Server through a secure HTTPS connection.
5. **“Carbonite Ultra Setup for Quorum”** provides procedures for connecting a Ross Video Carbonite Ultra switcher to Quorum.
6. **“Carbonite Ultra 60 Setup for Quorum”** provides procedures for connecting a Ross Video Carbonite Ultra 60 switcher to Quorum.
7. **“Ultrix Carbonite Setup for Quorum”** provides procedures for connecting a Ross Video Carbonite Ultra switcher to Quorum.
8. **“Carbonite Black Setup for Quorum”** provides procedures for connecting a Ross Video Carbonite Black switcher to Quorum.
9. **“Carbonite Setup for Quorum”** provides procedures for connecting a Ross Video Carbonite switcher to Quorum.
10. **“Graphite CPC Setup for Quorum”** provides procedures for connecting a Ross Video Graphite CPC All-In-One Production System to Quorum.
11. **“Graphite Setup for Quorum”** provides procedures for connecting a Ross Video Graphite All-In-One Production System to Quorum.
12. **“Ultrix Acuity Setup for Quorum”** provides procedures for connecting a Ross Ultrix Acuity switcher to Quorum.
13. **“Acuity Setup for Quorum”** provides procedures for connecting a Ross Acuity switcher to Quorum.
14. **“Camera Configuration”** provides procedures for configuring Caprica devices for the cameras in your venue.
15. **“Graphics System Configuration”** provides procedures for configuring a Caprica device for the graphics system used in your Quorum system.
16. **“Caprica Server Configuration”** provides procedures for configure devices, switcher inputs, and audio channel names for a switcher connected to the Caprica Server in a Quorum system.

If, at any time, you have a question about the installation or operation of your Caprica Server, please contact us at the numbers listed in the section **“Contacting Technical Support”** on page 1–2. Our technical staff is always available for consultation, training, or service.

## 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 **RundownControl** section, click **Install License**.

### User Entered Text

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

1. In the **Open** box, enter the following application name:

```
services.msc
```

### Referenced Guides

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

- using **RapidRestore** to archive and back up Quorum rundowns and settings, refer to the chapter “**RapidRestore™**” on page 16–1 in the *Quorum 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 > Exit**,” you would click the **File** menu and then click **Exit**.

### Important Instructions

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

- ★ After installing Caprica Server software, licenses must be obtained from Ross Video Technical Support before using the Caprica Server.

## Getting Help

The Quorum Online Help system can be accessed from any of the components of Quorum. Online Help opens in a Microsoft Internet Explorer® window.

The Quorum Online Help system displays, by default, the **Contents** pane. To access the **Search** or **Glossary** panes, click the **Search** or **Glossary** button on the top toolbar in the Online Help system.

## Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, The Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

## North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-686-1557

Toll free within North America: +1 833-859-0499

## EMEA

Our EMEA center is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

Our telephone number is: +44 (0)1189502446

International toll free: +800 3540 3545

If the local support specialist is not available, your call will be transferred automatically to our North America center.

## Australia

Our Sydney, Australia office is located in Alexandria, NSW.

Our local support telephone number is: 1300 007 677

If the local support specialist is not available, your call will be transferred automatically to our North America center.

## Online

**E-mail:** [techsupport@rossvideo.com](mailto:techsupport@rossvideo.com)

**Website:** open a support request using the link <https://support.rossvideo.com/> to open a support request.



# Installation Notes

This chapter provides information about the general requirements of a Caprica system and instructions on how to log in to your Caprica Server. The following topics are discussed in this chapter:

- Unpacking
- Software Compatibility
- Computer System Requirements
- Typical Power Consumption
- Ports
- Processes
- New Caprica Server First Log In
- Caprica Server Log In

## Unpacking

Unpack your Caprica system from the shipping container(s) you received and check the contents against the packing list to ensure that all items are included. If any items are missing or damaged, contact your sales representative or Ross Video for assistance.

## Software Compatibility

To ensure the proper function of a Caprica system, the software versions installed on devices must be compatible with the installed Caprica Server software.

Caprica Server 4.0 software is compatible with the following versions of associated software:

**Table 2.1 Caprica Server 4.0 Compatibility**

<b>Quorum</b>	v10.0 or greater
<b>DashBoard</b>	v9.0 or greater
<b>Cockpit</b>	v1.3.0-0011

## Computer System Requirements

To ensure the proper function of a Caprica system, verify that the Caprica client computer (customer supplied) meets the requirements described in the following sections:

### Hardware

Ross Video recommends the following computer hardware configuration to run Caprica client software:

**Table 2.2 Caprica Client Computer Hardware Specifications**

<b>Model</b>	Dell Precision T5810
<b>CPU</b>	Intel Xeon Processor E5-1607 v3
<b>RAM</b>	8GB (2x4GB) 2133MHz DDR4 RDIMM ECC
<b>Storage</b>	2 x 500GB 3.5inch Serial ATA (7,200 rpm) configured as RAID 1
<b>LAN</b>	100 MB/s
<b>Display</b>	1680x1050 for 16:9 displays or 1280x1024 for 4:3 displays
<b>Display Adapter</b>	128MB Video RAM

- Client PCs must be set up on the same subnet as the Caprica Server.
- ★ USB/KVM extenders can interfere with Caprica system operation and are not supported for use with Caprica client computers. Place Caprica client computers within the standard keyboard, video, and mouse cable lengths from the operator.

### Operating System

Ross Video recommends the following minimum operating system requirements to run Caprica client software:

- Microsoft® Windows® 10 or 11 64 bit with the latest patches. **Windows 11 is recommended.**
- ★ Ensure that the operating system is updated with all necessary security patches and service packs before installing Quorum software on a computer.

## Web Browser

Quorum can be accessed using one of the following web browsers:

- Microsoft Edge version 100 or greater
- Google Chrome™ browser version 100 or greater
- Mozilla Firefox® version 100 or greater
- Apple Safari® version 16 or greater

## Typical Power Consumption

The information provided in the following table lists the typical power consumption for each component in a Caprica system:

**Table 2.3 Caprica Power Consumption**

Caprica Component	Power Consumption
Server	700W
Client Computer	500W
Monitors (2)	100W
<b>Total</b>	<b>1300W</b>

## Ports

The information provided in the following sections lists the ports used by a Quorum system:

- Caprica
- Quorum

### Caprica

The information provided in the following table lists the ports used by Caprica:

**Table 2.4 Caprica Ports**

Application	Port	Purpose	Set By	Connection
Caprica	22	SSH	Internal	Caprica Servers
	973	rsync	Internal	Caprica Servers
	5253	Dashboard OGP Interface	Internal	DashBoard Clients and Caprica Servers
	5404	Cluster / Corrosync	Internal	Caprica Servers
	5405	Cluster / Corrosync	Internal	Caprica Servers
	5406	Cluster / Corrosync	Internal	Caprica Servers
	5901	VNC	Internal	Caprica Servers
	8080	Vintage Caprica web page	Internal	Caprica Servers and external users
	9090	Caprica web page	Internal	Caprica Servers and external users
12345	Caprica port	User	Quorum Server to Caprica Server	
Devices	Any	Port defined during configuration	User	Caprica Servers and devices

## Quorum

The information provided in the following table lists the ports used by Quorum:

**Table 2.5 Quorum Ports**

Application	Port	Purpose	Set By	Connection
Quorum	80	Quorum Jetty server (unsecured)	Internal	Quorum client to the Quorum Server
	443	SSL for Jetty server	Internal	Quorum client to the Quorum Server
Postgres	5432	Postgres database	Internal	Quorum Server and client to computer running Postgres database
Ross Product Manager	3030	Licensing	Internal	Quorum Server to Ross Product Manager
	8443	SSL for Licensing	Internal	Quorum Server to Ross Product Manager
DataLinq	2222	XPression DataLinq	Internal	XPression to Quorum Server
Bosch	443	Bosch microphone system	Internal	Microphone system to Quorum Server
Shure	3142	Shure microphone system	Internal	Microphone system to Quorum Server
BiAmp	2300	BiAmp microphone system	Internal	Microphone system to Quorum Server

## Processes

The information provided in the following table lists the Quorum processes that run on Client and Server computers in a Quorum system:

**Table 2.6 Quorum System Processes**

Process	Quorum Server	Client
Quorum Server service	Yes	No
Quorum Jetty service	Yes	Optional
PostgreSQL database	Yes	No
Web Browser	Optional *	Yes

\* Development environment

## New Caprica Server First Log In

The first time you log in to your new Caprica Server you must set the password for the default caprica account. The caprica account is a super user that can edit all settings and control all processes on a Caprica Server.

★ DHCP and DNS must be available on your corporate network to set caprica user password on the first log in.

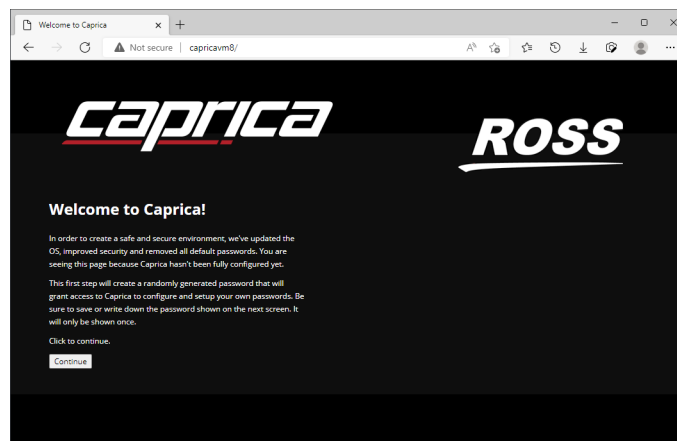
### To set the caprica user password on the first log in

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open the Caprica web page URL:

`http://capricavm8`

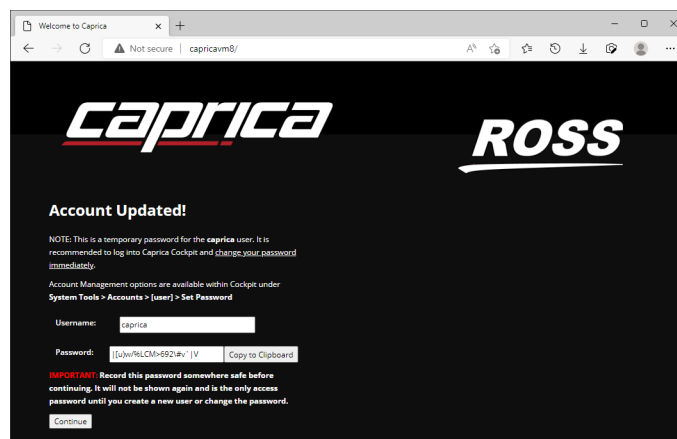
If the web browser identifies your connection with the Caprica web page as not secure, add an exception for the Caprica web page.

The **Welcome to Caprica!** web page opens.



3. Click **Continue**.

The **Account Updated!** web page opens.



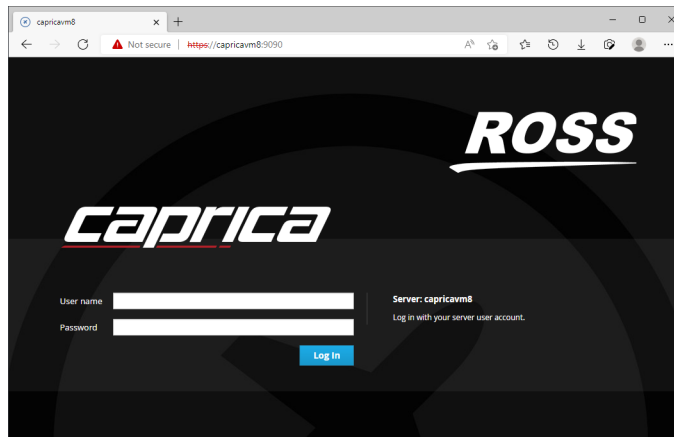
4. Click **Copy to Clipboard**.

Caprica copies the password displayed in the **Password** box to the clipboard so that you can use the password to log in to Caprica on the next web page.

★ As a backup, record the displayed password before continuing. The password for the caprica user will not be shown again and is the only access password until you change it for the caprica user or create a new user.

5. Click **Continue**.

The **Caprica Login** web page opens.



6. In the **User name** box, enter `caprica`.
7. In the **Password** box, paste the password from the clipboard.
8. Click **Log In**.

**Caprica Cockpit** opens.

## Change the Caprica User Password

After your first log in to the Caprica Server you can change the caprica user password to one that satisfies the password policy of your organization.

### To change the caprica user password

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

```
https://<Caprica Server>:9090
```

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

- ★ If Caprica Cockpit does not open, your Caprica Server computer is not running the Amazon Linux 2 operating system. Contact Ross Video Technical Support to upgrade the operating system of your Caprica Server computer.

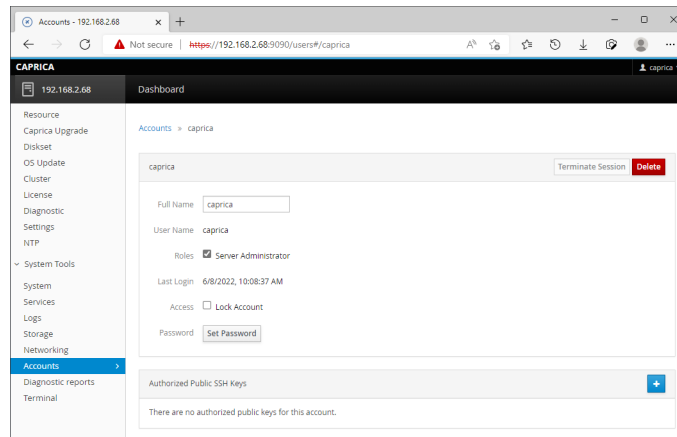
3. Use the following credentials to log in to **Caprica Cockpit**.

- **User:** `caprica`
- **Password:** `<your_password>`

**Caprica Cockpit** opens.

4. Use the **User (caprica)** menu to select **Account Settings**.

The **Accounts** web page opens for the **caprica** user.



5. Click **Set Password**.

The **Set Password** dialog opens.



6. In the **Old Password** box, enter the current password for the **caprica** user.
7. In the **New Password** box, enter a new password for the **caprica** user that satisfies the password policy of your organization.
8. In the **Old Password** box, enter the same password as you entered in the **New Password** box.
9. Click **Set**.

Cockpit updates the **caprica** user with the new password that you set.

## Caprica Server Log In

How you log in to your Caprica Server depends on whether your Caprica Server is running on a computer or in the Hyper-V virtualization layer of the Quorum Server computer.

### Caprica Server Computer

When your Caprica Server runs on a computer, you can use the following credentials to directly log in to the Caprica Server Computer.

- **User:** caprica
- **Password:** <your\_password>

## Hyper-V

When your Caprica Server runs in the Hyper-V virtualization layer, you must use a VNC viewer application to log in to the Caprica Server.

### To log in to a Caprica Server running in Hyper-V

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a VNC viewer application to connect to your Caprica server on port 5901. The connection address format is as follows, where <Caprica Server> is the hostname or IP address of your **Caprica Server** computer and 5901 is the connection port:

<Caprica Server>:5901

3. Use the following credentials to log in to the Caprica Server.

- **User:** caprica
- **Password:** <your\_password>

The **VNC view** window opens displaying the desktop of your Caprica Server.

# Software Installation

This chapter provides instructions for installing Caprica Server software on a Caprica Server computer, either after a system re-image or to upgrade to a newer version of Caprica.

The following topics are discussed in this chapter:

- Before You Install Software
- Setting the Caprica Hyper-V Automatic Start and Stop Options
- Updating the Caprica Server Operating System
- Updating Caprica Cockpit Software
- Updating Caprica Server Software
- Caprica Server Software License
- Maintaining the Caprica Server
- Accessing the Caprica Server
- Setting the Severity Level for System Logs

## Before You Install Software

Before installing software on a Caprica Server system, perform the following tasks:

- Have a qualified Ross Video technician perform any required maintenance or repairs on your Caprica system.
- Back up all Caprica Server settings.
- Update the operating system on the Caprica Server computer to the operating system version required by the Caprica Server software.

Contact a Ross Video sales representative for information about Caprica Server Commissioning, Training, and Update services.

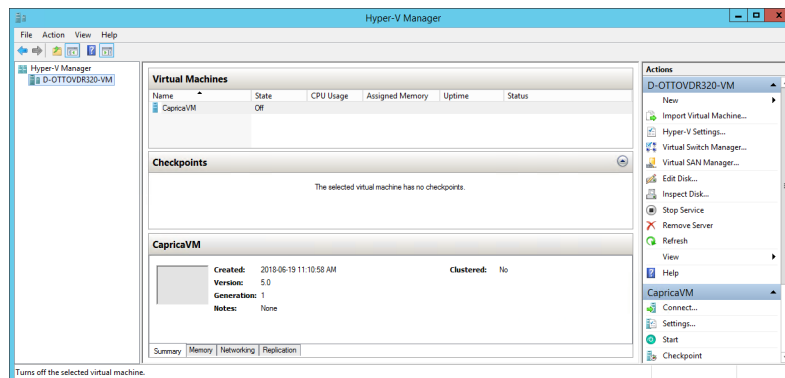
## Setting the Caprica Hyper-V Automatic Start and Stop Options

When you use Caprica in your Quorum system to control your switcher and devices, you must configure Hyper-V to automatically start and stop with the Quorum Server computer. Quorum Systems with Acuity switchers do not require Caprica.

### To set the Caprica Hyper-V automatic start and stop options

1. Use the following credentials to log in to the Quorum Server computer that hosts your Caprica Server in Hyper-V:
  - **User:** quorum
  - **Password:** <your\_password>
2. Use the **Start** menu to select **Hyper-V Manager**.

The **Hyper-V Manager** window opens.

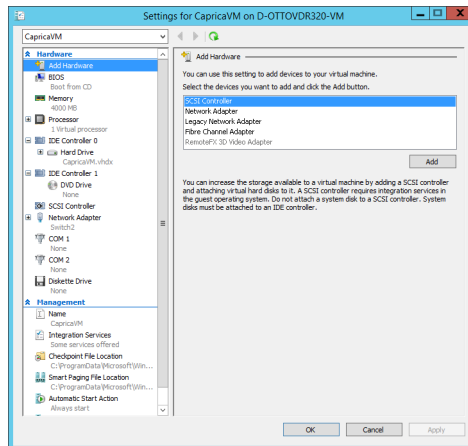


When the Caprica VM is running, complete the following steps to turn it off:

- a. In the **Caprica VM** section of the **Actions** panel, click **Turn Off**.  
An **Alert** opens.
- b. Click **Turn Off** to turn the Caprica VM off.

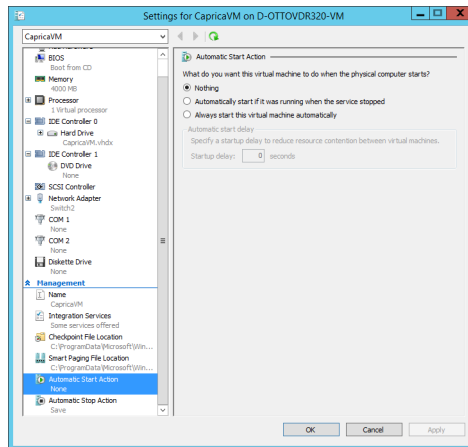
3. In the **Caprica VM** section of the **Actions** panel, select **Settings**.

The **Settings** dialog box opens.



4. In the **Management** section of the tree view, click **Automatic Start Action**.

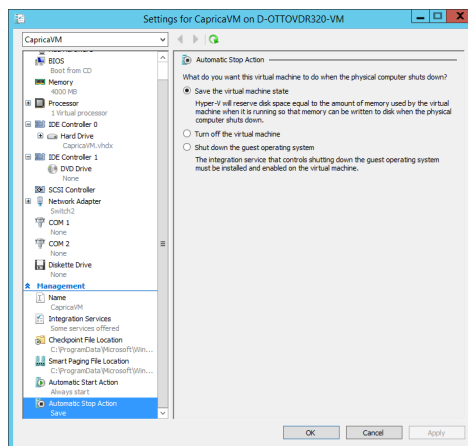
The **Automatic Start Action** panel opens.



5. Select the **Always start this virtual machine automatically** option to automatically start the Caprica VM with the Quorum Server computer.

6. In the **Management** section of the tree view, click **Automatic Stop Action**.

The **Automatic Stop Action** panel opens.



7. Select the **Shutdown the guest operating system** option to automatically shutdown the Caprica VM with the Quorum Server computer.
8. Click **OK** to save the selected Hyper-V automatic start and stop options and close the **Settings** dialog box.
9. To start the Caprica VM after setting the automatic start and stop options, click **Start** in the **Caprica VM** section of the **Actions** panel.

## Updating the Caprica Server Operating System

On Caprica Servers running the Amazon Linux 2 operating system and Caprica Cockpit v2.0.1 software, you can use Caprica Cockpit to update the Caprica Server operating system. You can only upgrade the operating system of your Caprica Server to the next specific operating system version to guarantee that all required dependencies are properly installed on your Caprica Server.

- ★ Caprica Server v8.x software and greater requires the Amazon Linux 2 operating system. To install the Amazon Linux 2 operating system on your Caprica Server, contact Ross Video Technical Support.
- ★ You cannot use Caprica Cockpit to rollback the operating system version installed on a Caprica Server or to repair the currently installed operating system on a Caprica Server. Before you upgrade the operating system on your Caprica Server you should create a snapshot of the current state of your Caprica8VM virtual machine.

## Caprica Virtual Machine Snapshot

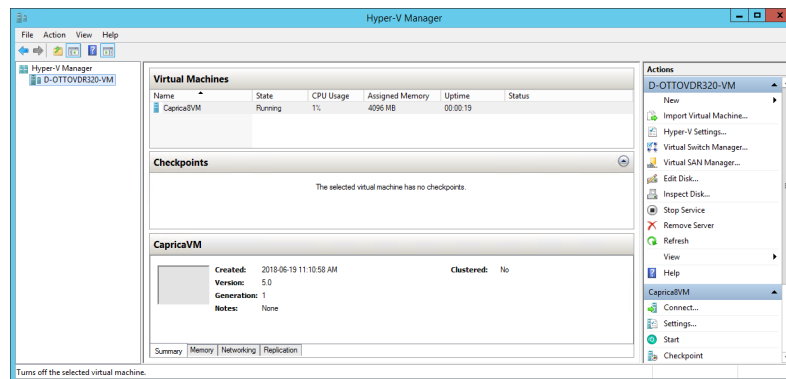
You can use Hyper-V Manager to create a snapshot of the current state of your Caprica8VM virtual machine. The Hyper-V Manager can import the Caprica8VM virtual machine snapshot to restore the passwords, settings, and configuration of the Caprica8VM virtual machine at the time the snapshot was taken.

- ★ While creating a snapshot of the Caprica8VM virtual machine the Caprica Server will not be available to your Quorum system. Only create Caprica8VM virtual machine snapshots during off hours.

### To create a snapshot of your Caprica8VM virtual machine

1. Log in to the **Quorum Server computer** that hosts your Caprica Server in Hyper-V as the **quorum** user.
2. Use the **Start** menu to select **Hyper-V Manager**.

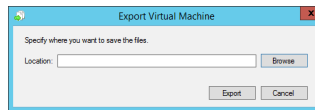
The **Hyper-V Manager** window opens.



3. In the **Virtual Machines** section select **Caprica8VM**.
4. In the **CapricaVM** section of the **Actions** panel, click **Save**.

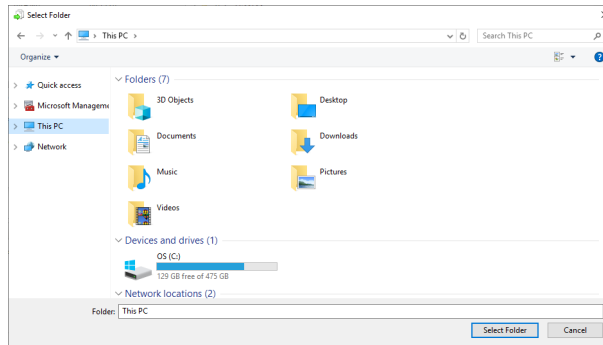
5. In the **CapricaVM** section of the **Actions** panel, click **Export**.

The **Export Virtual Machine** dialog box opens.



6. Click **Browse**.

The **Select Folder** dialog box opens.



7. Navigate to the folder in which to save the exported Caprica8VM virtual machine.

8. Click **Select Folder**.

The **Select Folder** dialog box closes, and the **Folder** box in the **Export Virtual Machine** dialog box displays the full path to the selected folder.

9. In the **Export Virtual Machine** dialog box, click **Export**.

The **Export Virtual Machine** dialog box closes, and the Hyper-V Manager exports the Caprica8VM virtual machine to the selected folder.

10. Save the folder that contains the export of the **Caprica8VM** virtual machine in a safe offline location along with your other backup files.
11. Record the user names and passwords used in the **Caprica8VM** virtual machine backup and save them in a safe offline location along with your other backup files.

## Update the Caprica Server Operating System

After creating a snapshot of the current state of your Caprica8VM virtual machine, you are ready to use Caprica Cockpit to update your Caprica Server operating system.

- ★ The Caprica Server operating system updates procedure presented in this section is only valid for updating Caprica Servers running the Amazon Linux 2 operating system and Caprica Cockpit v2.0.1 software.

### To update your Caprica Server operating system

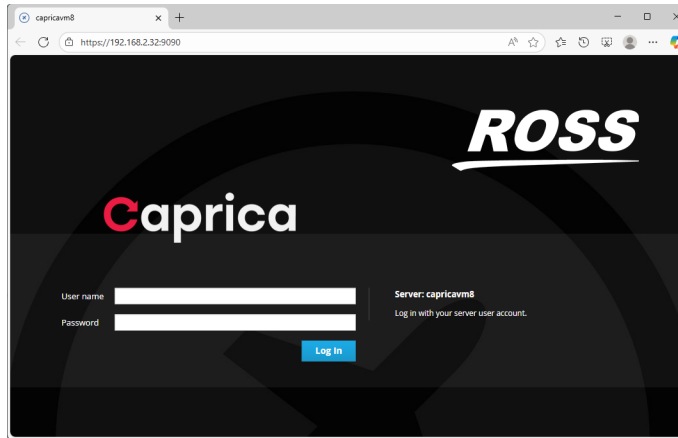
1. Contact Ross Video Technical Support to obtain the most recent Caprica Server operating system upgrade package file.
2. Log in to a computer connected to the same network as the Caprica Server computer.
3. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

```
https://<Caprica Server>:9090
```

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

- ★ If Caprica Cockpit does not open, your Caprica Server computer is not running the Amazon Linux 2 operating system. Contact Ross Video Technical Support to upgrade the operating system of your Caprica Server computer.

The **Caprica Login** web page opens.



4. Use the following credentials to log in to **Caprica Cockpit**:

- **User:** caprica
- **Password:** <your\_password>

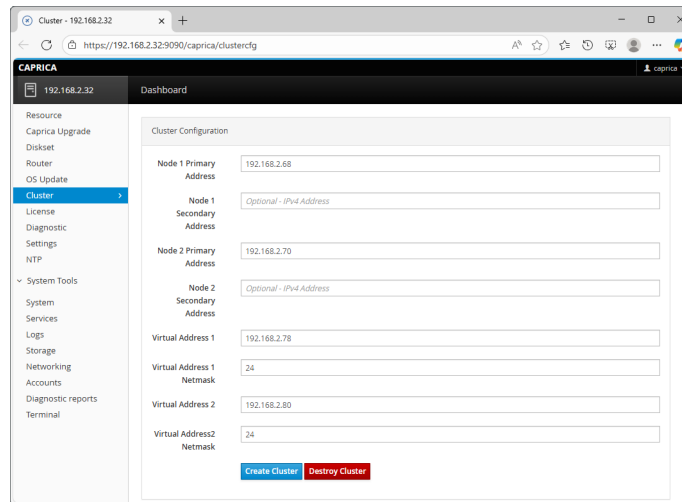
5. Click **Log In**.

**Caprica Cockpit** opens.

6. If your Caprica Server is set up as a cluster, complete the following steps to destroy the cluster before you update the Caprica Server Operating system:

- a. In the tree view, click **Cluster**.

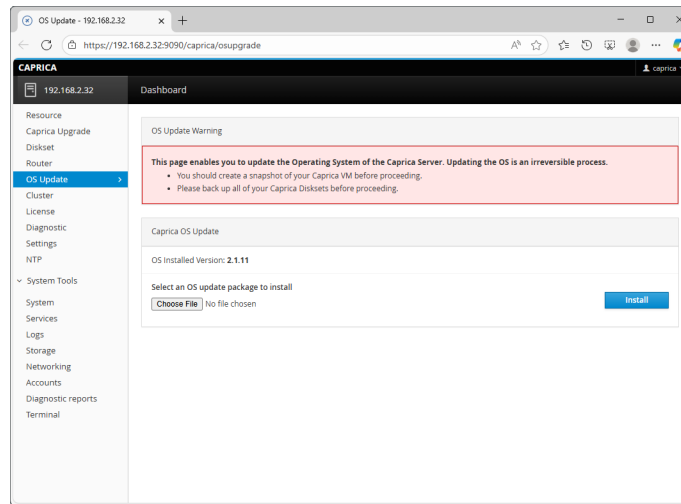
The **Cluster Configuration** web page opens.



- b. Click **Destroy Cluster**.

7. In the tree view, click **OS Update**.

The **OS Update** web page opens.



8. In the **Select an OS update package to install** section, click **Choose File**.

The **Open** dialog box opens.

9. Use the **Open** dialog box to locate and select the **Caprica-OS.X.X.to.Y.Y.pkg** Caprica Server operating system upgrade package file you obtained from Ross Video Technical Support.

Where **X.X** is the current operating system version installed on your Caprica Server and **Y.Y** is the new operating system version to install on your Caprica Server.

10. Click **Open**.

The **Open** dialog box closes and the **Select an OS update package to install** section displays the name of the selected PKG file.

11. Click **Install**.

The **Caprica OS Update Confirmation** alert opens.

12. Click **Yes**. Click **No** to cancel the operating system update for your Caprica Server.

The Caprica OS Upgrade web page installs new the operating system on the Caprica Server. After the operating system install completes, Caprica Cockpit disconnects while the Caprica Server reboots using the newly installed operating system.

13. In **Caprica Cockpit**, click **Reconnect**.

The **Caprica Login** web page opens.

14. Use your Caprica credentials to log in to **Caprica Cockpit**.

15. In the tree view, click **OS Update**.

The **OS Update** web page opens. The **Installed Version** field displays the version of the current operating system installed on the Caprica Server.

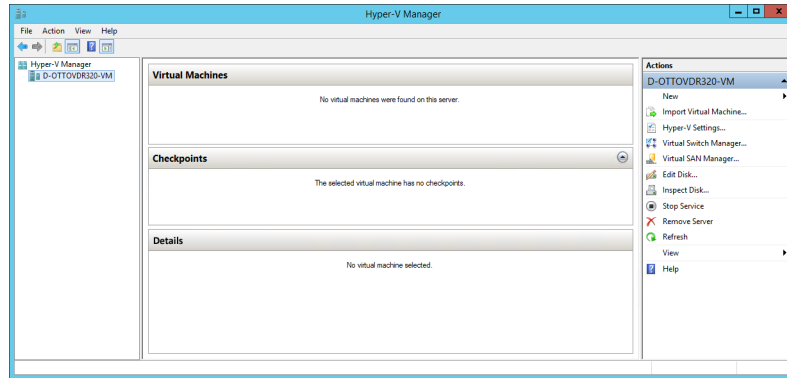
## Caprica Virtual Machine Restore

If you encounter problems with a Caprica Server operating system update, you can use Hyper-V Manager to import a Caprica8VM virtual machine snapshot to restore the saved state of your Caprica Server. The new virtual machine created by importing the Caprica8VM virtual machine snapshot retains the passwords, settings, and configuration of the Caprica8VM virtual machine at the time it was exported.

## To import a Caprica8VM virtual machine snapshot

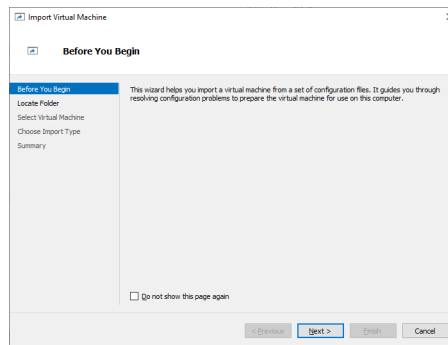
1. Log in to the **Quorum Server computer** that hosts your Caprica Server in Hyper-V as the **quorum** user.
2. Use the **Start** menu to select **Hyper-V Manager**.

The **Hyper-V Manager** window opens.



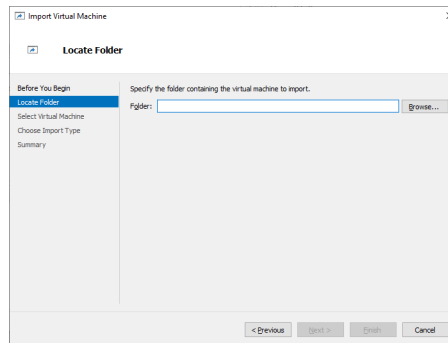
3. In the **Host** section of the **Actions** panel, click **Import Virtual Machine**.

The **Import Virtual Host Machine** wizard opens.



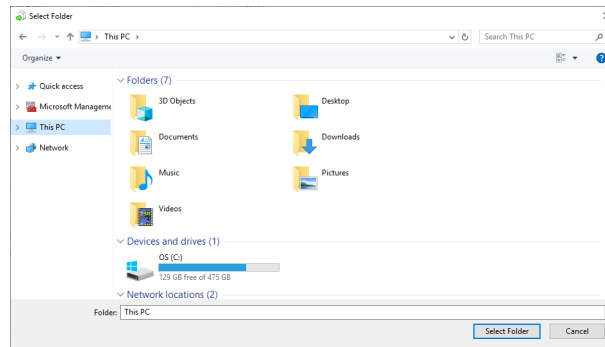
4. Click **Next**.

The **Locate Folder** screen opens.



5. Click **Browse**.

The **Select Folder** dialog box opens.



6. Navigate to the folder that contains the **Caprica8VM** virtual machine snapshot folder.

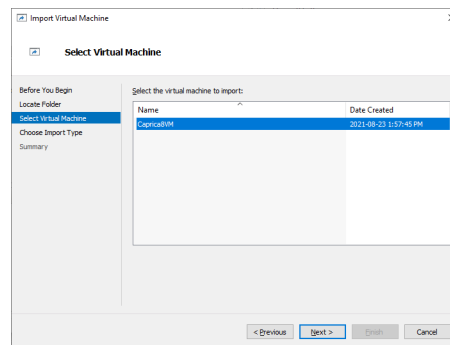
7. Select **Caprica8VM** virtual machine snapshot folder.

8. Click **Select Folder**.

The **Select Folder** dialog box closes, and the **Folder** box in the **Locate Folder** screen displays the full path to the selected folder.

9. Click **Next**.

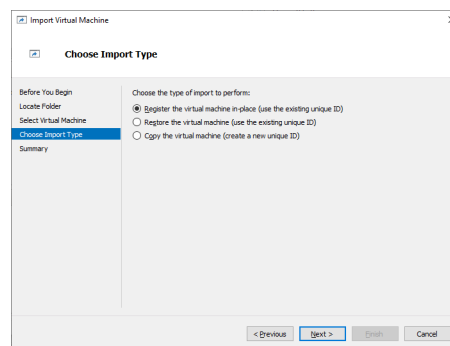
The **Select Virtual Machine** screen opens.



10. In the **Select the virtual machine to import** list, select **Caprica8VM**.

11. Click **Next**.

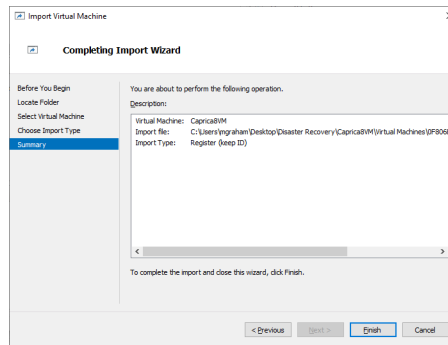
The **Choose Import Type** screen opens.



12. Select the **Register the virtual machine in-place** option.

13. Click **Next**.

The **Completing Import Wizard** screen opens.



14. Click **Finish**.

The **Import Virtual Host Machine** wizard closes, and Hyper-V Manager imports the Caprica8VM virtual machine.

15. In the **Caprica8VM** section of the **Actions** panel, select **Start**.

## Updating Caprica Cockpit Software

Caprica Cockpit software enables you to use a web user interface to manage your Caprica Server. To access Caprica Cockpit, use a web browser to open the URL `https://<Caprica Server>:9090` where `<Caprica Server>` is the hostname or IP address of your Caprica Server computer.

### To update Caprica Cockpit software

1. Contact Ross Video Technical Support to obtain the most recent Caprica Cockpit software installer.

If you received the Caprica Cockpit software installer on the Windows side of your server you must transfer the installer to the Linux side of the server where your Caprica Server runs. Ross Video recommends using an SFTP application to transfer the installer between the Windows and Linux environments of your server. Contact Ross Video Technical Support if you require help transferring the installer.

2. Use the following credentials to log on to the Caprica Server computer:

- **User:** `caprica`
- **Password:** `<your_password>`

3. Verify that the Caprica Server computer is running the Amazon Linux 2 operating system.

If your Caprica Server computer is not running the Amazon Linux 2 operating system, contact Ross Video Technical Support to upgrade the operating system.

4. On the Caprica Server computer, navigate to the folder where you saved the Caprica Cockpit software installer from Ross Video Technical Support.

5. Open a **Terminal** window.

6. At the prompt in the **Terminal** window, enter the following command to install the new version of Caprica Cockpit on the Caprica Server:

```
sudo yum install caprica-cockpit-X.X.X-####.x86_64.rpm
```

Where `x.x.x` is the minor version letter and `####` is build number for the Caprica Cockpit software.

## Updating Caprica Server Software

Before updating Caprica Server software to the latest version of Caprica Server software, have a qualified Ross Video technician perform any required maintenance or repairs on the Caprica Server.

- ★ The Caprica Server software upgrade procedure presented in this section is only valid for upgrading from Caprica v3.0. Upgrading Caprica Server software v1.x or v2.x to v3.x should be performed by Ross Video personnel.

### To update Caprica Server software to version 4.0

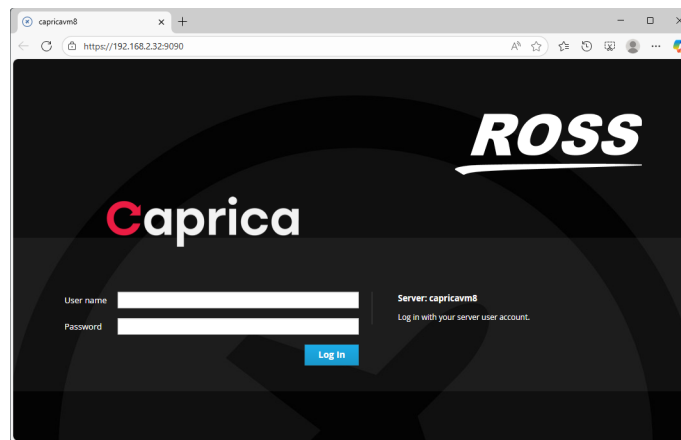
1. Contact Ross Video Technical Support to obtain the most recent Caprica Server software installer.
2. Log in to a computer connected to the same network as the Caprica Server computer.
3. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where <Caprica Server> is the hostname or IP address of your **Caprica Server** computer:

`https://<Caprica Server>:9090`

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

- ★ If Caprica Cockpit does not open, your Caprica Server computer is not running the Amazon Linux 2 operating system. Contact Ross Video Technical Support to upgrade the operating system of your Caprica Server computer.

The **Caprica Login** web page opens.

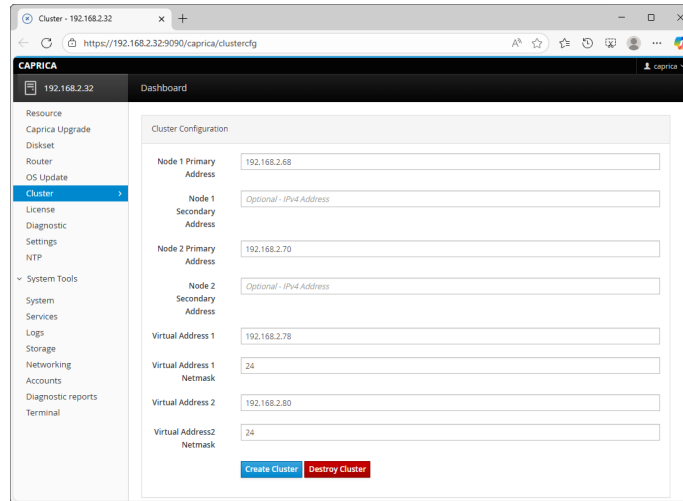


4. Use the following credentials to log in to **Caprica Cockpit**:
  - **User:** caprica
  - **Password:** <your\_password>
5. Click **Log In**.  
**Caprica Cockpit** opens.

- If your Caprica Server is set up as a cluster, complete the following steps to destroy the cluster before you update the Caprica Server Operating system:

- In the tree view, click **Cluster**.

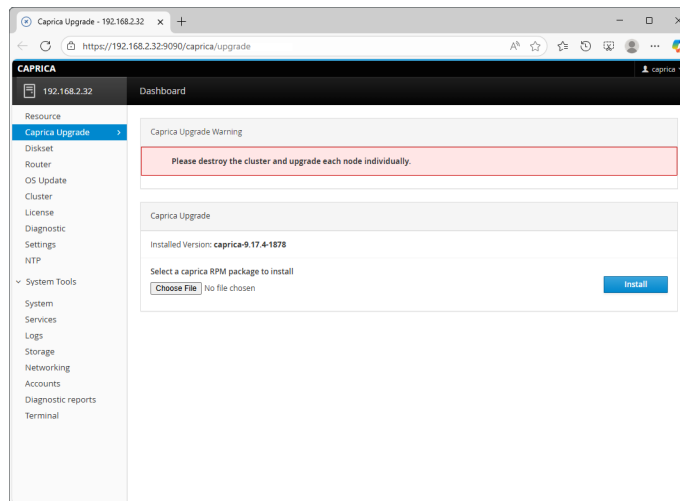
The **Cluster Configuration** web page opens.



- Click **Destroy Cluster**.

- In the tree view, click **Caprica Upgrade**.

The **Caprica Upgrade** web page opens.



- In the **Select a Caprica RPM package to install** section, click **Browse**.

The **File Upload** dialog box opens.

- Use the **File Upload** dialog box to locate and select the **caprica-4.0.X-###.x86.rpm** file you downloaded from Ross Video Technical Support.

Where **X** is the minor version letter and **###** is build number for the Caprica Server software.

- Click **Open**.

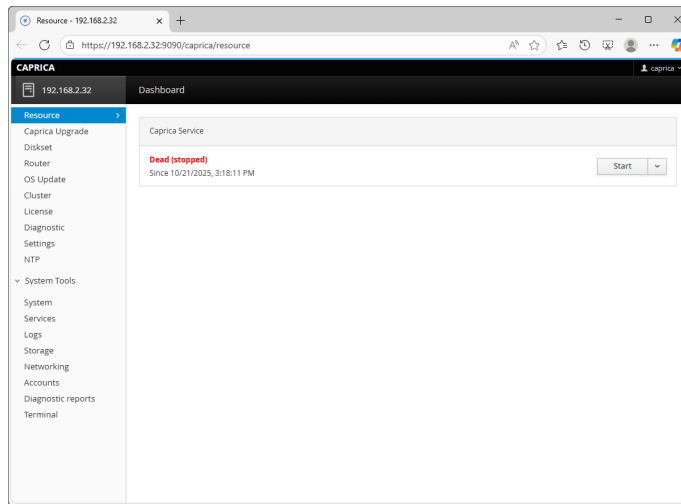
The **File Upload** dialog box closes and the **Select a Caprica RPM package to install** section displays the name of the selected RPM file.

- Click **Install**.

The **Caprica Upgrade** web page installs new version of Caprica Server software.

12. In the tree view, click **Resource**.

The **Resource** web page opens.



13. In the **Caprica Service** section, use the list to the right of the **Active** Caprica Service to select **Start**.

The Caprica Server starts running the new version of Caprica Server software.

## Caprica Server Software License

Ross Video uses a product key and feature license keys to control user access to Caprica. The Ross Licensing Service verifies your Quorum product key and grants access to Caprica.

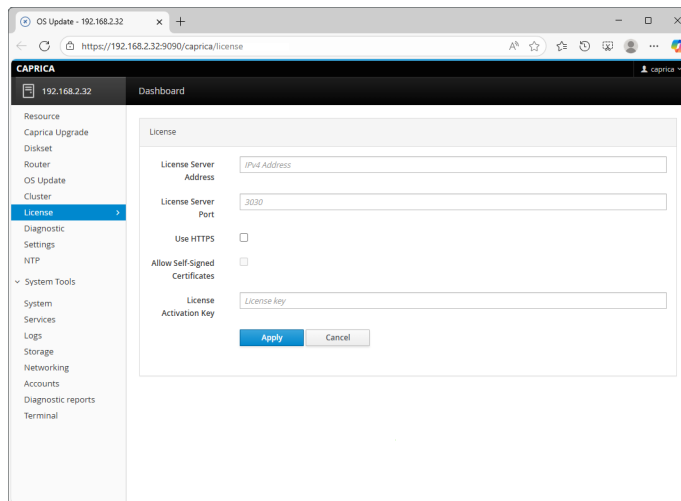
★ Before you can license Caprica, you must activate your Quorum product key on the Ross Licensing Service in your Quorum system. Refer to the Quorum *Installation and Configuration Guide* for information on activating Quorum product keys.

You can obtain a Quorum product key from Ross Video Technical Support.

### To license a Caprica Server

1. In the **Caprica Cockpit** tree view, click **License**.

The **License** web page opens.



2. In the **License** section, enter the IP address or hostname of your **Horizon Server** or **Ross Platform Manager Server** computer in the **License Server Address** box.
  - ★ When you use a secure HTTPS connection to a **Horizon Server** or **Ross Platform Manager Server** for licensing, you must enter the IP address or hostname from your security certificate in the **License Server Address** box.
3. In the **License Server Port** box, enter the network port number of Ross Licensing Service.
 

**Horizon Servers** use port 3030 as the default network port for unsecure HTTP connections. **Ross Platform Manager Servers** use port 443 for secure HTTPS connections.
4. When you use a secure HTTPS connection to a **Horizon Server** or **Ross Platform Manager Server** for licensing, complete the following steps:
  - a. Select the **Use HTTPS** check box.
 

The **Allow Self-Signed Certificates** check box activates.
  - b. When using a self-signed untrusted certificate for your connection, select the **Allow Self-Signed Certificates** check box.
5. In the **License Activation Key** box, enter the Quorum product key obtained from Ross Video Technical Support.
6. Click **Apply**.
7. Restart the Caprica service.
 

For the steps to restart the Caprica service, refer to the procedure “**To control the Caprica Service**” on page 3–15.
8. For each Caprica Server in your Quorum system, repeat step 1 to step 7.

## Maintaining the Caprica Server

You can use Caprica Cockpit to control and view information about the Caprica Server.

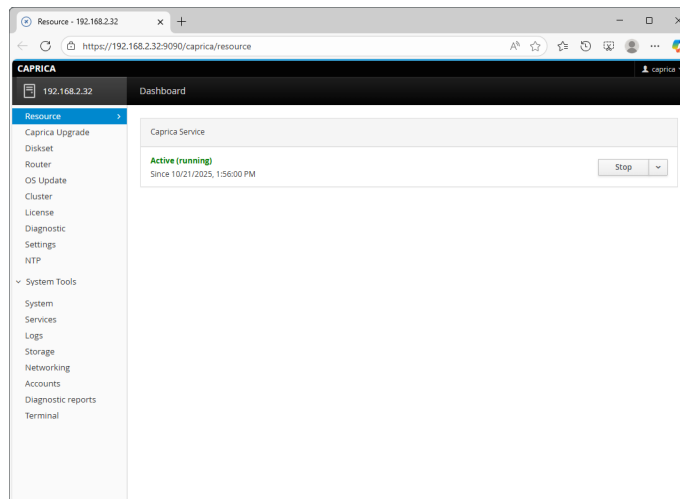
### Current Status

You can use Caprica Cockpit to view the current status of a Caprica Service.

#### To view the status of the Caprica Service

1. In the **Caprica Cockpit** tree view, click **Resource**.

The **Resource** web page opens.



2. Use the **Caprica Service** section of the Resource web page to view the current status of the Caprica Service.

## Control

You can use Caprica Cockpit to control the Caprica Service running on the Caprica Server.

### To control the Caprica Service

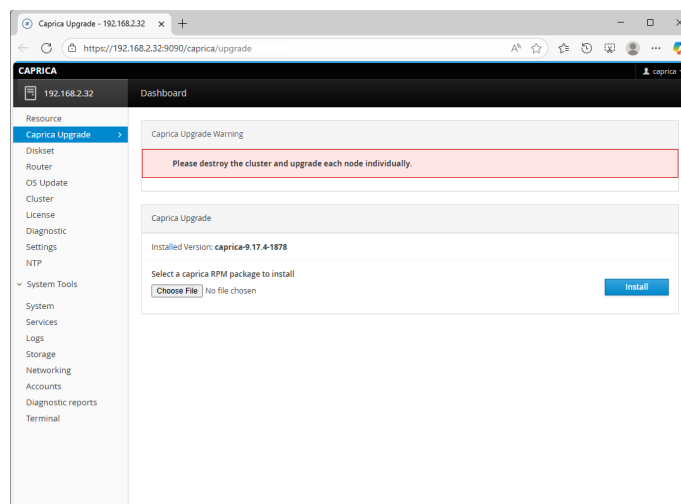
1. In the **Caprica Cockpit** tree view, click **Resource**.  
The **Resource** web page opens.
2. In the **Caprica Service** section, use the list to the right of the **Active Caprica Service** to control the Caprica Service as follows:
  - **Start** — start the Caprica Service
  - **Stop** — stop the Caprica Service
  - **Restart** — stop and then start the Caprica Service

## Caprica Server Software Version

You can use Caprica Cockpit to view the version of Caprica Server software installed on a Caprica Server computer.

### To view the Caprica Server software version

1. In the **Caprica Cockpit** tree view, click **Caprica Upgrade**.  
The **Caprica Upgrade** web page opens.



2. In the **Caprica Upgrade** section, use the **Installed Version** field to view the version of Caprica Server software installed on a Caprica Server computer.

## Accessing the Caprica Server

To access and configure a Caprica Server, you need to use the DashBoard™ Control System application on a computer that has connectivity to the Caprica Server. You can download the DashBoard application installer from the Ross Video website.

When installing DashBoard for the sole purpose of configuring a Caprica Server, complete the following recommended component selections on the **Choose Components** screen of the DashBoard application installer:

- Select the **DashBoard Framework** box.

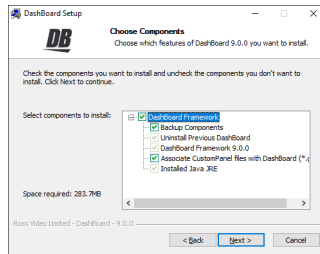


Figure 3.1 DashBoard Application Installer

#### For More Information on...

- DashBoard application installation or uninstall, refer to the *DashBoard Control System User Manual* and the *DashBoard Online Help* system.
- DashBoard plug-in updates, refer to the *DashBoard Control System User Manual* and the *DashBoard Online Help* system.
- where to download the Dashboard application installer, refer to the **Terminal Equipment | openGear | Control & Monitoring | DashBoard** section of the Ross Video website.

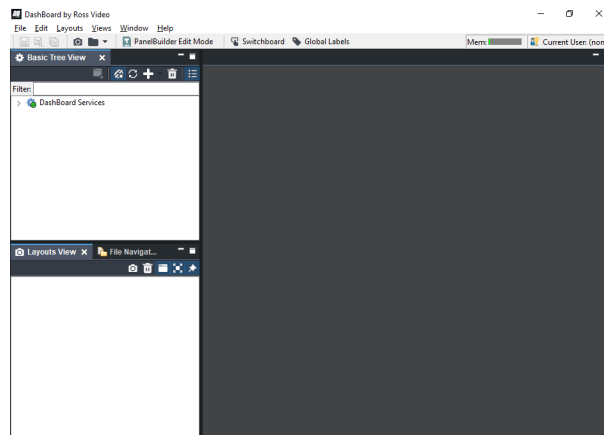
## Connecting DashBoard to the Caprica Server

Before you configure a Caprica Server, you must configure the DashBoard application on a Client computer to connect to your Caprica Server.

#### To connect DashBoard to the Caprica Server

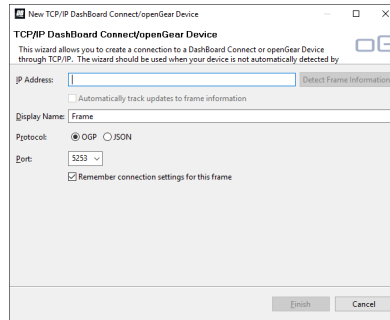
1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.



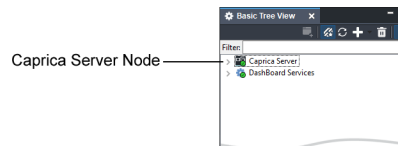
3. Use the **File** menu to select **New > TCP/IP openGear Frame**.

The **New TCP openGear Frame Connection** dialog box opens.



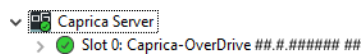
4. In the **IP Address** box, enter the IP address or hostname of the Caprica Server or Caprica Server Cluster. Your Network Administrator can provide you with the IP address or hostname of your Caprica Server or Caprica Server Cluster.
5. In the **Display Name** box, enter a name to describe the Caprica Server. The DashBoard **Tree View** displays the entered Display Name beside the node associated with the Caprica Server.
6. Use the **Port** list to select **5253** as the port number that the Caprica Server uses to communicate with Dashboard.
7. Select the **Remember connection settings for this frame** check box.
8. Click **Finish**.

The DashBoard **Tree View** displays a node for the new Caprica Server.



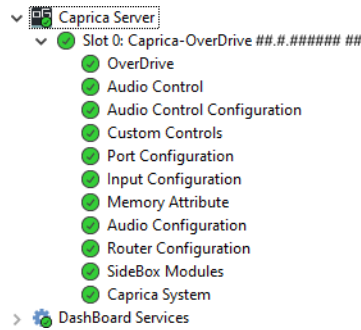
9. Hover the mouse over the **Caprica Server** node to view the following information about the server:
  - IP address of the server
  - Client to server connection status
10. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



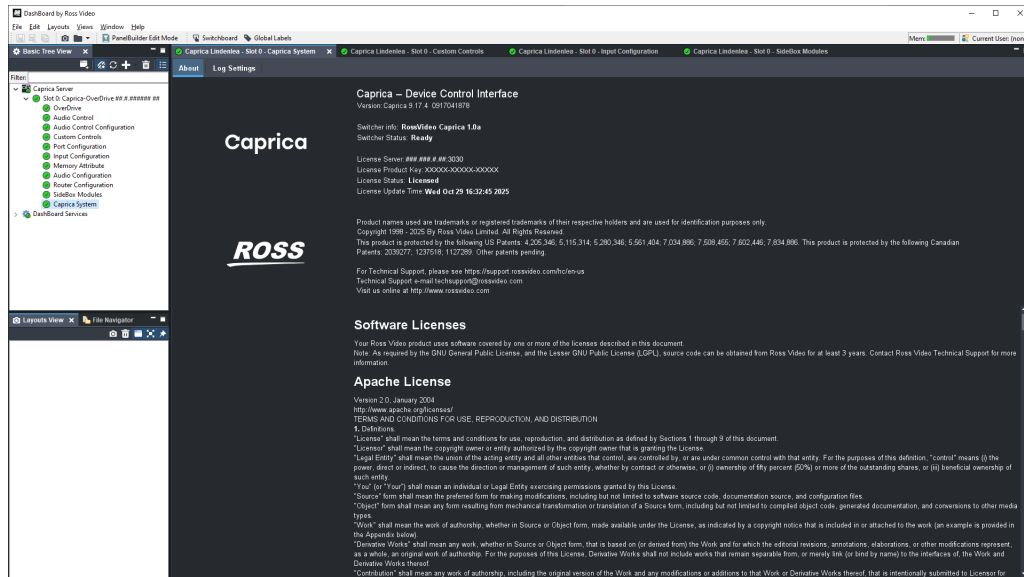
11. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

The **Slot 0: Caprica** node displays the available Caprica Server clients.



12. Double-click the **Caprica System** node.

The **About** tab opens in the **Device View** and displays Caprica version, switcher, switcher status, and Caprica license information.



## Connection Status

The LED in the lower right corner of a Caprica Server node indicates the current connection status between DashBoard and the Caprica Server. The LED reports the following connection states:

**Table 3.1 Caprica Server Connection Status**

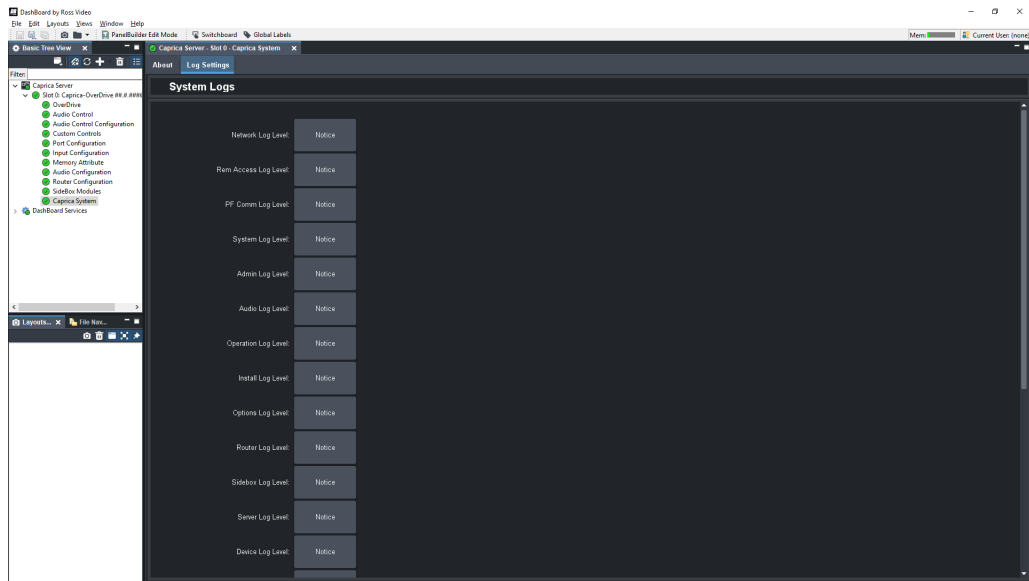
LED	Status
	A connection exists between DashBoard and the Caprica Server.
	DashBoard is trying to establish a connection with the Caprica Server, but there may be a connectivity problem.
	There is no connection between DashBoard the Caprica Server. Check with your IT Department to verify that the Caprica Server is running.

## Setting the Severity Level for System Logs

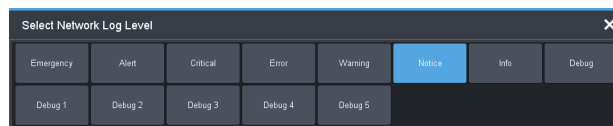
Through the Log Settings tab of the Caprica System node, you can configure the severity level for the various logs in which Caprica saves captured communication events and errors. You can set the severity level for each log listed in the Log Setting tab.

### To configure the severity level of a log

1. In the **DashBoard Tree View**, expand the **Caprica Server** node.
2. Double-click the **Caprica System** node.  
The **About** tab opens in the **Device View**.
3. Click the **Log Settings** tab.  
The **Log Settings** tab opens.



4. Click the button to the **right** of the **log file** for which to set a severity level.  
The **Select Log Level** dialog box opens for the selected log file.



5. Click the **severity level** to set for the selected log file. The available severity levels are as follows:
  - **Emergency** — system is unusable.
  - **Alert** — action must be taken immediately.
  - **Critical** — critical conditions.
  - **Error** — error conditions.
  - **Warning** — warning conditions.
  - **Notice** — normal but significant conditions. This is the default severity level.
  - **Info** — informational messages.
  - **Debug** — debug messages.
  - **Debug 1 to 5** — debug-level messages 1 to 5.

The **Select Log Level** dialog box closes and the button to the left of the log file displays the selected severity level.

6. Use **Caprica Cockpit** to view the system log files as follows:

a. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

`https://<Caprica Server>:9090`

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

b. Use the following credentials to log in to **Caprica Cockpit**:

- **User:** caprica
- **Password:** `<your_password>`

c. Click **Log In**.

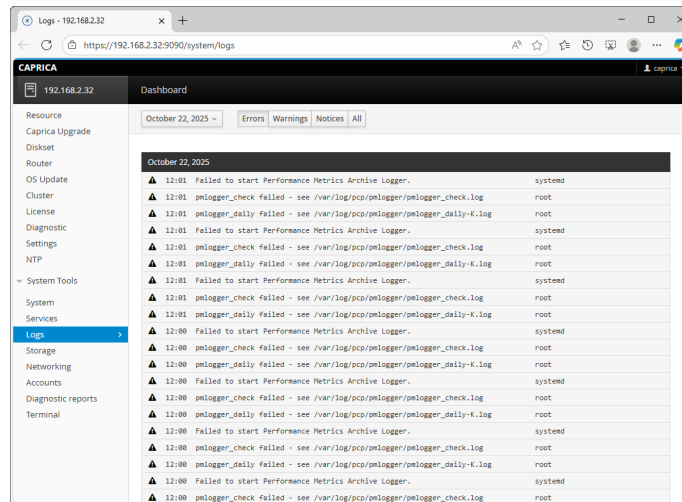
The **Caprica Cockpit** opens.

d. In the tree view, click **System Tools**.

The **System Tools** node expands.

e. In the **System Tools** node, click **Logs**.

The **Logs** web page opens.



f. Use the **Date** menu to change the date of the displayed logs.

g. Click **Errors**, **Warnings**, **Notices**, or **All** to change the severity of the displayed logs.

# Cockpit HTTPS Connection

Cockpit enables you to use a web user interface to manage your Caprica Server through a secure HTTPS connection. Cockpit provides a self-signed certificate to enable web browser HTTPS access. Most modern web browsers flag the provided self-signed certificate as unsecured. To guarantee an HTTPS connection between your web browser and Cockpit, Ross Video recommends using a signed certificate.

The steps to set up a signed certificate depend on your web browser platform, your IT policies, and your Certificate Authority (CA). Ross Video recommends using an external CA to simplify certificate creation, deployment, and maintenance. You can also create your own internal CA and sign your own server certificate.

★ Since each IT department and external CA has unique requirements that cannot be covered in this document, you should gather requirements from your IT department and CA before you proceed with the procedures in this chapter.

Independent of using an internal or external CA, you must create a Certificate Signing Request (CSR) and a private key for each Caprica server in your system. The CA uses the CSR to create a signed certificate. You must copy the signed certificate and private key to the Caprica Server for Cockpit to use.

★ Due to the various customer security environments, this chapter provides the basic steps to configure a secure HTTPS connection for Cockpit.

The following topics are discussed in this chapter:

- Creating an Internal Certificate Authority
- Registering Your Certificate Authority with Your Web Browser
- Creating a Certificate Signing Request
- Signing a Server Certificate
- Preparing and Loading a Signed Certificate
- Disabling HTTPS Secure Connections

## Creating an Internal Certificate Authority

- ★ When you already have a CA on another server, your IT department provides you a CA, or your company uses an external CA, skip this section and continue with the section “**Registering Your Certificate Authority with Your Web Browser**” on page 4–3.

### To create an internal Certificate Authority

1. Log in to your **Caprica Server**.
2. Create a folder to store certification files; for example: `ca_files`.
3. Change into your certification files folder.
4. Use a text editor to create a file named `ca.cfg`.
5. Enter the text below in the open `ca.cfg` file. Do not copy and paste the text below into the `ca.cfg` file as this may cause formatting errors in the file.

```
HOME                = .
RANDFILE            = $ENV::HOME/.rnd

[ ca ]
default_ca          = CA_default

[ CA_default ]
default_days        = 1000
default_crl_days    = 365
default_md          = sha256
preserve           = no
x509_extensions    = ca_extensions
email_in_dn         = no
copy_extensions     = copy
certificate         = ./cacert.pem
private_key         = ./cakey.pem
new_certs_dir       = .
database            = ./index.txt
serial              = ./serial.txt

[ req ]
prompt             = no
default_keyfile     = cakey.pem
distinguished_name = ca_distinguished_name
x509_extensions    = ca_extensions
string_mask        = utf8only

[ ca_distinguished_name ]
countryName        = <country_name>
stateOrProvinceName = <state_province_name>
localityName       = <city_name>
organizationName   = <company_name>
commonName         = <common_name>
emailAddress        = <email_address>

[ ca_extensions ]
subjectKeyIdentifier = hash
authorityKeyIdentifier = keyid:always, issuer
basicConstraints     = critical, CA:true
keyUsage             = keyCertSign, cRLSign

[ signing_policy ]
countryName          = optional
stateOrProvinceName = optional
localityName         = optional
```

```

organizationName      = optional
organizationalUnitName = optional
commonName           = supplied
emailAddress          = optional

[ signing_req ]
subjectKeyIdentifier  = hash
authorityKeyIdentifier = keyid, issuer
basicConstraints      = CA:FALSE
keyUsage              = digitalSignature, keyEncipherment

```

6. In the [ **ca\_distinguished\_name** ] section of the `ca.cfg` file, replace the text `<country_name>` with a two-character abbreviation for the country in which your Caprica Server resides.
7. Replace the text `<state_province_name>` with the name of the state or province in which your Caprica Server resides.
8. Replace the text `<city_name>` with the name of the city in which your Caprica Server resides.
9. Replace the text `<company_name>` with the name of the company that owns your Caprica Server.
10. Replace the text `<common_name>` with the host name of your Caprica Server.
11. Replace the text `<email_address>` with the email address for the Caprica Server administrator.
12. Save and close the `ca.cfg` file.
13. In the folder that contains your `ca.cfg` file, run the following command to generate a CA certificate and a corresponding key:

```

openssl req -x509 -config ca.cfg -newkey rsa:4096 -sha256 -out cacert.pem -outform PEM

```

14. At the **Enter PEM pass phrase:** prompt, enter a pass phrase for the CA certificate.

★ Ross Video does not recommend creating a CA without a pass phrase.

The `openssl` command generates a CA certificate named `cacert.pem` and a corresponding key named `cakey.pem`.

## Registering Your Certificate Authority with Your Web Browser

After you register a CA with a web browser, the web browser will trust any certificate signed by the CA. When using an internal CA, copy the generated `cacert.pem` file to each client computer that you use to access your Caprica Server.

★ When your CA is already registered with your web browser, skip this section and continue with the section “**Creating a Certificate Signing Request**” on page 4-4.

The procedure to register a CA with a web browser depends on the following parameters in your work environment:

- Operating system of your computer.
- Web browser software
- Version of web browser software

Please refer to your web browser documentation for information on how to register your CA with your web browser.

## Creating a Certificate Signing Request

Before you can generate a signed certificate, you must create a Certificate Signing Request (CSR). A CSR contains information specific to the server. The CA also uses the CSR to generate a signed certificate.

- ★ Each CA has different requirements for a CSR. Ross Video recommends checking CSR requirements with your CA provider before proceeding with the procedure in this section.

### To create a Certificate Signing Request for a Certificate Authority

1. Use a text editor to create a file named `csr.cfg`.
2. Enter the text below in the open `csr.cfg` file. Do not copy and paste the text below into the `csr.cfg` file as this may cause formatting errors in the file.

```
[req]
prompt                = no
default_bits          = 4096
default_md             = sha256
default_keyfile       = serverkey.pem
distinguished_name    = dn
req_extensions        = v3_req

[dn]
countryName           = <country_name>
stateOrProvinceName  = <state_province_name>
localityName          = <city_name>
organizationName     = <company_name>
commonName            = <common_name>
emailAddress          = <email_address>

[v3_req]
keyUsage = keyEncipherment, dataEncipherment
extendedKeyUsage = serverAuth
subjectAltName = @alt_names

[alt_names]
IP.1 = <IP_Address_NIC_1> # NIC 1 IP address
IP.2 = <IP_Address_Cluster> # Cluster virtual IP address (OPTIONAL)
IP.3 = <IP_Address_NIC_2> # NIC 2 IP address (OPTIONAL)
```

3. In the **[dn]** section of the `csr.cfg` file, replace the text **<country\_name>** with a two-character abbreviation for the country in which your Caprica Server resides.
4. Replace the text **<state\_province\_name>** with the name of the state or province in which your Caprica Server resides.
5. Replace the text **<city\_name>** with the name of the city in which your Caprica Server resides.
6. Replace the text **<company\_name>** with the name of the company that owns your Caprica Server.
7. Replace the text **<common\_name>** with the host name of your Caprica Server.
8. Replace the text **<email\_address>** with the email address for the Caprica Server administrator.
9. In the **[alt\_names]** section, replace the text **<IP\_Address\_NIC\_1>** with the IP address of your Caprica Server NIC 1.
10. Replace the text **<IP\_Address\_Cluster>** with the virtual IP address of your Caprica Server cluster.
- ★ If your Caprica system is not configured as a cluster, delete the **IP.2** alternate name from the `csr.cfg` file.
11. Replace the text **<IP\_Address\_NIC\_2>** with the IP address of your Caprica Server NIC 2.
- ★ If your Caprica system is not configured to use NIC 2, delete the **IP.3** alternate name from the `csr.cfg` file.

12. If you deleted an alternative name from the `[alt_names]` section, rename the alternate name so that they are sequential starting with `IP.1`.
13. Save and close the `csr.cfg` file.
14. In the folder that contains your `csr.cfg` file, run the following command to generate a CSR file:

```
openssl req -config csr.cfg -newkey rsa:4096 -sha256 -nodes -out servercert.csr
-outform PEM
```

The `openssl` command generates a CSR file named `server.csr` and a corresponding key named `serverkey.pem`.

## Signing a Server Certificate

### IT Department or External CA

If you use a CA managed by your IT department or an external CA, you must send your CSR file to your IT department or external CA so they can generate a signed certificate for you. Remember to get your IT department or an external CA to return the signed certificate generated from your CSR file to you.

★ Cockpit expects signed certificates to be PEM encoded x509 certificates.

In the following sections, the signed certificate is referred to as the `servercert.pem` file.

### Internal CA

If you use your own internal CA, you can generate your own signed certificate.

#### To generate a signed certificate

1. Before signing your first certificate, complete the following steps to create a CA database:
  - a. In the folder that contains your `csr.cfg` file, run the following command to create an empty file named `index.txt`:

```
touch index.txt
```

The `openssl` command updates the `index.txt` file every time you sign a certificate.
  - b. Run the following command to create a file named `serial.txt` containing a value of 01.

```
echo '01' > serial.txt
```

The `serial.txt` file contains the next available serial number in hex, which the `openssl` command updates every time you sign a certificate.

With the CA database created, you are ready to sign certificates.

2. In the folder that contains your `server.csr`, `index.txt`, and `serial.txt` files, run the following command to sign your certificate:

```
openssl ca -config ca.cfg -policy signing_policy -extensions signing_req -out servercert.pem -infiles server.csr
```
3. At the **Enter pass phrase for /cakey.pem:** prompt, enter the pass phrase you set for your CA certificate in step 14 of the procedure “**To create an internal Certificate Authority**” on page 4–2.
4. At the **Sign the certificate? [y/n]:** prompt, enter `y`.

The `openssl` command creates a signed certificate file named `servercert.pem`.

## Preparing and Loading a Signed Certificate

Your signed certificate `servercert.pem` file and the private key `serverkey.pem` file are concatenated to make a `.cert` file. Cockpit loads `.cert` files from the `/etc/cockpit/ws-certs.d` folder on a Caprica Server. When Cockpit loads a certificate, it loads the last file alphabetically with the `.cert` extension.

### To prepare and load a signed certificate

1. In your certification files folder, run the following command to create a file named **100-server.cert** and write the contents of your **servercert.pem** to the new file:

```
cat servercert.pem > 100-server.cert
```

2. Run the following command to append the content of your **serverkey.pem** file to your **100-server.cert** file:

```
cat serverkey.pem >> 100-server.cert
```

3. Run the following command to move your **100-server.cert** file to the `/etc/cockpit/ws-certs.d` folder:

```
sudo mv 100-server.cert /etc/cockpit/ws-certs.d/100-server.cert
```

4. Run the following command to restart Cockpit and load your signed certificate:

```
sudo systemctl restart cockpit
```

## Disabling HTTPS Secure Connections

It is possible to disable HTTPS secure connections for your Caprica system. You should only disable HTTPS secure connections on a segregated network that is not accessible from the internet.

★ Ross Video does not recommend disabling HTTPS secure connections for your Caprica system.

### To disable HTTPS secure connections for your Caprica system

1. Log in to your **Caprica Server**.
2. Change into the `/etc/cockpit/` folder.
3. Use a text editor to create a file named `cockpit.conf`.
4. Enter the following text in the open `cockpit.conf` file:

```
[WebService]
AllowUnencrypted = true
```

5. Save and close the `cockpit.conf` file.
6. Run the following command to restart Cockpit:

```
sudo systemctl restart cockpit
```

# Carbonite Ultra Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite Ultra switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Ultra Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with a Carbonite Ultra switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 5–2.
- On the Caprica Server, create a Switcher device for your Carbonite Ultra switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Ultra Switcher**” on page 5–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 5–7.

## Quorum System Connections

In a Quorum system, a Carbonite Ultra switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 5.1**) illustrates the cabling layout of the Carbonite Ultra switcher connection to a Quorum system.

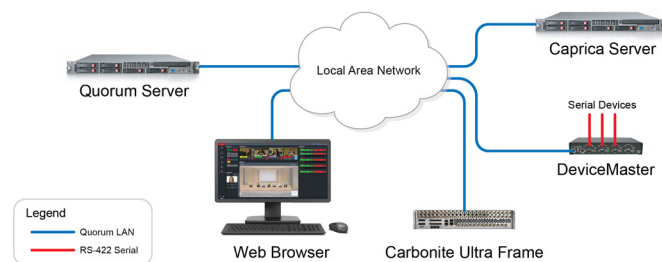


Figure 5.1 Quorum System Connection to a Carbonite Ultra Switcher

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Ultra Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Ultra switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Ultra Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Ultra Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Ultra switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Ultra Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra switcher in a Quorum system.

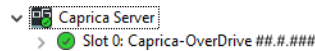
**To configure the SWITCHER1 device for a Carbonite Ultra switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

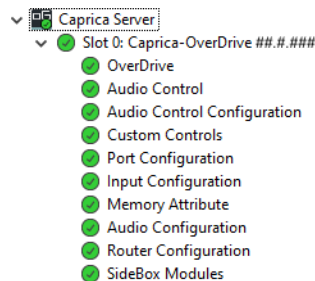
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

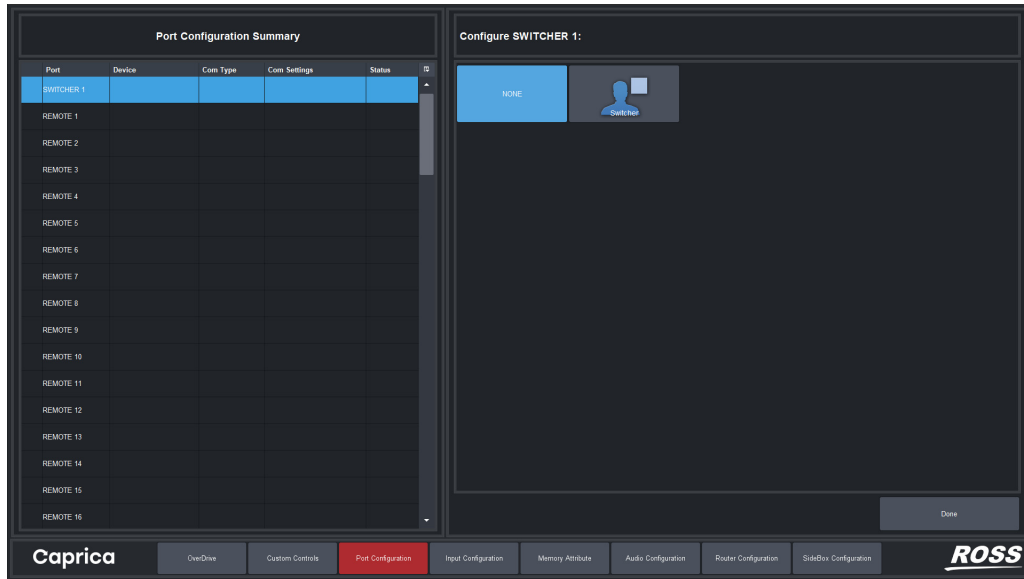
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

7. In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



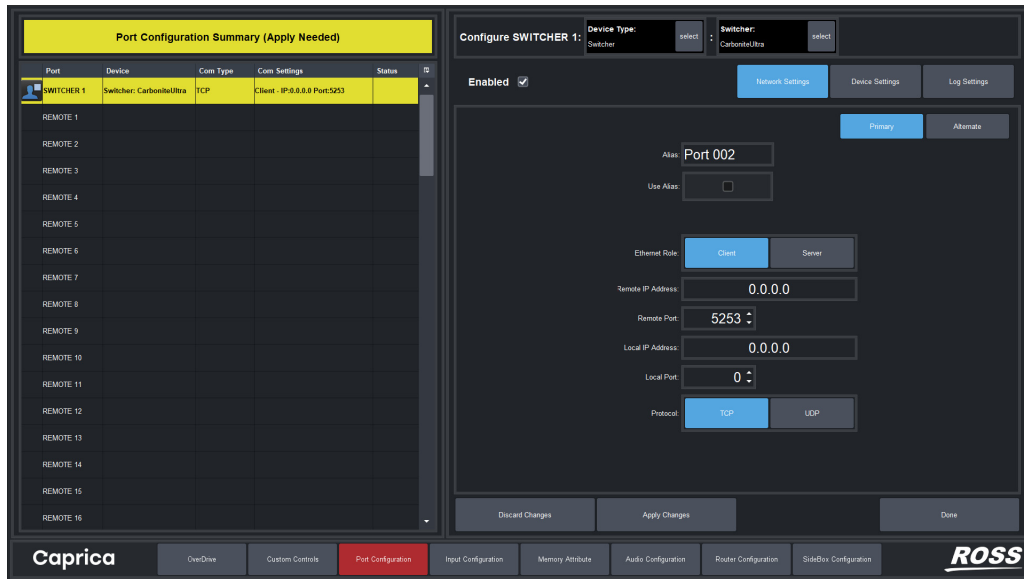
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra switcher in a Quorum system.

8. In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

9. Click **CarboniteUltra**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Ultra switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Ultra switcher.

14. Use the **Remote Port** box to enter or select 5253.

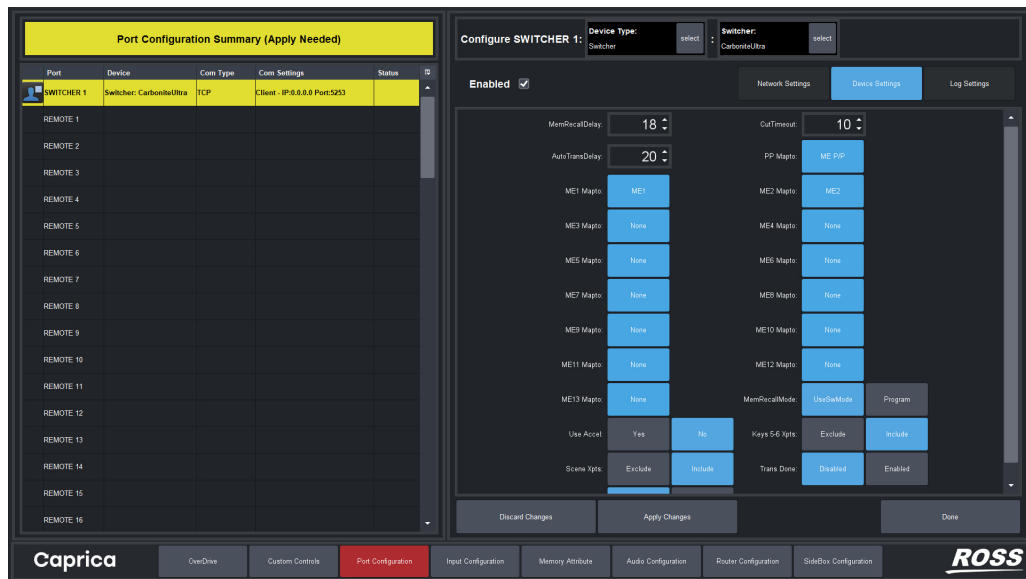
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Ultra switcher.



19. Use the **MemRecalDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to the Program bus in Caprica.

When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.

23. Click **ME1 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME2 in Caprica.
25. Click **ME3 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME3 in Caprica.
26. Click **ME4 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME4 in Caprica.
27. Click **ME5 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME5 in Caprica.
28. Click **ME6 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME6 in Caprica.
29. Click **ME7 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME7 in Caprica.
30. Click **ME8 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME8 in Caprica.
31. Click **ME9 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME9 in Caprica.
32. Click **ME10 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME10 in Caprica.
33. Click **ME11 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME11 in Caprica.
34. Click **ME12 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME12 in Caprica.
35. Click **ME13 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra switcher to map to ME13 in Caprica.
36. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
37. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Carbonite Ultra switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
38. Use the **Keys 5-6 Xpts** buttons to prevent virtual inputs from shifting after updating a Carbonite Ultra switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading a Carbonite Ultra switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created on Carbonite Ultra versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating a Carbonite Ultra switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created on Carbonite Ultra versions before version 7.0 may not work properly with this setting.

39. Use the **Scene Xpts** buttons to prevent virtual inputs from shifting after updating a Carbonite Ultra switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading a Carbonite Ultra switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created for Carbonite Ultra versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating a Carbonite Ultra switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created for Carbonite Ultra versions before version 7.0 may not work properly with this setting.
40. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
41. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.
42. Click **Apply Changes** to save the switcher settings.
43. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.



# Carbonite Ultra 60 Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite Ultra 60 switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Ultra 60 Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with a Carbonite Ultra 60 switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 6–2.
- On the Caprica Server, create a Switcher device for your Carbonite Ultra 60 switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Ultra 60 Switcher**” on page 6–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 6–7.

## Quorum System Connections

In a Quorum system, a Carbonite Ultra 60 switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 6.1**) illustrates the cabling layout of the Carbonite Ultra 60 switcher connection to a Quorum system.

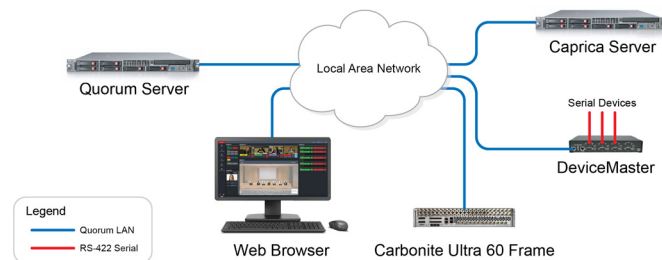


Figure 6.1 Quorum System Connection to a Carbonite Ultra 60 Switcher

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Ultra 60 Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Ultra 60 switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Ultra 60 Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Ultra 60 Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Ultra 60 switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Ultra 60 Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra 60 switcher in a Quorum system.

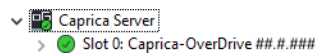
**To configure the SWITCHER1 device for a Carbonite Ultra 60 switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

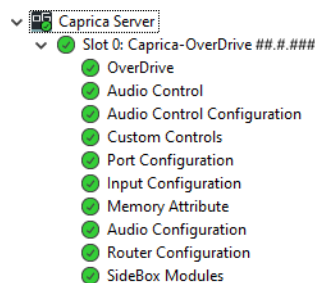
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

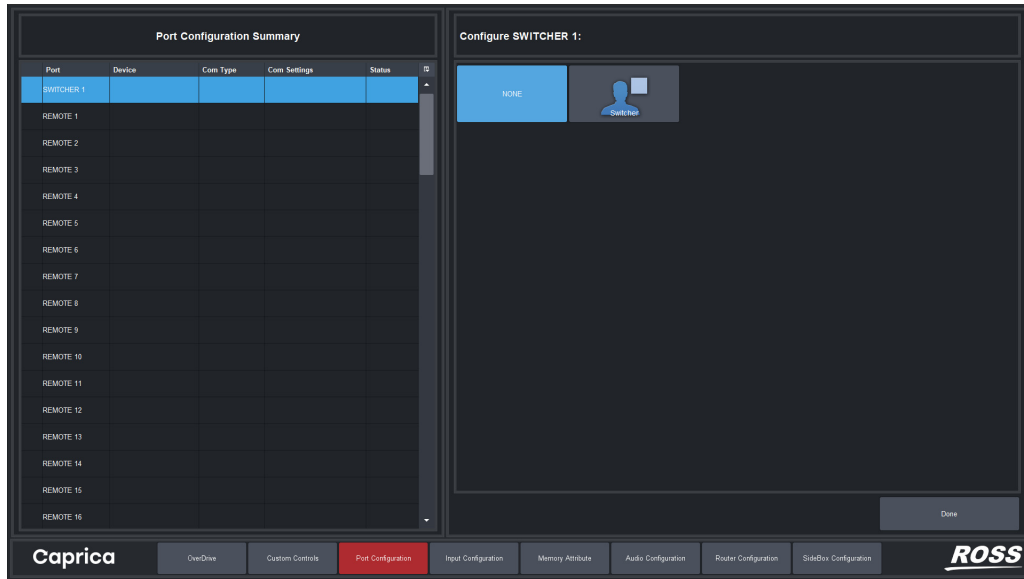
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



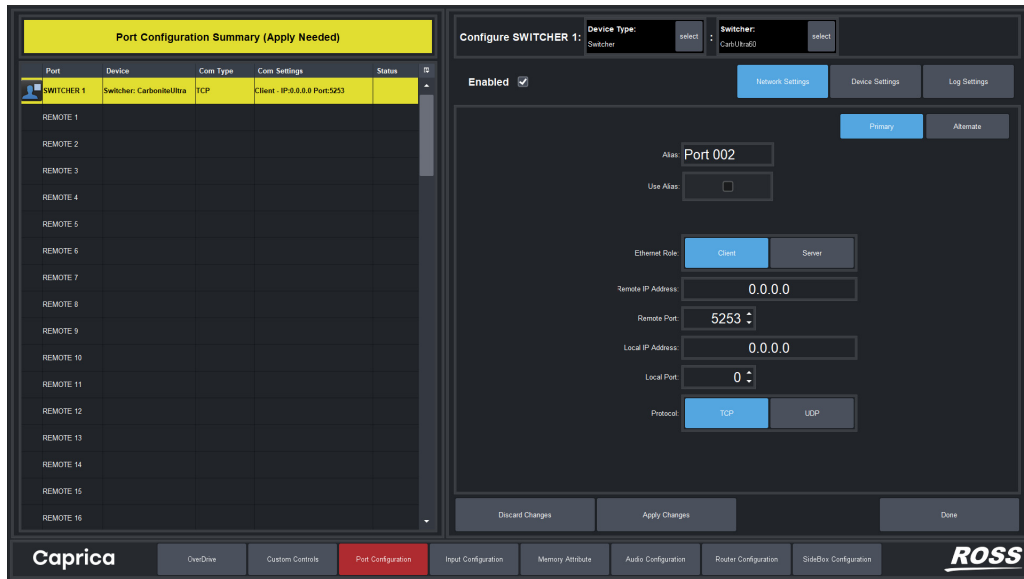
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra 60 switcher in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

- Click **CarbUltra60**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Ultra 60 switcher.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Ultra 60 switcher.

14. Use the **Remote Port** box to enter or select 5253.

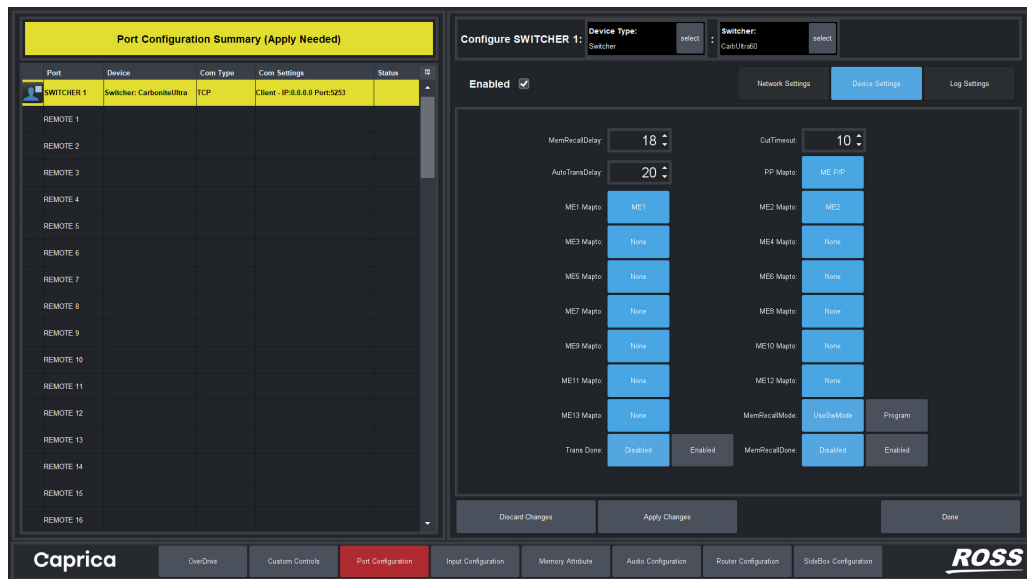
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Ultra 60 switcher.



19. Use the **MemRecallDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to the Program bus in Caprica.

When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.

23. Click **ME1 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME2 in Caprica.
25. Click **ME3 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME3 in Caprica.
26. Click **ME4 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME4 in Caprica.
27. Click **ME5 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME5 in Caprica.
28. Click **ME6 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME6 in Caprica.
29. Click **ME7 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME7 in Caprica.
30. Click **ME8 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME8 in Caprica.
31. Click **ME9 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME9 in Caprica.
32. Click **ME10 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME10 in Caprica.
33. Click **ME11 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME11 in Caprica.
34. Click **ME12 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME12 in Caprica.
35. Click **ME13 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra 60 switcher to map to ME13 in Caprica.
36. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
37. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Carbonite Ultra 60 switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
38. Use the **Keys 5-6 Xpts** buttons to prevent virtual inputs from shifting after updating a Carbonite Ultra 60 switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading a Carbonite Ultra 60 switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created on Carbonite Ultra 60 versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating a Carbonite Ultra 60 switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created on Carbonite Ultra 60 versions before version 7.0 may not work properly with this setting.

39. Use the **Scene Xpts** buttons to prevent virtual inputs from shifting after updating a Carbonite Ultra 60 switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading a Carbonite Ultra 60 switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created for Carbonite Ultra 60 versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating a Carbonite Ultra 60 switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created for Carbonite Ultra 60 versions before version 7.0 may not work properly with this setting.
40. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
41. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.
42. Click **Apply Changes** to save the switcher settings.
43. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher custom controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.



# Carbonite Ultra Solo Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite Ultra Solo switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Ultra Solo Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with a Carbonite Ultra Solo switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 7–2.
- On the Caprica Server, create a Switcher device for your Carbonite Ultra Solo switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Ultra Solo Switcher**” on page 7–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 7–6.

## Quorum System Connections

In a Quorum system, a Carbonite Ultra Solo switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 7.1**) illustrates the cabling layout of the Carbonite Ultra Solo switcher connection to a Quorum system.

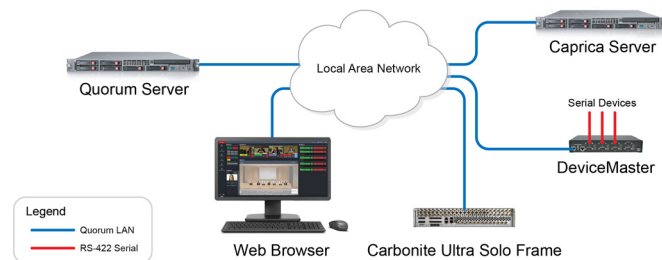


Figure 7.1 Quorum System Connection to a Carbonite Ultra Solo Switcher

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Ultra Solo Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Ultra Solo switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Ultra Solo Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Ultra Solo Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Ultra Solo switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Ultra Solo Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra Solo switcher in a Quorum system.

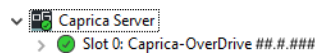
**To configure the SWITCHER1 device for a Carbonite Ultra Solo switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

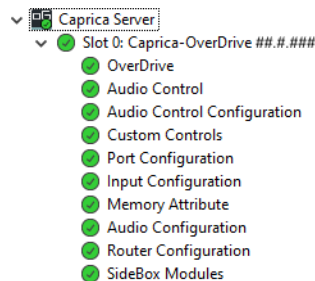
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.

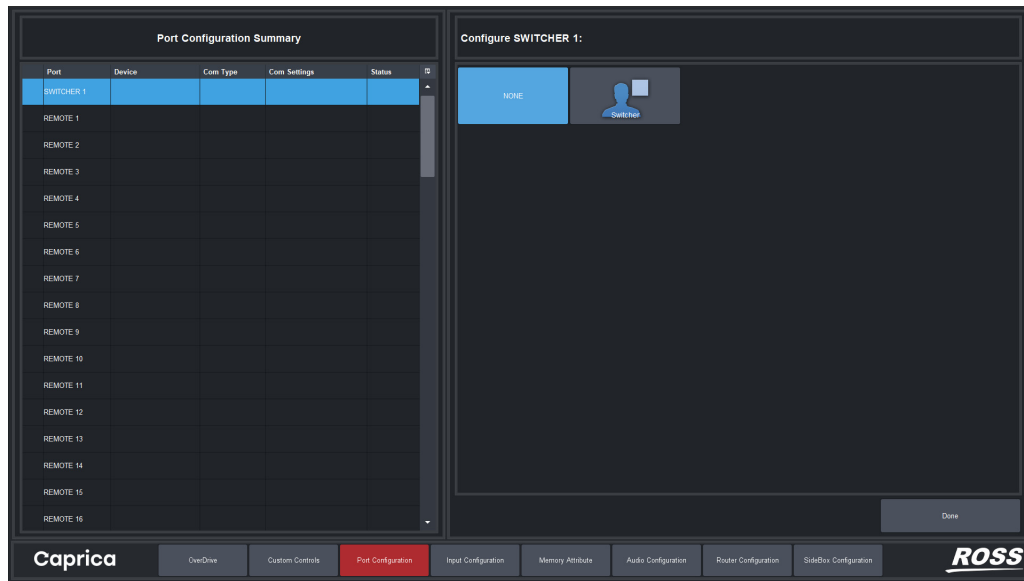
The **Port Configuration** client opens in the **Device View**.

6. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.

- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



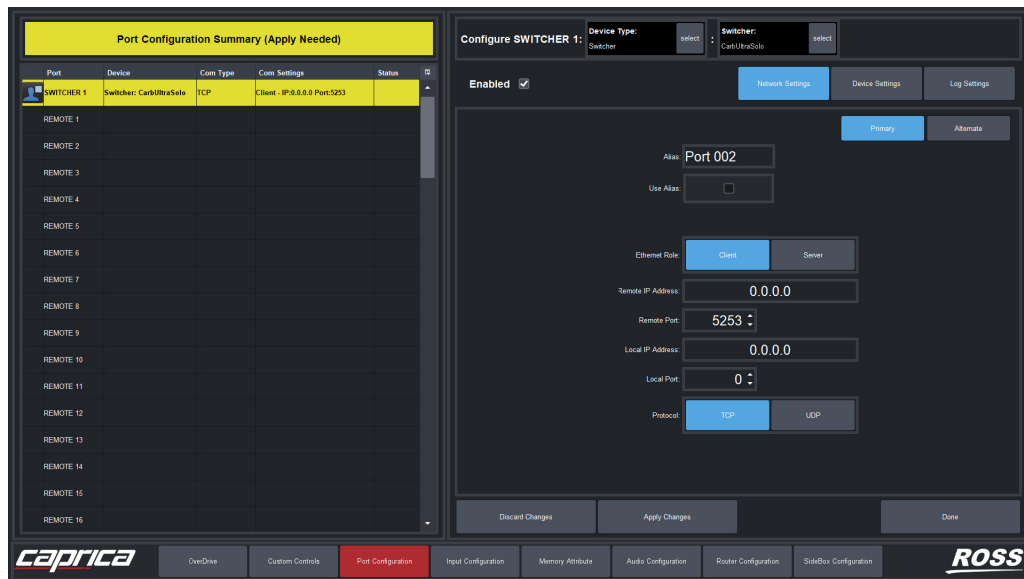
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Ultra Solo switcher in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

- Click **CarbBlackSolo**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Ultra Solo switcher.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Ultra Solo switcher.

14. Use the **Remote Port** box to enter or select 5253.

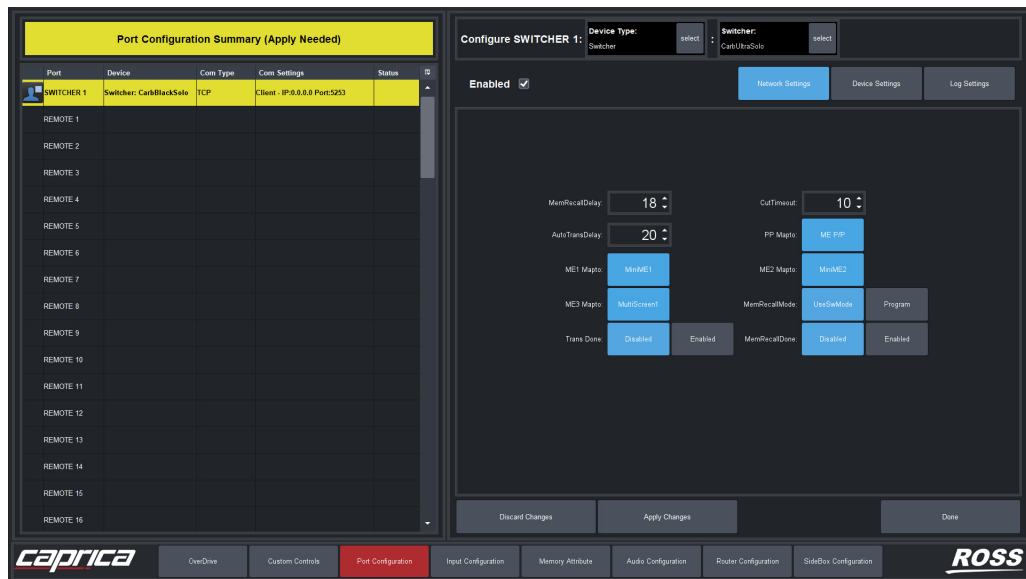
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Ultra Solo switcher.



19. Use the **MemRecalDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra Solo switcher to map to the Program bus in Caprica.

When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.

23. Click **ME1 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra Solo switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra Solo switcher to map to ME2 in Caprica.
25. Click **ME3 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Ultra Solo switcher to map to ME3 in Caprica.
26. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
27. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
28. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.
29. Click **Apply Changes** to save the switcher settings.
30. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Carbonite Code Setup for Quorum

This chapter provides instructions for connecting an Quorum system with a Ross Video Carbonite Code switcher through a Caprica Server.

The following topics are discussed in this chapter:

- LimitationsQuorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Code Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Limitations

The following limitations apply to an Quorum system configured with a Carbonite Code switcher connected to the Quorum system through a Caprica Server:

- The Fade To Black transition in OverDrive does not function. You can use the RossTalk FTB command or a GPI to make a Carbonite Code switcher fade to and from black.
- You can not fully control your production system through the Carbonite Code panel or DashBoard UI.
- When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.

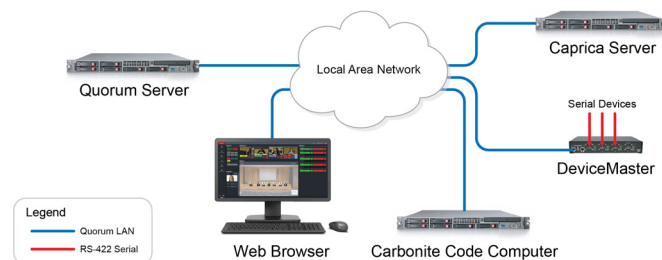
## Quorum System Setup

To set up an Quorum system with a Carbonite Code switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 8–2.
- On the Caprica Server, create a Switcher device for your Carbonite Code switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Code Switcher**” on page 8–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 8–7.

## Quorum System Connections

In an Quorum system, a Carbonite Code switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 8.1**) illustrates the cabling layout of the Carbonite Code switcher connection to an Quorum system.



*Figure 8.1 Quorum System Connection to a Carbonite Code Switcher*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Code Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Code switcher to an Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Code computer to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Code SoftPanel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

### For More Information on...

- cabling an Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Code switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Code Switcher

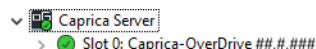
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Code switcher in an Quorum system.

### To configure the SWITCHER1 device for a Carbonite Code switcher

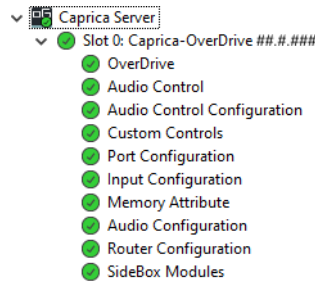
1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

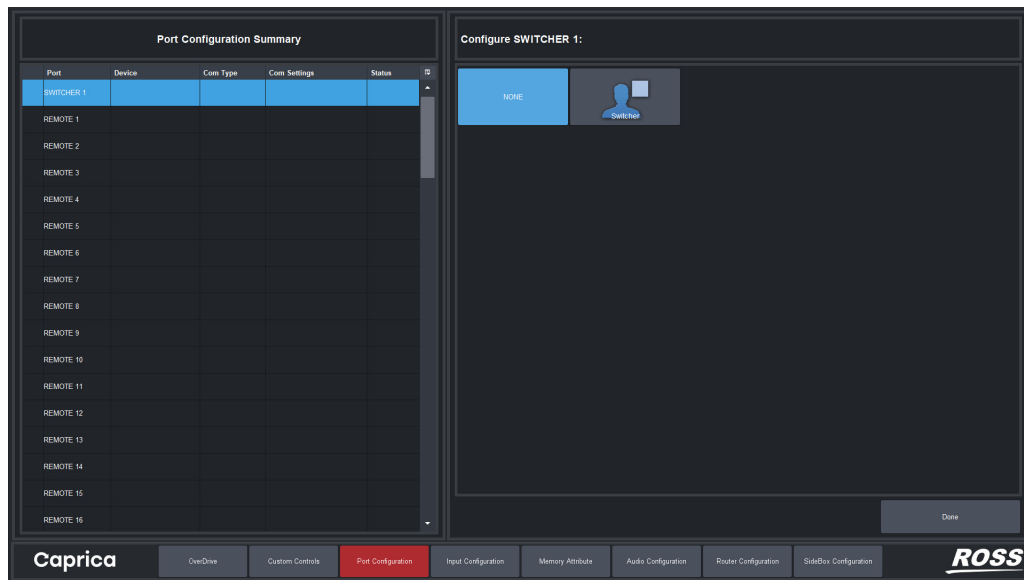
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.  
The **Caprica Server** node displays the available Caprica Servers.



- In the **Caprica Server** node, expand the **Slot 0: Caprica** node.  
The **Slot 0: Caprica** node displays the available Caprica Server clients.



- Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
- Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.
- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.  
The **Configure SWITCHER1** panel opens.

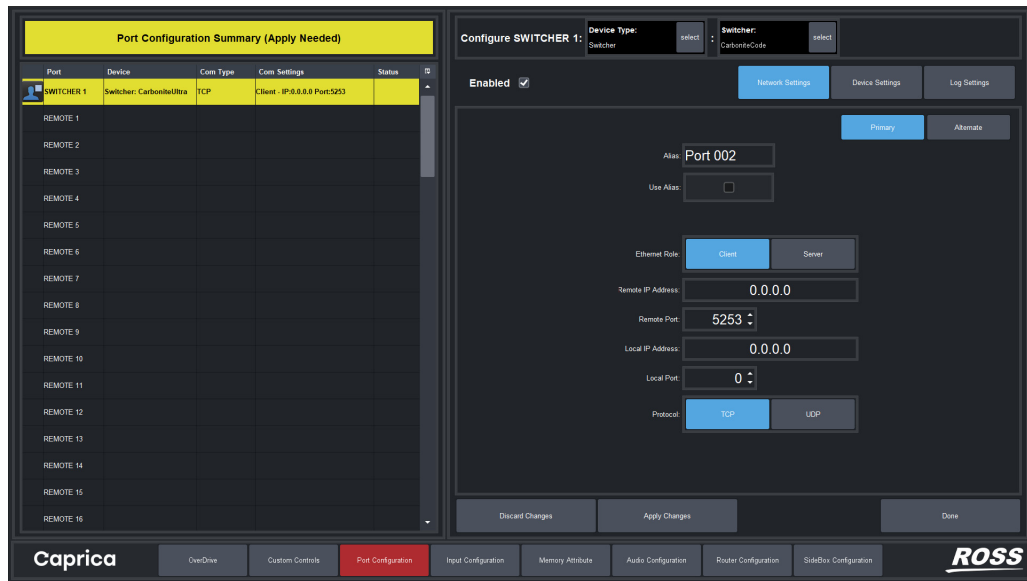


The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Code switcher in an Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.  
The **Configure SWITCHER1** panel lists the available switchers.

9. Click **CarboniteCode**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Code switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Code switcher.

14. Use the **Remote Port** box to enter or select 5253.

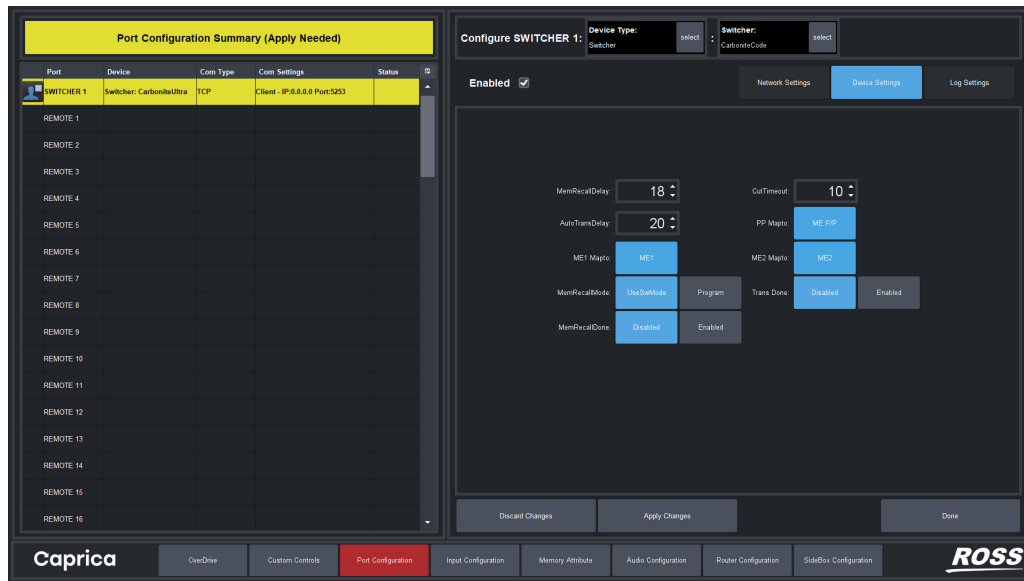
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Code switcher.



19. Use the **MemRecallDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.
20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.
21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.
22. Click **PP Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Code switcher to map to the Program bus in Caprica.  

When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.
23. Click **ME1 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Code switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Code switcher to map to ME2 in Caprica.
25. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
26. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
27. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.

28. Click **Apply Changes** to save the switcher settings.

29. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure an Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.



# Ultrix Carbonite Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Ultrix Carbonite switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for an Ultrix Carbonite Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

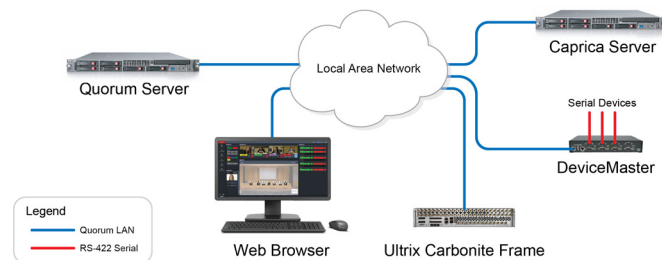
## Quorum System Setup

To set up a Quorum system with an Ultrix Carbonite switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 9–2.
- On the Caprica Server, create a Switcher device for your Ultrix Carbonite switcher.  
Refer to the section “**Configuring a Switcher Device for an Ultrix Carbonite Switcher**” on page 9–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 9–8.

## Quorum System Connections

In a Quorum system, an Ultrix Carbonite switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 9.1**) illustrates the cabling layout of the Ultrix Carbonite switcher connection to a Quorum system.



*Figure 9.1 Quorum System Connection to an Ultrix Carbonite Switcher*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Ultrix Carbonite Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect an Ultrix Carbonite switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Ultrix Carbonite Frame to your internal network.
5. Use an **Ethernet** cable to connect the Ultrix Carbonite Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling an Ultrix Carbonite switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for an Ultrix Carbonite Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with an Ultrix Carbonite switcher in a Quorum system.

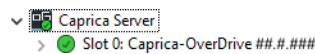
**To configure the SWITCHER1 device for an Ultrix Carbonite switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

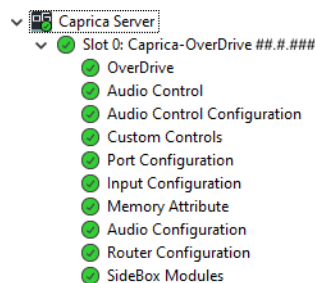
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

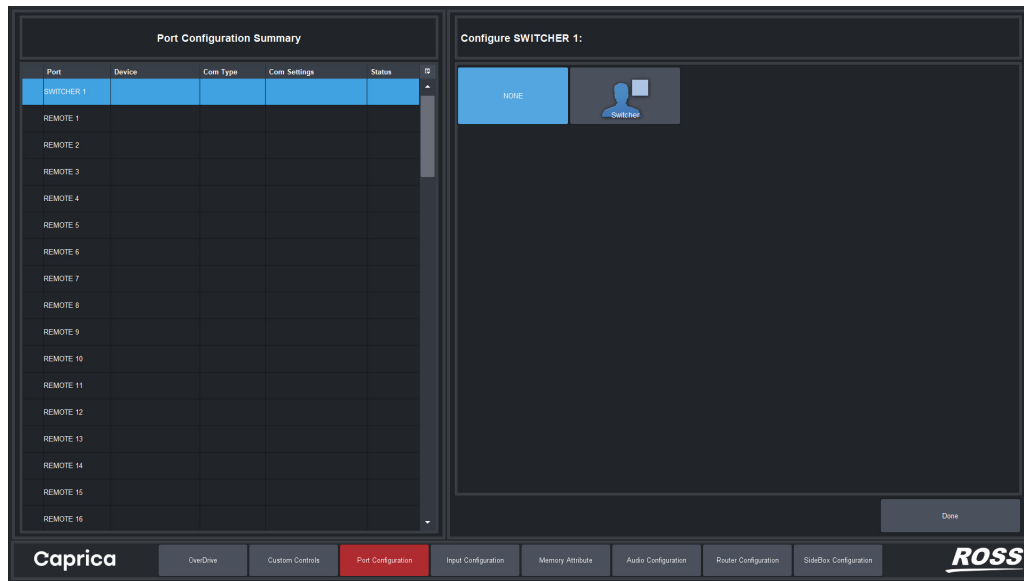
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



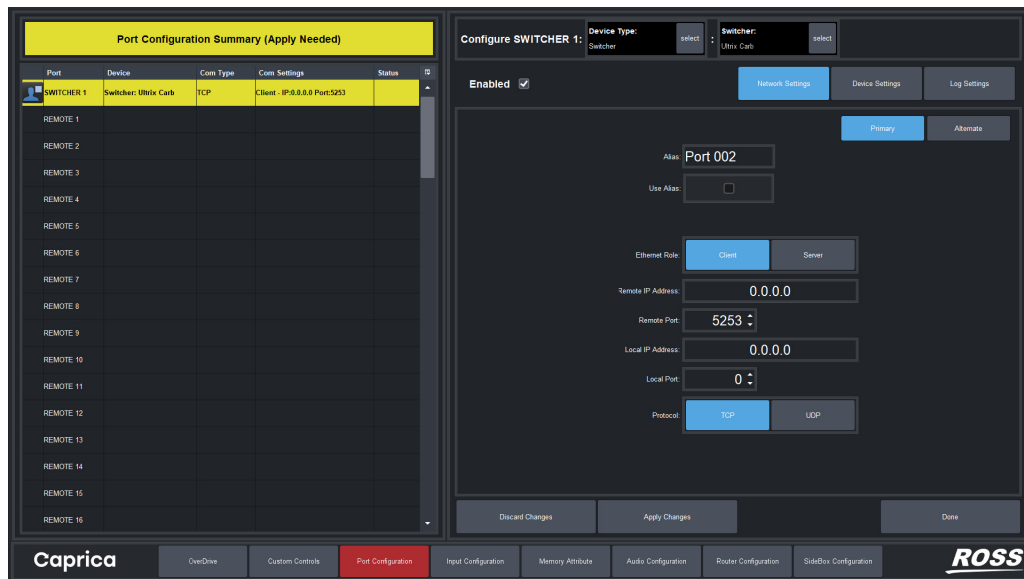
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with an Ultrix Carbonite switcher in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

- Click **CarboniteUltra**.

The **Configure SWITCHER1** panel displays the **Network Settings** for an Ultrix Carbonite switcher.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Ultrix Carbonite switcher.

14. Use the **Remote Port** box to enter or select 5253.

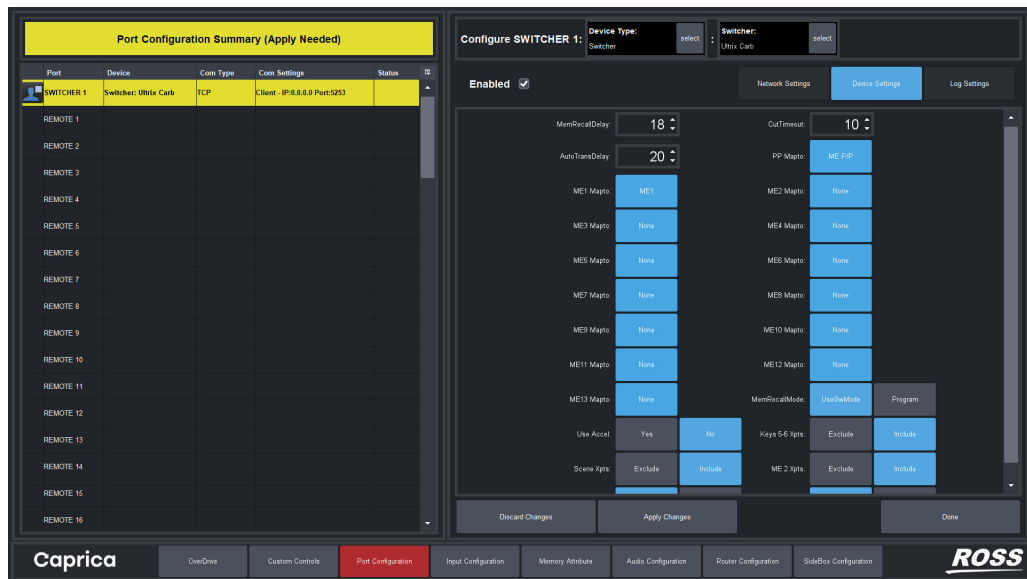
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for an Ultrix Carbonite switcher.



19. Use the **MemRecallDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to the Program bus in Caprica.
- When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.
- The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
23. Click **ME1 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME1 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
24. Click **ME2 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME2 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
25. Click **ME3 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME3 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
26. Click **ME4 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME4 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
27. Click **ME5 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME5 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
28. Click **ME6 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME6 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
29. Click **ME7 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME7 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
30. Click **ME8 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME8 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
31. Click **ME9 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME9 in Caprica. The ME mode set on the switcher limits the available options as follows:
- **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.

32. Click **ME10 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME10 in Caprica. The ME mode set on the switcher limits the available options as follows:
  - **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
33. Click **ME11 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME11 in Caprica. The ME mode set on the switcher limits the available options as follows:
  - **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
34. Click **ME12 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME12 in Caprica. The ME mode set on the switcher limits the available options as follows:
  - **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
35. Click **ME13 Mapto** to select the ME, Canvas, or Scene on your Ultrix Carbonite switcher to map to ME13 in Caprica. The ME mode set on the switcher limits the available options as follows:
  - **HD 2 ME 4 MM** — ME2 is not available in this mode.
  - **HD 3 ME** — mini MEs are not available in this mode.
36. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
37. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Ultrix Carbonite switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
38. Use the **Keys 5-6 Xpts** buttons to prevent virtual inputs from shifting after updating an Ultrix Carbonite switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading an Ultrix Carbonite switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created on Ultrix Carbonite versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating an Ultrix Carbonite switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created on Ultrix Carbonite versions before version 7.0 may not work properly with this setting.
39. Use the **Scene Xpts** buttons to prevent virtual inputs from shifting after updating an Ultrix Carbonite switcher to version 7.0 or greater. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after upgrading an Ultrix Carbonite switcher to version 7.0 or greater. Using this setting maintains virtual input positions for Custom Controls created for Ultrix Carbonite versions before version 7.0.
  - **Include** — use this setting to shift virtual inputs after updating an Ultrix Carbonite switcher to version 7.0 or greater. Custom Controls that use virtual inputs and were created for Ultrix Carbonite versions before version 7.0 may not work properly with this setting.

40. Use the **ME 2 Xpts** buttons to prevent virtual inputs from shifting after switching an Ultrix Carbonite switcher to **HD 3 ME** mode on. The available settings are as follows:
  - **Exclude** — use this setting to maintain virtual input positions after switching to HD 3 ME mode. Using this setting maintains virtual input positions for Custom Controls created for your Ultrix Carbonite switcher when it was in HD 2 ME 4 MM mode.
  - **Include** — use this setting to shift virtual inputs after switching to HD 3 ME mode. Custom Controls that use virtual inputs and were created for your Ultrix Carbonite switcher when it was in HD 2 ME 4 MM mode may not work properly with this setting.
41. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
42. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.
43. Click **Apply Changes** to save the switcher settings.
44. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Carbonite Black Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite Black switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Black Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

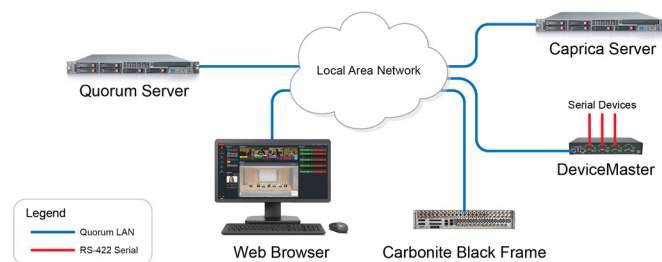
## Quorum System Setup

To set up a Quorum system with a Carbonite Black switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 10–2.
- On the Caprica Server, create a Switcher device for your Carbonite Black switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Black Switcher**” on page 10–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 10–6.

## Quorum System Connections

In a Quorum system, a Carbonite Black switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 10.1**) illustrates the cabling layout of the Carbonite Black switcher connection to a Quorum system.



*Figure 10.1 Quorum System Connection to a Carbonite Black Switcher*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Black Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Black switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Black Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Black Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Black switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Black Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Black switcher in a Quorum system.

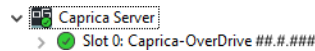
**To configure the SWITCHER1 device for a Carbonite Black switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

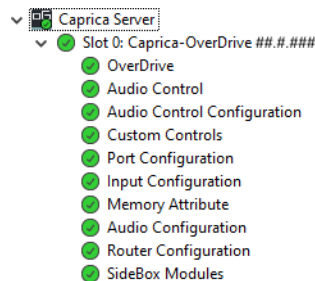
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

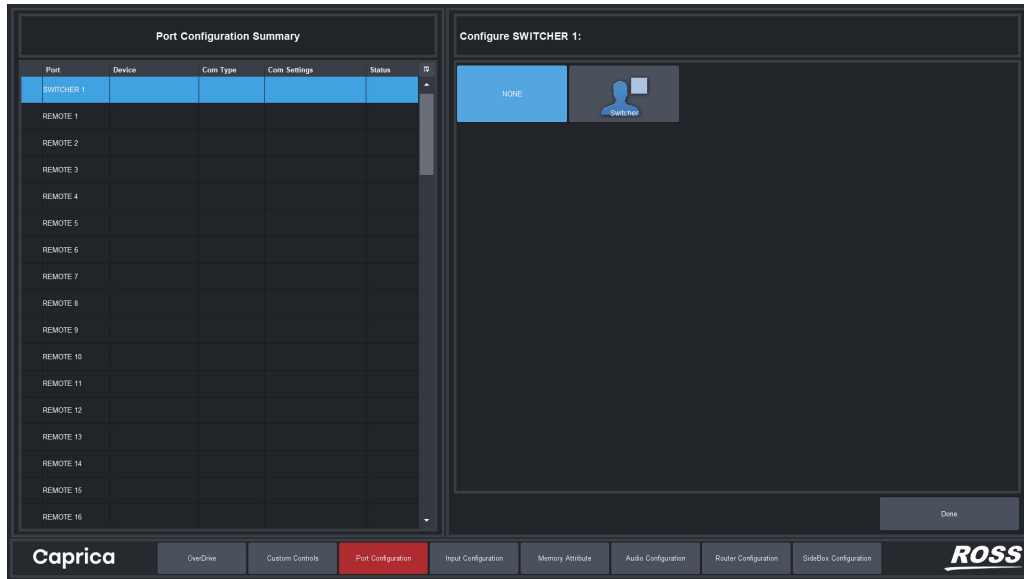
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



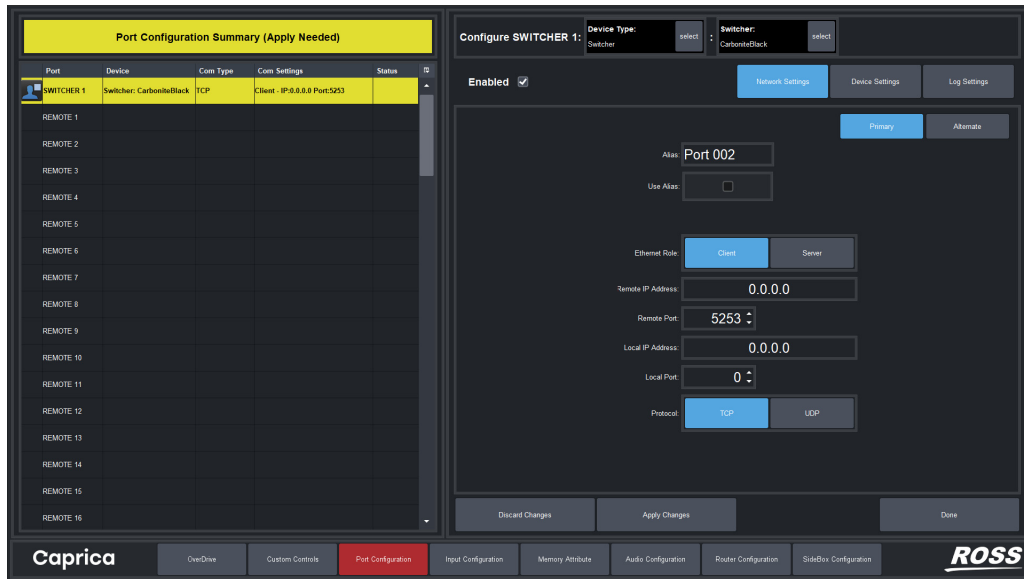
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Black switcher in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

- Click **CarboniteBlack**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Black switcher.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Black switcher.

14. Use the **Remote Port** box to enter or select 5253.

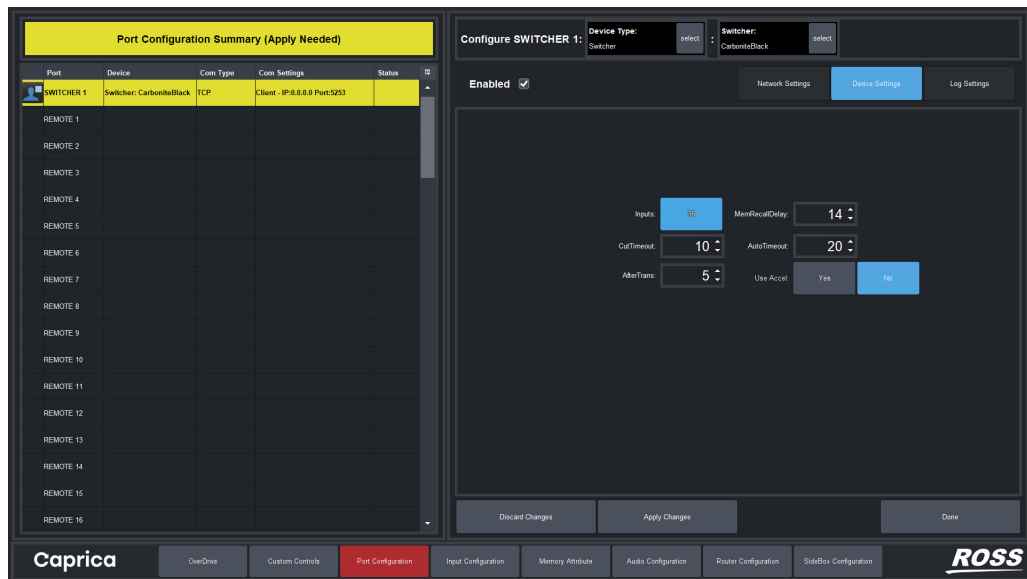
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Black switcher.



19. Click **Inputs** to set the number of inputs on your Carbonite Black frame.

20. Use the **MemRecallDelay** setting to enter or select the number of fields to wait for memory recalls to complete.

21. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Use the **AutoTimeout** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

23. Use the **AfterTrans** box to enter or select the number of frames to wait after Caprica confirms that a transition is complete.

24. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Carbonite Black switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
25. Click **Apply Changes** to save the switcher settings.
26. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Carbonite Black Solo Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite Black Solo switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Black Solo Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

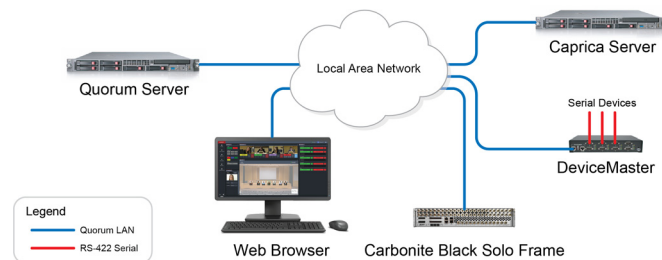
## Quorum System Setup

To set up a Quorum system with a Carbonite Black Solo switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 11–2.
- On the Caprica Server, create a Switcher device for your Carbonite Black Solo switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Black Solo Switcher**” on page 11–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 11–6.

## Quorum System Connections

In a Quorum system, a Carbonite Black Solo switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 11.1**) illustrates the cabling layout of the Carbonite Black Solo switcher connection to a Quorum system.



*Figure 11.1 Quorum System Connection to a Carbonite Black Solo Switcher*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Black Solo Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite Black Solo switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Black Solo Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Black Solo Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite Black Solo switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Black Solo Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Black Solo switcher in a Quorum system.

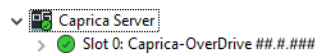
**To configure the SWITCHER1 device for a Carbonite Black Solo switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

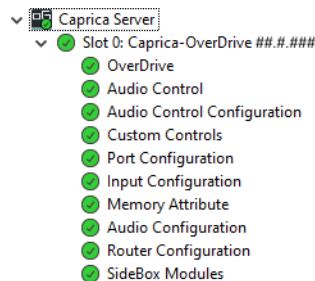
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

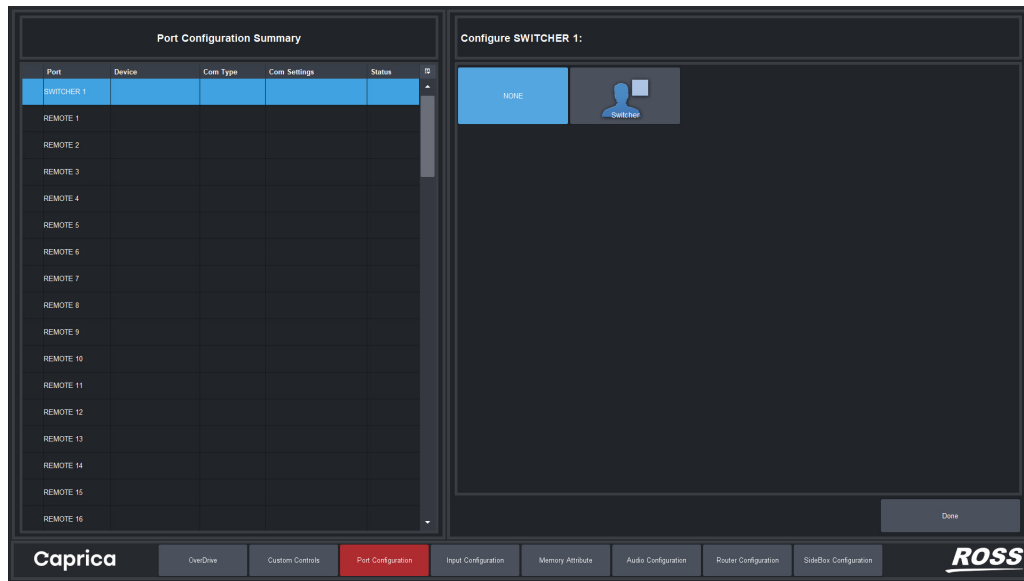
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

7. In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



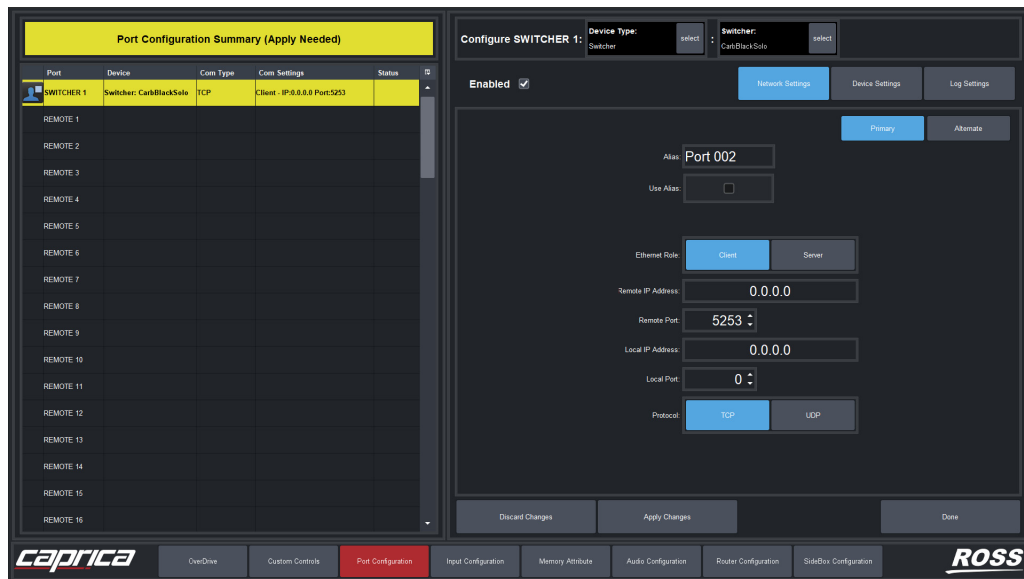
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite Black Solo switcher in a Quorum system.

8. In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

9. Click **CarbBlackSolo**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite Black Solo switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite Black Solo switcher.

14. Use the **Remote Port** box to enter or select 5253.

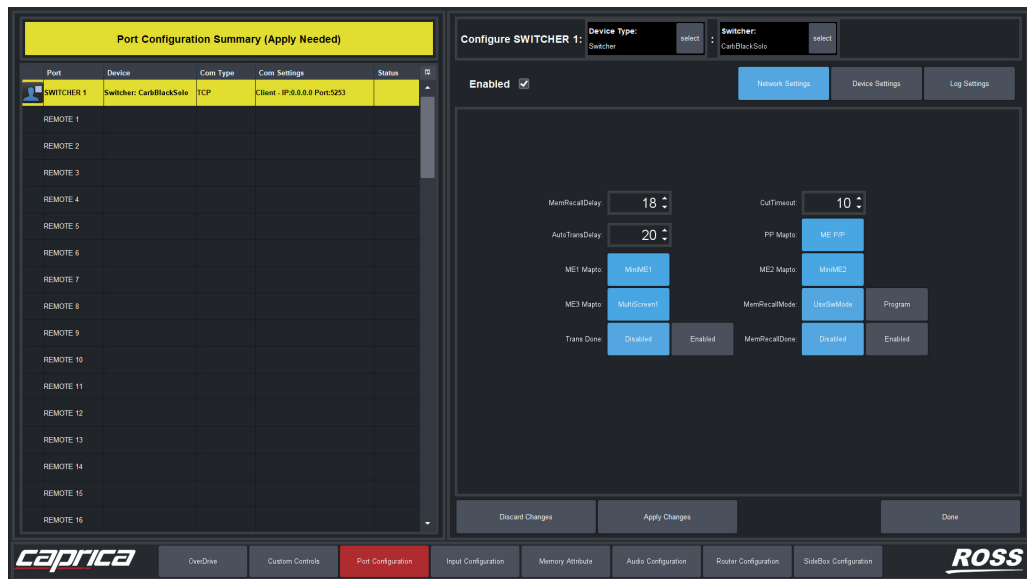
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite Black Solo switcher.



19. Use the **MemRecallDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Black Solo switcher to map to the Program bus in Caprica.

When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.

23. Click **ME1 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Black Solo switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Black Solo switcher to map to ME2 in Caprica.
25. Click **ME3 Mapto** to select the ME, MiniME, Canvas, or Scene on your Carbonite Black Solo switcher to map to ME3 in Caprica.
26. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
27. Use the **Trans Done** buttons to set the switcher response to transitions. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to transitions. This option makes OverDrive operation more reliable.
28. Use the **MemRecallDone** buttons to set the switcher response to memory recalls. The available settings are as follows:
  - **Disabled** — select this option when your switcher does not support this functionality.
  - **Enabled** — for switchers that support this functionality, select this option to speed up the switcher response to memory recalls. This option makes OverDrive operation more reliable.
29. Click **Apply Changes** to save the switcher settings.
30. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Carbonite Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Carbonite switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Carbonite Switcher
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

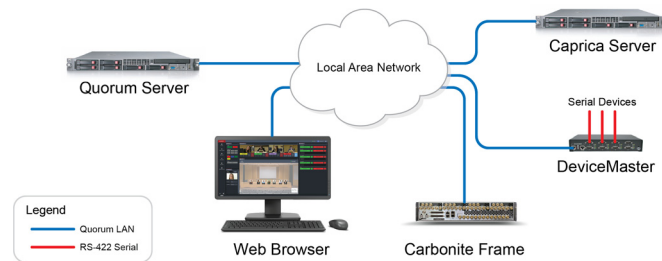
## Quorum System Setup

To set up a Quorum system with a Carbonite switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 12–2.
- On the Caprica Server, create a Switcher device for your Carbonite switcher.  
Refer to the section “**Configuring a Switcher Device for a Carbonite Switcher**” on page 12–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 12–6.

## Quorum System Connections

In a Quorum system, a Carbonite switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 12.1**) illustrates the cabling layout of the Carbonite switcher connection to a Quorum system.



*Figure 12.1 Quorum System Connection to a Carbonite Switcher*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Carbonite Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Carbonite switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Carbonite Frame to your internal network.
5. Use an **Ethernet** cable to connect the Carbonite Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Carbonite switcher, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Carbonite Switcher

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite switcher in a Quorum system.

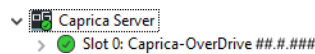
**To configure the SWITCHER1 device for a Carbonite switcher**

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

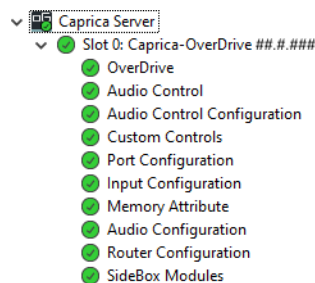
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

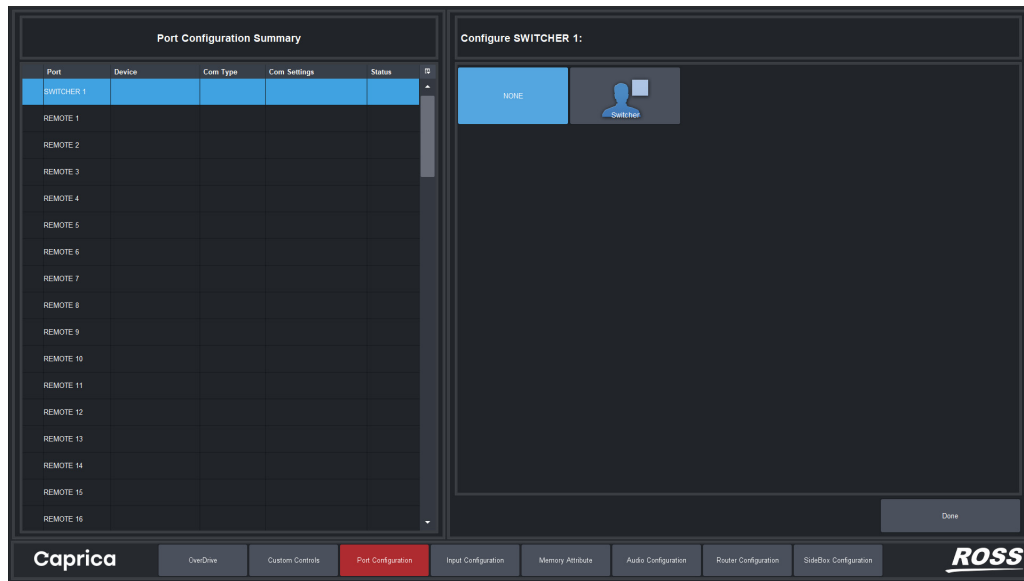
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

7. In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



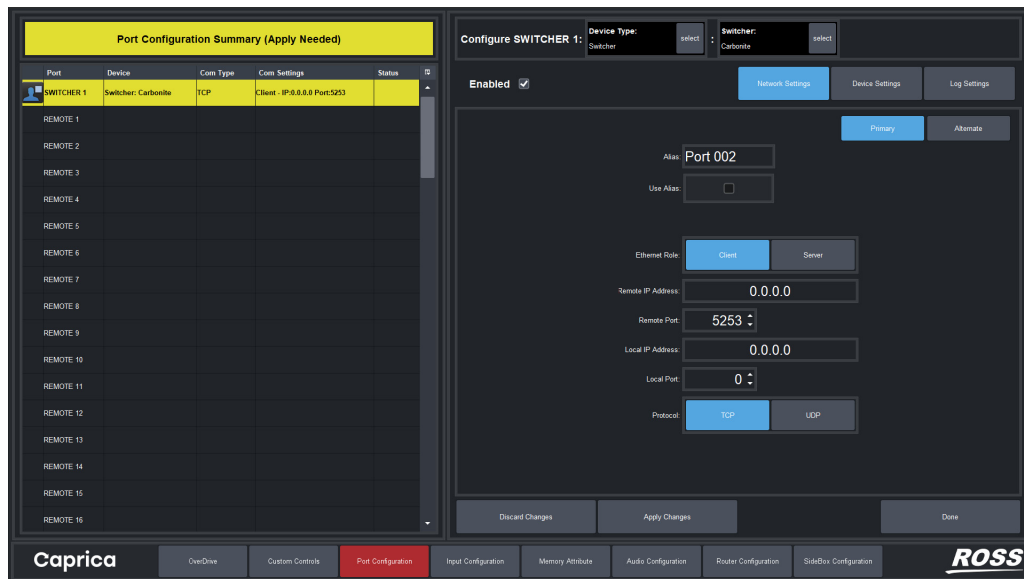
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Carbonite switcher in a Quorum system.

8. In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

9. Click **Carbonite**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Carbonite switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Carbonite switcher.

14. Use the **Remote Port** box to enter or select 5253.

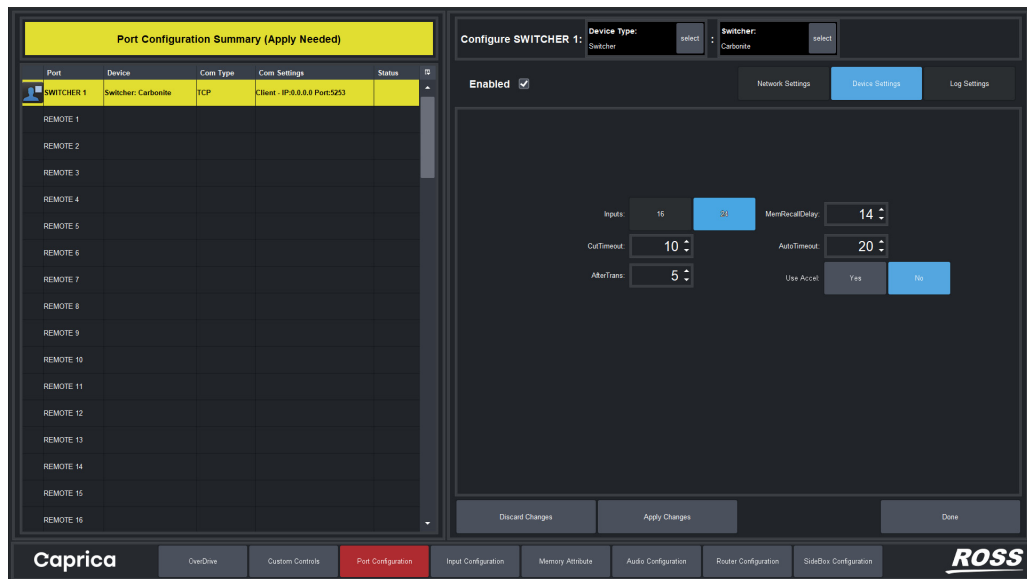
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Carbonite switcher.



19. Use the **Inputs** buttons to set the number of inputs on your Carbonite frame.

20. Use the **MemRecallDelay** setting to enter or select the number of fields to wait for memory recalls to complete.

21. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Use the **AutoTimeout** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

23. Use the **AfterTrans** box to enter or select the number of frames to wait after Caprica confirms that a transition is complete.

24. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Carbonite switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
25. Click **Apply Changes** to save the switcher settings.
26. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Graphite CPC Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Graphite CPC All-In-One Production System through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Ross Video Graphite CPC All-In-One Production System
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

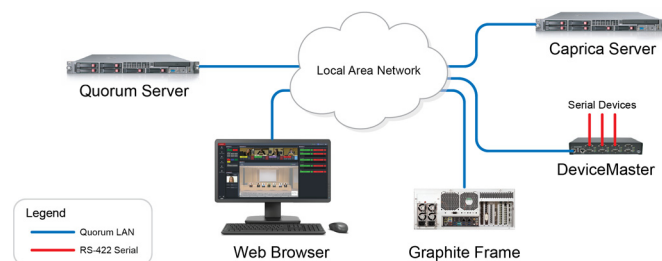
## Quorum System Setup

To set up a Quorum system with a Ross Video Graphite CPC All-In-One Production System, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 13–2.
- On the Caprica Server, create a Switcher device for your Ross Video Graphite CPC All-In-One Production System. Refer to the section “**Configuring a Switcher Device for a Ross Video Graphite CPC All-In-One Production System**” on page 13–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 13–6.

## Quorum System Connections

In a Quorum system, a Ross Video Graphite CPC All-In-One Production System connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 13.1**) illustrates the cabling layout of the Ross Video Graphite CPC All-In-One Production System connection to a Quorum system.



*Figure 13.1 Quorum System Connection to a Ross Video Graphite CPC All-In-One Production System*

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Graphite CPC Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Ross Video Graphite CPC All-In-One Production System to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Graphite CPC Frame to your internal network.
5. Use an **Ethernet** cable to connect the Graphite CPC Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Ross Video Graphite CPC All-In-One Production System, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Ross Video Graphite CPC All-In-One Production System

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Ross Video Graphite CPC All-In-One Production System in a Quorum system.

**To configure the SWITCHER1 device for a Ross Video Graphite CPC All-In-One Production System**

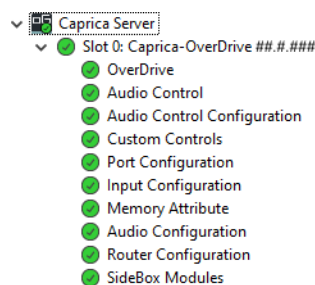
1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

3. In the **DashBoard Tree View**, expand the **Caprica Server** node.  
The **Caprica Server** node displays the available Caprica Servers.



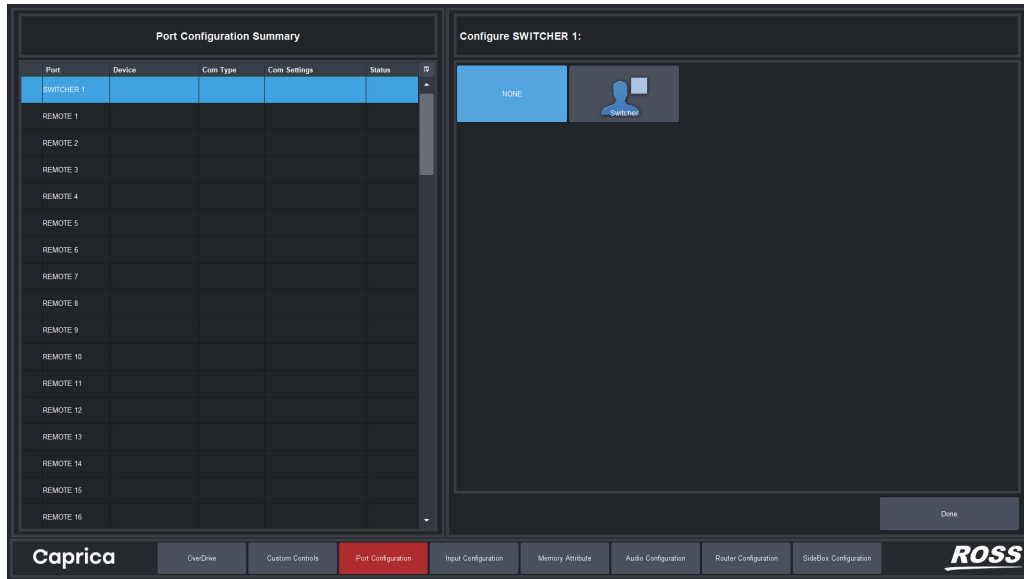
4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.  
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.



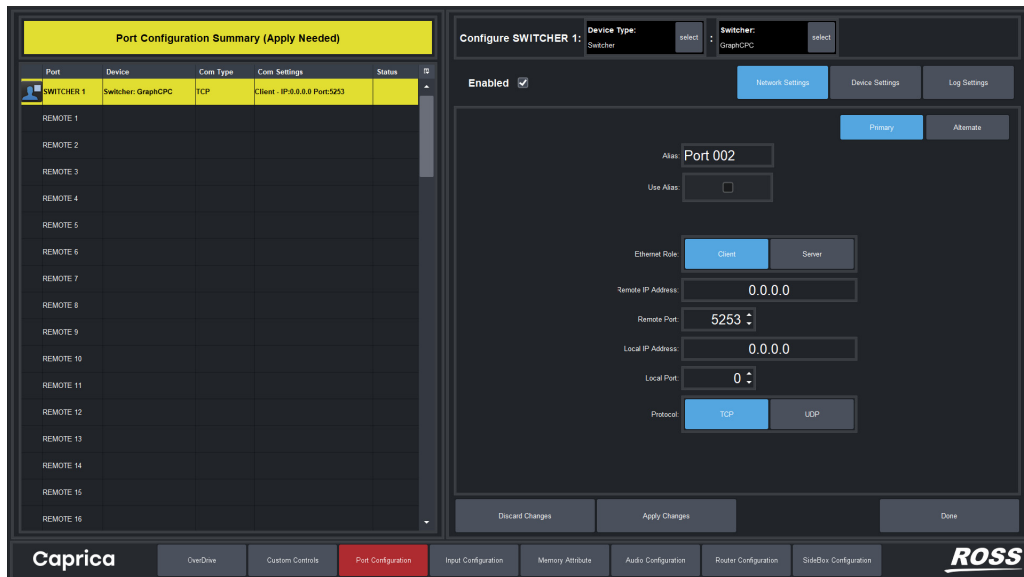
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Ross Video Graphite CPC All-In-One Production System in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

- Click **GraphCPC**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Ross Video Graphite CPC All-In-One Production System.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Ross Video Graphite CPC All-In-One Production System.

14. Use the **Remote Port** box to enter or select 5253.

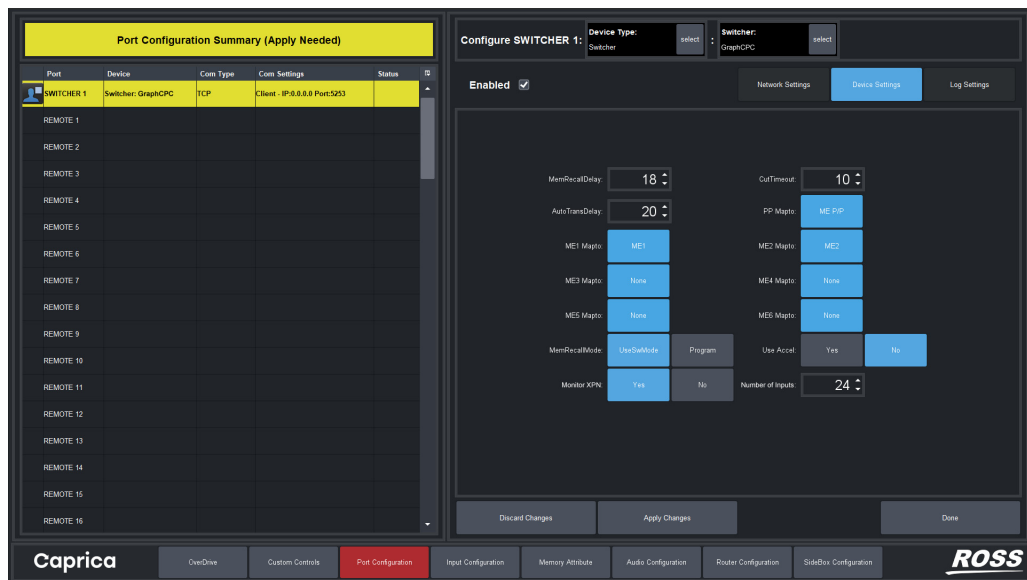
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Graphite CPC switcher.



19. Use the **MemRecallDelay** box to enter or select the number of fields to wait after a memory recall until everything is “settled”, the memory recall is officially over, and OverDrive can continue.

20. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

21. Use the **AutoTransDelay** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

22. Click **PP Mapto** to select the ME on your Graphite CPC switcher to map to the Program bus in Caprica.  
When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.
23. Click **ME1 Mapto** to select the ME on your Graphite CPC switcher to map to ME1 in Caprica.
24. Click **ME2 Mapto** to select the ME on your Graphite CPC switcher to map to ME2 in Caprica.
25. Click **ME3 Mapto** to select the ME on your Graphite CPC switcher to map to ME3 in Caprica.
26. Click **ME4 Mapto** to select the ME on your Graphite CPC switcher to map to ME4 in Caprica.
27. Click **ME5 Mapto** to select the ME on your Graphite CPC switcher to map to ME5 in Caprica.
28. Click **ME6 Mapto** to select the ME on your Graphite CPC switcher to map to ME6 in Caprica.
29. Use the **MemRecallMode** buttons to set the memory recall method to use. The available settings are as follows:
  - **UseSwMode** — use the memory recall mode set on the switcher to execute memory recalls.
  - **Program** — use the Program memory recall mode to execute memory recalls.
30. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Graphite CPC switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
31. Use the **Monitor XPN** buttons to set the connection between the Graphite CPC switcher and XPression for live production. The available settings are as follows:
  - **Yes** — treat the Graphite CPC switcher as not connected to XPression, just like the Caprica Server not being able to connect to the Graphite CPC switcher. Most users should select this setting.
  - **No** — let the Caprica Server try control the Graphite CPC switcher, even if it is not connected to XPression.
32. Use the **Number of Inputs** box to enter or select the number of inputs on your Graphite CPC frame.
33. Click **Apply Changes** to save the switcher settings.
34. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Graphite Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Graphite All-In-One Production System through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Configuring a Switcher Device for a Ross Video Graphite All-In-One Production System
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with a Ross Video Graphite All-In-One Production System, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 14–2.
- On the Caprica Server, create a Switcher device for your Ross Video Graphite All-In-One Production System.  
Refer to the section “**Configuring a Switcher Device for a Ross Video Graphite All-In-One Production System**” on page 14–3.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 14–6.

## Quorum System Connections

In a Quorum system, a Ross Video Graphite All-In-One Production System connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 14.1**) illustrates the cabling layout of the Ross Video Graphite All-In-One Production System connection to a Quorum system.

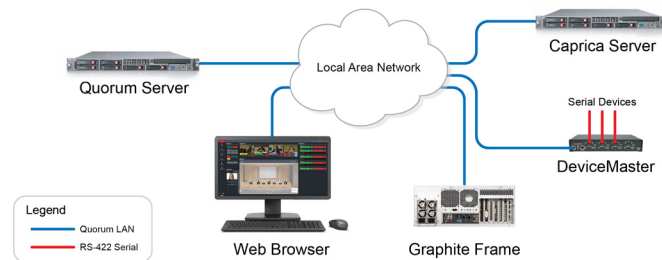


Figure 14.1 Quorum System Connection to a Ross Video Graphite All-In-One Production System

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- DeviceMaster for serial device connections
- Graphite Frame and Panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect a Ross Video Graphite All-In-One Production System to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Graphite Frame to your internal network.
5. Use an **Ethernet** cable to connect the Graphite Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

**For More Information on...**

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling a Ross Video Graphite All-In-One Production System, refer to the switcher setup documentation supplied with your switcher.

## Configuring a Switcher Device for a Ross Video Graphite All-In-One Production System

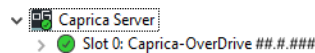
The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Ross Video Graphite All-In-One Production System in a Quorum system.

**To configure the SWITCHER1 device for a Ross Video Graphite All-In-One Production System**

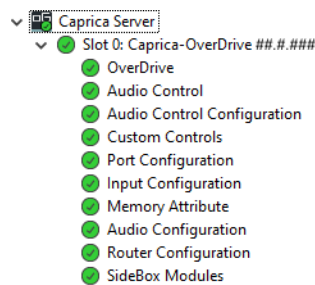
1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

3. In the **DashBoard Tree View**, expand the **Caprica Server** node.  
The **Caprica Server** node displays the available Caprica Servers.

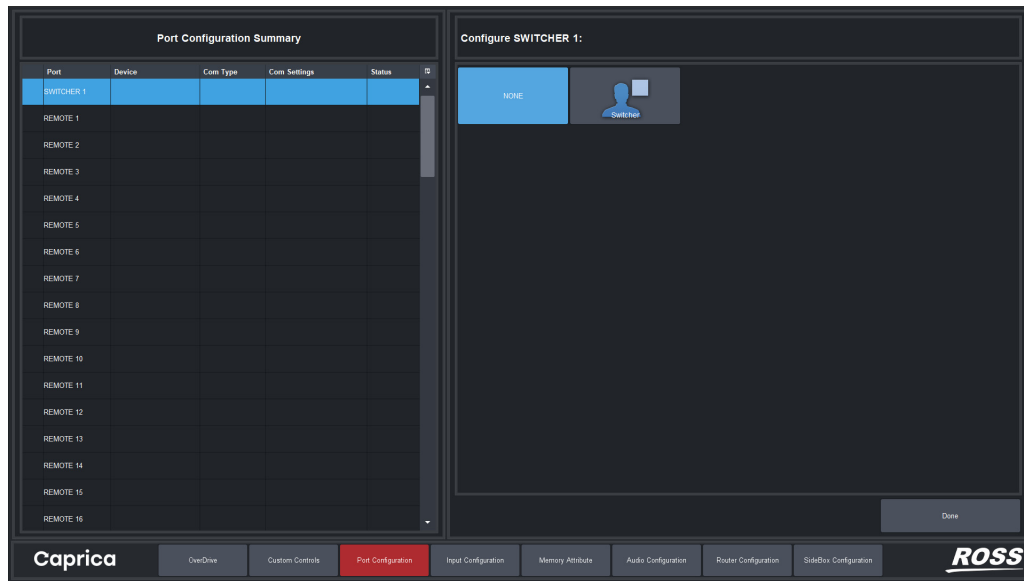


4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.  
The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.  
The **Port Configuration** client opens in the **Device View**.
6. Use the **Window** menu to select **Full Screen**.  
The **Port Configuration** client expands to full screen view.

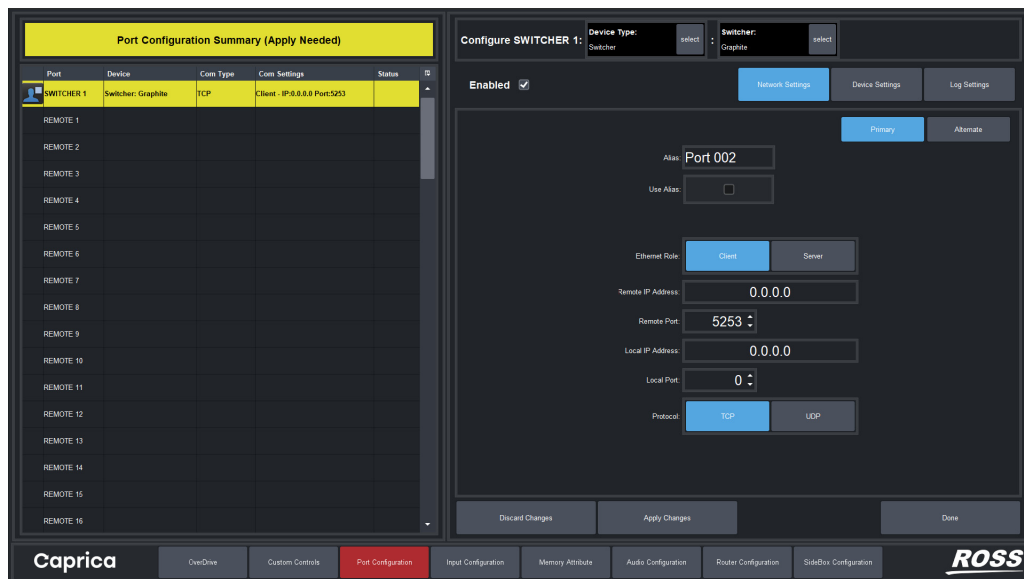
- In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.  
The **Configure SWITCHER1** panel opens.



The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with a Ross Video Graphite All-In-One Production System in a Quorum system.

- In the **Configure SWITCHER1** panel, click **Switcher**.  
The **Configure SWITCHER1** panel lists the available switchers.
- Click **Graphite**.

The **Configure SWITCHER1** panel displays the **Network Settings** for a Ross Video Graphite All-In-One Production System.



- To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Ross Video Graphite All-In-One Production System.

14. Use the **Remote Port** box to enter or select 5253.

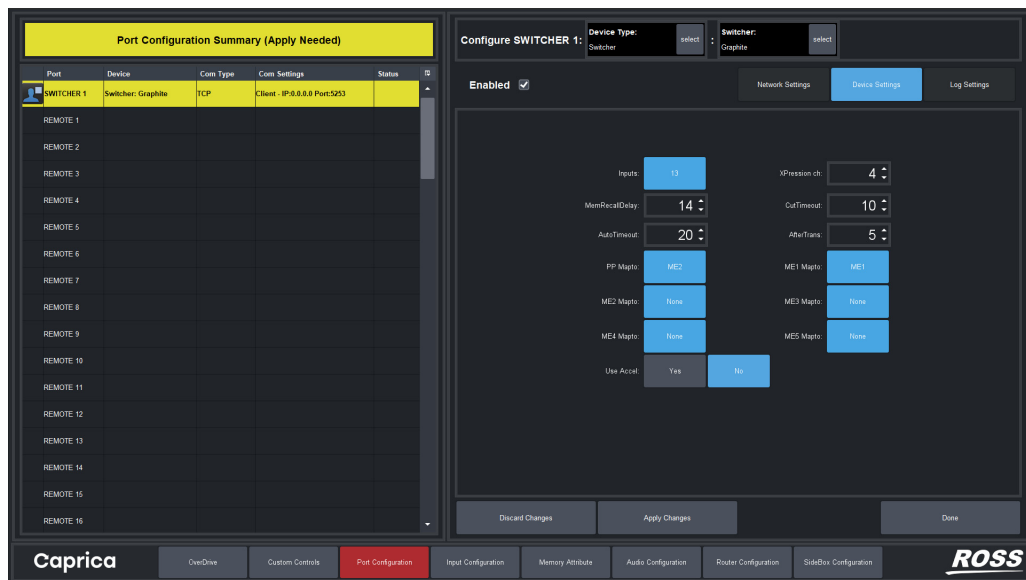
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for a Graphite switcher.



19. Click **Inputs** to set the number of inputs on your Graphite frame.

20. Use the **XPression ch** setting to enter or select the number of internal XPression video/alpha input pairs on your Carbonite frame.

21. Use the **MemRecallDelay** setting to enter or select the number of fields to wait for memory recalls to complete.

22. Use the **CutTimeout** box to enter or select the number of frames to wait after a Cut transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

23. Use the **AutoTimeout** box to enter or select the number of frames to wait after an AutoTrans transition until everything is “settled”, the transition is officially over, and OverDrive can continue.

24. Use the **AfterTrans** box to enter or select the number of frames to wait after Caprica confirms that a transition is complete.

25. Click **PP Mapto** to select the ME on your Graphite switcher to map to the Program bus in Caprica.  
When using a MiniME as Program/Preset, Ross Video recommends that you use the highest numbered MiniME to avoid re-entry conflicts and errors. Using a lower numbered MiniME as Program/Preset may hinder Quorum taking multi-layered shots on air.
26. Click **ME1 Mapto** to select the ME on your Graphite switcher to map to ME1 in Caprica.
27. Click **ME2 Mapto** to select the ME on your Graphite switcher to map to ME2 in Caprica.
28. Click **ME3 Mapto** to select the ME on your Graphite switcher to map to ME3 in Caprica.
29. Click **ME4 Mapto** to select the ME on your Graphite switcher to map to ME4 in Caprica.
30. Click **ME5 Mapto** to select the ME on your Graphite switcher to map to ME5 in Caprica.
31. Use the **Use Accel** buttons to control the use of an experimental feature to improve communication performance between your Graphite switcher and Caprica Server. The available settings are as follows:
  - **Yes** — use this experimental feature.
  - **No** — do not use this experimental feature.
32. Click **Apply Changes** to save the switcher settings.
33. Click **Done** to close the **Configure SWITCHER1** panel.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Ultrix Acuity Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Ultrix Acuity switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Switcher Communications Setup
- Configuring an Ultrix Acuity Switcher Device
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with an Ultrix Acuity switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 15–2.
- Configure you Ultrix Acuity frame to connect to the Quorum Server.  
Refer to the section “**Switcher Communications Setup**” on page 15–3.
- On the Caprica Server, create a Switcher Device for your Ultrix Acuity switcher.  
Refer to the section “**Configuring an Ultrix Acuity Switcher Device**” on page 15–5.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 15–8.

## Quorum System Connections

In a Quorum system, an Ultrix Acuity switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 15.1**) illustrates the cabling layout of the Ultrix Acuity switcher connection to a Quorum system.

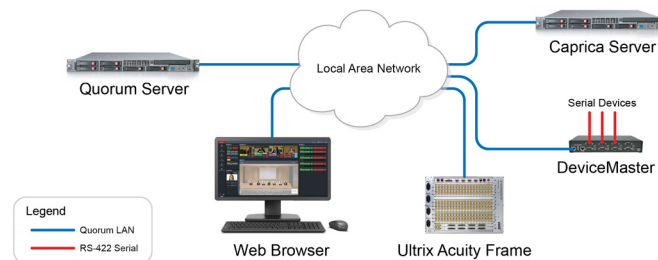


Figure 15.1 Quorum System Connection to an Ultrix Acuity Switcher

- ★ In an Ultrix Acuity MultiPanel configuration, Quorum is only able to interface with the Master Panel. Quorum cannot interface with the Satellite panels in an Ultrix Acuity MultiPanel configuration.

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- Ultrix Acuity frame and panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect an Ultrix Acuity switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Ultrix Acuity Frame to your internal network.
5. Use an **Ethernet** cable to connect the Ultrix Acuity Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

### For More Information on...

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling an Ultrix Acuity switcher, refer to the switcher setup documentation supplied with your switcher.

## Switcher Communications Setup

On your Ultrix Acuity switcher you must assign a Peripheral port and start communications to enable Quorum to control your Ultrix Acuity switcher.

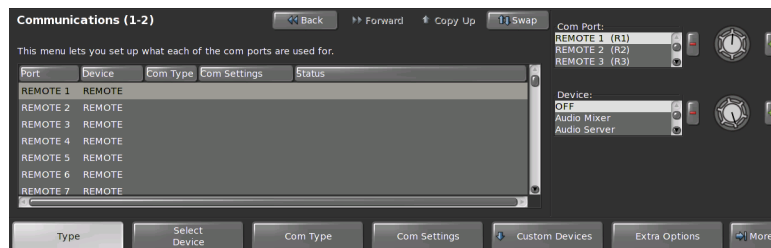
### Peripheral Port

Quorum communicates with your Ultrix Acuity switcher over a Peripheral port.

#### To configure a Peripheral port to communicate with Quorum

1. Navigate to the **Communications Menu (1-2)** by pressing **Home > Setup > Installation > Com Setup**.
2. Configure the Peripheral port for Quorum communication as follows:
  - a. Press **Type**.

The **Type** page opens.

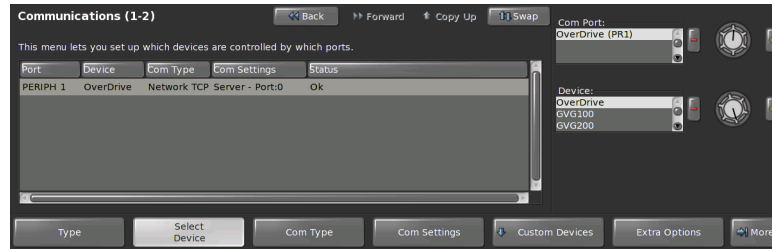


- b. Use the **Com Port** knob to select the first available Frame net port.
- c. Use the **Device** knob to select **Editor**.

3. Assign the Quorum device to the selected Frame net port as follows:

a. Press **Select Device**.

The **Select Device** page opens.



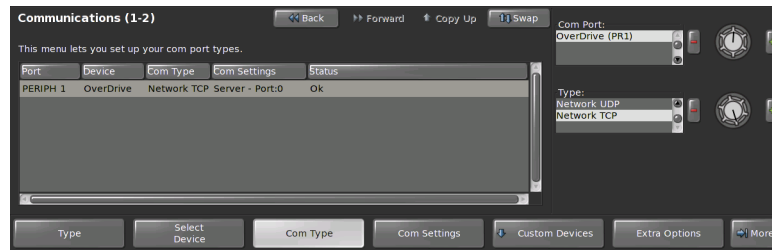
b. Use the **Com Port** knob to select your Frame net port.

c. Use the **Device** knob to select Quorum.

4. Select the type of communication that is used to communicate with Quorum as follows:

a. Press **Com Type**.

The **Com Type** page opens.



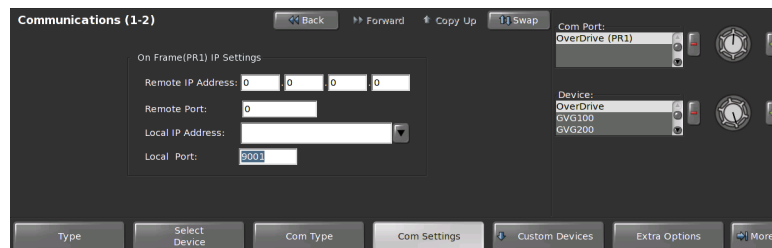
b. Use the **Com Port** knob to select your Frame net port.

c. Use the **Type** knob to select **Network TCP**.

5. Set the communication settings for the Peripheral port as follows:

a. Press **Com Settings**.

The **Com Settings** page opens.



b. Use the **Com Port** knob to select your Frame net port.

c. Use the **Client/Server** knob to select **Server**.

d. In the **Local Port** box, enter 9001.

6. Press **Home**.

The **Installation Change Confirmation Screen** opens.

7. Press **Confirm** to save your Peripheral port configuration.

## Start Communications

After configuring Peripheral port 1 and an External Link port 2, you must turn the Editor on to enable Quorum to control your Ultrix Acuity switcher.

### To enable Quorum to control your Ultrix Acuity switcher

1. Navigate to the **Remote Enables** menu by pressing **Home > More > Remote Enables**.
2. Toggle the **Editor** button to **ON**.

## Configuring an Ultrix Acuity Switcher Device

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with an Ultrix Acuity switcher in a Quorum system.

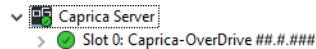
### To configure the SWITCHER1 device for an Ultrix Acuity switcher

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

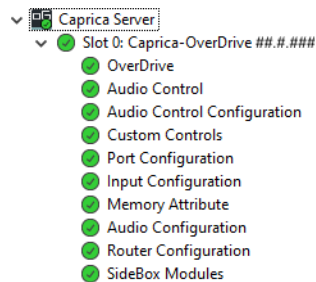
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.

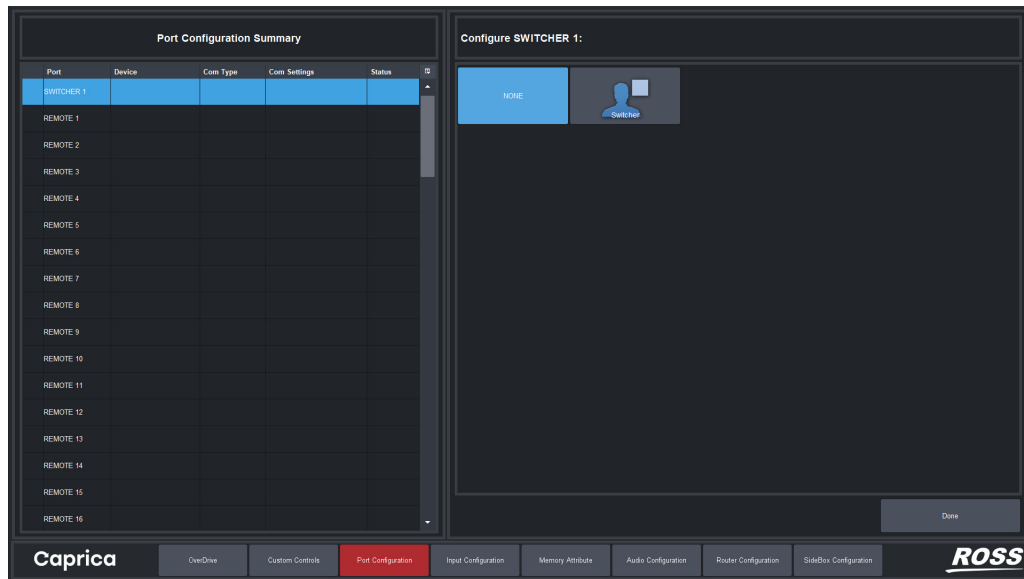
The **Port Configuration** client opens in the **Device View**.

6. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.

7. In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.

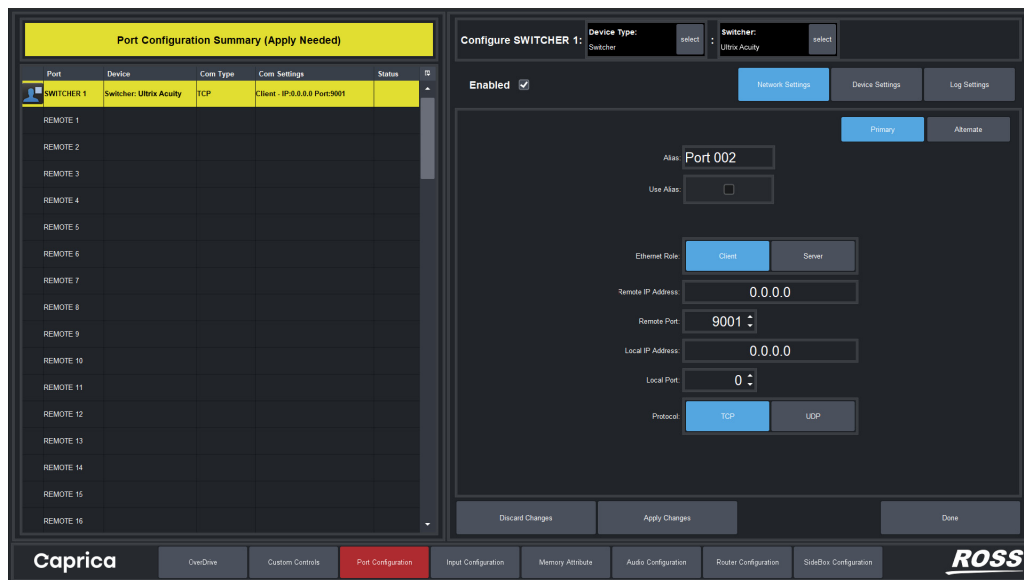


8. In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

9. Click **Ultrix Acuity**.

The **Configure SWITCHER1** panel displays the **Network Settings** for an Ultrix Acuity switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Ultrix Acuity switcher.

14. Use the **Remote Port** box to enter or select 9001.

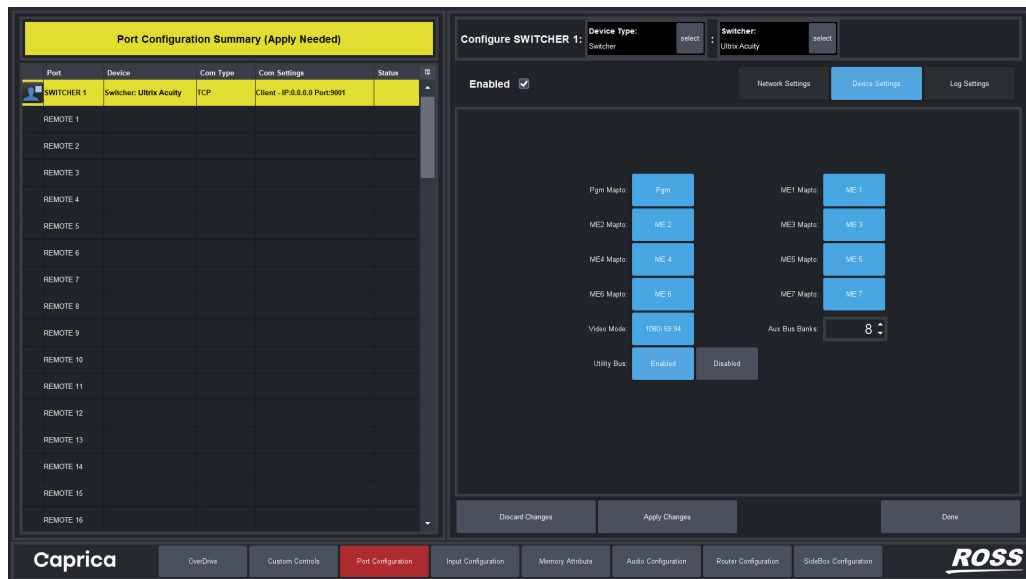
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for an Ultrix Acuity switcher.



19. Click **PP Mapto** to select the ME on your Ultrix Acuity switcher to map to the Program bus in Caprica.

20. Click **ME1 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME1 in Caprica.

21. Click **ME2 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME2 in Caprica.

22. Click **ME3 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME3 in Caprica.

23. Click **ME4 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME4 in Caprica.

24. Click **ME5 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME5 in Caprica.

25. Click **ME6 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME6 in Caprica.

26. Click **ME7 Mapto** to select the ME on your Ultrix Acuity switcher to map to ME7 in Caprica.

27. Click the **Video Mode** setting button to select the video format set on your Ultrix Acuity switcher.

28. Use the **Utility Bus** buttons to control the use of the Acuity switcher Utility Bus. The available settings are as follows:
  - **Enable** (new install default) — enable access to the Acuity switcher Utility Bus.
    - › **Custom Controls** — access Custom Controls in the Utility Bus, including setting bus sources and copying bus functions. Custom Control Utility Bus functions also work using RossTalk commands.
    - › **Memory Recalls** — switcher memories that include Utility Buses. Caprica Custom Controls can also recall these memories. When OverDrive templates recall these memories the Utility Buses will recall their saved bus sources.
  - **Disable** (upgrade default) — disable access to the Acuity switcher Utility Bus.
29. Use the **Aux Bus Banks** box to enter or select the number of aux bus banks on your Ultrix Acuity switcher.
30. Click **Apply Changes** to save the switcher settings.
31. Click **Done** to close the **Configure SWITCHER1** panel.
32. To view the connection status between your switcher and Caprica, click the **About Caprica** node of your **Caprica Server** in the **DashBoard Tree View**.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Acuity Setup for Quorum

This chapter provides instructions for connecting a Quorum system with a Ross Video Acuity switcher through a Caprica Server.

The following topics are discussed in this chapter:

- Quorum System Setup
- Quorum System Connections
- Switcher Communications Setup
- Configuring an Acuity Switcher Device
- Connecting Quorum to Your Caprica Server
- Configuring Your Caprica Server

## Quorum System Setup

To set up a Quorum system with an Acuity switcher, complete the following:

- Connect the Quorum system components together.  
Refer to the section “**Quorum System Connections**” on page 16–2.
- Configure you Acuity frame to connect to the Quorum Server.  
Refer to the section “**Switcher Communications Setup**” on page 16–3.
- On the Caprica Server, create a Switcher Device for your Acuity switcher.  
Refer to the section “**Configuring an Acuity Switcher Device**” on page 16–5.
- Configure the Quorum Server to connect to the Caprica Server.  
Refer to the section “**Connecting Quorum to Your Caprica Server**” on page 16–8.

## Quorum System Connections

In a Quorum system, an Acuity switcher connects to the Quorum Server through a Caprica Server. The following diagram (**Figure 16.1**) illustrates the cabling layout of the Acuity switcher connection to a Quorum system.

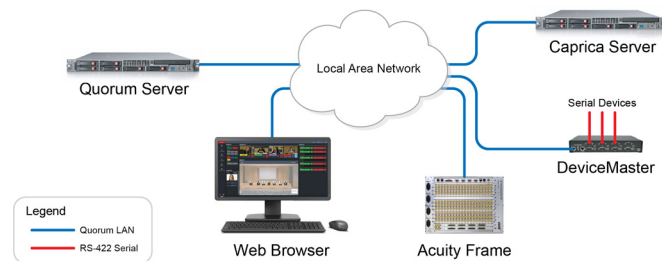


Figure 16.1 Quorum System Connection to an Acuity Switcher

- ★ In an Acuity MultiPanel configuration, Quorum is only able to interface with the Master Panel. Quorum cannot interface with the Satellite panels in an Acuity MultiPanel configuration.

The following Quorum system components connect through the internal network of your company:

- Quorum Server
- Caprica Server
- Acuity frame and panel

Cabling to connect to Quorum system components to an internal network is not provided with Quorum systems.

### To connect an Acuity switcher to a Quorum system

1. Verify that the **Quorum Server** is connected to your internal network through Ethernet port **1** on the back of the server.
2. Verify that the **Caprica Server** is connected to your internal network.
3. Use an **Ethernet** cable to connect the DeviceMaster **UP** port to your internal network.
4. Use an **Ethernet** cable to connect the Acuity Frame to your internal network.
5. Use an **Ethernet** cable to connect the Acuity Panel to your internal network.

## Quorum Server Peripheral Connections

The Quorum system comes with a USB Keyboard that can be connected to a USB port on the Quorum computer.

- ★ USB/KVM extenders can interfere with Quorum system operation and are not supported for use with Quorum client computers. Place Quorum client computers within the standard keyboard, video, and mouse cable lengths from the operator.

Touch-screen monitors may be purchased as an option to provide a dual-monitor display. Contact your Ross Video representative for more information on this option.

- ★ For DELL Quorum computers, connect the primary monitor to plug number 1 on the Y break-out cable attached to the back of the computer to ensure that the primary monitor is used for the POST and the operating system.

### For More Information on...

- cabling a Quorum Server, refer to the *Cabling Your Quorum Server Quick Start Guide*.
- cabling a Caprica Server, refer to the *Cabling Your Caprica Server Quick Start Guide*.
- cabling an Acuity switcher, refer to the switcher setup documentation supplied with your switcher.

## Switcher Communications Setup

On your Acuity switcher you must assign a Peripheral port and start communications to enable Quorum to control your Acuity switcher.

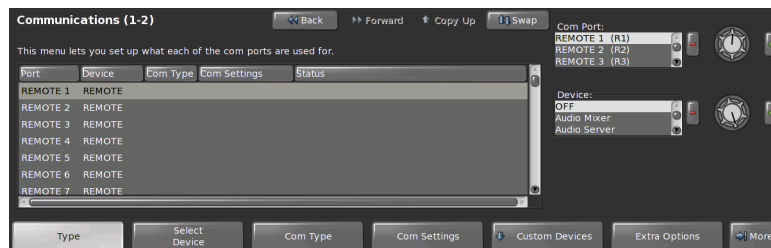
### Peripheral Port

Quorum communicates with your Acuity switcher over a Peripheral port.

#### To configure a Peripheral port to communicate with Quorum

1. Navigate to the **Communications Menu (1-2)** by pressing **Home > Setup > Installation > Com Setup**.
2. Configure the Peripheral port 1 port for Quorum communication as follows:
  - a. Press **Type**.

The **Type** page opens.

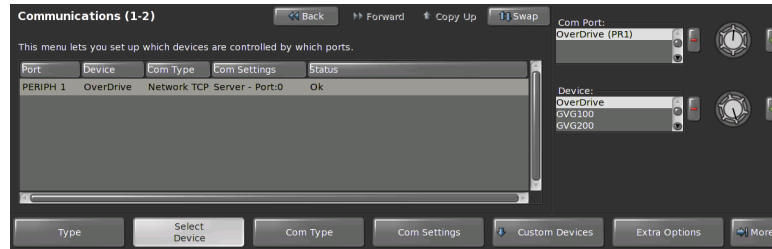


- b. Use the **Com Port** knob to select **PERIPH 1 (PR1)**.
- c. Use the **Device** knob to select **Editor**.

3. Assign the Quorum device to Peripheral port 1 as follows:

a. Press **Select Device**.

The **Select Device** page opens.



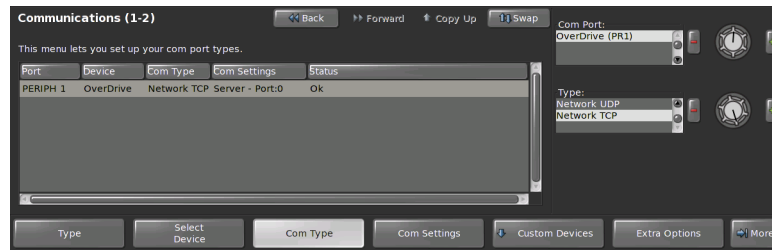
b. Use the **Com Port** knob to select **PERIPH 1 (PR1)**.

c. Use the **Device** knob to select **Quorum**.

4. Select the type of communication that is used to communicate with Quorum as follows:

a. Press **Com Type**.

The **Com Type** page opens.



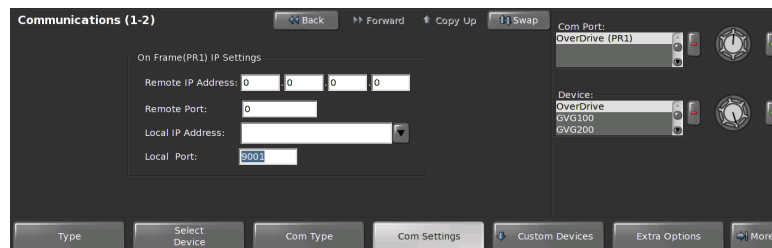
b. Use the **Com Port** knob to select **PERIPH 1 (PR1)**.

c. Use the **Type** knob to select **Network TCP**.

5. Set the communication settings Peripheral port 1 as follows:

a. Press **Com Settings**.

The **Com Settings** page opens.



b. Use the **Com Port** knob to select **PERIPH 1 (PR1)**.

c. Use the **Client/Server** knob to select **Server**.

d. In the **Local Port** box, enter 9001.

6. Press **Home**.

The **Installation Change Confirmation Screen** opens.

7. Press **Confirm** to save your Peripheral port 1 configuration.

## Start Communications

After configuring Peripheral port 1, you must turn the Editor on to enable Quorum to control your Acuity switcher.

### To enable Quorum to control your Acuity switcher

1. Navigate to the **Remote Enables** menu by pressing **Home > More > Remote Enables**.
2. Toggle the **Editor** button to **ON**.

## Configuring an Acuity Switcher Device

The SWITCHER1 device on the Caprica Server enables the Quorum Server to communicate with an Acuity switcher in a Quorum system.

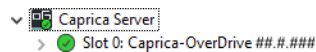
### To configure the SWITCHER1 device for an Acuity switcher

1. On the Client computer, verify that the following conditions are true:
  - The Client computer uses the current version of **DashBoard** software.
  - The Client computer can access a running Caprica Server on the network.
2. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.

**DashBoard** opens.

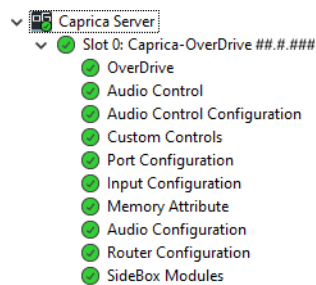
3. In the **DashBoard Tree View**, expand the **Caprica Server** node.

The **Caprica Server** node displays the available Caprica Servers.



4. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.

The **Slot 0: Caprica** node displays the available Caprica Server clients.



5. Double-click the **Port Configuration** node.

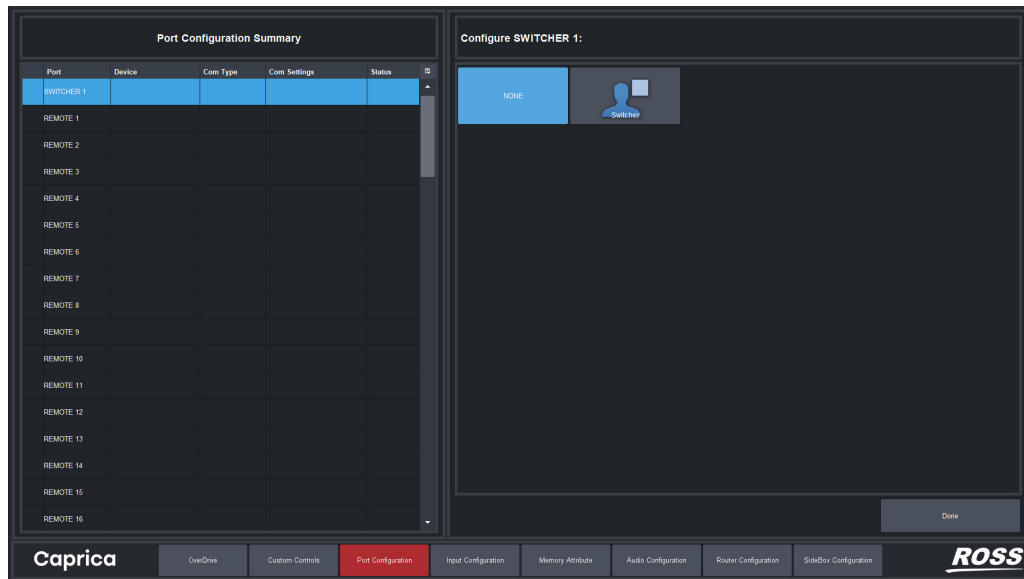
The **Port Configuration** client opens in the **Device View**.

6. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.

7. In the **Port Configuration Summary** table, double-click **SWITCHER1** in the **Port** column.

The **Configure SWITCHER1** panel opens.

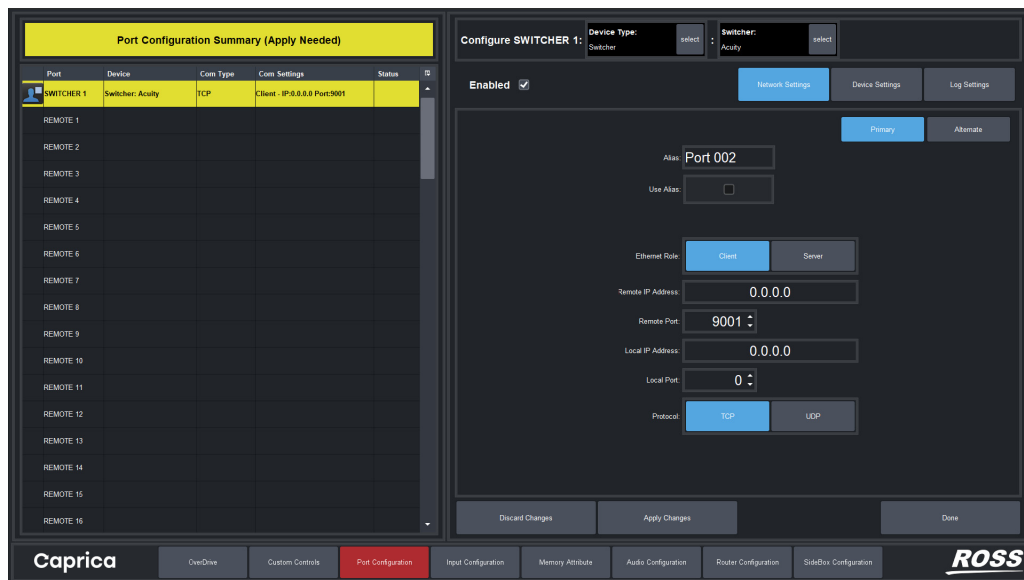


8. In the **Configure SWITCHER1** panel, click **Switcher**.

The **Configure SWITCHER1** panel lists the available switchers.

9. Click **Acuity**.

The **Configure SWITCHER1** panel displays the **Network Settings** for an Acuity switcher.



10. To enable Caprica to control the device you are configuring, confirm that the **Enable** check box is selected for the device. When you clear the **Enable** check box for a device, Caprica ignores and does not control the device.

11. To set a custom name for the remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

12. For the **Ethernet Role** setting, click **Client**.

13. In the **Remote IP Address** box, enter the IP address of your Acuity switcher.

14. Use the **Remote Port** box to enter or select 9001.

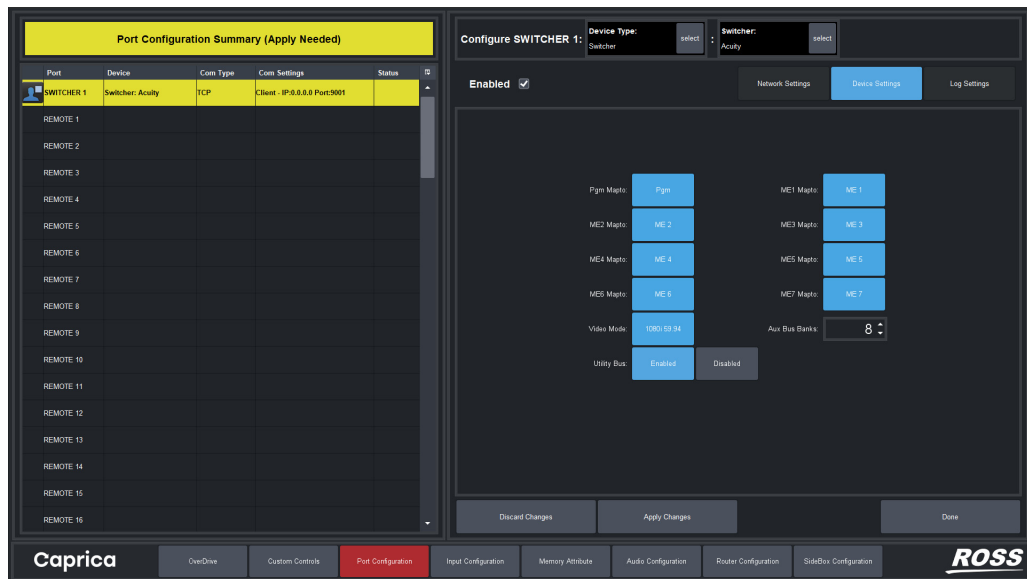
15. In the **Local IP Address** box, enter 0.0.0.0.

16. Use the **Local Port** box to enter or select 0.

17. For the **Protocol** setting, click **TCP**.

18. Click **Device Settings**.

The **Configure SWITCHER1** panel displays the **Device Settings** for an Acuity switcher.



19. Click **PP Mapto** to select the ME on your Acuity switcher to map to the Program bus in Caprica.

20. Click **ME1 Mapto** to select the ME on your Acuity switcher to map to ME1 in Caprica.

21. Click **ME2 Mapto** to select the ME on your Acuity switcher to map to ME2 in Caprica.

22. Click **ME3 Mapto** to select the ME on your Acuity switcher to map to ME3 in Caprica.

23. Click **ME4 Mapto** to select the ME on your Acuity switcher to map to ME4 in Caprica.

24. Click **ME5 Mapto** to select the ME on your Acuity switcher to map to ME5 in Caprica.

25. Click **ME6 Mapto** to select the ME on your Acuity switcher to map to ME6 in Caprica.

26. Click **ME7 Mapto** to select the ME on your Acuity switcher to map to ME7 in Caprica.

27. Click the **Video Mode** setting button to select the video format set on your Acuity switcher.

28. Use the **Utility Bus** buttons to control the use of the Acuity switcher Utility Bus. The available settings are as follows:
  - **Enable** (new install default) — enable access to the Acuity switcher Utility Bus.
    - › **Custom Controls** — access Custom Controls in the Utility Bus, including setting bus sources and copying bus functions. Custom Control Utility Bus functions also work using RossTalk commands.
    - › **Memory Recalls** — switcher memories that include Utility Buses. Caprica Custom Controls can also recall these memories. When OverDrive templates recall these memories the Utility Buses will recall their saved bus sources.
  - **Disable** (upgrade default) — disable access to the Acuity switcher Utility Bus.
29. Use the **Aux Bus Banks** box to enter or select the number of aux bus banks on your Acuity switcher.
30. Click **Apply Changes** to save the switcher settings.
31. Click **Done** to close the **Configure SWITCHER1** panel.
32. To view the connection status between your switcher and Caprica, click the **About Caprica** node of your **Caprica Server** in the **DashBoard Tree View**.

## Connecting Quorum to Your Caprica Server

In Quorum, you use the Server Configuration web page to configure the Quorum Server to communicate with the Quorum system switcher through the Caprica Server. To configure a Quorum Server to connect to a Caprica Server, refer to the section “**Configuring Caprica Communication Settings**” of the *Quorum Installation and Configuration Guide*.

## Configuring Your Caprica Server

After configuring a Caprica device for your switcher, configure the following on your Caprica Server:

- Devices connected to your Quorum system
- Inputs to your Quorum system
- Audio channel names displayed in Quorum
- Switcher Custom Controls available in Quorum

To complete the configuration of your Caprica Server, refer to the chapter “**Caprica Server Configuration**” on page 19–1.

# Camera Configuration

Quorum uses Caprica to control the cameras in a meeting venue. In Caprica, you must configure a Caprica device for each camera in your venue and assign it to a switcher input.

The following topics are discussed in this chapter:

- Configuring a Caprica Device for Your Cameras
- Connecting Camera Devices to Switcher Inputs

## Configuring a Caprica Device for Your Cameras

On the Caprica Server, you need to configure a Caprica device for each camera in your venue. Using the Port Configuration client on the Caprica Server, you can configure Caprica devices for your cameras.

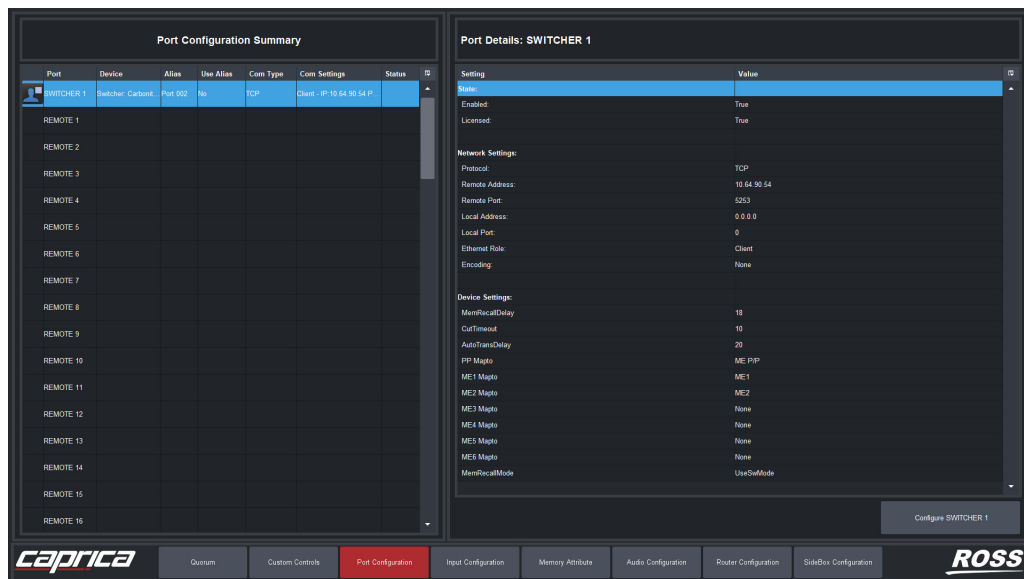
### To configure a Caprica device for a camera

1. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.
2. In the **DashBoard Tree View**, expand the **Caprica Server** node.
3. In the **Caprica Server** node, expand the **Slot 0: Caprica-Quorum** node.
4. Double-click the **Port Configuration** node.

The **Port Configuration** client opens in the **Device View**.

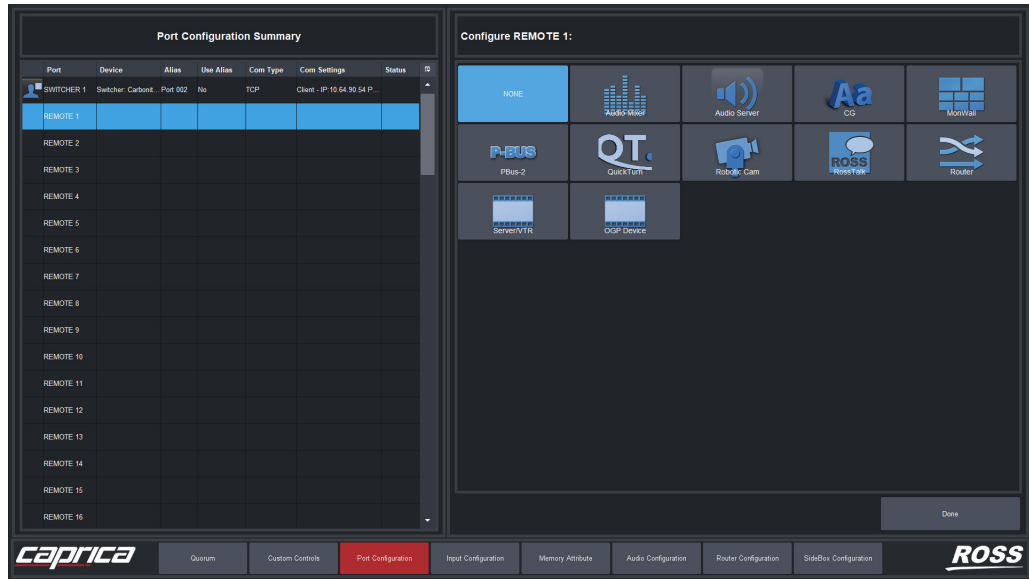
5. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.



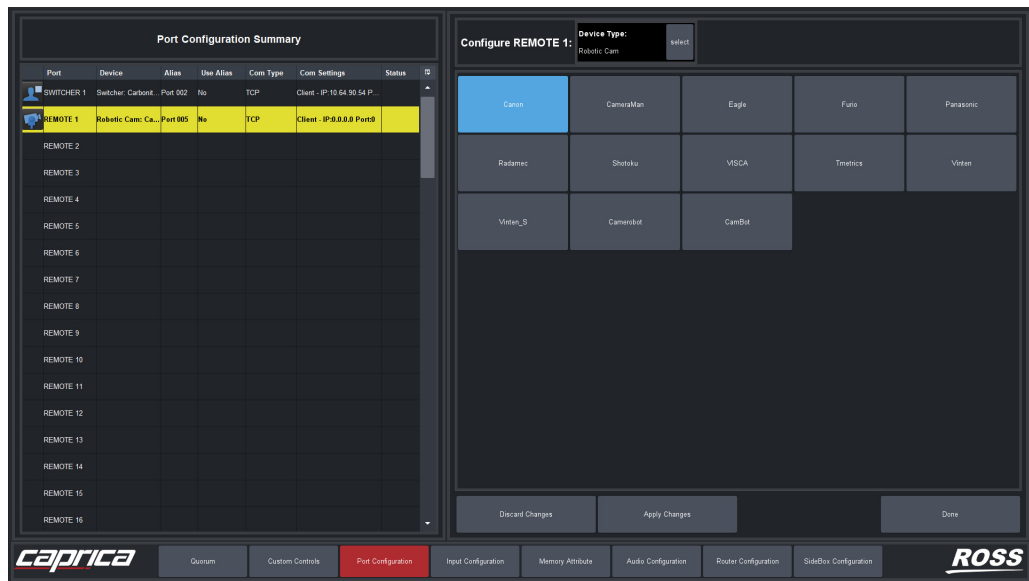
6. In the **Port** column of the **Port Configuration Summary** table, double-click the port to configure for the device (**REMOTE 1 to REMOTE72**).

The **Configure REMOTE #** panel for the selected port opens.



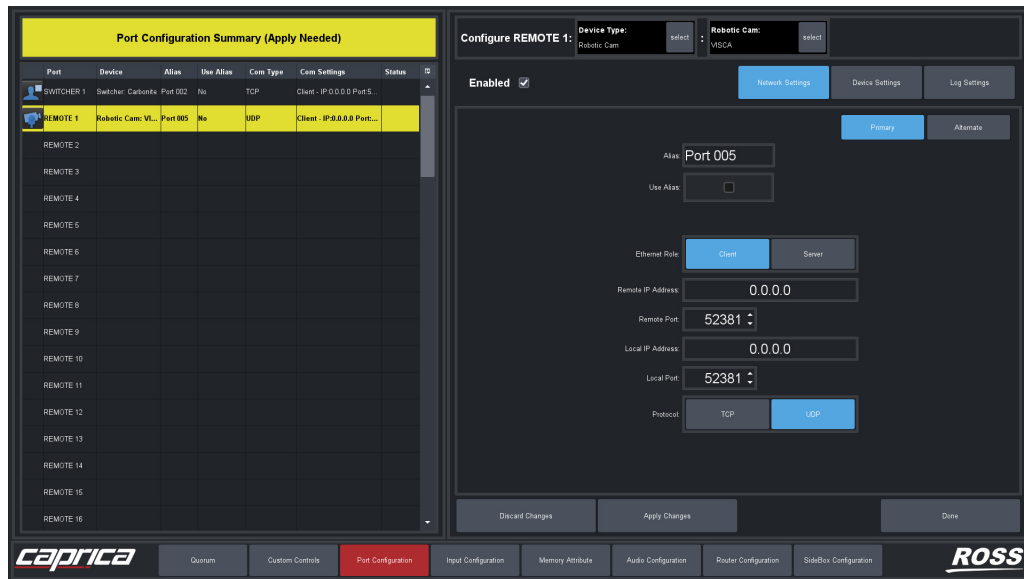
7. In the **Configure REMOTE #** panel, click **Robotic Cam**.

The **Configure REMOTE #** panel lists the available cameras.



If you selected the wrong device type, click **select** in the **Device Type** area to return to the list of available device types.

- Click the device to configure for your brand of camera. To configure a Ross Video PTZ camera, click **VISCA**. The **Configure REMOTE #** panel displays the **Network Settings** for the selected camera device.



If you selected the wrong device, click **select** in the **Device Name** area to return to the list of available devices.

- In the **Configure REMOTE #** panel, select the **Enable** check box to enable Caprica to control the device you are configuring. Clear the **Enable** check box for a device when you do not want Caprica to control the device.
- In the **Alias** box, enter a custom name for camera device on the remote port.  
For example: **PTZ1**.
- Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

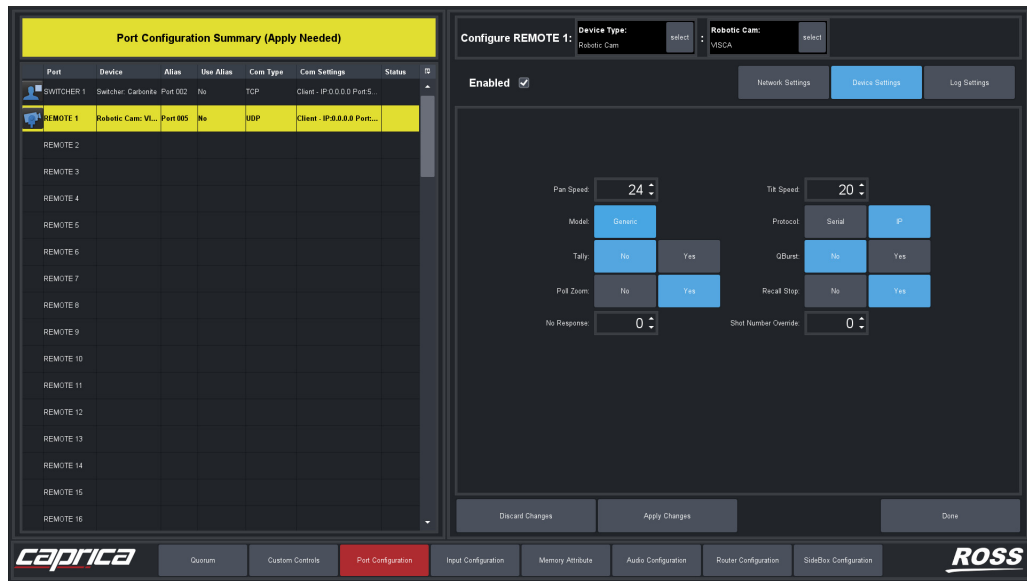
- Use the settings in the *Ross Video External Device Setup Sheet* for the selected camera device to configure the settings in the **Network Settings** section for the device.

Use the following settings to configure the **Network Settings** for a Ross Video PTZ camera:

- **Ethernet Role** — Client
- **Remote IP Address** — IP address of your PTZ camera
- **Remote Port** — Port number that your PTZ uses to communicate with other devices
- **Local IP Address** — 0.0.0.0
- **Local Port** — 0
- **Protocol** — TCP

### 13. Click Device Settings.

The **Configure REMOTE #** panel displays the **Device Settings** for the selected camera device.

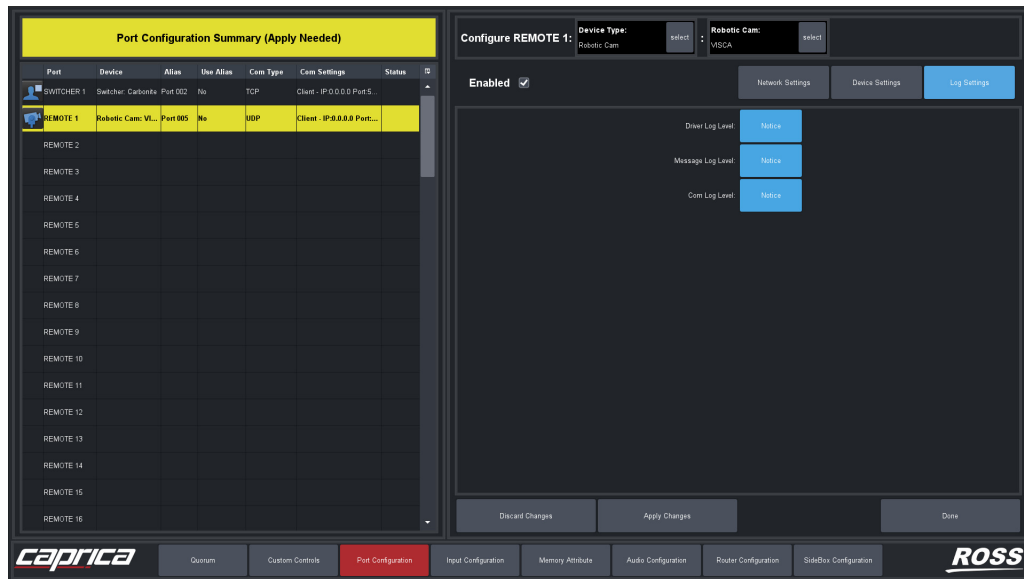


### 14. Use the following settings to configure the **Device Settings** for a Ross Video PTZ camera:

- **Pan Speed** — enter or select the speed at which to pan the camera, **1 to 24**.
- **Model** — click **Ross PTZ**.
- **Tally** — click **Yes** to enable camera tally. Click **No** to disable camera tally.
- **Poll Zoom** — click **Yes** to enable poll zoom. Click **No** to disable poll zoom.
- **No Response** — enter or select the interval for no response, **0 to 20**.
- **Tilt Speed** — enter or select the speed at which to tilt the camera, **1 to 20**.
- **Protocol** — click **IP**.
- **QBurst** — click **Yes** to enable QBurst. Click **No** to disable QBurst.
- **Recall Stop** — click **Yes**. to connect recalls. Click **No** to not connect recalls.
- **Shot Number Override** — enter or select the number of shots that OverDrive can recall from the camera, **1 to 255**. Enter **0** to use the camera default as the number of shots that OverDrive can recall.

15. To select the logging level of a device, click **Log Settings**.

The **Configure REMOTE #** panel displays the **Log Settings** for the camera device.



16. Click the **Log Level** buttons to set the logging level for the camera device.

17. Click **Apply Changes** to save the network, device, and log settings for the camera device.

18. Click **Done** to close the **Configure REMOTE #** panel.

19. Repeat step 6 to step 17 for each camera you want to connect to your Quorum Server.

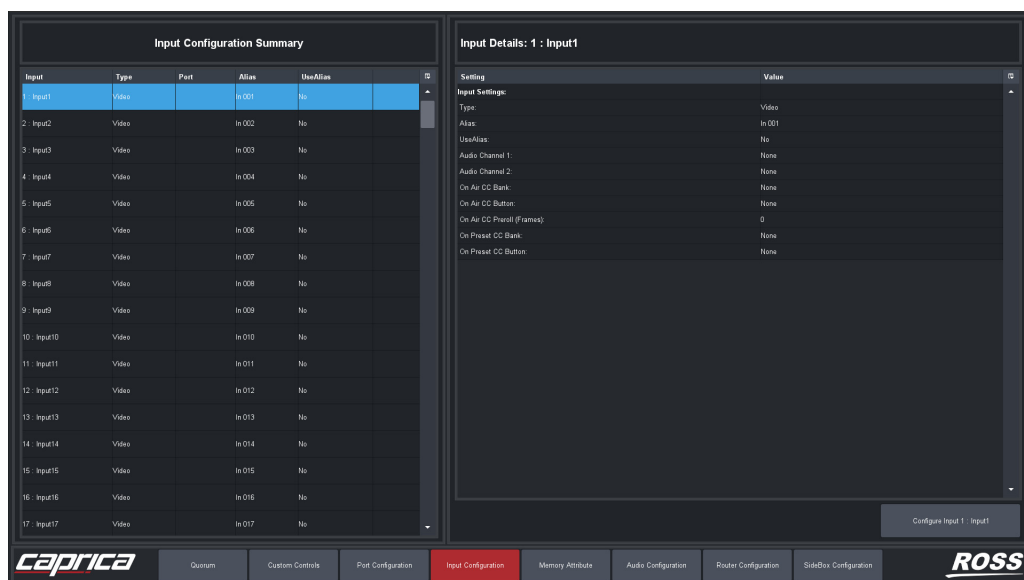
## Connecting Camera Devices to Switcher Inputs

After configuring Caprica devices for your cameras, you need to connect the camera devices to switcher inputs.

**To configure a switcher input for a camera device**

1. At the bottom of the **Device View**, click **Input Configuration**.

The **Input Configuration** client opens.

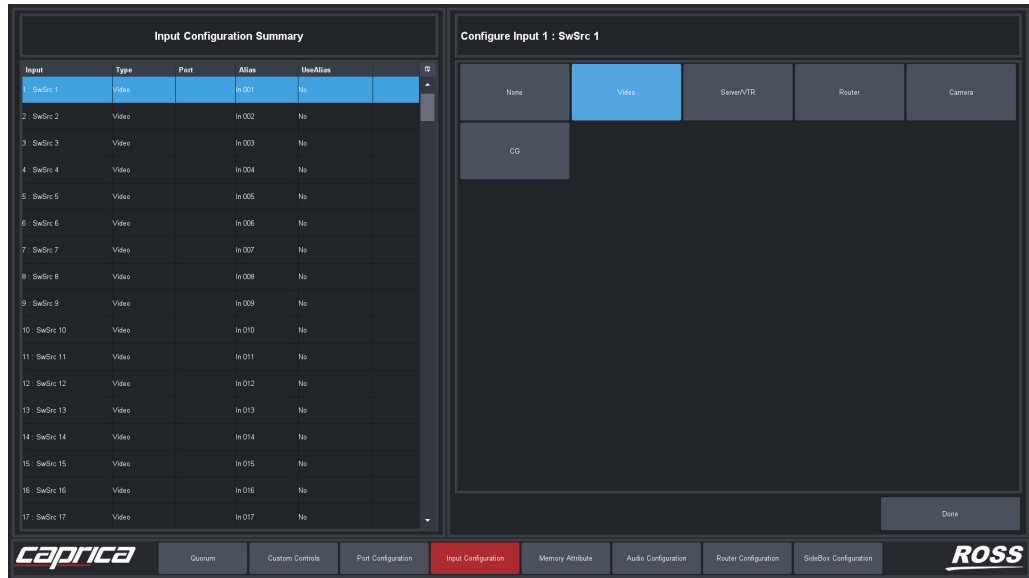


- In the **Input** column of the **Input Configuration Summary** table, double-click the switcher input to connect with a camera.

The **Configure Input #** panel displays the **Input Settings** the current **Input Type** associated with the selected switcher input.

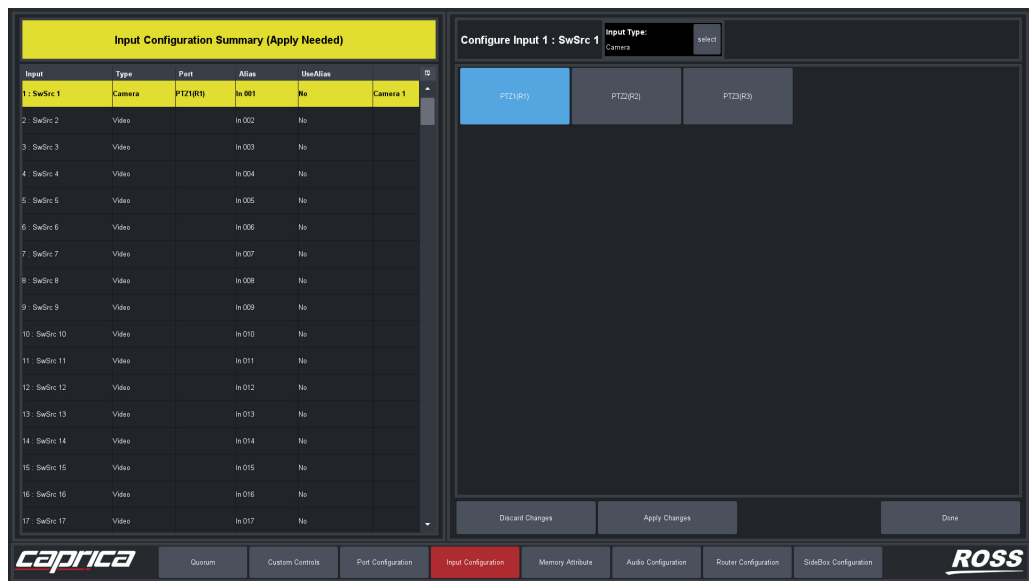
- At the top of the **Configure Input #** panel, click **select** in the **Input Type** area.

The **Configure Input #** panel lists the available input types.



- Click **Camera**.

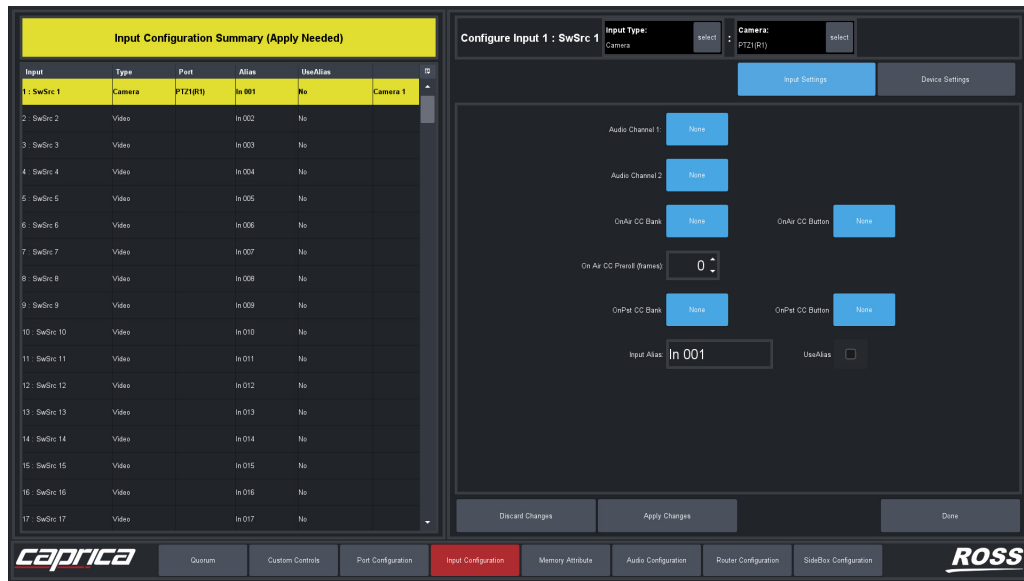
The **Configure Input #** panel lists the camera devices that you can connect with the selected switcher input.



If you selected the wrong input type, click **select** in the **Input Type** area to return to the list of available input types.

- Click the **Camera Device** to connect to the selected switcher input.

The **Configure Input #** panel displays the **Input Settings** for the selected switcher input.



If you selected the wrong device, click **select** in the **Device Name** area to return to the list of available devices.

- Use the following settings to configure the **Device Settings** for the combination of switcher input and camera device:
  - Audio Channel 1** — click this button to select the audio channel for the audio channel 1 of the selected switcher input.
  - Audio Channel 2** — click this button to select the audio channel for the audio channel 2 of the selected switcher input.
  - On Air CC Bank** — click this button to select the custom control bank that contains the custom control button assigned to the custom control to run when the input goes on air.
  - On Air CC Button** — click this button to select the custom control button assigned to the custom control to run when the input goes on air.

To not run a custom control when the input goes on air, select **None** for either the **On Air CC Bank** or the **On Air CC** setting.

- On Air CC Preroll (frame)** — in this box, enter or select the number of frames to delay taking the input on air after firing the selected On Air custom control.
- On Pst CC Bank** — click this button to select the custom control bank that contains the custom control button assigned to the custom control to run when Quorum prepares the input.
- On Pst CC Button** — click this button to select the custom control button assigned to the custom control to run when Quorum prepares the input.

To not run a custom control when Quorum prepares the input, select **None** for either the **On Pst CC Bank** or the **On Pst CC Button**.

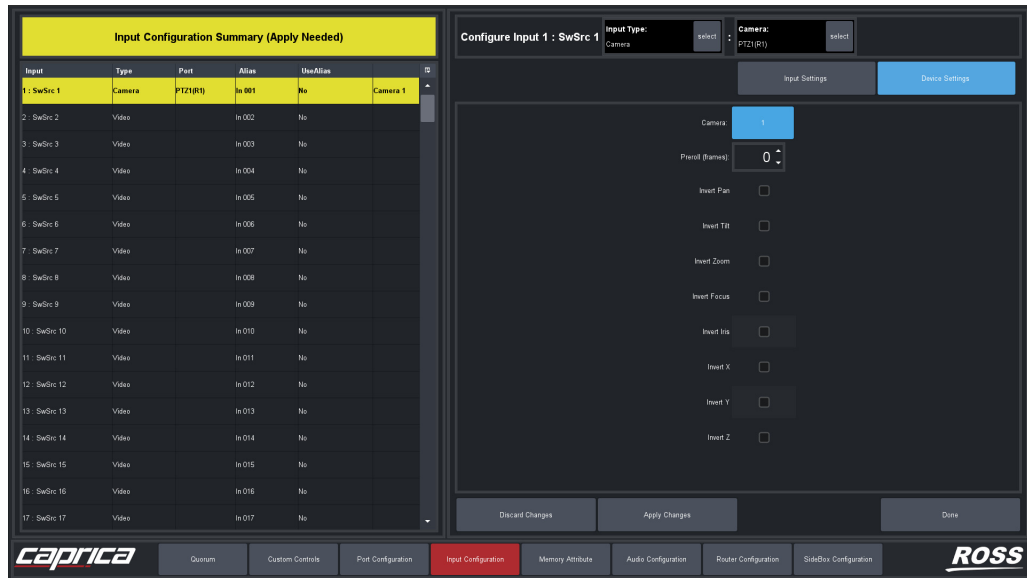
  - To set a custom name for a switcher input, complete the following steps:
    - In the **Input Alias** box, enter a custom name for the selected switcher input.
    - Select the **UseAlias** check box.

The **Alias** column in the **Input Configuration Summary** table displays the custom name set for the switcher input. The **UseAlias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the switcher input.

To use the default switcher input name, clear the **UseAlias** check box. The **UseAlias** column displays **No** to indicate that Caprica and Quorum use the default switcher input name. The **Alias** column and the **Input Alias** box retain the custom name set for the switcher input.

**8. Click Device Settings.**

The **Configure Input #** panel displays the **Device Settings** for the selected switcher input.



**9. Use the following settings to configure the Device Settings for the combination of switcher input and camera device:**

- **Camera** — click this button to select the input number to which the camera is connected.
- **Preroll (frames)** — in this box, enter or select the number of frames to delay transitioning to the camera.
- **Invert Pan** — select this check box to invert the pan direction that the camera pans when using the positioner.
- **Invert Tilt** — select this check box to invert the direction that the camera tilts when using the positioner.
- **Invert Zoom** — select this check box to invert the zoom direction when using the positioner.
- **Invert Focus** — select this check box to invert the focus direction when using the positioner.
- **Invert Iris** — select this check box to invert the iris direction when using the positioner.
- **Invert X** — select this check box to invert the direction that the camera moves in the X-axis when using the positioner.
- **Invert Y** — select this check box to invert the direction that the camera moves in the Y-axis when using the positioner.
- **Invert Z** — select this check box to invert the direction that the camera moves in the Z-axis when using the positioner.

**10. Click Apply Changes to save the network and device settings for the selected switcher input.**

**11. Click Done to close the Configure Input # panel.**

**12. Repeat step 2 to step 10 for each device you want to connect to your Quorum system.**

After you configure the ports and inputs on your Caprica Server, you can physically connect your devices to your Quorum system.



# Graphics System Configuration

Quorum uses Caprica to control the cameras in a meeting venue. In Caprica, you must configure a Caprica device for the graphics system used in your Quorum system.

The following topic is discussed in this chapter:

- Configuring a Caprica Device for Your Graphics System

## Configuring a Caprica Device for Your Graphics System

On the Caprica Server, you need to configure a Caprica device for the graphics system in your Quorum system. Using the Port Configuration client on the Caprica Server, you can configure a Caprica device for your graphics system.

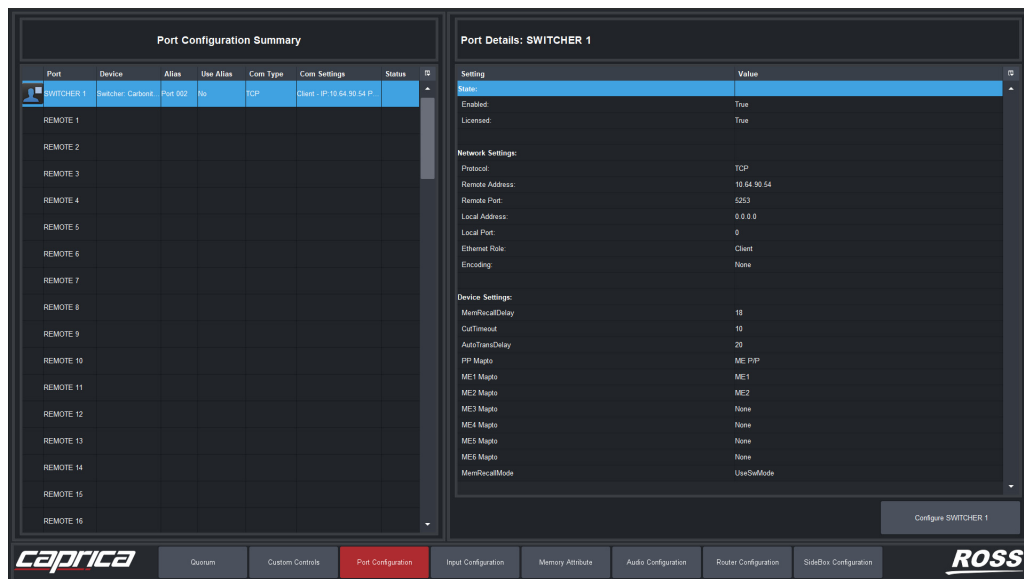
### To configure a Caprica device for a graphics system

1. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.
2. In the **DashBoard Tree View**, expand the **Caprica Server** node.
3. In the **Caprica Server** node, expand the **Slot 0: Caprica-Quorum** node.
4. Double-click the **Port Configuration** node.

The **Port Configuration** client opens in the **Device View**.

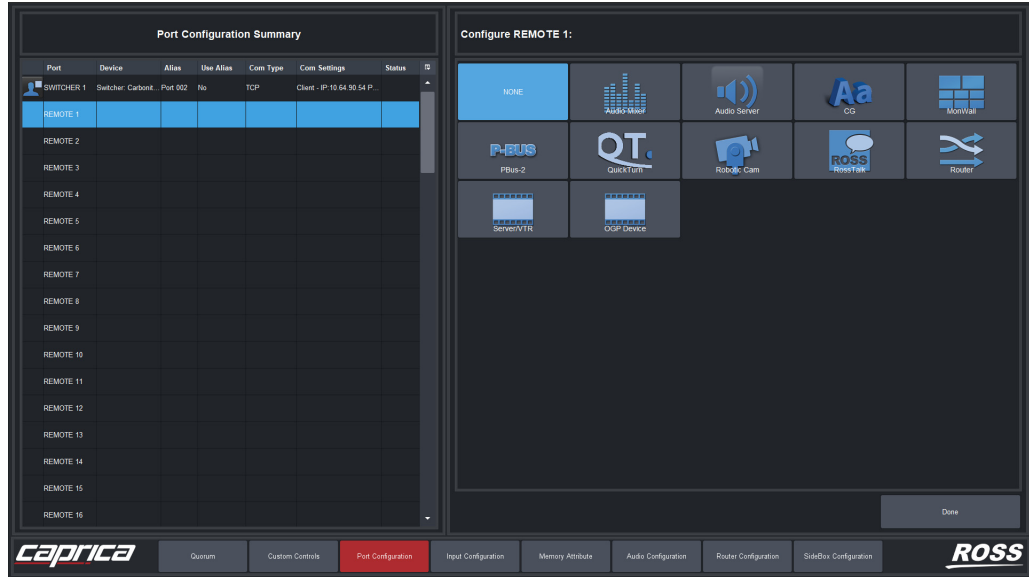
5. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.



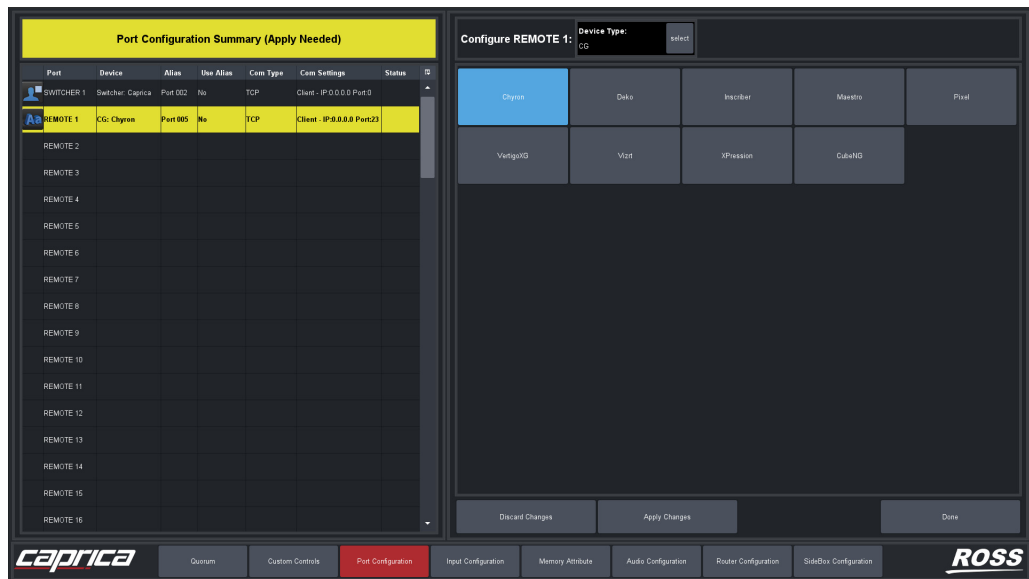
6. In the **Port** column of the **Port Configuration Summary** table, double-click the port to configure for the device (**REMOTE 1 to REMOTE72**).

The **Configure REMOTE #** panel for the selected port opens.



7. In the **Configure REMOTE #** panel, click **CG**.

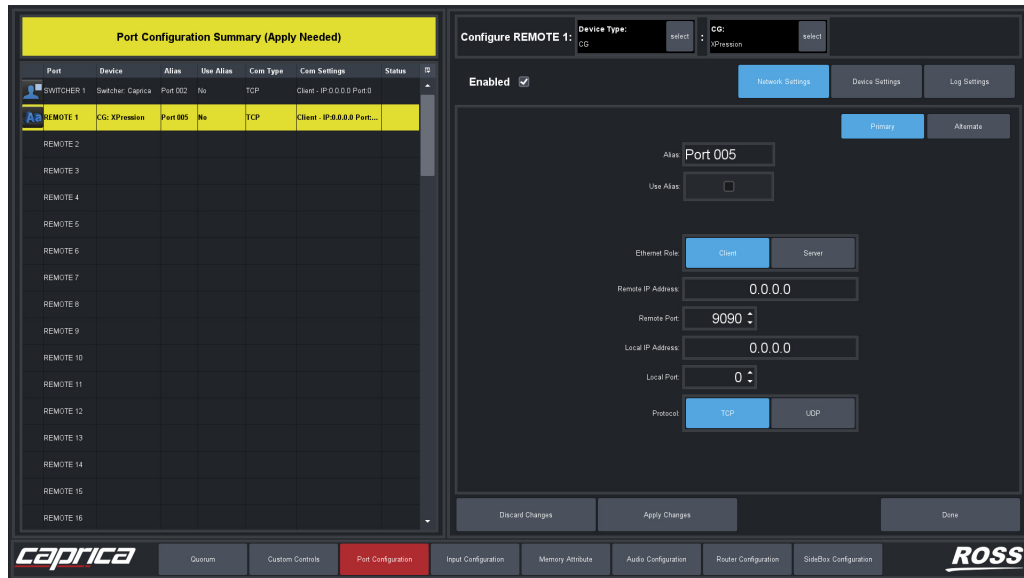
The **Configure REMOTE #** panel lists the available graphics systems.



If you selected the wrong device type, click **select** in the **Device Type** area to return to the list of available device types.

- Click the device to configure for your brand of graphics system. To configure a Ross XPression graphics system, click **XPression**.

The **Configure REMOTE #** panel displays the **Network Settings** for the selected camera device.



If you selected the wrong device, click **select** in the **Device Name** area to return to the list of available devices.

- In the **Configure REMOTE #** panel, select the **Enable** check box to enable Caprica to control the device you are configuring. Clear the **Enable** check box for a device when you do not want Caprica to control the device.
- In the **Alias** box, enter a custom name for the graphics system on the remote port.

For example: **XPression**.

- Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

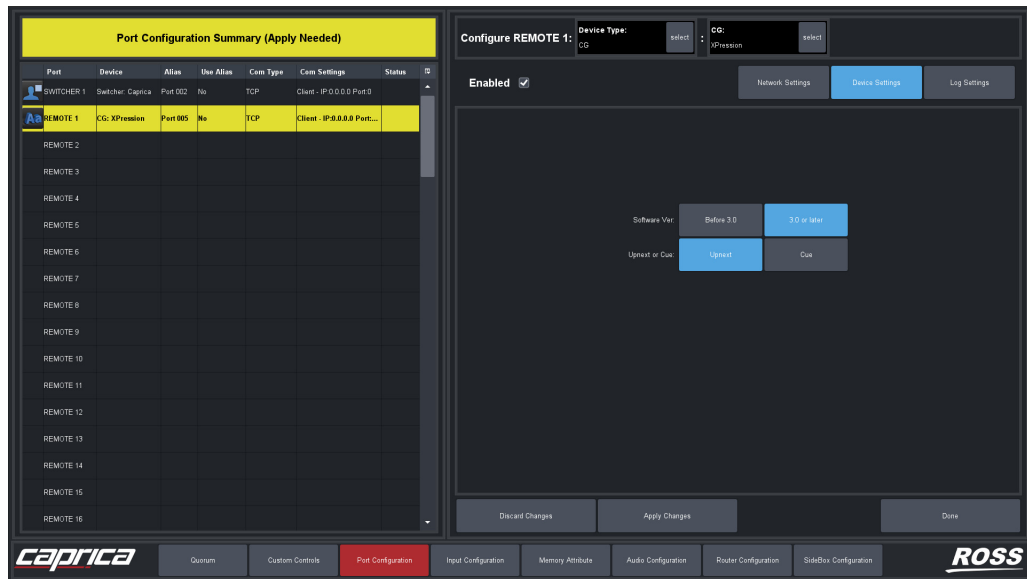
- Use the settings in the **Ross Video External Device Setup Sheet** for the selected camera device to configure the settings in the **Network Settings** section for the device.

Use the following settings to configure the **Network Settings** for a Ross Video XPression graphics system:

- **Ethernet Role** — Client
- **Remote IP Address** — IP address of your XPression graphics system
- **Remote Port** — 9090
- **Local IP Address** — 0.0.0.0
- **Local Port** — 0
- **Protocol** — TCP

### 13. Click Device Settings.

The **Configure REMOTE #** panel displays the **Device Settings** for the selected graphics system device.

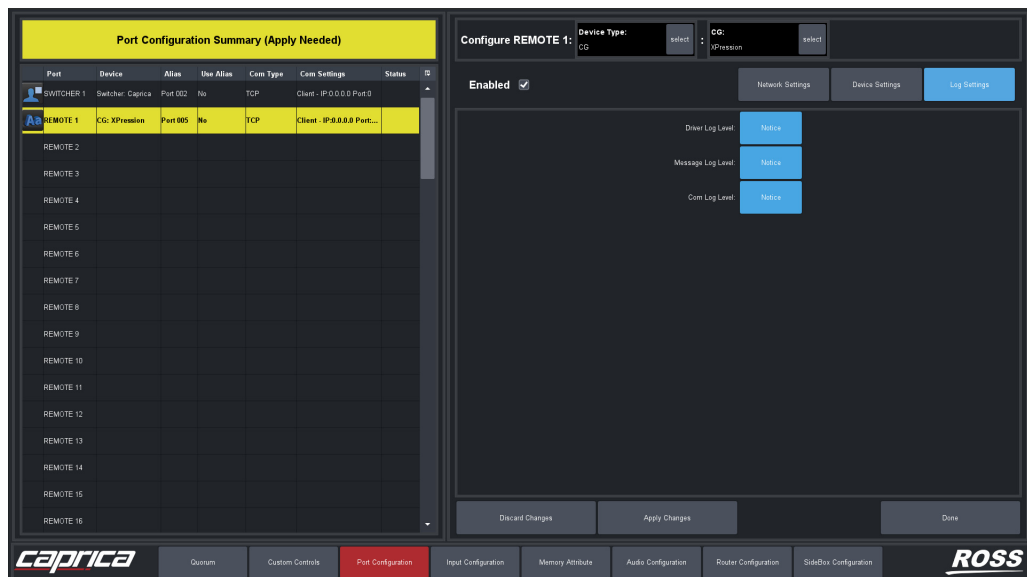


### 14. Use the following settings to configure the **Device Settings** for a Ross Video XPression graphics system:

- **Software Ver** — click the software version installed on your XPression. The available options are as follows:
  - › **Before 3.0**
  - › **3.0 or later**
- **Upnext or Cue** — click the method with which to handle take item takeids. The available options are as follows:
  - › **Upnext** — set the preview to the take item *takeid* in the sequencer without moving the focus bar.
  - › **Cue** — prepare the take item *takeid* to go to air next in framebuffer number buffer on layer number layer. The take item is not taken to air but is prepared to be taken to air without any frame delay.

### 15. To select the logging level of a device, click **Log Settings**.

The **Configure REMOTE #** panel displays the **Log Settings** for the graphics system device.



16. Click the **Log Level** buttons to set the logging level for the camera device.
17. Click **Apply Changes** to save the network, device, and log settings for the camera device.
18. Click **Done** to close the **Configure REMOTE #** panel.

# Caprica Server Configuration

After configuring the Caprica Server to connect a switcher to your Quorum Server, you also need to configure devices, switcher inputs, audio channel names, router sources (inputs), and router destinations (outputs). You may also want to create Custom Controls for the switcher in your Quorum system. This chapter provides instructions for completing the configuration of a Caprica Server in a Quorum system and creating Custom Controls for the switcher in a Quorum system.

The following topics are discussed in this chapter:

- Configuring Devices to Connect to a Quorum System
- Configuring Custom Device Connections
- Configuring Switcher Inputs
- Assigning Names and Custom Controls to Memories
- Configuring Audio
- Customizing Router Source and Destination Names
- Controlling Router Sources and Destinations for Quorum
- Creating Custom Control Macros
- Saving Caprica Server Configuration
- Recalling Configurations from a Diskset
- Creating Caprica Server Diagnostic Reports
- Controlling User Session Timeout

## Configuring Devices to Connect to a Quorum System

On the Caprica Server, you need to configure each device that you will connect to your Quorum system to enable Quorum to control the devices. Using the Port Configuration client on the Caprica Server, you can configure the following types of devices to work with Quorum:

- Audio Mixers
- Audio Servers
- Character Generators
- PBus-2 Devices
- QuickTurn Devices
- Robotic Cameras
- RossTalk Devices
- Routers
- Video Servers / VTRs
- OGP Devices

For each device that you can use with Quorum, Ross Video publishes an *External Device Setup Sheet* that contains the settings that enable Quorum to control the device.

### For More Information on...

- using devices in Quorum, refer to the section “**External Device Templates**” in the *Quorum User Guide*.

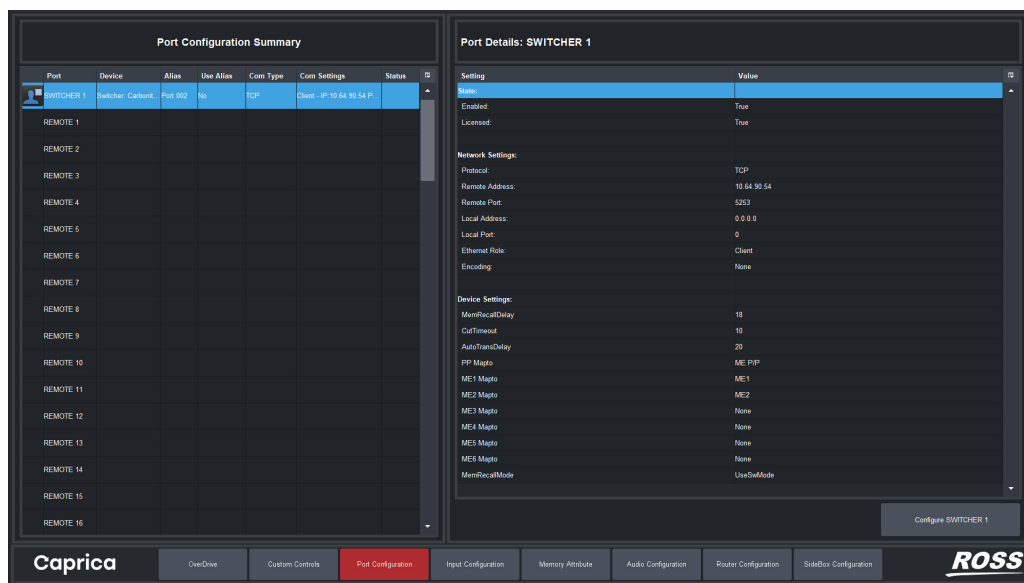
### To configure a device for Quorum

1. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.
2. In the **DashBoard Tree View**, expand the **Caprica Server** node.
3. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.
4. Double-click the **Port Configuration** node.

The **Port Configuration** client opens in the **Device View**.

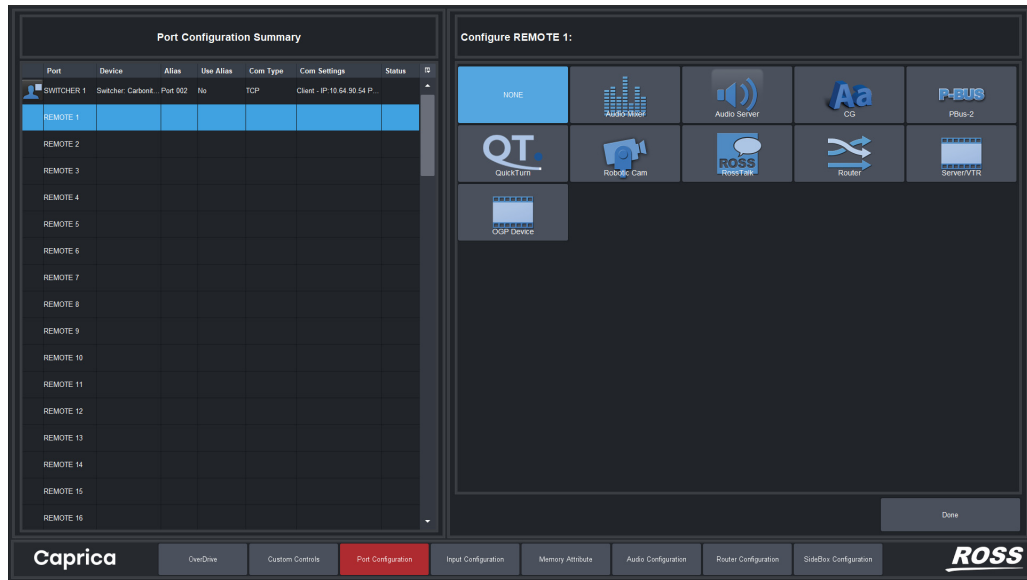
5. Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.



- In the **Port** column of the **Port Configuration Summary** table, double-click the port to configure for the device (**REMOTE 1 to REMOTE72**).

The **Configure REMOTE #** panel for the selected port opens.

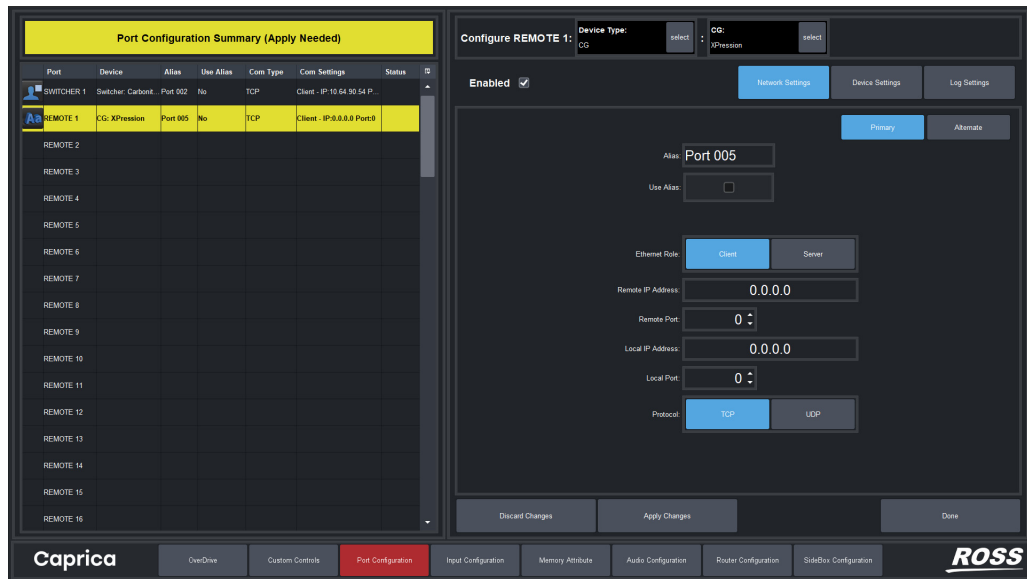


- In the **Configure REMOTE #** panel, click the type of device to configure.

The **Configure REMOTE #** panel lists the available devices for the selected device type. If you selected the wrong device type, click **select** in the **Device Type** area to return to the list of available device types.

- Click the device to configure.

The **Configure REMOTE #** panel displays the **Network Settings** for the selected device.



If you selected the wrong device, click **select** in the **Device Name** area to return to the list of available devices.

- In the **Configure REMOTE #** panel, select the **Enable** check box to enable Caprica to control the device you are configuring. Clear the **Enable** check box for a device when you do not want Caprica to control the device.

10. To set a custom name for a remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

11. Configure the settings in the **Network Settings** section for the selected device using the settings in the *Caprica Device Setup Sheet* for the device.

You can use the following URL to view the *Caprica Device Setup Sheets* for supported devices:

- <https://help.rossvideo.com/caprica/help/devices/index.html>

★ Changing a setting value automatically applies the new value to the device, but does not save the new value. You should not operate Caprica with unsaved changes. You must click **Apply Changes** to save the your setting changes.

12. For devices that you want to switch between network locations, define an alternate location as follows:

- a. Click **Alternate** to set a second set of network settings for the selected device.

The **Configure REMOTE #** panel displays the **Alternate Network Settings** for the selected device.

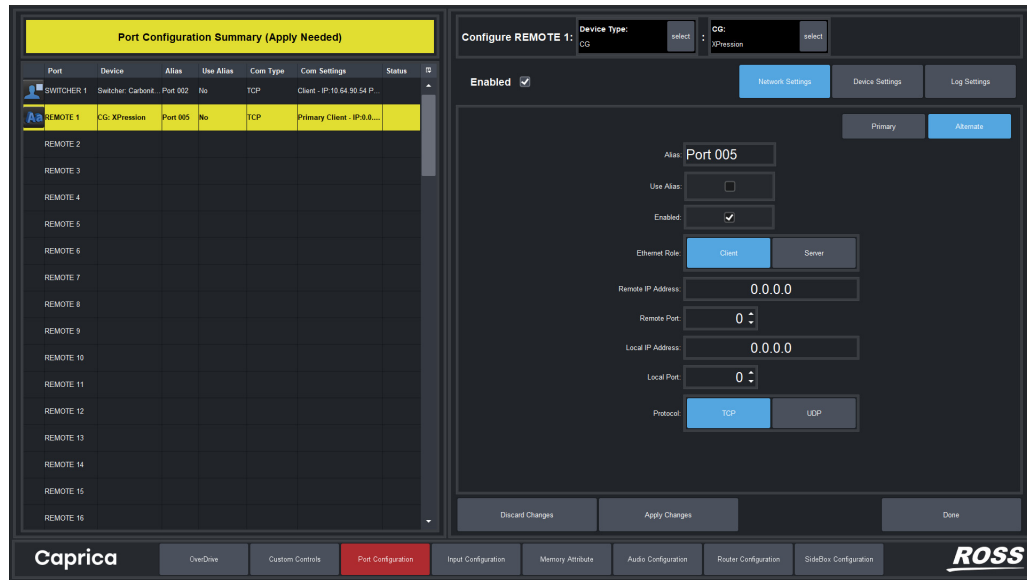
The screenshot displays the Caprica web interface. On the left, the 'Port Configuration Summary (Apply Needed)' table is visible. It has columns for Port, Device, Alias, Use Alias, Conn. Type, Conn. Settings, and Status. The first row is 'SWITCHER 1' with device 'Switcher: Carbon... Port 002', alias 'Port 002', 'No' for Use Alias, 'TCP' for Conn. Type, and 'Client - IP: 10.54.50.54 P...'. The second row is 'REMOTE 1' with device 'CG: XPression', alias 'Port 005', 'No' for Use Alias, 'TCP' for Conn. Type, and 'Client - IP: 8.0.0.0 Port0'. Below this are rows for REMOTE 2 through REMOTE 16.

On the right, the 'Configure REMOTE 1' panel is shown. It includes a 'Device Type' dropdown set to 'CG' and an 'iPression' dropdown. There are tabs for 'Network Settings', 'Device Settings', and 'Log Settings'. The 'Network Settings' tab is active, showing an 'Enabled' checkbox checked, a 'Primary' button, and an 'Alternate' button. The 'Alias' field contains 'Port 005'. There are 'Use Alias' and 'Enabled' checkboxes, both currently unchecked. At the bottom of the panel are 'Discard Changes', 'Apply Changes', and 'Done' buttons.

The bottom navigation bar includes 'Caprica', 'OverDrive', 'Custom Controls', 'Port Configuration' (highlighted in red), 'Input Configuration', 'Memory Attribute', 'Audio Configuration', 'Router Configuration', 'SlideBox Configuration', and the 'ROSS' logo.

- b. Select the **Enabled** check box to configure a second set of network settings for the selected device. Clearing the **Enable** check box also deletes the previously set Alternate networks settings.

The **Configure REMOTE #** panel displays the **Alternate Network Settings** for the selected device.

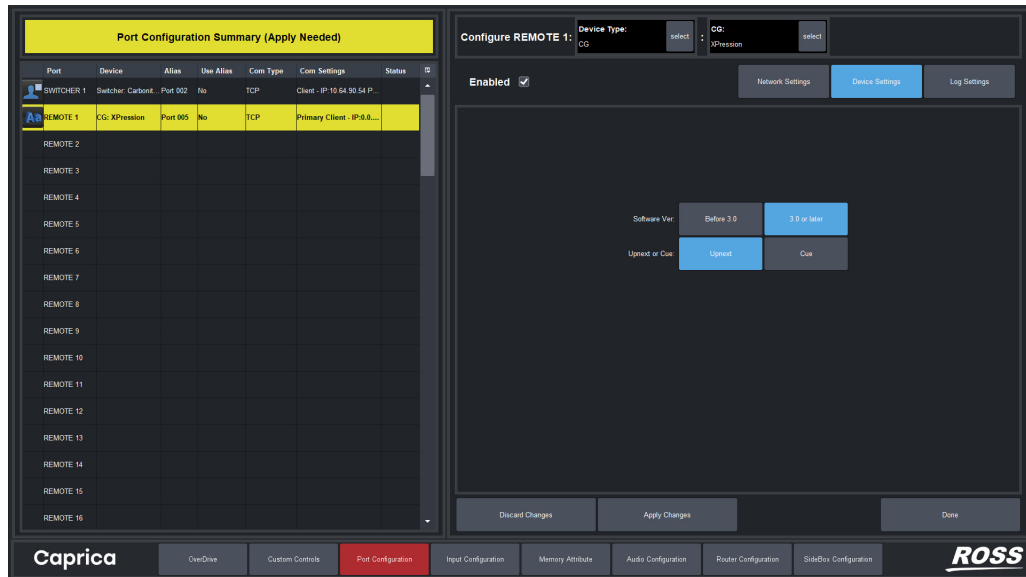


- c. Use the displayed **Alternate** network settings to configure the second set of network settings for the selected device.

To switch between Primary and Alternate networks settings, create a Custom Control that runs the **Select Device** or **Swap Device** Custom Control command. Refer to the section “**Special**” on page B-8 for more information about the **Select Device** and **Swap Device** Custom Control commands.

### 13. Click **Device Settings**.

The **Configure REMOTE #** panel displays the **Device Settings** for the selected device.



14. Configure the settings in the **Device Settings** section for the selected device using the settings in the *Caprica Device Setup Sheet* for the device.

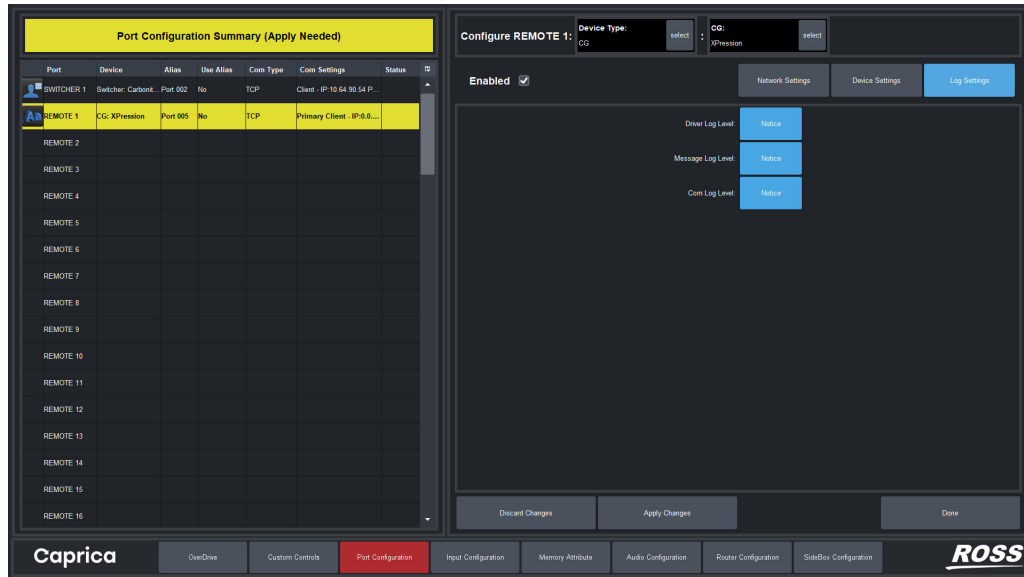
You can use the following URL to view the *Caprica Device Setup Sheets* for supported devices:

- <https://help.rossvideo.com/caprica/help/devices/index.html>

★ Changing a setting value automatically applies the new value to the device, but does not save the new value. You should not operate Caprica with unsaved changes. You must click **Apply Changes** to save the your setting changes.

15. To select the logging level of a device, click **Log Settings**.

The **Configure REMOTE #** panel displays the **Log Settings** for the selected device.



16. Click the **Log Level** buttons to set the logging lever for the device.

17. Click **Apply Changes** to save the network and device settings for the selected device.

18. Click **Done** to close the **Configure REMOTE #** panel.

19. Repeat step 6 to step 17 for each device you want to connect to your Quorum Server.

## Configuring Custom Device Connections

If Caprica does not have a device driver for a device that you want to connect to your OverDrive system, you can create a custom device driver to make the connection. On your Caprica Server, you can define up to 50 custom devices. Each custom device can contain up to 50 actions.

To create a custom device driver, you will need the following information about the your device:

- 
- 
- 
- 
- 
-

### To configure a device for Quorum

1. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.
2. In the **DashBoard Tree View**, expand the **Caprica Server** node.
3. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.
4. Double-click the **Custom Device Configuration** node.

The **Custom Device Configuration** client opens in the **Device View**.

5. Use the **Window** menu to select **Full Screen**.

The **Custom Device Configuration** client expands to full screen view.

6. In the **Custom Device Name** list of the **Custom Device Configuration** section, click the **User Driver** to configure for your custom device (**UserDriver01** to **UserDriver50**).

The **Custom Device Configuration** panel for the selected user driver opens.

7. In the **Custom Device Name** box, enter a name for your custom device.
8. Use the **Authorization** list to select the authorization method to use for your custom device. The available authorization methods are as follows:
  - **API Key** —
  - **OAuth2** —
  - **None** — do not use authorization.
9. In the **Custom Device Action Name** list of the **Actions** section, click the **Action** to define for your custom device (**Action 01** to **Action 50**).
10. In the **Action Name** box, enter a name for the selected action.
11. In the **Header Parameters** box, enter the
12. For the **Request Method** setting, click the request method to use for the action. The available request methods are as follows:
  - **GET** — retrieve a record or a collection of records from the server.
  - **POST** — send data to create a new record on the server.
  - **PUT** — send data to update an existing record on the server.
  - **DELETE** — delete a record or a collection of records from the server.
  - **PATCH** — send data to apply partial modification to an existing record on the server.
13. In the **Endpoint** box, enter
14. Use the **Content Type** list to select the . The available content types are as follows:
  - **application/json** —
  - **application/octet-stream** —
  - **application/xml** —
  - **application/x-www-form-urlencoded** —
  - **multipart/form-data** —
  - **text/plain** —
  - **None** — do not use content type.
15. In the **Payload** box, enter .
16. Click **Apply**.  
 Caprica applies your settings to the selected action. The byte count for your **Payload** also updates.
17. To add another action to your custom device, repeat step **9** to step **16** of this procedure.

## Using a Custom Device Driver

After defining a custom device driver for a device, you can use it to connect the device to your OverDrive System. Caprica stores your custom devices in the Custom Device device type.

### To use a custom device driver to connect a device to Quorum

1. Use one of the following methods to launch **DashBoard**:
  - Double-click the **DashBoard** icon on the desktop.
  - Use the **Start** menu to select **All Programs > DashBoard > DashBoard**.
2. In the **DashBoard Tree View**, expand the **Caprica Server** node.
3. In the **Caprica Server** node, expand the **Slot 0: Caprica** node.
4. Double-click the **Port Configuration** node.

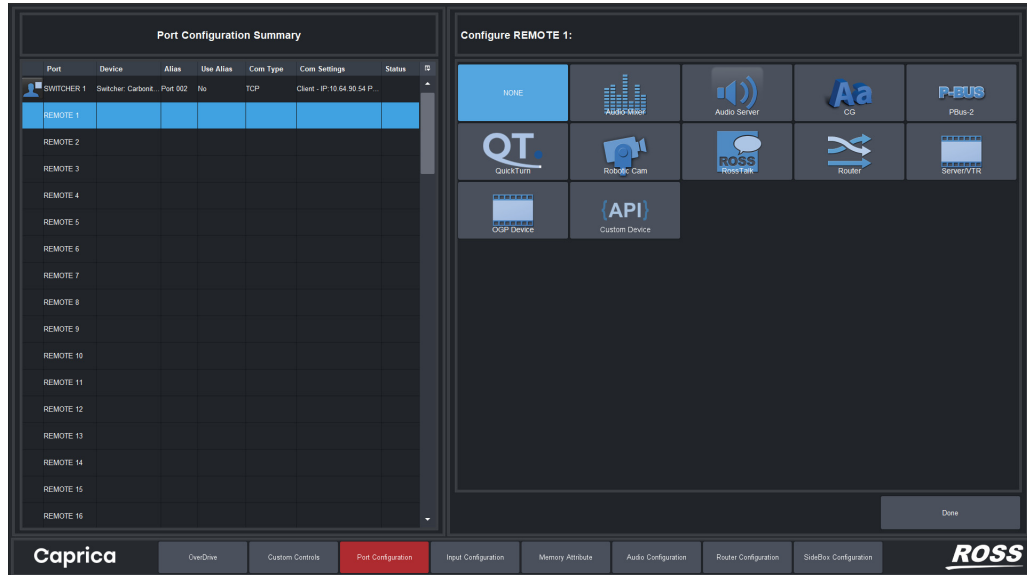
The **Port Configuration** client opens in the **Device View**.

- Use the **Window** menu to select **Full Screen**.

The **Port Configuration** client expands to full screen view.

- In the **Port** column of the **Port Configuration Summary** table, double-click the port to configure for the device (**REMOTE 1 to REMOTE72**).

The **Configure REMOTE #** panel for the selected port opens.

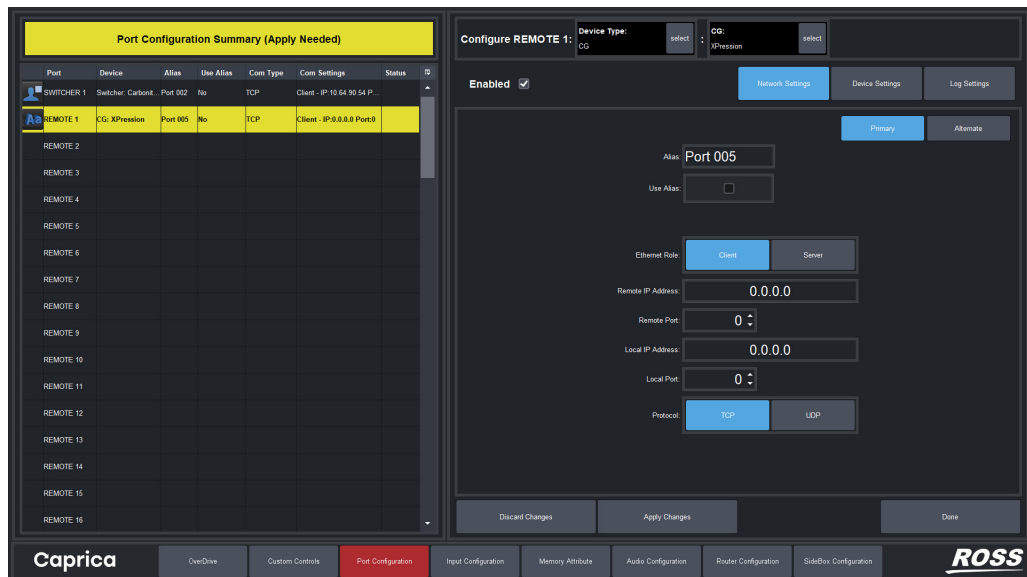


- In the **Configure REMOTE #** panel, click **Custom Device**.

The **Configure REMOTE #** panel lists the available custom devices.

- Click the custom device to configure.

The **Configure REMOTE #** panel displays the **Network Settings** for the selected custom device.



If you selected the wrong custom device, click **select** in the **Device Name** area to return to the list of available custom devices.

- In the **Configure REMOTE #** panel, select the **Enable** check box to enable Caprica to control the device you are configuring. Clear the **Enable** check box for a device when you do not want Caprica to control the device.

10. To set a custom name for a remote port, complete the following steps:

- a. In the **Alias** box, enter a custom name for the remote port.
- b. Select the **Use Alias** check box.

The **Alias** column in the **Port Configuration Summary** table displays the custom name set for the remote port. The **Use Alias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the remote port.

To use the default remote port name, clear the **Use Alias** check box. The **Use Alias** column displays **No** to indicate that Caprica and Quorum use the default remote port name. The **Alias** column and the **Alias** box retain the custom name set for the remote port.

11. In the **URL** box, enter the

12. In the **API Key** box, enter the

13. Enable the **Permit Self Signed** check box to

14. Click **Apply Changes** to save the network and device settings for the selected custom device.

15. Click **Done** to close the **Configure REMOTE #** panel.

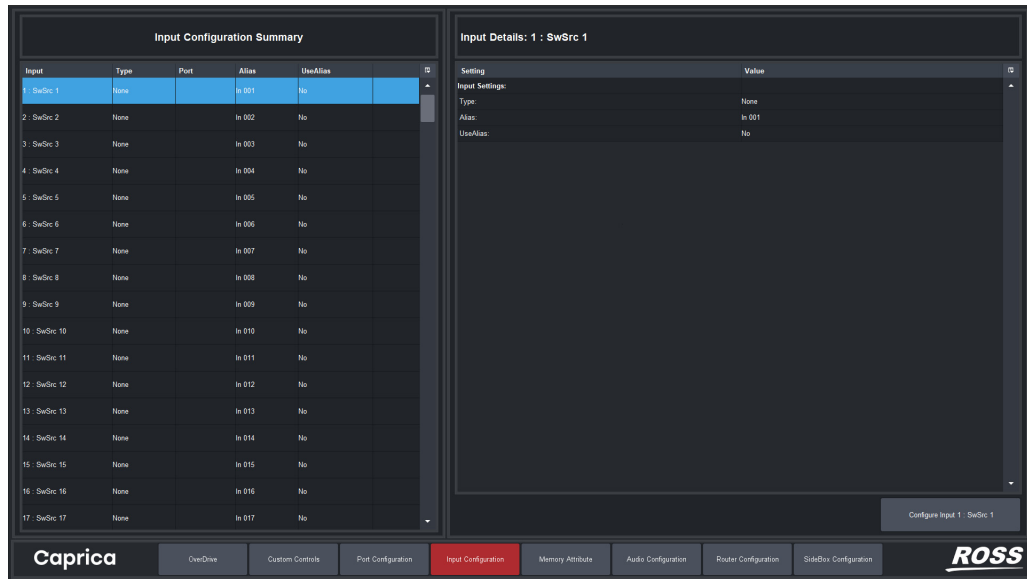
## Configuring Switcher Inputs

After you configure the devices to connect to your Quorum system, you need to configure switcher inputs for the devices.

### To configure a switcher input for a device

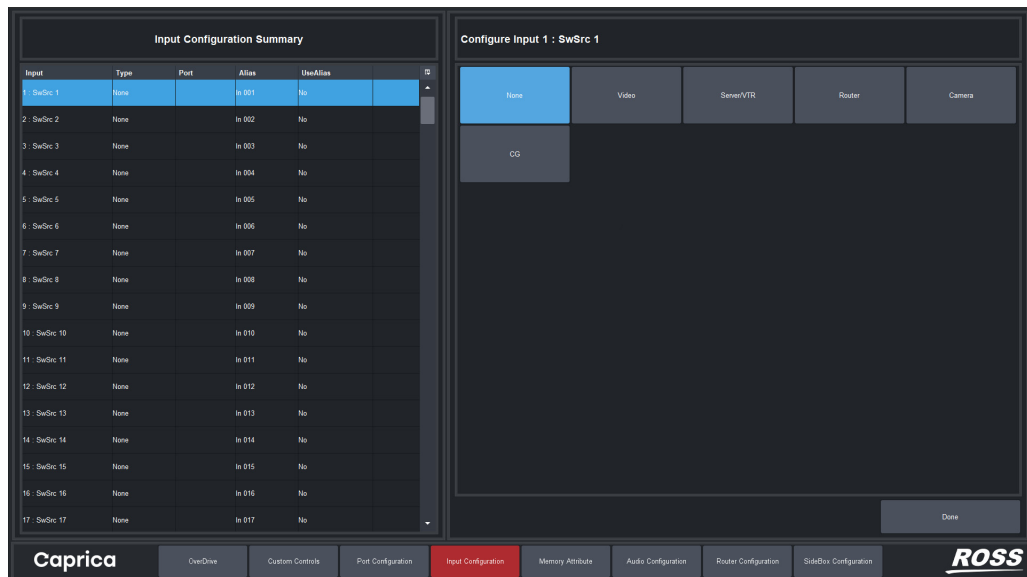
1. At the bottom of the **Device View**, click **Input Configuration**.

The **Input Configuration** client opens.



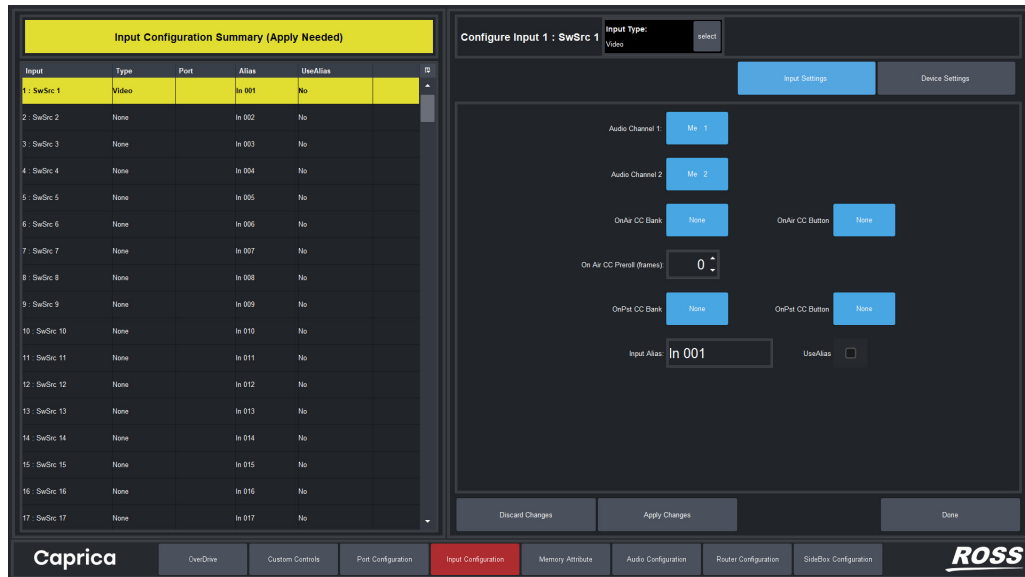
2. In the **Input** column of the **Input Configuration Summary** table, double-click the switcher input to configure for a device.

The **Configure Input #** panel lists the available input types.

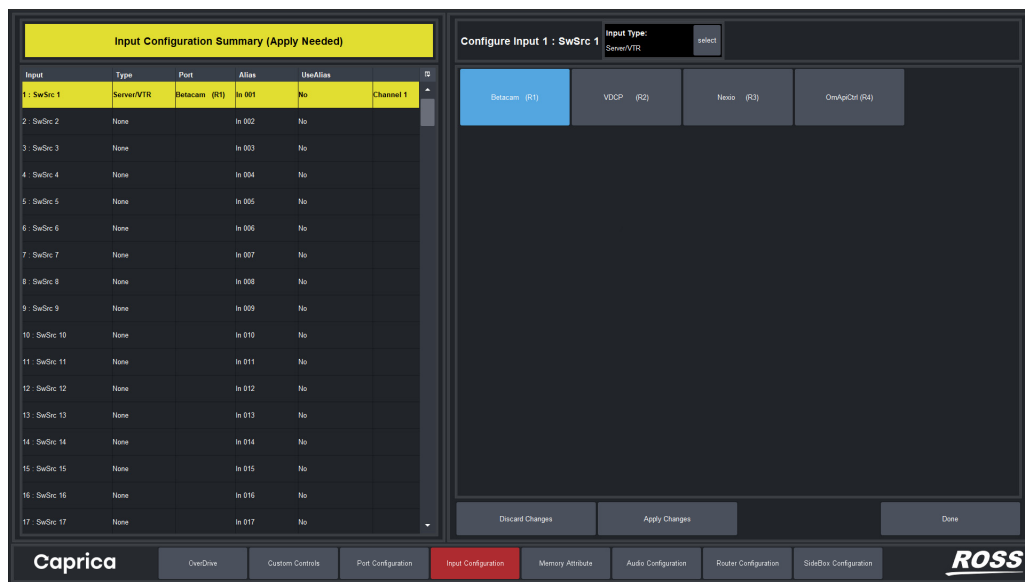


- Click the **Input Type** to connect to the selected switcher input.

When you select the **Video** input type, the **Configure Input #** panel displays the **Input Settings** for the selected switcher input. Skip to step 5. If you selected the wrong input type, click **select** in the **Input Type** area to return to the list of available input types.

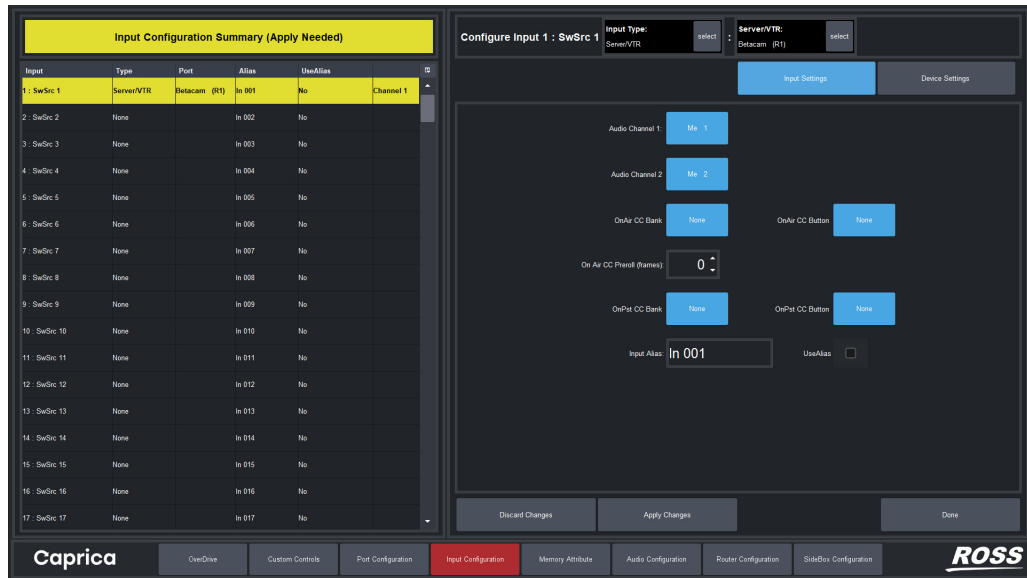


When you select the **Server/VTR, Router, Camera, or CG** input type, the **Configure Input #** panel lists the available devices for the selected input type. If you selected the wrong input type, click **select** in the **Input Type** area to return to the list of available input types.



- Click the **Device** to connect to the selected switcher input.

The **Configure Input #** panel displays the **Input Settings** for the selected switcher input. If you selected the wrong device, click **select** in the **Device Name** area to return to the list of available devices.



- Click **Audio Channel 1** to select the audio channel for the audio channel 1 of the selected switcher input.
- Click **Audio Channel 2** to select the audio channel for the audio channel 2 of the selected switcher input.
- Select the Custom Control to run when the input goes on air as follows:
  - Click **On Air CC Bank** to select the Custom Control bank that contains the Custom Control button assigned to the Custom Control to run when the input goes on air.
  - Click **On Air CC Button** to select the Custom Control button assigned to the Custom Control to run when the input goes on air.

To not run a Custom Control when the input goes on air, select **None** for either the **On Air CC Bank** or the **On Air CC** setting.

- Use the **On Air CC Preroll (frame)** box to enter or select the number of frames to delay taking the input on air after firing the selected On Air Custom Control.
- Select the Custom Control to run when Quorum prepares the input as follows.
  - Click **On Pst CC Bank** to select the Custom Control bank that contains the Custom Control button assigned to the Custom Control to run when Quorum prepares the input.
  - Click **On Pst CC Button** to select the Custom Control button assigned to the Custom Control to run when Quorum prepares the input.

To not run a Custom Control when Quorum prepares the input, select **None** for either the **On Pst CC Bank** or the **On Pst CC Button**.

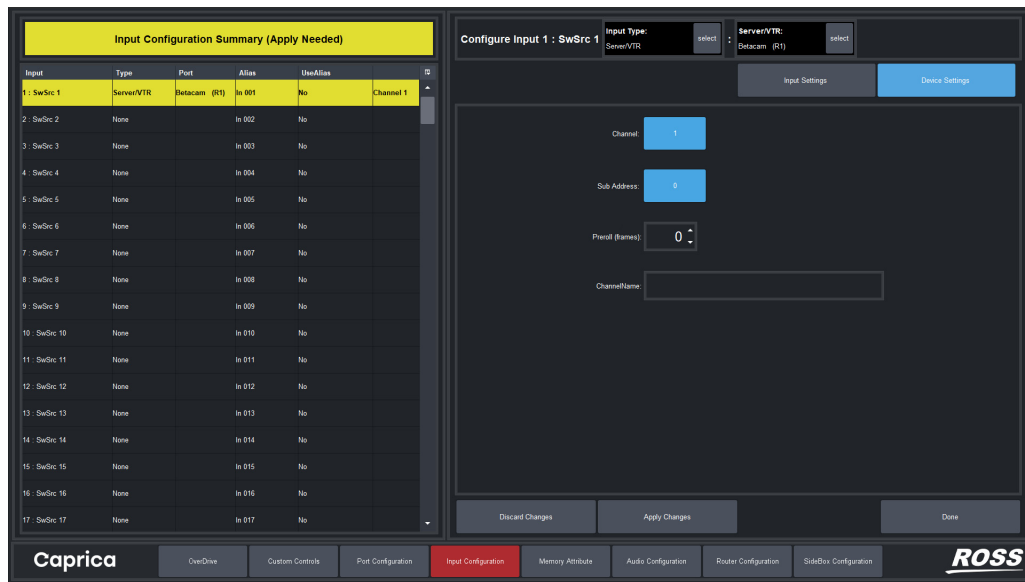
10. To set a custom name for a switcher input, complete the following steps:
  - a. In the **Input Alias** box, enter a custom name for the selected switcher input.
  - b. Select the **UseAlias** check box.

The **Alias** column in the **Input Configuration Summary** table displays the custom name set for the switcher input. The **UseAlias** column displays **Yes** to indicate that Caprica and Quorum use the custom name set for the switcher input.

To use the default switcher input name, clear the **UseAlias** check box. The **UseAlias** column displays **No** to indicate that Caprica and Quorum use the default switcher input name. The **Alias** column and the **Input Alias** box retain the custom name set for the switcher input.

11. Click **Device Settings**.

The **Configure Input #** panel displays the **Device Settings** for the selected switcher input.



12. Use the steps for the selected **Device** to configure the **Device Settings** as required for the combination of switcher input and device.

### Server/VTR

- a. Click **Channel** to select the channel for the video server.
- b. Click **Sub Address** to select the VDCP sub address for the video server.
- c. Use the **Preroll (frames)** box to enter or select the number of frames to delay transitioning to the video server.
- d. In the **ChannelName** box, enter the channel name to use on the Omneon Server. This setting is only used be Omneon API devices.

### Router

- a. Click **Destination** to select the router destination to map to the selected input.
- b. Click **Level** to select the level for the selected destination.

### Camera

- a. Click **Camera** to select the input number to which the camera is connected.
- b. Use the **Preroll (frames)** box to enter or select the number of frames to delay transitioning to the camera.
- c. Select the **Invert Pan** check box to invert the pan direction that the camera pans when using the positioner.
- d. Select the **Invert Tilt** check box to invert the direction that the camera tilts when using the positioner.

- e. Select the **Invert Zoom** check box to invert the zoom direction when using the positioner.
- f. Select the **Invert Focus** check box to invert the focus direction when using the positioner.
- g. Select the **Invert Iris** check box to invert the iris direction when using the positioner.
- h. Select the **Invert X** check box to invert the direction that the camera moves in the X-axis when using the positioner.
- i. Select the **Invert Y** check box to invert the direction that the camera moves in the Y-axis when using the positioner.
- j. Select the **Invert Z** check box to invert the direction that the camera moves in the Z-axis when using the positioner.

**CG**

- a. Click **Channel** to select the channel for the character generator.

13. Click **Apply Changes** to save the network and device settings for the selected switcher input.
14. Click **Done** to close the **Configure Input #** panel.
15. Repeat step 2 to step 13 for each device you want to connect to your Quorum system.
16. After you configure the ports and inputs on your Caprica Server, you can physically connect your devices to your Quorum system.

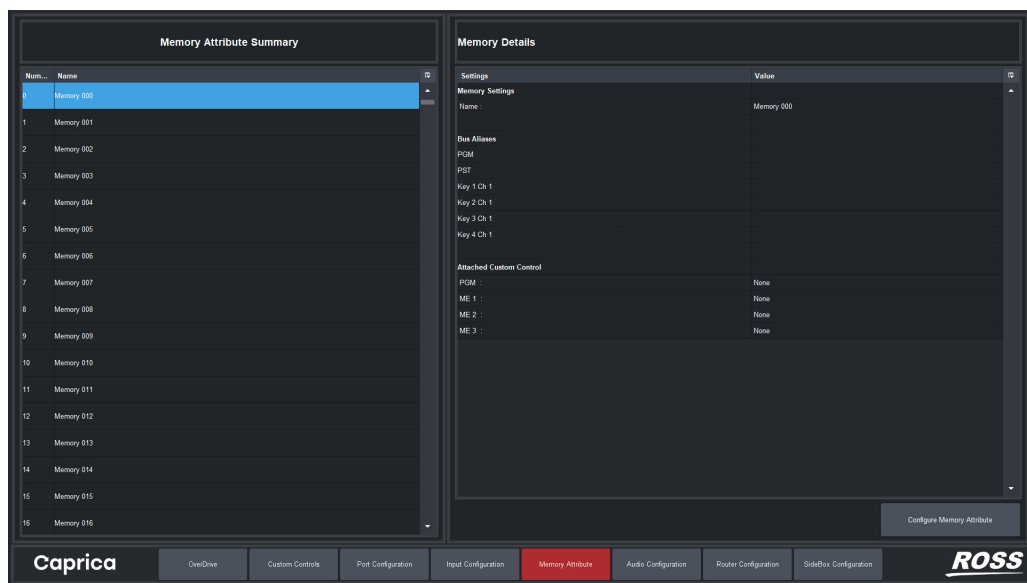
## Assigning Names and Custom Controls to Memories

The Memory Attribute client enables you to name switcher memories, name the buses of a switcher memory, and assign a Custom Control to each ME of a switcher memory. The Custom Control assigned to a memory ME automatically runs when you recall the memory for the ME.

**To configure switcher memory attributes**

1. At the bottom of the **Device View**, click **Memory Attribute**.

The **Memory Attribute** client opens.

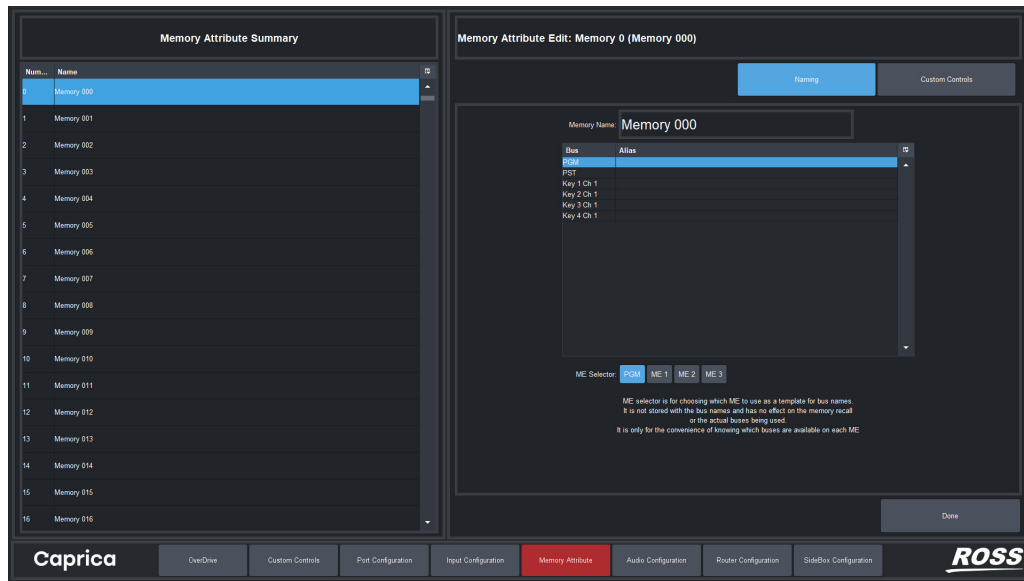


2. In the **Number** column of the **Memory Attribute Summary** table, double-click the memory number to name and assign Custom Controls.

The **Memory Edit** panel opens for the selected memory.

3. Click **Naming**.

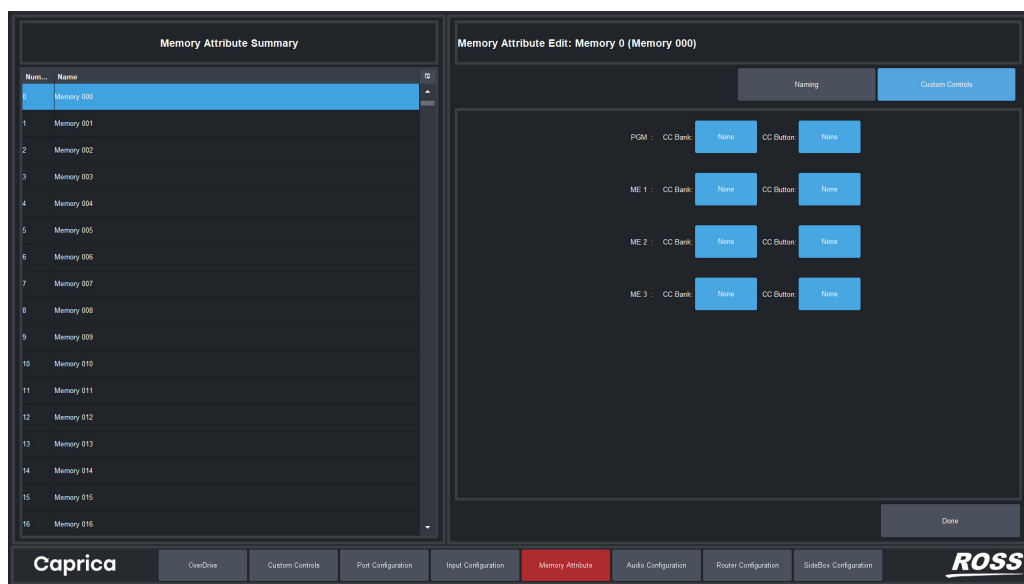
The **Memory Edit** panel displays the **Naming** settings for the selected memory.



4. In the **Memory Name** box, enter a name for the selected memory.
5. Click an **ME** in the **ME Selector** setting to display the available buses for the selected ME in the **Bus** table.
6. To name a bus, complete the following steps:
  - a. Click in the **Alias** column cell to the right of the **Bus** to name.
  - b. In the **Alias** cell, enter a name for the bus (up to 14 characters).

The name set for a bus is same for all MEs of a memory. Bus names can differ between memories.
  - c. Repeat step **a** and step **b** for each bus that you want to name.
7. Click **Custom Controls**.

The **Memory Edit** panel displays the **Custom Controls** settings for the selected memory.



8. For each ME, select the Custom Control to run on memory recall as follows:
  - a. To the right of an **ME** name, click **CC Bank** to select the Custom Control bank that contains the Custom Control button assigned to the Custom Control to run on memory recall for the ME.
  - b. Click **CC Button** to select the Custom Control button assigned to the Custom Control to run on memory recall for the ME.
  - c. Repeat step **a** and step **b** for each ME that you want to assign a Custom Control.
9. Click **Apply Changes** to save the memory configuration.
10. Repeat step **2** to step **9** for each memory that you want to assign a Custom Control.
11. Click **Done** to close the **Memory Edit** panel.

## Configuring Audio

The Audio Configuration client contains two tabs that enable you to configure audio channel names and settings.

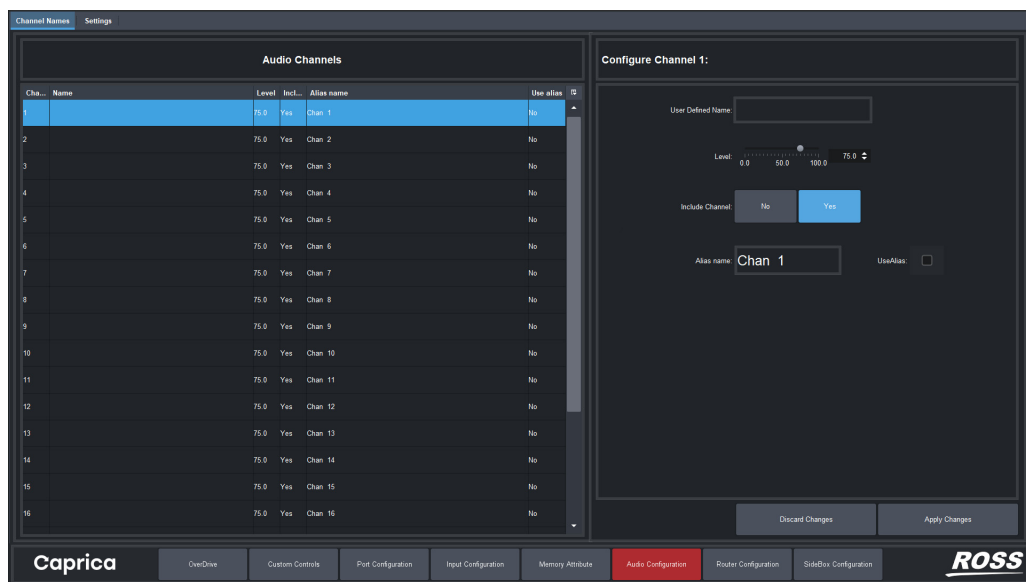
### Customizing Audio Channels for Quorum

The Channel Names tab of the Audio Configuration client enables you to customize the following settings for the audio channels associated with the remote or peripheral devices you configured for Quorum:

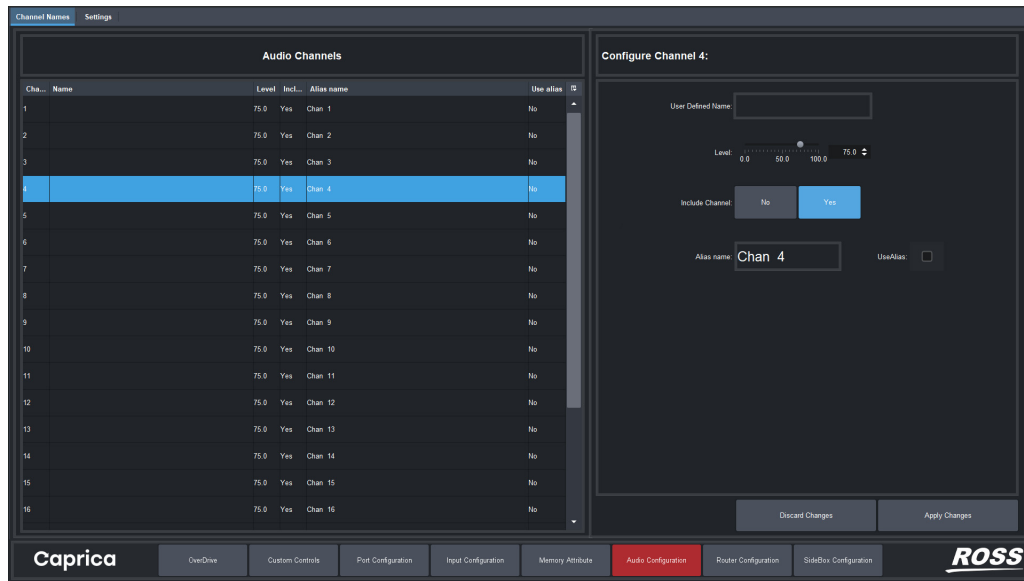
- Channel name
- Initial audio level
- Availability of the channel in Quorum

#### To customize an audio channel for Quorum

1. At the bottom of the **Device View**, click **Audio Configuration**.  
The **Audio Configuration** client opens in the **Device View**.
2. Click the **Channel Names** tab.  
The **Channel Names** tab opens.



- In the **Channel** column of the **Audio Channels** table, double-click the audio channel to customize. The **Configure Channel #** panel for the selected audio channels opens.



- In the **User Defined Name** box, enter a name for the selected audio channel. Quorum displays audio channel names in the **Rundown Control**, **Direct Control**, and **Template Editor** clients.
- Use one of the following methods to set the initial audio level for the selected audio channel:
  - Click and drag the **Level** slider to set the initial audio level for the audio channel. As you drag the slider, the **Level** box displays the set initial audio level for the channel.
  - Use the **Level** box to enter or select the initial audio level for the audio channel. The **Level** slider moves to show the set initial audio level.
- For the **Include Channel** setting, click **Yes** to include the audio channel in Quorum or **No** to exclude the channel from Quorum.
- Click **Apply Changes** to save your customized audio channel settings.
- Repeat step 3 to step 7 for each audio channel you wish to customize for Quorum.

## Configuring Audio Settings

In the Settings tab of the Audio Configuration client, you can control audio transitions and set a fader dead zone.

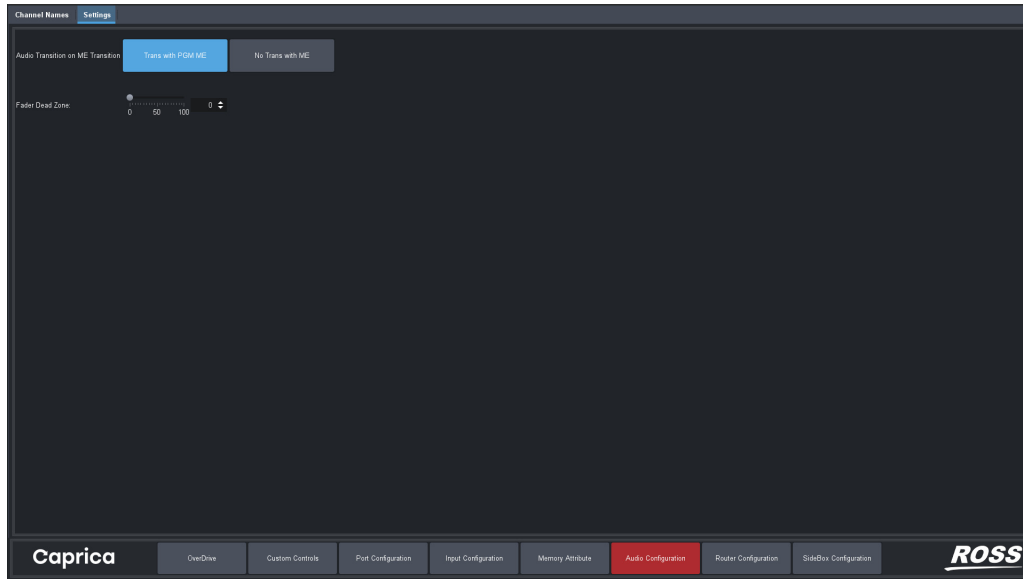
### Audio Transition

You can choose to transition audio with the Program ME or stop audio when the Program or other MEs transition.

#### To control audio transition on ME transition

- At the bottom of the **Device View**, click **Audio Configuration**. The **Audio Configuration** client opens in the **Device View**.
- Click the **Settings** tab.

The **Settings** tab opens.



3. Use the **Audio Transition on ME Transition** setting buttons to select one of the following options to set how to transition audio with ME transitions:
  - **Trans with PGM ME** — transition audio with the Program ME.
  - **No Trans with ME** — stop audio transitions when the Program ME or any other ME transitions.

### Fader Dead Zone

You can configure a dead zone in Caprica to ignore audio mixer fader output from zero percent to a set percentage of the fader range. The dead zone percentage affects all audio channels in Caprica and is reflected in Custom Controls using audio percentages and passed through to OverDrive DirectControl.

★ The **SideSlide** module is not affected by the **Fader Dead Zone** setting.

The full range of Caprica audio faders map to the active range set for the audio mixer faders, the set dead zone percentage to one hundred percent (**Figure 19.1**). Only once an audio mixer fader surpasses the set dead zone percentage does the associated Caprica audio fader begin to move.

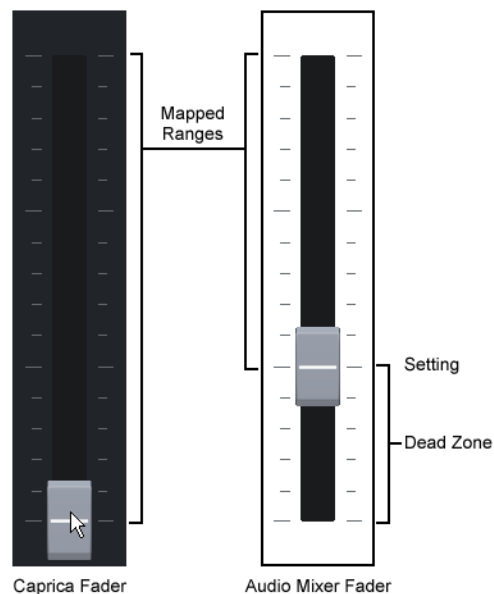


Figure 19.1 Dead Zone Fader Ranges

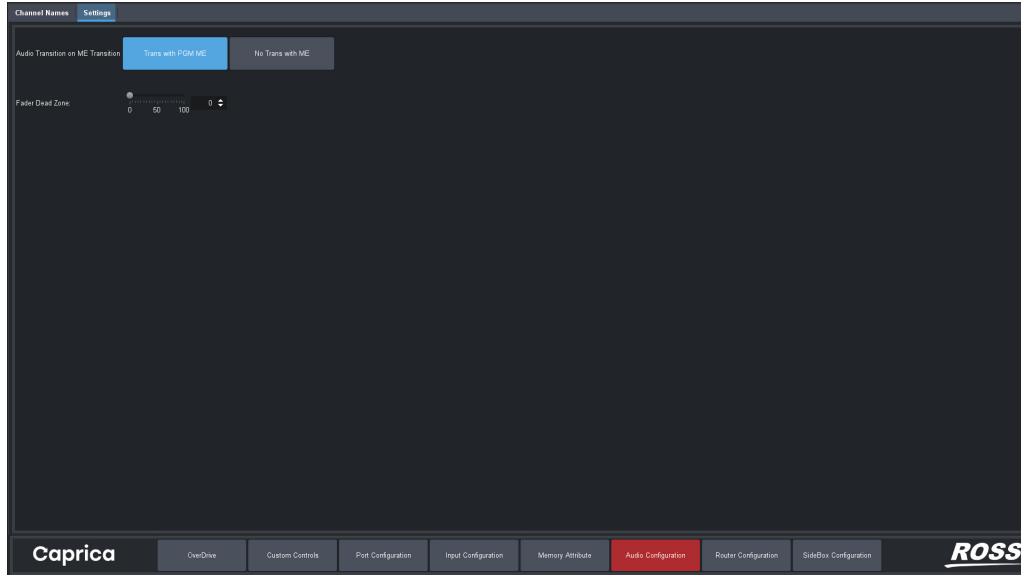
## To configure a Dead Zone for audio mixer faders

1. At the bottom of the **Device View**, click **Audio Configuration**.

The **Audio Configuration** client opens in the **Device View**.

2. Click the **Settings** tab.

The **Settings** tab opens.



3. Drag the **Fader Dead Zone** slider to set the size of the fader dead zone for all audio mixer faders. You can also use the box to the right of the slider to enter or select fader dead zone size.

Caprica automatically saves the set **Fader Dead Zone** value.

## Customizing Router Source and Destination Names

For each router device configured in Caprica for a Quorum system, you can customize the names of router sources (inputs) and destinations (outputs). In Caprica, the Router Configuration client and the Custom Controls client display custom router source and destination names for selection. OverDrive also displays custom router source and destination names for selection.

Comma-separated values (.csv) files are used to upload custom source and destination names to a router. Name files must contain a heading for each column, a list of the source or destination numbers, and the name to apply to the source or destination number. The format of a name file is as follows:

```
"Device_ID,Device_Mnemonic",  
0,VTR 1  
1,AUDIO 2  
2,BARS  
3,BLACK  
4,CAM 1  
8,AUX 3
```

You can use a text editor or a spreadsheet program that can export to comma-separated values format to create router source or destination name files.

## Uploading Custom Router Source and Destination Names

After creating a file that contains custom router source or destination names, you are ready to use Caprica Cockpit to upload your custom names to your router.

## To upload custom router source and destination names

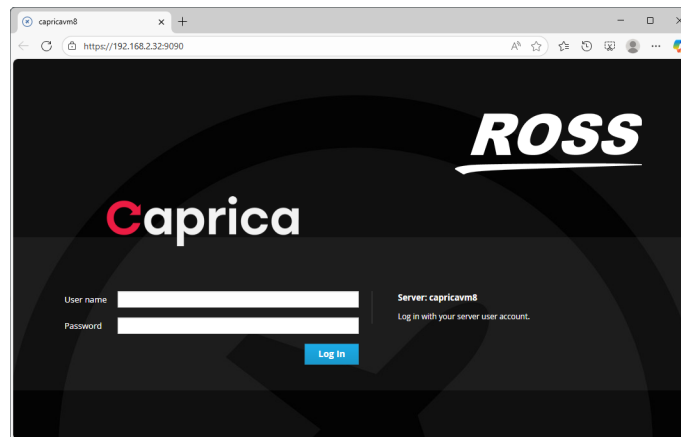
1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

`https://<Caprica Server>:9090`

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

- ★ If Caprica Cockpit does not open, your Caprica Server computer is not running the Amazon Linux 2 operating system. Contact Ross Video Technical Support to upgrade the operating system of your Caprica Server computer.

The **Caprica Login** web page opens.



3. Use the following credentials to log in to **Caprica Cockpit**:

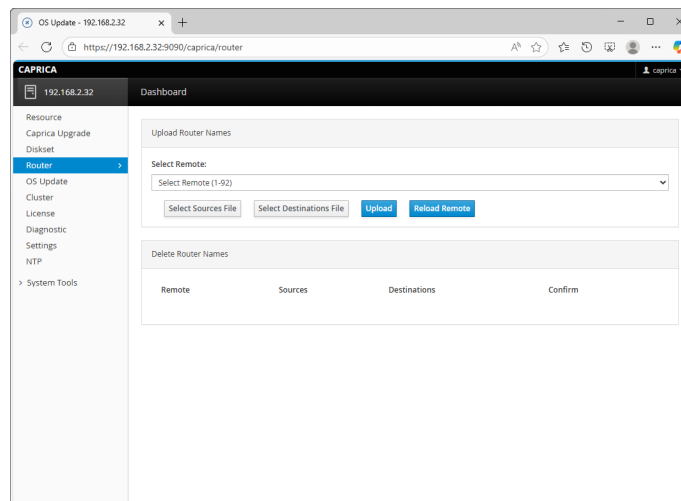
- **User:** caprica
- **Password:** <your\_password>

4. Click **Log In**.

**Caprica Cockpit** opens.

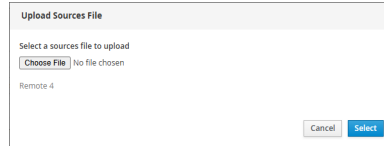
5. In the **Caprica Cockpit** tree view, click **Router**.

The **Router** web page opens.



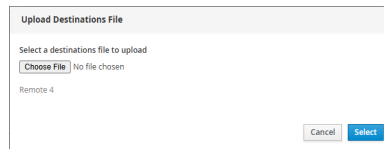
6. Use the **Select Remote** list to select the port to which the router that you want to customize names is connected.
7. Depending on the names that you want to customize for a router, click one of the following buttons:
  - **Select Sources File** — click this button to upload a comma-separated values file that contains router source names.

The **Upload Sources File** dialog opens.



- **Select Destinations File** — click this button to upload a comma-separated values file that contains router destination names.

The **Upload Destinations File** dialog opens.



8. Click **Choose File**.

The **Open** dialog box opens.

9. Use the **Open** dialog box to locate and select the router **sources** or router **destinations** file (.csv).

10. With a router **sources** or router **destinations** file (.csv), click **Open**.

The **Open** dialog box closes and the **Upload Sources File** or **Upload Destinations File** dialog box displays the name of the selected file.

11. Click **Select**.

The **Upload Sources File** or **Upload Destinations File** dialog box closes and name of the selected file displays below the **Select Sources File** or **Select Destinations File** button on the **Router** web page.

12. Click **Upload**.

The selected file or files upload to the router associated with the remote port selected from the **Select Remote** list. The **Delete Router Names** section displays the remote port to which you uploaded name files and a check box for each type of uploaded file.

Delete Router Names			
Remote	Sources	Destinations	Confirm
Remote: 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="button" value="Delete Selected"/>

You can view the uploaded source and destination names for a router in the Dashboard **Router Configuration** client or in the **Custom Controls** client when adding **Router Take Xpt** command to a Custom Control.

#### For More Information on...

- the Router Configuration client, refer to the section “**Controlling Router Sources and Destinations for Quorum**” on page 19–23.
- the Custom Control client, refer to the section “**Creating Custom Control Macros**” on page 19–27.

## Resetting Default Router Source and Destination Names

Router source and destination names can be reset to the default names by deleting the name file or files uploaded to a router.

### To reset default router source and destination names

1. In the **Delete Router Names** section of the **Router** web page, select one of the following check boxes to the right of the remote port associated with the router that you want to reset to default names:
  - **Sources** — select this check box to delete the router source names file from the router associated with the remote port.
  - **Destinations** — select this check box to delete the router destination names file from the router associated with the remote port.
2. With the type of name files to delete from the router selected, click **Delete Selected**.  
The selected name files are deleted from the **Delete Router Names** section.
3. In the **Upload Router Names** section, use the **Select Remote** list to select the remote port from which you just deleted a name files.
4. Click **Reload Remote**.

Depending on the type of name files you deleted from a router, the source and/or destination names are reset to the default names. You can view the reset source and destination names for a router in the DashBoard **Router Configuration** client or in the **Custom Controls** client when adding Router Take Xpt command to a Custom Control.

### For More Information on...

- the Router Configuration client, refer to the section “**Controlling Router Sources and Destinations for Quorum**” on page 19–23.
- the Custom Control client, refer to the section “**Creating Custom Control Macros**” on page 19–27.

## Controlling Router Sources and Destinations for Quorum

For each router device configured in Caprica for a Quorum system, you can select the accessible router sources (inputs) and router destinations (outputs) for Quorum. When working with large routers composed of multiple routing matrices, the list of available sources and destinations grow to tens of thousands of items.

### For More Information on...

- configuring devices in Caprica for Quorum, refer to the section “**Configuring Devices to Connect to a Quorum System**” on page 19–2.

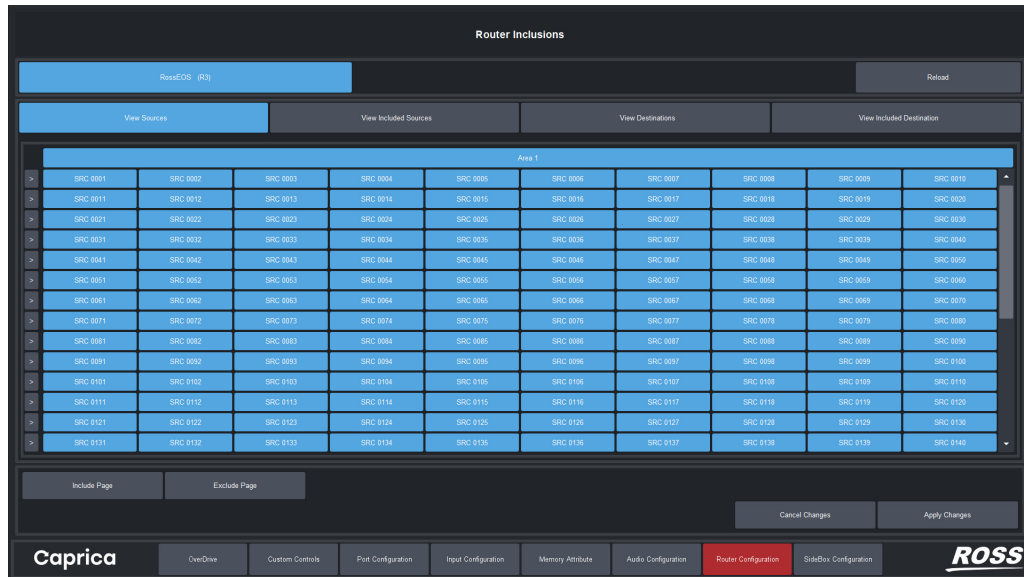
## Sources

Creating a list of included sources helps simplify list navigation and item selection in Quorum.

### To create a list of router included sources

1. Use the **Port Configuration** client to configure a router device for your Quorum system.
2. At the bottom of the **Device View**, click **Router Configuration**.

The **Router Configuration** client opens.

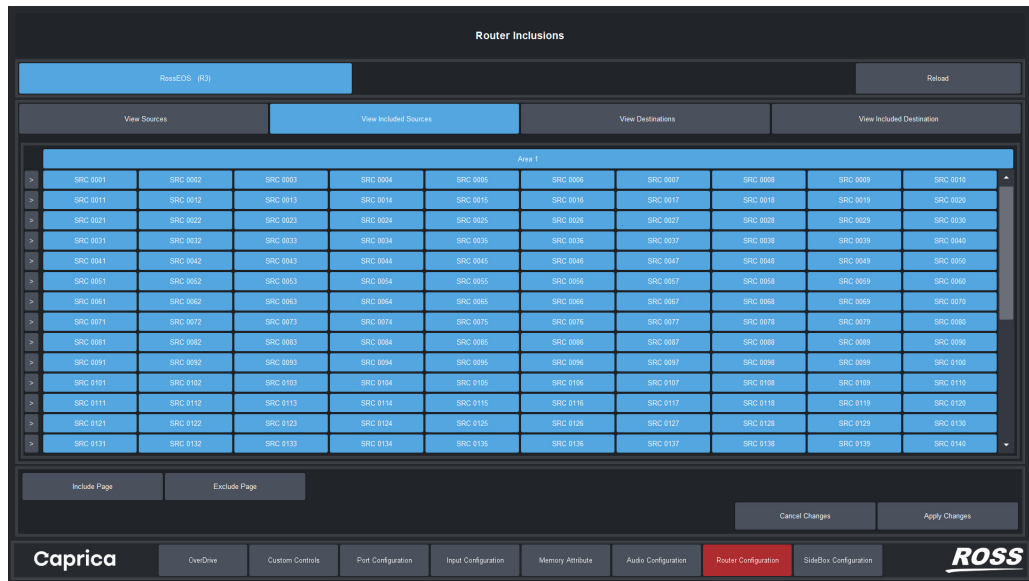


3. At the top of the **Router Configuration** client, click the **Router** (for example: RossEOS (R1)) for which to create a list of included sources.
4. Click **View Sources**.

The **Router Configuration** client displays a list that contains a button for each available source on the selected router. You may need to click the following buttons to view all the available router sources.

- **Area** — if the router contains multiple areas, click the **Area 1** to **Area N** button to view the sources in the selected area.
  - **Page** — if the selected router contains more than 256 sources, click the **Page 2** to **Page N** buttons to view the next page of 256 sources.
5. In the source list, click each source that you want to make accessible to OverDrive. To select multiple sources at once, do the following:
    - **Row** — to select all the sources in a row, click the  **Arrow** button to the left of the row that contains the sources to select.
    - **Page** — to select all the sources on a page, click **Include Page**.
  6. To deselect a source, click a selected source. To deselect multiple sources at once, do the following:
    - **Row** — to deselect a row of selected sources, click the  **Arrow** button to the left of the row that contains the sources to deselect. When a row contains an unselected source, all the sources change to selected. Click the  **Arrow** button once again to deselect all the sources in the row.
    - **Page** — to deselect all the sources on a page, click **Exclude Page**.
  7. Click **Apply Changes** to save the selected sources to the router included sources list.

- To view only the sources in the router included sources list, click **View Included Sources**. The **Router Configuration** client displays the sources in the router included sources list.



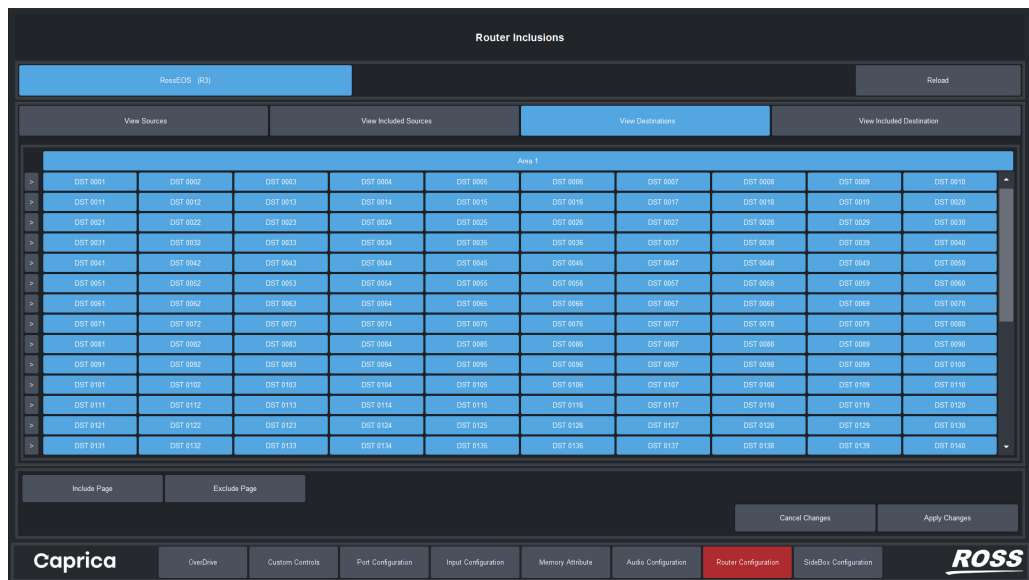
## Destinations

Creating a list of included destinations helps simplify list navigation and item selection in Quorum.




### To create a list of router included destinations

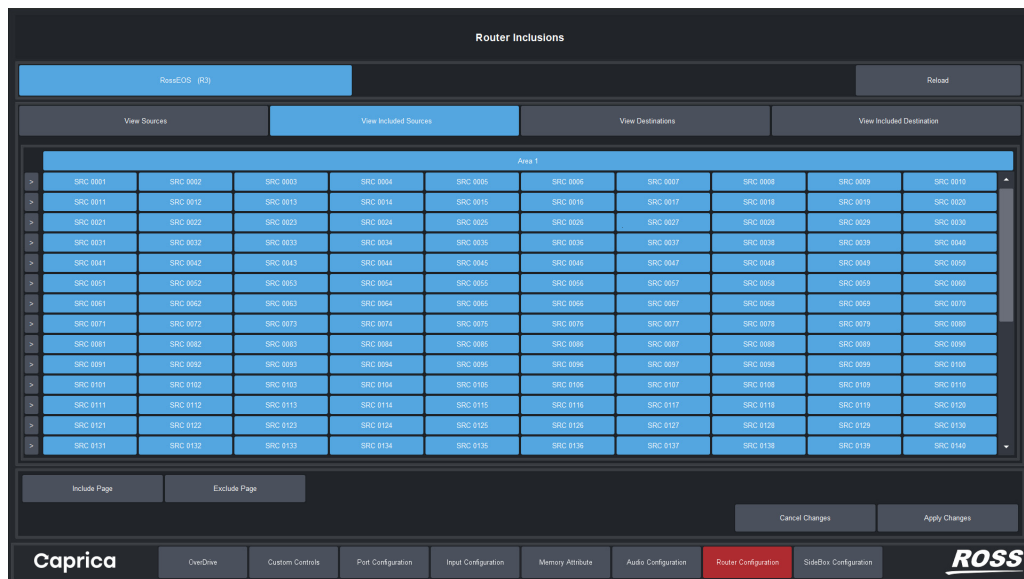
- At the top of the **Router Configuration** client, click the **Router** (for example: RossEOS (R1)) for which to create a list of included destinations.
- Click **View Destinations**.

The **Router Configuration** client displays a list that contains a button for each available destination on the selected router.



You may need to click the following buttons to view all the available router destinations.

- **Area** — if the router contains multiple areas, click the **Area 1** to **Area N** button to view the destinations in the selected area.
  - **Page** — if the selected router contains more than 256 destinations, click the **Page 2** to **Page N** buttons to view the next page of 256 destinations.
3. In the destination list, click each destination that you want to make accessible to OverDrive. To select multiple destinations at once, do the following:
    - **Row** — to select all the destinations in a row, click the  **Arrow** button to the left of the row that contains the destinations to select.
    - **Page** — to select all the destinations on a page, click **Include Page**.
  4. To deselect a destination, click a selected destination. To deselect multiple destinations at once, do the following:
    - **Row** — to deselect a row of selected destinations, click the  **Arrow** button to the left of the row that contains the destinations to deselect. When a row contains an unselected destination, all the destinations change to selected. Click the  **Arrow** button once again to deselect all the destinations in the row.
    - **Page** — to deselect all the destinations on a page, click **Exclude Page**.
  5. Click **Apply Changes** to save the selected destinations to the router included destinations list.
  6. To view only the destinations in the router included destinations list, click **View Included Destinations**.  
The **Router Configuration** client displays the destinations in the router included destinations list.



## Creating Custom Control Macros

The Custom Control function of the switcher enables you to program sequences of keystrokes (called “macros”) and other special switcher functions — and store them in dedicated buttons and banks in the Custom Control group. Once programmed, you can playback a macro by pressing the associated button in the Custom Control group. A Custom Control macro can be as simple as triggering an output GPI pulse, or as complex as recalling a specific memory register, performing a switcher transition, and flying a group of keys — all with one-button simplicity. You can use the Caprica Custom Controls client to create Custom Control macros for your Quorum switcher.

- ★ Do not use the Caprica Custom Controls client to create or edit Custom Controls while playing out a rundown. Creating or editing Custom Controls during rundown play out may cause the rundown to stop playing.

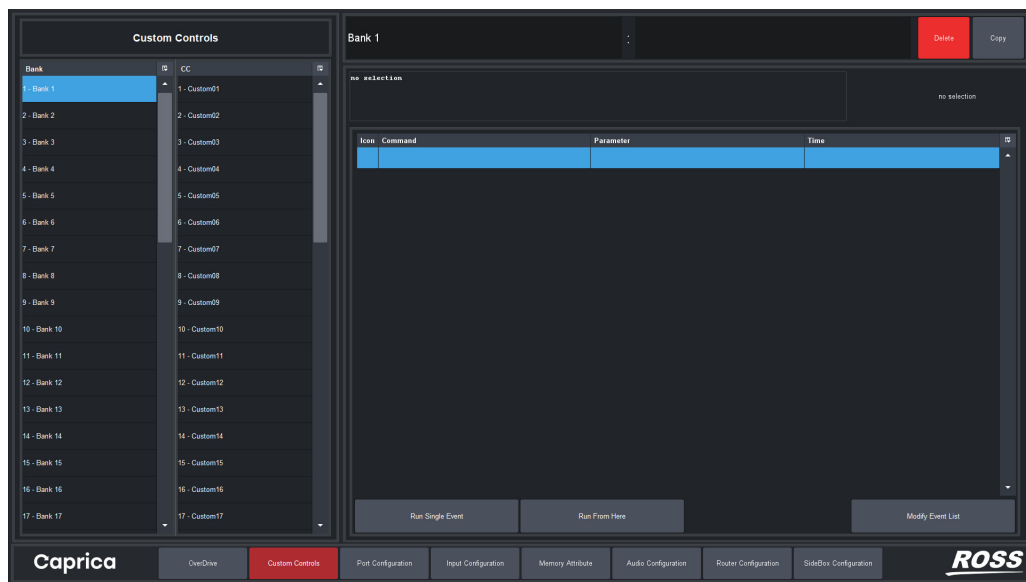
### For More Information on...

- using Custom Control macros in Quorum, refer to the section “**Custom Controls in *Quorum***” in the *Quorum User Guide*.

### To create a Custom Control macro

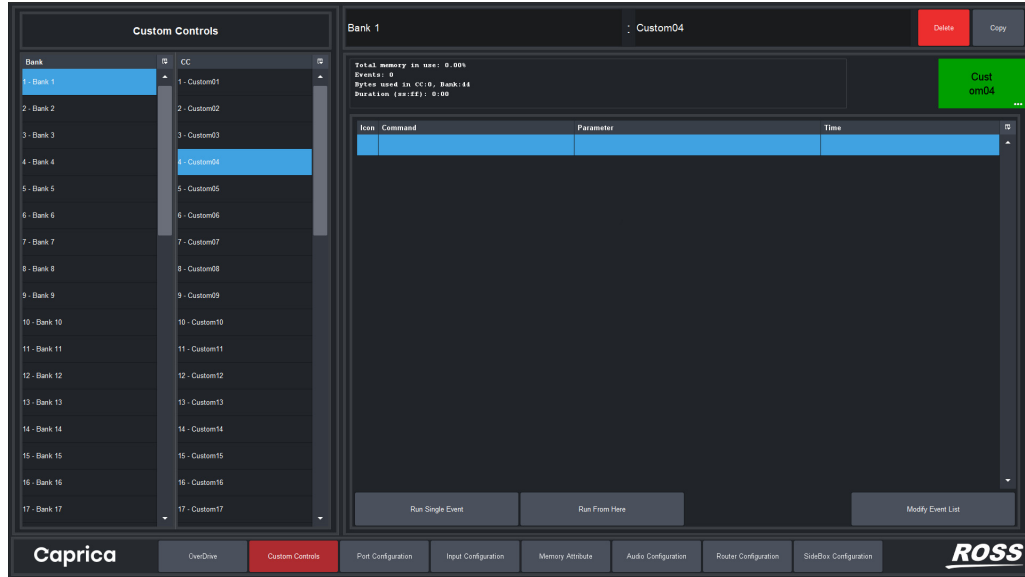
1. At the bottom of the **Device View**, click **Custom Controls**.

The **Custom Controls** client opens.



2. In the **Bank** column of the **Custom Controls** table, click the bank name that contains the Custom Control that you want to program with a new Custom Control macro.
3. In the **CC Name** column, click the name of the Custom Control to program.

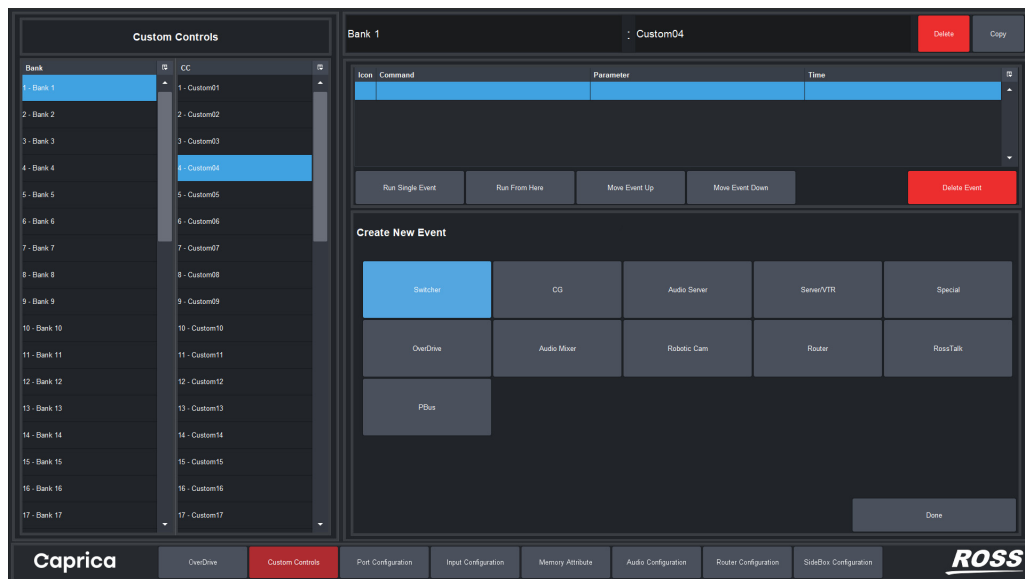
The **Bank** and **CC Name** boxes display the selected bank and Custom Control names.



The fields above the Custom Control **Event** list display the following information:

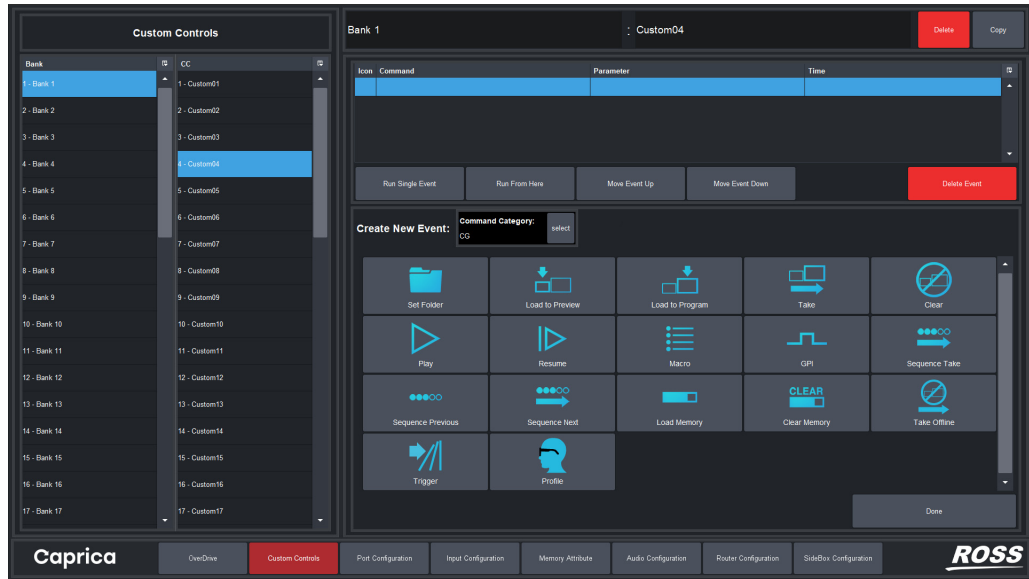
- **Total memory in use** — this field displays the percentage of the Caprica Custom Control memory that is used by all of the Custom Controls on your Caprica Server.
  - **Events** — this field displays the number of events in the selected Custom Control.
  - **Bytes used in** — this field displays the amount of Caprica Custom Control memory in bytes used by the selected Custom Control (**CC**) and bank (**Bank**).
  - **Duration** — this field displays the duration of the selected Custom Control in seconds (**ss**) and frames (**ff**).
4. Click in the **Bank** box to edit the bank name or the **CC Name** box to edit the Custom Control name.
  5. Click **Modify Event List** at the bottom of the **Custom Controls** client.

The **Create New Event** panel opens listing the available types of Custom Controls that you can use to build a Custom Control macro.



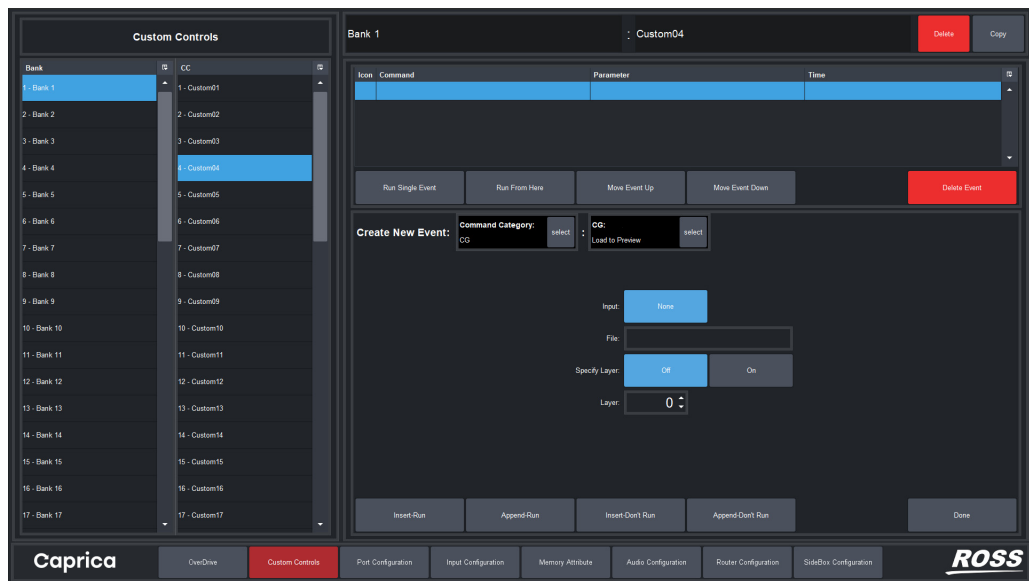
- In the **Create New Event** panel, click the type of Custom Control that you want to use to create a new event in your Custom Control macro.

The **Create New Event** panel lists the available Custom Controls that you can use to create an event in your Custom Control macro. If you selected the wrong Custom Control type, click **select** in the **Command Category** area to return to the list of available Custom Control types.



- Click the **Custom Control** to add to your macro as an event.

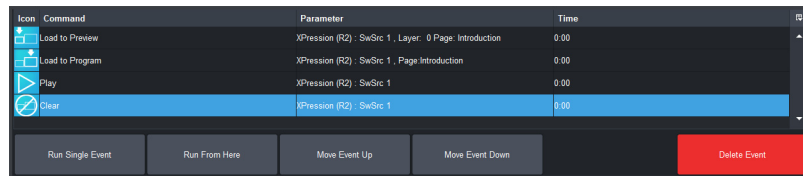
The **Create New Event** panel displays the setting for the selected Custom Control. If you selected the wrong Custom Control, click **select** in the **Custom Control Name** area to return to the list of available Custom Controls.



- Configure the **Custom Control Settings** as required for the new event in your Custom Control macro.

9. Depending on the location to add a configured Custom Control as an event in your Custom Control macro, Click one of the following:
  - **Insert-Run** — add a configured Custom Control above the currently selected event in the **Event List** and run the Custom Control on the switcher connected to the Quorum system. When an event is not selected in the **Event List**, new events are added as the first event in the **Event List**.
  - **Append-Run** — add a configured Custom Control below the currently selected event in the **Event List** and run the Custom Control on the switcher connected to the Quorum system. When an event is not selected in the **Event List**, new events are added as the last event in the **Event List**.
  - **Insert-Don't Run** — add a configured Custom Control above the currently selected event in the **Event List**, but do not run the Custom Control on the switcher connected to the Quorum system. When an event is not selected in the **Event List**, new events are added as the first event in the **Event List**.
  - **Append-Don't Run** — add a configured Custom Control below the currently selected event in the **Event List**, but do not run the Custom Control on the switcher connected to the Quorum system. When an event is not selected in the **Event List**, new events are added as the first event in the **Event List**.

The **Custom Controls** client adds the configured Custom Control to the **Event List** and highlights the new event. The **Event List** displays Custom Control macro events in the order of execution.



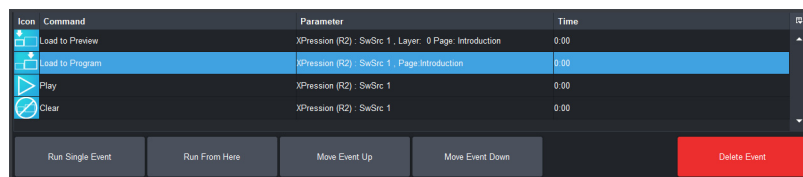
10. Click **select** in the **Command Category** area to start configuring the next event in your Custom Control macro.
11. Repeat step 5 to step 10 to add additional events to your Custom Control macro.
12. After you add the last event to your Custom Control macro, click **Done** to complete the macro.

## Moving Events in a Custom Control Macro

If you inserted an event at the wrong location in your Custom Control macro, you can move the offending event to the correct location in your Custom Control macro.

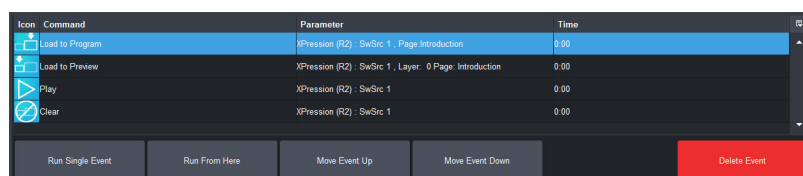
### To move an event in a Custom Control macro

1. In the **Event List** table, select the event to move.



2. Use the following button to move the selected event in the Event List table:
  - **Move Event Up** — move the selected event up one row in the **Event List** table.
  - **Move Event Down** — move the selected event down one row in the **Event List** table.

The **Custom Controls** client deletes the selected event from the **Event List** table and the Custom Control macro.

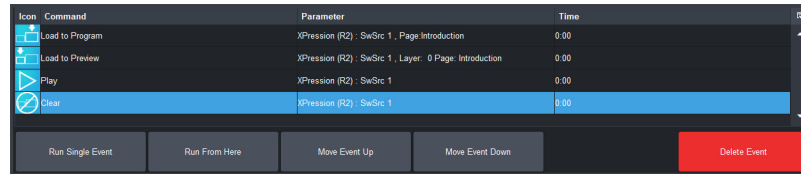


## Deleting Events from a Custom Control Macro

If you added an incorrect event to your Custom Control macro, you can delete the offending event from your Custom Control macro.

### To delete an event from a Custom Control macro

1. In the **Event List** table, select the event to delete.

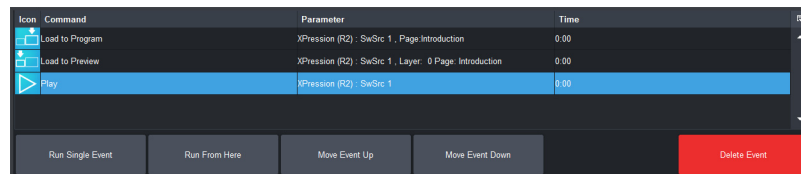


2. Click **Delete Event**.

The **Confirm Delete** alert opens.

3. Click **Delete Event**. Click **Cancel** if you do not want to delete the selected event. You cannot recover deleted events.

The **Custom Controls** client deletes the selected event from the **Event List** table and the Custom Control macro.



## Testing Custom Control Macros

While creating a Custom Control macro or after completing a macro you can use the following procedures to test the macro:

### To test individual events in a Custom Control macro

1. In the **Event List** table, click the event to test.
2. Click **Run Single Event** at the bottom of the **Event List** table.
3. On the switcher in your Quorum system, verify the results of the event.

### To test from a selected event to the last event in a Custom Control macro

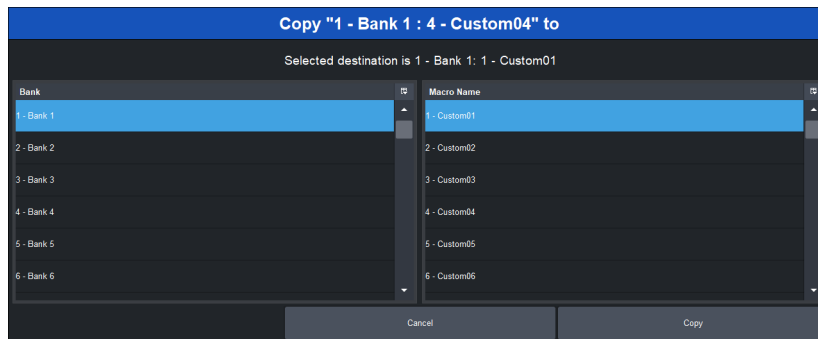
1. In the **Event List** table, click the event from which you want to start testing the Custom Control macro. Click the first event in the **Event List** to test the entire Custom Control macro.
2. Click **Run From Here** at the bottom of the **Event List** table.
3. On the switcher in your Quorum system, verify the results of the events.

## Making Copies of a Custom Control Macro

Starting with a copy of a Custom Control macro that does most of what you want is a quick method of build a Custom Control macro.

### To create a copy of a Custom Control macro

1. In the **Bank** column of the **Custom Controls** table, click the Custom Control bank that contains the Custom Control macro to copy.
2. In the **CC Name** column of the **Custom Controls** table, click the name of the Custom Control macro to copy.  
The **Custom Controls** client displays the selected bank and Custom Control name in the **Bank** and **CC Name** boxes at the top of the client.
3. Click **Copy** to the right of the **Bank** and **CC Name** boxes.  
The **Copy** dialog box opens.



4. In the **Bank** column of the **Copy** dialog box, click the Custom Control bank in which you want to save a copy of the selected Custom Control macro.
5. In the **Macro Name** column of the **Copy** dialog box, click the Custom Control name in which to save a copy of the selected Custom Control macro.
6. Click **Copy**.  
The Custom Controls client copies the selected Custom Control macro to the selected **Bank** and **Macro Name**.
7. To access the copied Custom Control macro, use the **Bank** and **CC Name** columns in the **Custom Controls** table.

## Deleting Custom Control Macros

When you no longer require a Custom Control macro, you can delete the Custom Control macro. Deleting a Custom Control macro deletes all the events in the Custom Control macro, preparing it for a new Custom Control macro.

### To delete a Custom Control macro

1. In the **Bank** column of the **Custom Controls** table, click the Custom Control bank that contains the Custom Control macro to delete.
2. In the **CC Name** column of the **Custom Controls** table, click the name of the Custom Control macro to delete.  
The **Custom Controls** client displays the selected bank and Custom Control name in the **Bank** and **CC Name** boxes at the top of the client.
3. Click **Delete** to the right of the **Bank** and **CC Name** boxes.  
The **Confirm Delete** alert opens.
4. Click **Delete**. Click **Cancel** if you do not want to delete the selected Custom Control macro. You cannot recover deleted Custom Control macros.  
The **Custom Controls** client deletes all the events in the selected Custom Control macro.

## Saving Caprica Server Configuration

After you finish configuring your Caprica Server it is a good idea to save the Caprica Server configuration to a diskset. You can use a diskset as a Caprica Server backup or to copy Caprica Server configurations to another Caprica Server. A diskset may contain one or more of the following Caprica Server configuration components:

- **Installation**
  - › Devices to connect to a Quorum system
  - › Switcher inputs
  - › Audio channels
  - › Router sources and destinations
- **Custom Control** - Custom Control macro definitions
- **Shotbox** — SideShot module configuration
- **Memory** — Memory Attribute configuration

When you create a diskset on a Caprica Server in a Redundant Caprica Server System the diskset is automatically copied to the other Caprica Server the Redundant Caprica Server System.

### Save Caprica Server Configuration to a New Diskset

At any time, you can save the current configuration of your Caprica Server to a new diskset. You can also save existing diskset on your Caprica Server to a diskset with a new name. When you save Caprica Server configurations to a new diskset, you can choose to save all or individual components in the diskset.

#### All Current Configuration Components

When you choose to save all components of the current Caprica Server configuration, Caprica compresses the Installation, Custom Control, Shotbox, and Memory configuration components into a single diskset file.

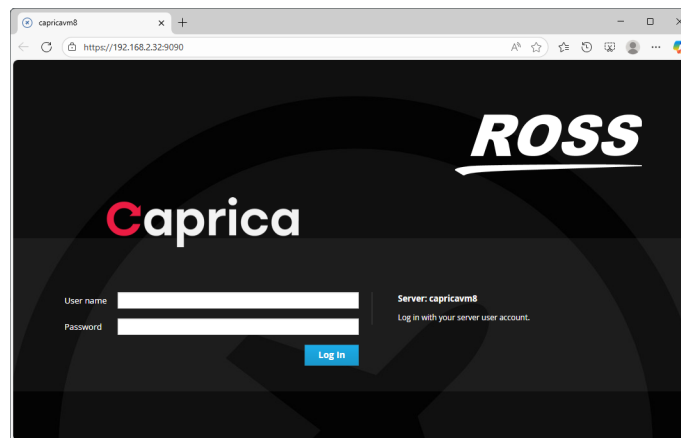
#### To save all components of the current Caprica Server configuration to a diskset

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where <Caprica Server> is the hostname or IP address of your **Caprica Server** computer:

```
https://<Caprica Server>:9090
```

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

The **Caprica Login** web page opens.



3. Use the following credentials to log in to **Caprica Cockpit**:

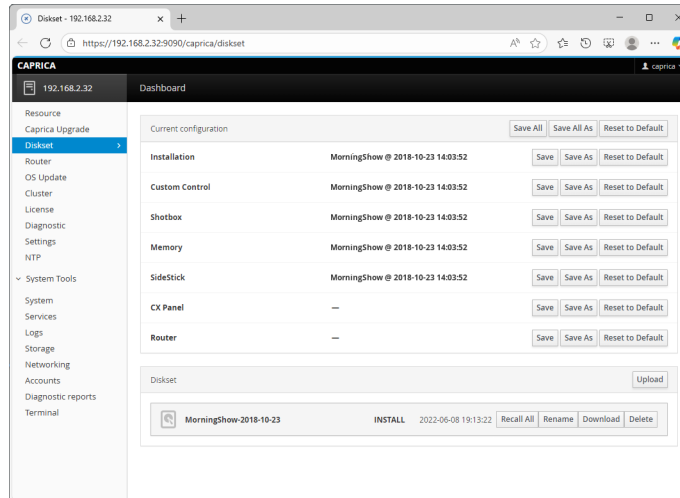
- **User:** caprica
- **Password:** <your\_password>

4. Click **Log In**.

**Caprica Cockpit** opens.

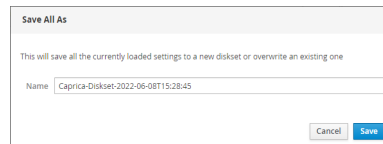
5. In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.



6. In the title bar of the **Current Configuration** section, click **Save All As**.

The **Save All As** dialog box opens.

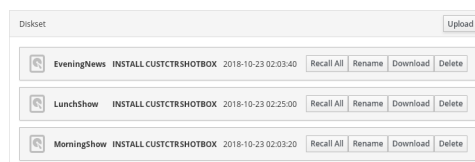


7. In the **Name** box, enter a name for your new diskset or use the suggested diskset name.

★ If you enter the name of an existing diskset, Caprica will overwrite the configuration components contained in the existing diskset with the components from the current configuration.

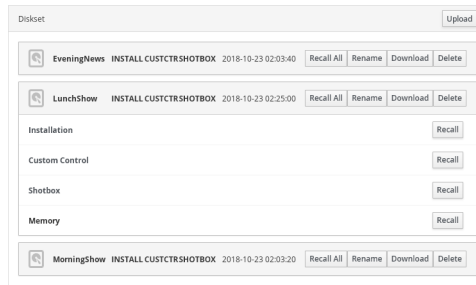
8. Click **Save**.

Caprica creates a new diskset by compressing the current configuration components into a single file (.tgz) with the name set in the **Save All As** dialog box. Caprica saves disksets files in the /caprica/archive directory on the Caprica Server computer. The **Diskset** section lists all the diskset files contained in the /caprica/archive directory, even diskset files copied into the directory from other sources.



- To view the configuration components contained in the new diskset, click the name of the new diskset in the **Diskset** section.

The selected diskset expands to display the configuration components contained in the diskset.



### Individual Current Configuration Components

You can choose to individually save the Installation, Custom Control, Shotbox, or Memory configuration from the current Caprica Server configuration to a diskset. You can add additional configuration components to an existing diskset.

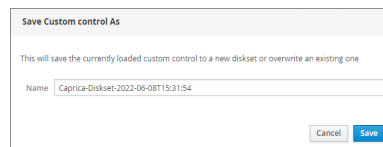
#### To save an individual component of the current Caprica Server configuration in a diskset

- Log in to a computer connected to the same network as the Caprica Server computer.
- Use a web browser to open **Caprica Cockpit**.
- Log in to **Caprica Cockpit** as the **caprica** user.
- In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.

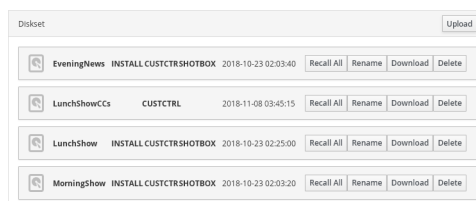
- In the **Current Configuration** section, click **Save As** to the right of the configuration component to save.

The **Save Component As** dialog box opens.



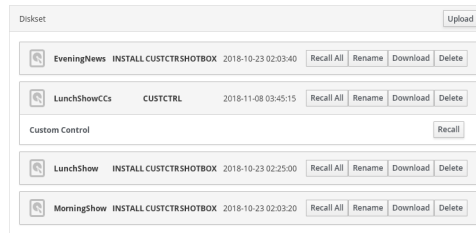
- In the **Name** box, enter a name for your new diskset or use the suggested diskset name.
- ★ If you enter the name of an existing diskset, Caprica will overwrite the configuration component in the diskset that matches the component you selected to save. When the diskset does not contain the configuration component you selected to save, Caprica will add the component to the diskset.
- Click **Save**.

Caprica creates a new diskset by saving the selected current configuration component in a file (.tgz) with the name set in the **Save Component As** dialog box. Caprica saves disksets files in the `/caprica/archive` directory on the Caprica Server computer. The **Diskset** section lists all the diskset files contained in the `/caprica/archive` directory, even diskset files copied into the directory from other sources.



- To view the configuration component contained in the new diskset, click the name of the new diskset in the **Diskset** section.

The selected diskset expands to display the configuration component contained in the diskset.



## Save Changes Made to a Caprica Server Configuration

After you make changes to the current configuration of your Caprica Server, you can save the configuration component changes back to the original disksets from which you recalled the components.

### All Current Configuration Components

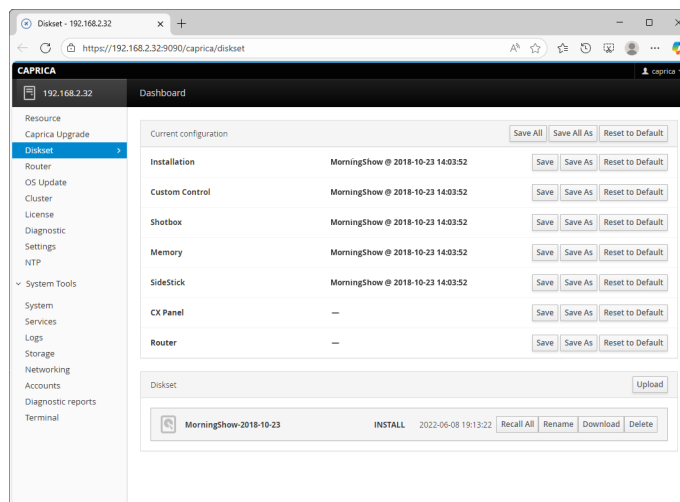
When you choose to save all configuration component changes for the current Caprica Server configuration, Caprica will overwrite the components in the originating disksets with the components in the Current Configuration section of the Diskset web page. The Current Configuration section displays the name of the originating diskset to the right of each configuration component.

- ★ Saving the current Caprica Server configuration overwrites the configuration components in the originating disksets with the current Caprica Server configuration.

### To save all Caprica Server configuration component changes to the originating disksets

- Log in to a computer connected to the same network as the Caprica Server computer.
- Use a web browser to open **Caprica Cockpit**.
- Log in to **Caprica Cockpit** as the **caprica** user.
- In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.



5. In the title bar of the **Current Configuration** section, click **Save All**.

The **Save All** alert opens.

6. Click **Save**.

Caprica overwrites the configuration components in the originating disksets with the current Caprica Server configuration. Click **Cancel** to cancel saving the current Caprica Server configuration back to the originating disksets.

### Individual Current Configuration Components

You can choose to individually save the Installation, Custom Control, Shotbox, or Memory configuration from the current Caprica Server configuration back to the originating diskset.

- ★ Saving an individual configuration component overwrites the configuration component in the originating disksets with the current Caprica Server configuration.

#### To save an individual Caprica Server configuration component changes to the originating diskset

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**.
3. Log in to **Caprica Cockpit** as the **caprica** user.
4. In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.

5. In the **Current Configuration** section, click **Save** to the right of the configuration component to save.

The **Save Installation** alert opens.

6. Click **Save**.

Caprica overwrites the configuration component in the originating diskset with the current Caprica Server configuration. Click **Cancel** to cancel saving the current Caprica Server configuration back to the originating diskset.

### Renaming a Diskset to Another Caprica Server

You can rename any of the disksets stored on your Caprica Server.

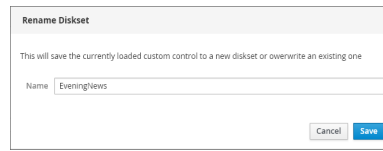
#### To rename a diskset on a Caprica Server

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**.
3. Log in to **Caprica Cockpit** as the **caprica** user.
4. In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.

5. In the **Diskset** section, click **Rename** to right of the diskset to rename.

The **Rename Diskset** dialog box opens.



6. In the **Name** box, enter a new name for the selected diskset.

★ If you enter the name of an existing diskset, Caprica will overwrite the existing diskset with the configuration components contained in the renamed diskset. Click **Cancel** to cancel renaming the selected diskset.

7. Click **Save** or **Overwrite**.

The **Rename Diskset** dialog box closes and the **Diskset** section of the **Diskset** web page displays the renamed diskset.

## Deleting a Diskset

When you no longer require a diskset you can delete the diskset from the Caprica Server to save disk space.

### To delete a diskset from a Caprica Server

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**.
3. Log in to **Caprica Cockpit** as the **caprica** user.
4. In the tree view, click **Diskset**.

The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.

5. In the **Diskset** section, click **Delete** to the right of the diskset to delete from the Caprica Server.

An **Alert** opens.

6. Click **Delete**.

The Caprica Server deletes the selected diskset. Click **Cancel** to cancel deleting the selected diskset.

## Recalling Configurations from a Diskset

You can recall all or selected Caprica Server configuration components from a diskset to change the configuration of your Caprica Server. The Diskset section of the Diskset web page lists the available disksets on your Caprica Server.

★ Recalling Caprica Server configuration components from a diskset overwrites the current Caprica Server configuration with the configuration components contained in the selected diskset and then restarts the Caprica Server.

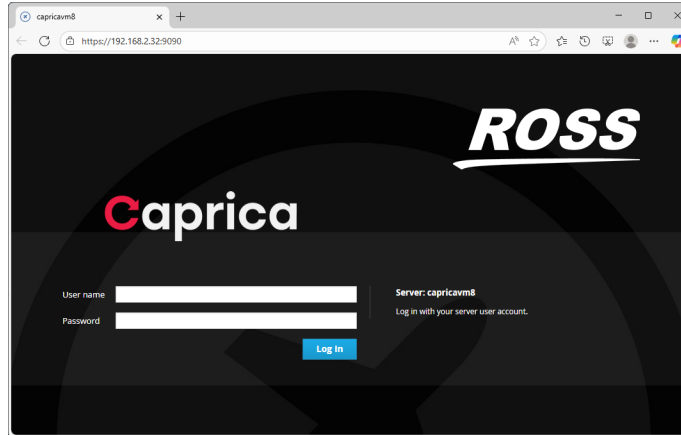
### To recall Caprica Server configuration components from a diskset

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

```
https://<Caprica Server>:9090
```

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

The **Caprica Login** web page opens.



3. Use the following credentials to log in to **Caprica Cockpit**:

- **User:** caprica
- **Password:** <your\_password>

4. Click **Log In**.

**Caprica Cockpit** opens.

5. In the tree view, click **Diskset**.

The **Diskset** web page opens. The **Diskset** section lists the disksets on your Caprica server from which you can recall configuration components. To the right of each diskset name, Caprica displays the components contained in the diskset along with the time and date that the diskset was created.

6. To recall all the Caprica Server configuration components contained in a diskset, complete the following steps:

a. In the **Diskset** section, click **Recall All** to right of the diskset to recall to the Caprica Server.

An **Alert** opens.

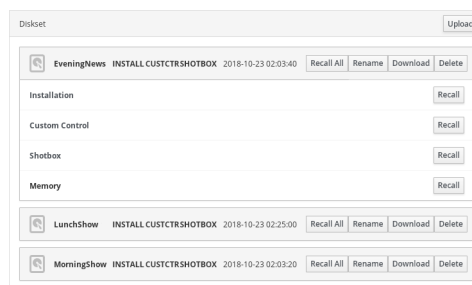
b. Click **Recall**.

Caprica overwrites the current Caprica Server configuration with the configuration components contained in the selected diskset and automatically restarts the Caprica Server to start using the new configuration. Click **Cancel** to cancel recalling the configuration components from the selected diskset.

7. To recall an individual Caprica Server configuration component from a diskset, complete the following steps:

a. In the **Diskset** section, click the name of the diskset from which to recall a Caprica Server configuration component.

The selected diskset expands to display the available Caprica Server configuration components contained in the diskset.



- b. In the expanded **Diskset**, click **Recall** to right of the Caprica Server configuration component to recall to the Caprica Server.

An **Alert** opens.

- c. Click **Recall**.

Caprica overwrites the current Caprica Server configuration with the selected configuration component from the diskset and automatically restarts the Caprica Server to start using the new configuration. Click **Cancel** to cancel recalling the selected configuration component from the diskset.

## Copying a Diskset to Another Caprica Server

You can use a diskset that you download from a Caprica Server to quickly configure another Caprica Server.

### To copy a diskset from one Caprica Server to another Caprica Server

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**.
3. Log in to **Caprica Cockpit** as the **caprica** user.
4. In the tree view, click **Diskset**.

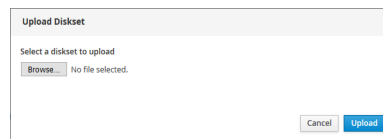
The **Diskset** web page opens. For each configuration component of the Caprica Server, the **Current configuration** section displays the name of the current diskset that contains the component and the time that component was recalled to configure the Caprica Server.

5. In the **Diskset** section, click **Download** to right of the diskset to copy to another Caprica Server.
6. Save the selected diskset to a file to your computer.
7. Use a web browser to open **Caprica Cockpit** on the **other** Caprica Server to which to copy the diskset.
8. Log in to **Caprica Cockpit** as the **caprica** user.
9. In the tree view, click **Diskset**.

The **Diskset** web page opens.

10. In the title bar of the **Diskset** section, click **Upload**.

The **Upload Diskset** dialog box opens.



11. In the **Upload Diskset** dialog box, click **Browse**.

The **File Upload** dialog box opens.

12. Use the **File Upload** dialog box to locate and select the **diskset file** (.tgz) to upload to the current Caprica Server.

13. Click **Open**.

The **File Upload** dialog box closes, and the **File Upload** dialog box displays the name of the selected diskset file.

- ★ When the diskset that you select has the same name as an existing diskset on the Caprica Server, Caprica will overwrite the existing diskset with the selected diskset. Click **Cancel** to cancel uploading the selected diskset.

14. Click **Upload** or **Overwrite**.

The **Upload Diskset** dialog box closes and the **Diskset** section of the **Diskset** web page displays the name of the uploaded diskset.

15. Recall all or selected Caprica Server configuration components from the uploaded diskset to the Caprica Server.

## Creating Caprica Server Diagnostic Reports

Diagnostic reports are used by Ross Video Technical Support to trouble shoot Caprica Server problems and are small enough to be sent to Ross Video for analysis. A diagnostic report is a .tgz file that contains the following information:

- Log files
- Installation files
- License files
- Cluster configuration
- Caprica software version
- Operating system version
- Support files

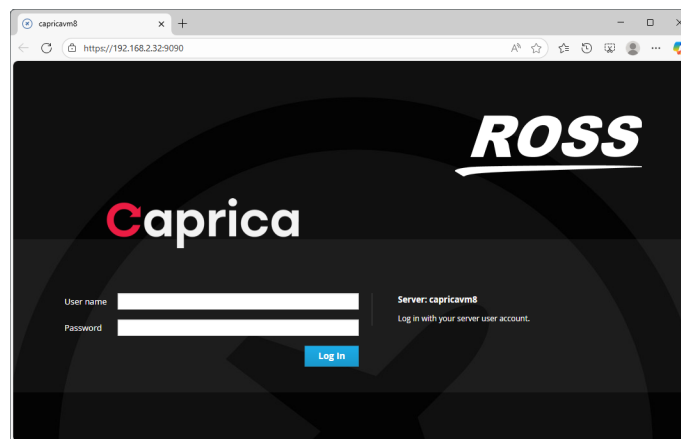
### To save a diagnostic report

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

`https://<Caprica Server>:9090`

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

The **Caprica Login** web page opens.



3. Use the following credentials to log in to **Caprica Cockpit**:

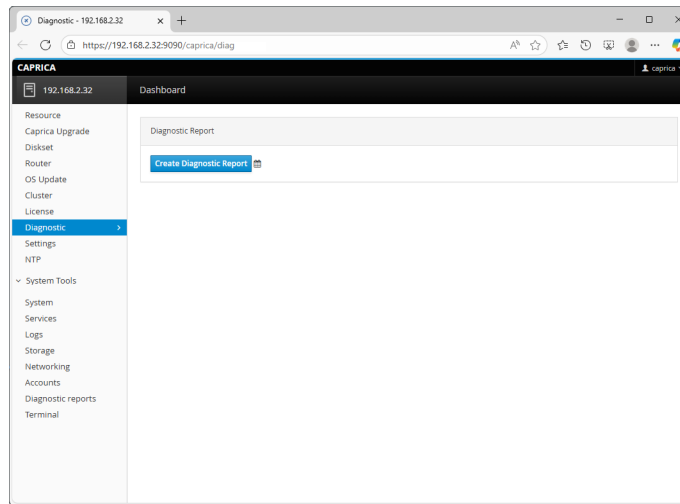
- **User:** caprica
- **Password:** <your\_password>

4. Click **Log In**.

**Caprica Cockpit** opens.

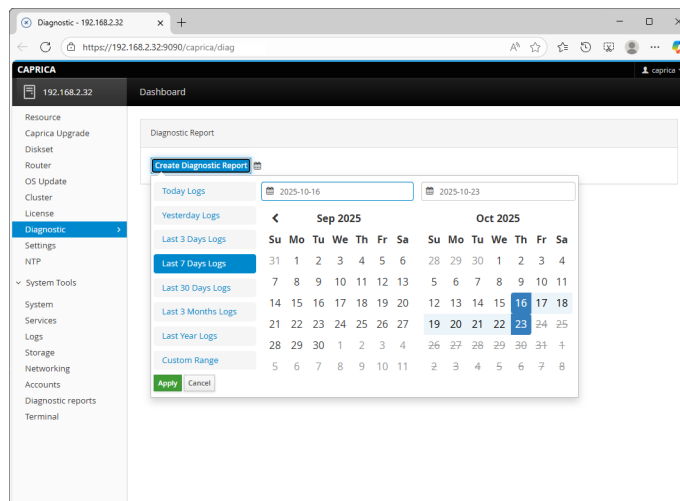
- In the tree view, click **Diagnostic**.

The **Diagnostic Report** web page opens.



- In the **Diagnostic Report** section, click **Create Diagnostic Report**.

The **Calendar** tool opens.



- Click a **Preset Date Range** button to create a diagnostic report for a set date range or click the **Custom Range** button to define your own date range.

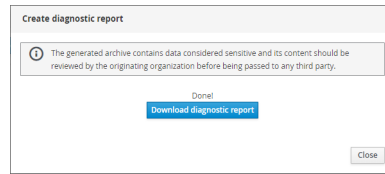
To define a custom date range for your diagnostic report:

- Click the **Custom Range** button.
- In the **Date** selector, click the start date for the diagnostic report.

The **Date** selector displays two months. To view other months, click the **Arrows** on either side of the month names.

- In the **Date** selector, click the end date for the diagnostic report.
- Click **Apply**.

After you select a pre-set date range or define a custom date range, Caprica generates a diagnostic report for the selected date range. The **Create diagnostic report** dialog box opens.



8. Click **Download diagnostic report**.
9. Follow your web browser prompts to save the diagnostic report .tgz file.
10. In the **Create diagnostic report** dialog box, click **Close**.

## Controlling User Session Timeout

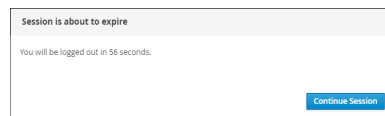
For user security, you can configure Caprica Cockpit to automatically log a user session out after a set number of minutes of inactivity.

### Automatic User Session Log Out

By default, Caprica Cockpit will automatically log a user session out after 15 minutes of inactivity. Caprica Cockpit will not automatically log out a user session before alerting the user.

**To continue a user session after reaching the set timeout limit:**

1. When there is only one minute remaining before Caprica Cockpit automatically logs out a user session, Caprica Cockpit displays the **Session is about to expire** alert to the user.



2. Click **Continue Session** to continue the Caprica Cockpit session.

Caprica Cockpit automatically logs the user session out if the user does not click **Continue Session** before the timer in the **Session is about to expire** alert reaches 0 seconds.

### Setting the User Session Timeout

You can set a user session timeout limit of 1 to 60 minutes of inactivity. You can also choose to turn off automatic user session timeout.

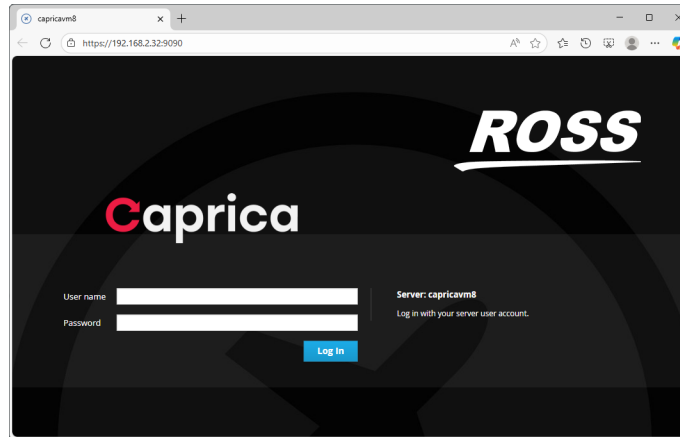
**To set the user session timeout limit:**

1. Log in to a computer connected to the same network as the Caprica Server computer.
2. Use a web browser to open **Caprica Cockpit**. The format of the URL is as follows, where `<Caprica Server>` is the hostname or IP address of your **Caprica Server** computer:

```
https://<Caprica Server>:9090
```

If the web browser identifies your connection with Caprica Cockpit as not secure, add an exception for Caprica Cockpit.

The **Caprica Login** web page opens.



3. Use the following credentials to log in to **Caprica Cockpit**:

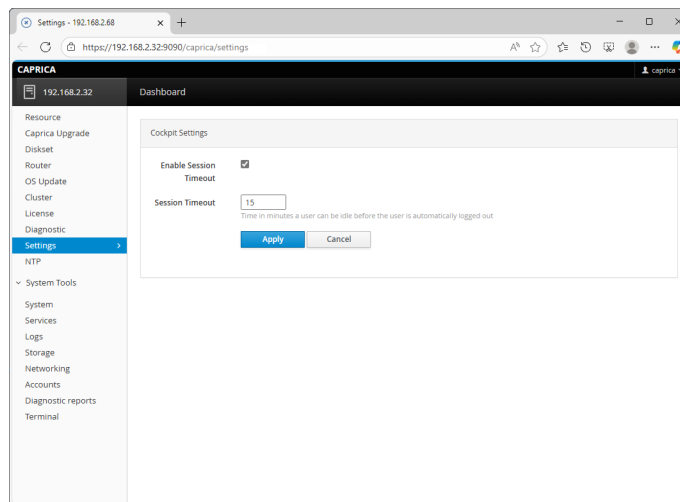
- **User:** caprica
- **Password:** <your\_password>

4. Click **Log In**.

**Caprica Cockpit** opens.

- In the tree view, click **Settings**.

The **Settings** web page opens.



5. Select the **Enable Session Timeout** check box to automatically log out user session that have been inactive for the set number of minutes.

To turn of automatic user session timeout, clear the **Enable Session Timeout** check box.

6. In the **Session Timeout** box, enter or select the number of minutes that a user session can be inactive before Caprica Cockpit automatically logs out the user session. **Session Timeout** can range from 1 to 60 minutes.

When there is only one minute remaining of the set **Session Timeout**, Caprica Cockpit displays the **Session is about to expire** alert to enable users the continue their session before being logged out.

7. Click **Apply**.

Caprica Cockpit saves the session timeout settings. Click **Cancel** to cancel saving the session timeout settings.

# Appendix A. Software Licenses

Your Ross Video product uses software covered by one or more of the licenses described in this document.

★ As required by the GNU General Public License, and the Lesser GNU Public License (LGPL), source code can be obtained from Ross Video for at least 3 years. Contact Ross Video Technical Support for more information.

The following licenses are contained in this appendix:

- End User Software License Agreement
- GNU GENERAL PUBLIC LICENSE
- GNU GENERAL PUBLIC LICENSE WITH THE CLASSPATH EXCEPTION
- GNU LESSER GENERAL PUBLIC LICENSE
- BSD License
- Apache License
- Eclipse Public License - v 1.0
- Expat License
- IMLIB2
- Jiffy
- Fedora 14 - License Agreement
- PSF LICENSE AGREEMENT FOR PYTHON 2.7.3
- Jetty
- Apache ActiveMQ

## End User Software License Agreement

This End User Software License Agreement is a legal agreement between you (the “**Licensee**”) and Ross Video Limited (“**Ross Video**”) specifying the terms and conditions of your installation and use of the Software and all Documentation (as those terms are defined herein).

### IMPORTANT:

**BY DOWNLOADING, ACCESSING, INSTALLING OR USING THE SOFTWARE AND/OR DOCUMENTATION LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT AND THE LICENSE GRANTED HEREUNDER SHALL BE EFFECTIVE AS OF AND FROM SUCH DATE. IF YOU DO NOT WISH TO ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT, DO NOT DOWNLOAD, ACCESS, INSTALL, REFER TO OR OTHERWISE USE THE SOFTWARE AND/OR DOCUMENTATION.**

**1. INTERPRETATION.** In this Agreement, (a) words signifying the singular number include the plural and vice versa, and words signifying gender include all genders; (b) every use of the words “herein”, “hereof”, “hereto” “hereunder” and similar words shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof; (c) reference to any agreement or other document herein will be construed as referring to such agreement or other document as from time to time amended, modified or supplemented (subject to any restrictions on such amendment, modification or supplement set forth therein); (d) every use of the words “including” or “includes” is to be construed as meaning “including, without limitation” or “includes, without limitation”, respectively; and (e) references to an Article or a Section are to be construed as references to an Article or Section of or to this Agreement unless otherwise specified.

**2. DEFINITIONS.** In this Agreement, in addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set out below:

“**Affiliate**” means, with respect to any Person, any other Person who directly or indirectly controls, is controlled by, or is under direct or indirect common control with, such Person. A Person shall be deemed to control a Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise; and the term “controlled” and “controlling” shall have a similar meaning.

“**Agreement**” means this End User Software License Agreement including the recitals hereto, as the same may be amended from time to time in accordance with the provisions hereof.

“**Backup System**” means the secondary piece of Designated Equipment upon which the Software is installed and mirrored for the sole purpose of replacing a Primary System in the event such Primary System is not available or functioning properly for any reason.

“**Change of Control**” means (a) the direct or indirect sale, transfer or exchange by the shareholders of a Party of more than fifty percent (50%) of the voting securities of such Party, (b) a merger or amalgamation or reorganization or other transaction to which a Party is party after which the shareholders of such Party immediately prior to such transaction hold less than fifty percent (50%) of the voting securities of the surviving entity, (c) the sale, exchange, or transfer of all or substantially all of the assets of a Party.

“**Confidential Information**” means all data and information relating to the business and management of either Party, including the Software, trade secrets and other technology to which access is obtained or granted hereunder by the other Party, and any materials provided by Ross Video to Licensee; provided, however, that Confidential Information shall not include any data or information which:

- a. is or becomes publicly available through no fault of the other Party;
- b. is already in the rightful possession of the other Party prior to its receipt from the other Party;
- c. is already known to the receiving Party at the time of its disclosure to the receiving Party by the disclosing Party and is not the subject of an obligation of confidence of any kind;
- d. is independently developed by the other Party;
- e. is rightfully obtained by the other Party from a third party; or
- f. is disclosed with the written consent of the Party whose information it is.

**“Designated Equipment”** shall mean (a) the hardware products sold by Ross Video to Licensee on which the Software is installed and licensed for use, as the same may be replaced from time to time by Ross Video; or (b) in the case of Software sold on a stand-alone basis, the equipment of Licensee on which the Software is to be installed and meets the minimum specifications set out in the Documentation.

**“Documentation”** shall mean manuals, instruction guides, user documentation and other related materials of any kind pertaining to the Software (whether in electronic, hard-copy or other media format) that are furnished to Licensee by or on behalf of Ross Video in relation to the Software.

**“Governmental Authority”** means (a) and federal, provincial, state, local, municipal, regional, territorial, aboriginal, or other government, governmental or public department, branch, ministry, or court, domestic or foreign, including any district, agency, commission, board, arbitration panel or authority and any subdivision of any of them exercising or entitled to exercise any administrative, executive, judicial, ministerial, prerogative, legislative, regulatory, or taxing authority or power of any nature; and (b) any quasi-governmental or private body exercising any regulatory, expropriation or taxing authority under or for the account of any of them, and any subdivision of any of them.

**“Improvements”** means all inventions, works, discoveries, improvements and innovations of or in connection with the Software, including error corrections, bug fixes, patches and other updates in Object Code form to the extent made available to Licensee in accordance with Ross Video’s release schedule.

**“License Fee”** means the fee(s) payable in respect of the Software in accordance with the relevant invoice(s) or other purchase documents delivered in connection with this Agreement.

**“License Period”** means the period of time that Licensee will have the rights granted under this Agreement, as may be specified in a Quote.

**“Maintenance Fee”** means the yearly maintenance fee(s) payable by Licensee to Ross Video, as determined by Ross Video, for the support, maintenance and update of the Software after the expiry of the Maintenance Period as set forth in this Agreement.

**“Maintenance Period”** means, in connection with the Software, the maintenance period of one (1) year from the date of shipment unless otherwise specified in the table below:

Product Category	Software Maintenance Period
Switchers	For the life of the Designated Equipment
Routers (excluding Ultrix)	For the life of the Designated Equipment
Master Control System Software (Dashboard)	For the life of the Designated Equipment
Gear	For the life of the Designated Equipment
Neilsen Encoders	For the life of the Designated Equipment
Sports Analysis	For the License Period

**“Modifications”** means any enhancements, changes, corrections, translations, adaptations, revisions, developments, upgrades or updates thereto; and **“Modify”** shall mean the creation of any of the foregoing.

**“Object Code”** means the machine readable executable form of a computer software program.

**“Parties”** means both Ross Video and Licensee and **“Party”** means either one of them as the context requires.

**“Person”** will be broadly interpreted and includes (a) a natural person, whether acting in his or her own capacity, or in his or her capacity as executor, administrator, estate trustee, trustee or personal or legal representative; (b) a corporation or a company of any kind, a partnership of any kind, a sole proprietorship, a trust, a joint venture, as association, an unincorporated association, an unincorporated syndicate, an unincorporated organization or any other association, organization or entity of any kind; and (c) a Governmental Authority.

**“Primary System”** means the Designated Equipment upon which the Software is installed and executed to deliver it’s intended functionality.

**“Quote”** means the document provided by Ross Video to Licensee detailing the Ross Video products contemplated for purchase, the corresponding fees and any License Period that may apply to the Software.

**“Software”** shall mean the version of the Object Code sold and delivered to Licensee by Ross Video concurrently with delivery of this Agreement and any subsequent error corrections, updates, Modifications or Improvements provided to Licensee by Ross Video pursuant to this Agreement, but specifically excluding any features or plug-ins that may be purchased by you directly from third parties as upgrades or enhancements to the Software.

**“Source Code”** means the human readable form of a computer software program, all tools and documentation necessary for a reasonably computer programmer to understand, maintain and Modify the Software.

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7. **LIMITED REPRESENTATIONS AND WARRANTIES.**

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- a. During the Maintenance Period the Software is warranted to be free from material defects under normal use;
- b. Ross Video has the authority to enter into this Agreement, is the owner or licensee of the Software and Documentation and has the right to grant all of the license rights herein;
- c. Except as expressly stated herein, no disabling mechanism or protection feature designed to prevent the Software's Use, including any computer virus, worm, lock, drop dead device, Trojan-horse routine, trap door, time bomb or any other codes or instructions that may be used to access, Modify, delete, damage or disable the Software or any other hardware or computer system, will be used or activated by Ross Video in respect of Software that is delivered to Licensee under a valid License; and
- d. The Software, if properly installed and used with Designated Equipment, will perform substantially as described in Ross Video's then current Documentation for such Software for the Maintenance Period.

**(B) Warranty Exclusions and Inclusions**

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**(C) Remedy**

If the Software becomes defective, and a valid claim is received by Ross Video during the Maintenance Period, Ross Video will, at its sole option and sole discretion, either (1) repair the defective Software at no charge, or (2) exchange the defective Software for a comparable product at no charge. The remedies set forth in this Section shall be the exclusive remedies available to Licensee in connection with a breach of the limited warranties set out above.

**(D) Maintenance Charges**

Technical support for the Software by telephone and email contact with Ross Video is provided by Ross Video to Licensee at no extra charge for the life of the product. During the Maintenance Period, Ross Video shall supply downloadable Software Modifications upon request of Licensee, when available, at no extra charge to Licensee. Notwithstanding the foregoing, Ross Video shall be under no legal obligation to create or release Software Modifications at any time or in accordance with a fixed schedule. Upon expiry of the Maintenance Period, where applicable, Licensee may purchase Software maintenance, including downloadable Software upgrades in one (1) year increments at the then applicable extended Maintenance Fee rates offered by Ross Video, in which case the warranties granted by this Agreement shall survive and remain in full force and effect during each such one (1) year term.

8. **OWNERSHIP.** The Parties acknowledge and agree that, as between the Parties, Ross Video shall be the owner of all intellectual property rights in the Software, Documentation and all related Modifications and Improvements, written materials, logos, trademarks, trade names, copyright, patents, trade secret and moral rights, registered or unregistered. No proprietary interest or title in or to the intellectual property in the Software, Documentation or any Improvements or Modifications is transferred to Licensee by this Agreement. Ross Video reserves all rights not expressly licensed to Licensee under section 3.

**9. THIRD PARTY SOFTWARE.** Licensee acknowledges that the Third Party Software is not owned by Ross Video. Notwithstanding any other provision of this Agreement, Ross Video, to the extent permitted by applicable law, offers no warranties (whether express, implied, statutory or by course of communication or dealing with Licensee, or otherwise) with respect to the Third Party Software. Ross Video may pass through to Licensee, if and to the extent permitted by applicable law, any warranties expressly provided by such third parties to Ross Video for such Third Party Software.

**10. INTELLECTUAL PROPERTY INDEMNITY.** Ross Video agrees to defend, indemnify and hold harmless Licensee from final damages awarded by a court of competent jurisdiction (hereinafter referred to as the “Losses”), which Licensee, or any of its officers or directors, may incur, suffer or become liable for as a result of, or in connection with, any third party claim asserted against Licensee to the extent such claim is based on a contention that the Software, Documentation or any portion thereof, infringes any valid, registered, enforceable patents, copyrights, trade secrets, trademarks or other intellectual property rights of any third party, provided that (a) the allegedly infringing Software or Documentation has been used within the scope of and in accordance with the terms of this Agreement, and (b) Licensee notifies Ross Video in writing of such claim within ten (10) days of a responsible officer of Licensee becoming aware of such claim. If the Software, Documentation or any portion thereof is held to constitute an infringement of a third party’s intellectual property rights, and use thereof is enjoined, Ross Video shall, at its election and expense, either (i) procure the right to use the infringing element of the Software or Documentation; or (ii) replace or modify the element of the Software or Documentation so that the infringing portion is no longer infringing and still performs the same function without any material loss of functionality. Ross Video shall make every reasonable effort to correct the situation with minimal effect upon the operations of Licensee.

Notwithstanding the above, Ross Video reserves the right to terminate this Agreement and the License granted hereunder on immediate notice to Licensee, and without liability to Licensee, in the event that the Software or Documentation constitutes or may, in Ross Video’s determination, constitute, an infringement of the rights of a third party that Ross Video, in its sole discretion, does not consider to be affordably remediable.

Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right and, in such event, there shall be no claim by either Licensee or Ross Video against the other arising out of such termination, provided that the foregoing shall not apply to a claim for infringement by Ross Video against Licensee in the event that Licensee is alleged to have infringed Ross Video's intellectual property rights, in which case Licensee shall remain liable for all outstanding License Fees and other amounts owing to Ross Video.

Notwithstanding the foregoing, Ross Video shall have no liability for any claim of infringement based on use of other than a current, unaltered release of the Software and/or Documentation available from Ross Video if such infringement would have been avoided by the use of a current, unaltered release of the Software and/or Documentation provided that such current, unaltered release performs substantially in conformance with the specifications set out in the Documentation and was provided, at no additional cost by Ross Video, to those subscribing for maintenance services for the Software or Documentation.

**11. CONFIDENTIALITY.** Each Party shall maintain in confidence all Confidential Information of the other Party, shall use such Confidential Information only for the purpose of exercising its rights and fulfilling its obligations under this Agreement, and shall not disclose any Confidential Information of the disclosing Party to any third party except as expressly permitted hereunder or make any unauthorized use thereof. Each Party shall disclose the Confidential Information only to those of its employees, consultants, advisors, and/or subcontractors who have a need to know the Confidential Information. Each Party shall, prior to disclosing the Confidential Information to such employees, consultants, advisors and/or subcontractors, obtain their agreement to receive and use the Confidential Information on a confidential basis on the same terms and conditions contained in this Agreement. The receiving Party shall treat the Confidential Information of the disclosing Party with the same degree of care against disclosure and/or unauthorized use as it affords to its own information of a similar nature, or a reasonable degree of care, whichever is greater. The receiving Party further agrees not to remove or destroy any proprietary or confidential legends or markings placed upon any documents or other materials of the disclosing Party. The obligations of confidence set forth in this Agreement shall extend to any Affiliates that have received Confidential Information of the disclosing Party and shall also cover Confidential Information disclosed by any Affiliate. The receiving Party shall be responsible for any actions or omissions of its Affiliates as if such actions or omissions were its own.

Either party may disclose certain Confidential Information if it is expressly required to do so pursuant to legal, judicial, or administrative proceedings, or otherwise required by law, provided that (i) such Party provides the other Party with reasonable written notice prior to such disclosure; (ii) such Party seeks confidential treatment for such Confidential Information; (iii) the extent of such disclosure is only to the extent expressly required by law or under the applicable court order; and (iv) such Party complies with any applicable protective or equivalent order.

Each of Ross Video and Licensee (the “**Indemnifying Party**”, as applicable) agree to indemnify the other (the “**Indemnified Party**”, as applicable) for all Losses incurred by the Indemnified Party as a result of a failure of the Indemnifying Party to comply with its obligations under this Section 11 provided that the Indemnified Party has given prompt notice of any such claim and, to the extent that a claim may lie against a third party for the unauthorized disclosure of such Confidential Information, the right to control and direct the investigation, preparation, action and settlement of each such claim and, further, provided that the Indemnified Party reasonably co-operates with the Indemnifying Party in connection with the foregoing and provides the Indemnifying Party with all information in the Indemnified Party’s possession related to such claim and such further assistance as reasonably requested by the Indemnifying Party.

The Parties acknowledge and agree that any breach of the confidentiality provisions of this Agreement by one Party may cause significant and irreparable injury to the other Party that is not compensable monetarily, as well as damages that may be difficult to ascertain, and agrees that, in addition to such other remedies that may be available at law or in equity, the other Party shall be entitled to seek injunctive relief (including temporary restraining orders, interim injunctions and permanent injunctions) in a court of competent jurisdiction in the event of the breach or threatened breach by such party of any of the confidentiality provisions of this Agreement. The relief contemplated in this Section shall be available to each Party without the necessity of having to prove actual damages and without the necessity of having to post any bond or other security. Each Party further agrees to notify the other Party in the event that it learns of or has reason to believe that any Person has breached the confidentiality provisions of this Agreement.

**12. LIMITATION OF LIABILITY.** The limitation of liability provisions of this Agreement reflect an informed voluntary allocation of the risks (known and unknown) that may exist in connection with the licensing of the Software or Documentation hereunder by Ross Video, and that voluntary risk allocation represents a material part of the Agreement reached between Ross Video and Licensee. Should Ross Video be in breach of any obligation, Licensee agrees that Licensee’s remedies will be limited to those set forth in this Agreement. No action, regardless of form, arising out of this Agreement may be brought by Licensee more than twelve (12) months after the facts giving rise to the cause of action have occurred, regardless of whether those facts by that time are known to, or reasonably ought to have been discovered by, Licensee.

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- a. IN ANY EVENT THE AGGREGATE LIABILITY OF ROSS VIDEO, ITS AFFILIATES AND LICENSORS, AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS,

FOR ANY CLAIM FOR DIRECT DAMAGES WITH RESPECT TO THE SUBJECT MATTER OF THIS AGREEMENT SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE PAID TO ROSS VIDEO UNDER THIS AGREEMENT.

### 13. TERM AND TERMINATION.

- a. Unless terminated earlier in accordance with the terms of this Agreement, the term of this Agreement shall commence upon Licensee's first download, access, installation, or other use of the Software or Documentation and continues until, in the case of Software sold with Designated Equipment provided by Ross Video, the earliest of (a) the end of the License Period, or (b) if the Designated Equipment is assigned or transferred in accordance with this Agreement, the date on which the Designated Equipment is no longer owned by Licensee;
- a. Either Party shall have the right to terminate this Agreement on notice to the other Party if:
  - a. the other Party fails to pay any fees or other amounts when due hereunder or under any other agreement between the Parties (or any Affiliates of the Parties, as applicable) in connection with the Software and/or Designated Equipment and such breach is not cured within thirty (30) days after written notice of such failure to pay is given to the defaulting Party by the non-defaulting Party;
  - a. the other Party shall file a voluntary petition in bankruptcy or insolvency or shall petition for reorganization under any bankruptcy law, consent to an involuntary petition in bankruptcy, or if a receiving order is given against it under the *Bankruptcy and Insolvency Act* (Canada) or the comparable law of any other jurisdiction (and such is not dismissed within ten (10) days);
  - a. there shall be entered an order, judgment or decree by a court of competent jurisdiction, upon the application of a creditor, approving a petition seeking reorganization or appointing a receiver, trustee or liquidator of all or a substantial part of the other Party's assets and such order, judgment or decree continues in effect for a period of thirty (30) consecutive days; or
  - a. the other Party shall fail to perform any of the other material obligations set forth in this Agreement and such default, in the case of a default which is remediable, continues for a period of thirty (30) days after written notice of such failure has been given by the non-defaulting Party or, in the case of a non-remediable default, immediately upon notice.
- a. Notwithstanding any to the contrary contained in this Agreement:
  - a. Ross Video may forthwith terminate this Agreement if Licensee is in breach of any of sections 3, 4 or 11 of this Agreement. For greater certainty, In such instances Ross Video shall provide written notice of such termination as soon as practicable but written notice shall not be a necessary prerequisite to such termination; and
  - a. in the event of a Change of Control of Licensee, Ross Video shall have the rights to terminate this Agreement and the License granted hereunder upon thirty (30) days' prior written notice to Licensee. For greater certainty, Ross Video's right to terminate in the event of a Change of Control of Licensee shall continue for a period of six (6) months from the date Licensee delivers notice of such Change of Control to Ross Video.
- a. Ross Video may terminate the License immediately on the date on which it provides notice to Licensee, if its agreements for Third Party Software are terminated.
- a. Upon the termination or expiry of this Agreement:
  - a. Licensee shall immediately cease and desist all use of the Software and Documentation;
  - a. Licensee shall immediately deliver to Ross Video any of Ross Video's Confidential Information provided hereunder (including the Software and Documentation) then in its possession or control, if any, and shall deliver a certificate of an officer of Licensee certifying the completeness of same;
  - a. Licensee shall refrain from further use of such Confidential Information; and
  - a. Licensee shall forthwith pay all amounts owing to Ross Video or any of its Affiliates hereunder.

14. **SURVIVAL.** The provisions of sections 1, 2, 4, 6, 8, 9, 11, 12, 13, 14, 17 and 19 herein shall survive the expiry or termination of this Agreement.

15. **FORCE MAJEURE.** Dates and times by which Ross Video is required to render performance under this Agreement shall be automatically postponed to the extent and for the period that Ross Video is prevented from meeting them by reason of events of force majeure or any cause beyond its reasonable control provided Ross Video notifies Licensee of the commencement and nature of such cause and uses its reasonable efforts to render performance in a timely manner.
16. **ASSIGNMENT.** Ross Video may assign this Agreement, or any of its rights or obligations hereunder, in whole or in part, upon notice to Licensee. Licensee shall not assign this Agreement, or any of its rights or obligations hereunder, in whole or in part, without the prior written consent of Ross Video, which consent may not be unreasonably withheld. This Agreement enures to the benefit of and is binding upon each of the Parties and their respective successors and permitted assigns.
17. **GOVERNING LAW.** This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and federal laws of Canada applicable therein and shall be treated, in all respects, as an Ontario contract. Each Party irrevocably and unconditionally submits and attorns to the exclusive jurisdiction of the courts of the Province of Ontario to determine all issues, whether at law or in equity, arising from this Agreement.
18. **LANGUAGE.** The Parties have expressly required that this Agreement and all documents relating thereto be drawn-up in English. Les parties ont expressément exigé que cette convention ainsi que tous les documents qui s'y rattachent soient rédigés en anglais.
19. **GOVERNMENT CONTRACTS.** If the Software and/or Documentation to be furnished to Licensee hereunder are to be used in the performance of a government contract or subcontract, the Software and/or Documentation shall be provided on a “restricted rights” basis only and Licensee shall place a legend, in addition to applicable copyright notices, in the form provided under the applicable governmental regulations. For greater certainty, Ross Video shall not be subject to any flowdown provisions required by any customers of Licensee that are a Governmental Authority unless Ross Video expressly agrees to be bound by such flowdown provisions in writing.
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21. **AMENDMENT AND WAIVER.** No amendment, discharge, modification, restatement, supplement, termination or waiver of this Agreement or any Section of this Agreement is binding unless it is in writing and executed by the Party to be bound. No waiver of, failure to exercise or delay in exercising, any Section of this Agreement constitutes a waiver of any other Section (whether or not similar) nor does any waiver constitute a continuing waiver unless otherwise expressly provided.
22. **SEVERABILITY.** Each Section of this Agreement is distinct and severable. If any Section of this Agreement, in whole or in part, is or becomes illegal, invalid, void, voidable or unenforceable in any jurisdiction by any court of competent jurisdiction, the illegality, invalidity or unenforceability of that Section, in whole or in part, will not affect (a) the legality, validity or enforceability of the remaining Sections of this Agreement, in whole or in part; or (b) the legality, validity or enforceability of that Section, in whole or in part, in any other jurisdiction.
23. **ENTIRE AGREEMENT.** This Agreement, and any other documents referred to herein, constitutes the entire agreement between the Parties relating to the subject matter of this Agreement and supersedes all prior written or oral agreements, representations and other communications between the Parties.

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1.2 "Designated Equipment" shall mean the hardware products identified on Exhibit "A" with which the Software is licensed for use.

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Ross Video Ltd.  
8 John Street  
Iroquois, ON  
K0E 1K0

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Iroquois, ON  
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11.4 Obligations on Termination. Within ten (10) days after termination of this grant, Licensee shall cease and desist all use of the Software and Documentation and shall return to Ross all full or partial copies of the Software and Documentation in Licensee's possession or under its control.

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Eclipse

The following artifacts are EPL.

\* org.eclipse.jetty.orbit:org.eclipse.jdt.core

The following artifacts are EPL and ASL2.

\* org.eclipse.jetty.orbit:javax.security.auth.message

The following artifacts are EPL and CDDL 1.0.

\* org.eclipse.jetty.orbit:javax.mail.glassfish

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Oracle

The following artifacts are CDDL + GPLv2 with classpath exception.

<https://glassfish.dev.java.net/nonav/public/CDDL+GPL.html>

\* javax.servlet:javax.servlet-api

\* javax.annotation:javax.annotation-api

\* javax.transaction:javax.transaction-api

\* javax.websocket:javax.websocket-api

-----

Oracle OpenJDK

If ALPN is used to negotiate HTTP/2 connections, then the following artifacts may be included in the distribution or downloaded when ALPN module is selected.

\* java.sun.security.ssl

These artifacts replace/modify OpenJDK classes. The modifications are hosted at github and both modified and original are under GPL v2 with classpath exceptions.

<http://openjdk.java.net/legal/gplv2+ce.html>

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OW2

The following artifacts are licensed by the OW2 Foundation according to the terms of <http://asm.ow2.org/license.html>

org.ow2.asm:asm-commons

org.ow2.asm:asm

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Apache

The following artifacts are ASL2 licensed.

org.apache.taglibs:taglibs-standard-spec

org.apache.taglibs:taglibs-standard-impl

-----

#### MortBay

The following artifacts are ASL2 licensed. Based on selected classes from following Apache Tomcat jars, all ASL2 licensed.

```
org.mortbay.jasper:apache-jsp
  org.apache.tomcat:tomcat-jasper
  org.apache.tomcat:tomcat-juli
  org.apache.tomcat:tomcat-jsp-api
  org.apache.tomcat:tomcat-el-api
  org.apache.tomcat:tomcat-jasper-el
  org.apache.tomcat:tomcat-api
  org.apache.tomcat:tomcat-util-scan
  org.apache.tomcat:tomcat-util
org.mortbay.jasper:apache-el
  org.apache.tomcat:tomcat-jasper-el
  org.apache.tomcat:tomcat-el-api
```

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#### Mortbay

The following artifacts are CDDL + GPLv2 with classpath exception.

<https://glassfish.dev.java.net/nonav/public/CDDL+GPL.html>

```
org.eclipse.jetty.toolchain:jetty-schemas
```

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#### Assorted

The UnixCrypt.java code implements the one way cryptography used by Unix systems for simple password protection. Copyright 1996 Aki Yoshida, modified April 2001 by Iris Van den Broeke, Daniel Deville.

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