

# CONCERTO

## MULTI-FORMAT ROUTING SWITCHER



**Release Notes**  
Software Version 1.8.1

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**Software Downloads** — Download software updates, drivers, and patches.



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Version **1.8.1**  
OCTOBER 2011

# *Concerto Release Notes*

## **Purpose**

This document provides information about the new features for the 1.8.1 software release of the Concerto Routing Matrix System.

## **New Features**

The 1.8.1 software release of the Concerto Routing Matrix System includes support for the Concerto 3Gb/s module.

## **Related Documents**

*Concerto Installation and Service manual.*

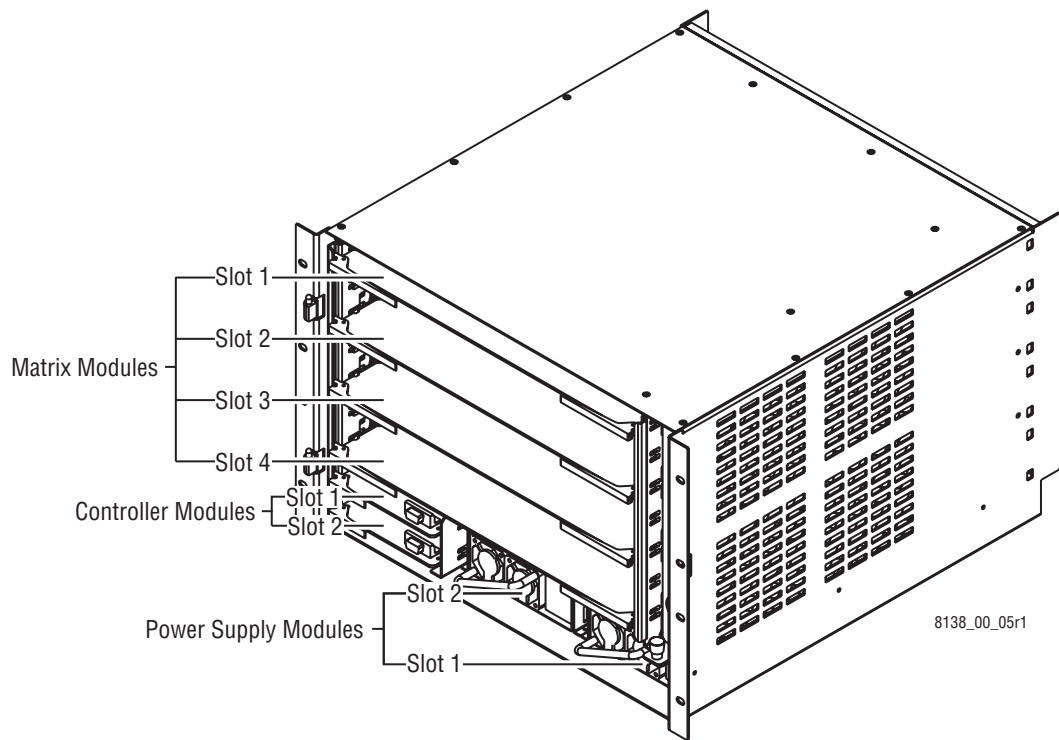
# Module Installation

All the modules are horizontally oriented in the frames and edge guides aid insertion and removal. The modules must be oriented in the frame with the front (populated) side facing up.

The position of the modules is the same for the 7 RU frame (shown in [Figure 1](#)) and the 8 RU Concerto+ frame.

Installing the 3Gb/s module into a slot with a different, or incompatible, rear panel may damage either the module or rear panel. Modules should only be installed in slots with the same type of rear panel.

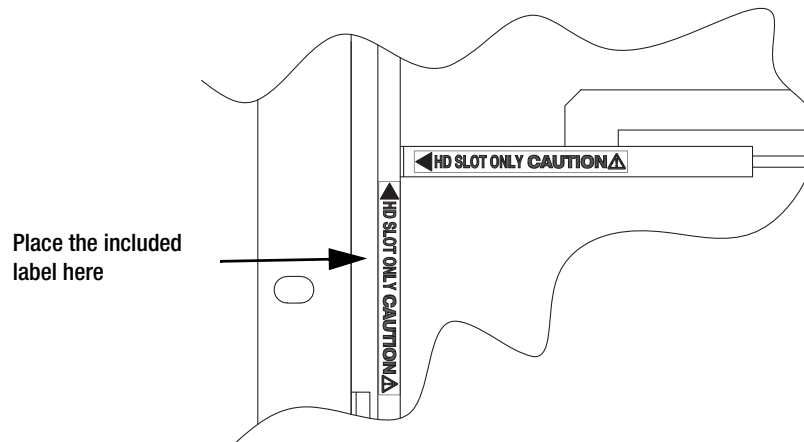
Figure 1. 7 RU Frame Configuration



Install the included Orange 3Gb/s label on the front surface of the left vertical guide rail directly below the HD or 3Gb/s module's slot to avoid possible equipment damage. The HD label is shown in [Figure 2 on page 9](#).



Figure 2. Label Location for Caution Sticker.



## Configuration

The Concerto can connect to different control systems using either Crosspoint Bus or Ethernet buses. Control using a Crosspoint Bus interface requires DIP Switch and Rotary Switch settings. Control using an Ethernet interface requires IP address configuration.

This section covers the IP settings, switch settings, and specific configuration items that Concerto requires to be controlled. General configuration areas that apply to all matrices connected to a control system are covered in the Instruction Manuals for the control system.

## Controllers

All of the Concerto Controllers can communicate via Ethernet. The CRS-MC-C2 module communicates via Ethernet or Crosspoint Bus based on the configuration of the Control **MODE/IN SEL** DIP Switch.

## Control Mode/In Sel Setting

On the CRS-MC-C2 Controller module, DIP Switch bank S11 (**MODE/IN SEL**) determines the control system interface. If this bank is configured for Ethernet (field or frame switching rate) control, then all of the other DIP Switches and Rotary Switches are bypassed and the controller uses Ethernet to communicate. If this bank is set for Crosspoint Bus (field or frame switching rate) control, then all of the other DIP Switches and Rotary Switches are used to configure the Concerto matrix.

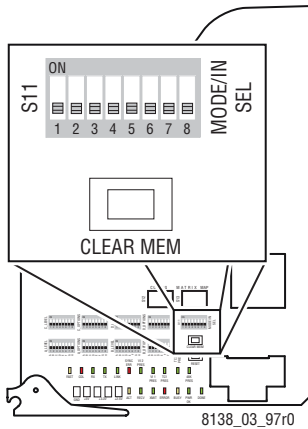


Table 1. Bank S11 DIP Switch Settings for Control Mode

Control Mode In	Control System	Switching Rate	Switch Settings				#5-#8 = OFF
			#1	#2	#3	#4	
Crosspoint Bus	Jupiter	Field	OFF	OFF	OFF	ON	Switches #5 through #8 are for factory use and must be set to OFF for normal operation.
		Frame	ON	OFF	OFF	ON	
	Jupiter W/ SNMP	Field	OFF	OFF	ON	OFF	
		Frame	ON	OFF	ON	OFF	
Ethernet	SMS 7000	Field	OFF	OFF	OFF	OFF	
	Encore	Frame	ON	OFF	OFF	OFF	

## Ethernet Interface Configuration

IP addresses for either the 10Base-T controller or the 10/100Base-T Controller are set at the factory for Encore installations. For that reason, it's possible to configure a Concerto using the default IP addresses with an Encore System Controller also running default IP addresses.

Table 2. Default Concerto IP Addresses

Concerto Matrix Controllers	Primary	Secondary
	Matrix Controller 1	Matrix Controller 2
Ethernet IP Address	192.168.1.34	192.168.1.35
Ethernet Subnet Mask	255.255.255.0	255.255.255.0

**CAUTION** Concerto Controller redundant operation employs consecutive IP addresses. The next higher IP address is reserved for this purpose and cannot be assigned to another device on the network, even if the Concerto is not operating redundantly. Serious system communications problems can occur if this next higher Concerto Controller IP address is used on the network.

Concerto IP addresses need to be changed on their controllers before they will interface with the SMS 7000 Control System, or interface with an Encore system that is not using default settings.

**Note** IP addresses set on a Concerto Matrix Controller with the **Factory Defaults** button on the Concerto Matrix Network Configuration web page (192.168.1.134 primary, 192.168.1.135 secondary) are different from the IP addresses manually set on a Concerto at the factory before shipment.

## Preparation

Before you change the IP addresses on Concerto, you should complete any software updates that are available for the control system you will be using to configure Concerto. You can update Concerto's software using NetConfig after the settings on Concerto are complete.

Consult with your Network or System administrator for the IP address for the Concerto hardware.

The following is required:

- The IP address that you want for each Matrix Controller (and backup if you have one) so that they can be uniquely addressed on your network,
- The IP address of your gateway (if you have one),
- The IP address of the Control System, (MCPU and backup MCPU for SMS 7000 or the System Control Processor for Encore).
- NetConfig installed on the PC being used for configuration, and
- The Concerto Software loaded onto the PC, which will be installed onto the Concerto Matrix controller after network communication is established.

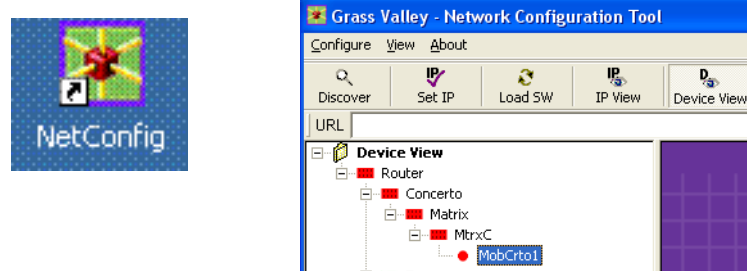
The NetConfig application can be used to change IP addresses and load software to devices on a network.

**CAUTION** If you are using a CRS-MC-C2 Controller module, the mode setting on DIP Switch bank S11 must be set correctly before it will communicate using Ethernet. See *Control Mode/In Sel Setting on page 10*.

## IP Address Setting Using NetConfig

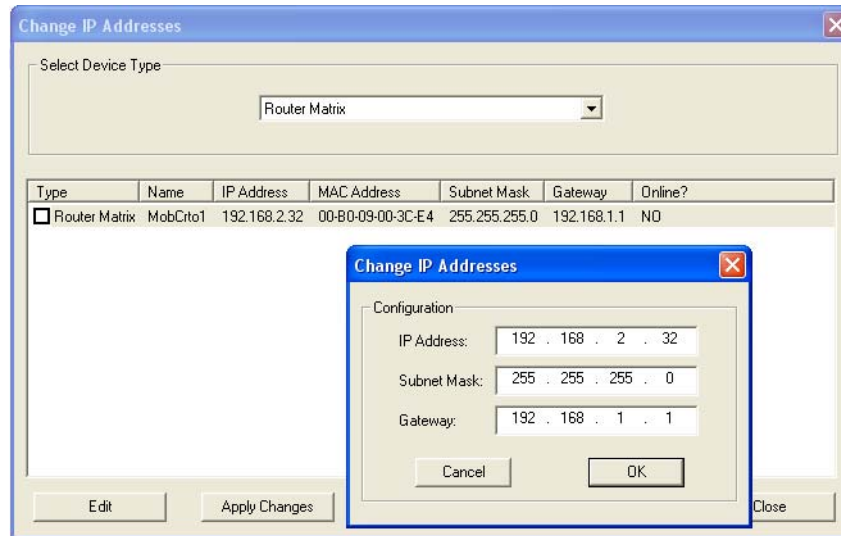
1. Double-click on the NetConfig icon to launch NetConfig (see [Figure 3 on page 12](#)). The main NetConfig window will appear.

Figure 3. Matrix Controller Invalid IP Address



2. Select **Device IP Addresses** on the **Configure** menu to access the **Change IP Addresses** window.
3. Select the Concerto Controller on the list (you can narrow the selection with the category drop down menu). Change Concerto's Controller Module IP setting(s) to the same subnet as your Control System (See [Figure 4](#)). For details on using NetConfig for these procedures, see the *NetConfig Instruction Manual*.

Figure 4. Change IP Addresses Dialog



After you've made these changes to Concerto IP settings you will be able to communicate fully with the Concerto via Ethernet and be able to make additional setting changes via NetConfig and/or the Control System.

You can review your Concerto settings or make any changes NetConfig supports by selecting your Concerto in NetConfig's IP or Device views and then using the various pages in the Browser. The **Concerto Matrix Description** screen ([Figure 5](#)) is a read-only screen that displays the current Concerto settings.

Figure 5. Concerto Matrix Description

**CONCERTO**

[Matrix Description](#)  
[Matrix System](#)  
[Matrix Network](#)  
[Reference Config](#)  
[Factory Default](#)  
[Local Configuration](#)  
[Matrix Applications](#)  
[Maintenance](#)

**Concerto Matrix Description**

Matrix System: **Concerto**  
Matrix Device Name: **RtSW/Rtr1**  
Frame Type: **67** Type Name: **Concerto 128**  
Matrix Programmed Type: **0**

Current Matrix Ethernet Status: **Comm OK, Primary**  
Controller Ethernet MAC address: **00:b0:09:01:02:b0**

Matrix Application Software Version: **V1.7.8 - Feb 01 2011 11:32:00**  
Matrix Application Loader Software Version: **0.0.0.a not created yet**  
Matrix Boot Software Version: **1.0.1 - 5272 mtrxC**

Matrix Hardware Information  
Controller Module Description:  
**10/100BaseT ethernet**  
**MtxC 671-6434-00a1**

Matrix Asset Tag Number (for user facility): **RtSW CRS 1**  
Matrix Location (for user facility): **Router Software Lab**

This is a read only page, however, the above  
"Matrix Device Name" can be revised on the following pages.

## IP Address Setting Using Concerto Web Pages

The IP addresses on a Concerto controller can also be changed directly from its web page, provided the PC used is configured with a compatible IP address compatible. However, it is more convenient to use NetConfig for this purpose, because it can list devices even the device is not configured directly on the network. Refer to the *NetConfig Instruction Manual* for detailed information.

If you know the existing IP address of the Concerto Matrix controller, you can access it from a properly configured computer. Once the Concerto web page is displayed, the IP address is changed by going to the Network Configuration screen (Figure 6). The Concerto Matrix controller will need to be reset to make any changes take effect. This is accomplished by checking the **Do Reset** box and then clicking on the **Save New Settings** button at the bottom of the screen, as shown in the example screen.

Figure 6. Concerto Matrix Network Configuration

**CONCERTO**

[Matrix Description](#)  
[Matrix System](#)  
[Matrix Network](#)  
[Reference Config](#)  
[Factory Default](#)  
[Local Configuration](#)  
[Matrix Applications](#)  
[Maintenance](#)

**Concerto Matrix Network Configuration**

**Current Settings**

Matrix Device Name: RtSWRtr1

System Type:  Encore  Prelude

Ethernet IP: 192.168.103.3

Subnet Mask: 255.255.255.0

Gateway IP: 192.168.0.100

Encore Master Controller IP: 192.168.103.1

Encore Slave Controller IP: 192.168.103.2

Max IP Router Hops: < < 2 > > \* <

Post Save Selection - Force Matrix Controller reset if box checked

Caution: Will force Controller to reset, and then resume using new network settings.

Do reset

Save New Settings Cancel Changes Factory Defaults

## Software Updates

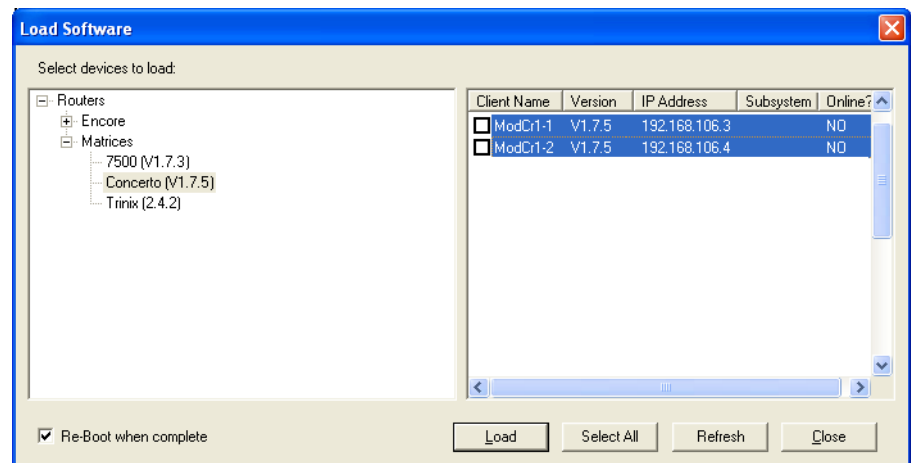
When you're ready to update Concerto's software, follow these steps.

**CAUTION** This procedure will take your Concerto(s) off line during the final step.

1. Ensure the PC that you are using is connected to the same network as your Concerto, and that the NetConfig and the Concerto software have been loaded onto the PC.
2. Launch NetConfig and select your Concerto in either the IP or Device view in the left pane of the NetConfig's main window.
3. Choose **Update Device Software** on the **Configure** menu.
4. When the Update Devices dialog box ([Figure 7](#)) appears, navigate through the hierarchy on the left to find your Concerto Controllers.
5. When your Concerto(s) appear in the right pane, click the **Select All** button.

**Note** Unpredictable system behavior is likely if different versions of software run in your facility.

Figure 7. The Update Devices Dialog Box



6. Ensure that the **Re-Boot when complete** check box is checked and click the **Load** button.
7. After the Concerto Controller reboots, verify that the correct software version is now loaded using the Concerto Matrix Description window. See [Figure 5 on page 13](#).
8. Exit NetConfig. Your Concerto changes are complete.

## Concerto Web Pages

The Concerto system offers web pages to report system status and allow configuration changes. These Web pages are accessible with a PC configured on the same network. Various web pages are displayed by clicking on the names of the pages on the left side of the screen.

The Concerto Controller must be reset before most changes will take effect. This is accomplished by checking the **Do Reset** box and then clicking on the **Save New Settings** button at the bottom of the screen.

The **Concerto Matrix Description** ([Figure 5](#)) and **Concerto Matrix Network Configuration** pages ([Figure 6 on page 14](#)) are illustrated earlier in this document. The following Concerto web pages are also available:

## Matrix Controller System Configuration

The Matrix Controller System Configuration web page allows you to enter descriptive information for the Concerto device, adjust serial port settings, and select control options.

Figure 8. Matrix Controller System Configuration Web Page

### System Parameters

The screen section allows descriptive information for the Concerto device, including name, asset tag, and location.

### Serial Port Configuration

Control settings for the console and external serial ports are available in this screen section.

### Control Options

**Standard**, **Standalone**, and **Native Protocol** settings are available. Most Concerto systems will run under Standard Control. Standalone and Native Protocol settings are used when the Concerto system is directly controlled by an automation system or other external control point.

**Note** Native Protocol cannot be used with Concerto Port Routers to perform bi-directional Takes.

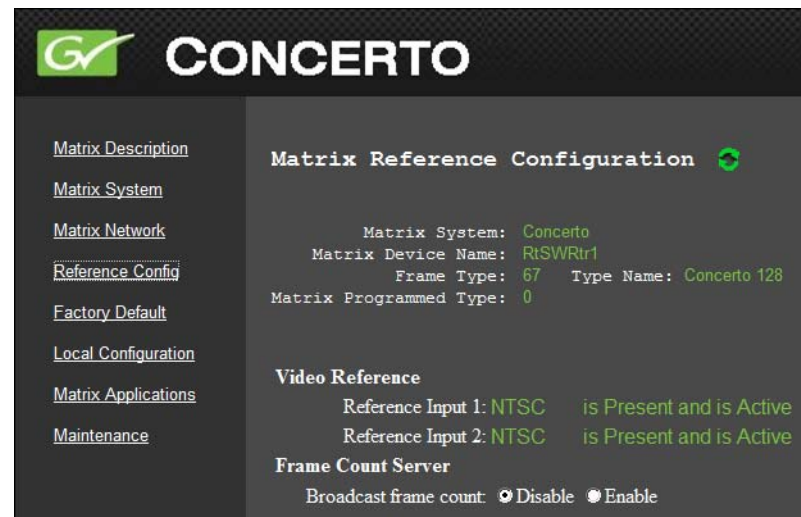


If **Standalone** is selected, additional settings become available on the Local Control web page.

## Matrix Reference Configuration

The Matrix Reference Configuration page reports the status of the system's video reference. The signal type is automatically detected and cannot be changed from this page.

Figure 9. Matrix Reference Configuration Web Page



### Frame Count Server

A Frame Count Server feature can be used with Grass Valley Prelude systems (not Encore systems) to synchronize frame boundary Takes initiated from system control panels. For Prelude control, the **Broadcast frame count** setting should be **Enabled**.

On Encore systems, the **Broadcast frame count** setting should be **Disabled** on Concerto, and any other matrices controlled by Encore, to prevent conflicts.

## Matrix Controller Factory Defaults

This read-only page shows the factory default settings for the Concerto system. The **Factory Defaults** button on the Network Configuration page is used to restore these settings (see [Figure 6 on page 14](#)).

Figure 10. Matrix Controller Factory Defaults Web Page

**CONCERTO**

[Matrix Description](#)

[Matrix System](#)

[Matrix Network](#)

[Reference Config](#)

[Factory Default](#)

[Local Configuration](#)

[Matrix Applications](#)

[Maintenance](#)

**Matrix Controller Factory Defaults**

Matrix Device Name: RtSWRtr1

**Factory Default Network Configuration**

Ethernet IP: 192.168.1.135  
 Subnet Mask: 255.255.255.0  
 Gateway IP: 192.168.1.1  
 Host Server Ethernet IP: 192.168.1.2  
 Host 2nd Server Ethernet IP: 0.0.0.0  
 Server Port Number: 6050  
 Server Port Type: UDP  
 Max Router Hops (Multicast): 2  
 Online Poll Time out seconds: 4

**Factory Default System Configuration**

Console Baud Rate: 115200  
 EXT COM Serial Port Baud Rate: 115200  
 EXT COM Serial Port Parity: 0

**Note** IP addresses set on a Concerto Matrix Controller with the **Factory Defaults** button on the Concerto Matrix Network Configuration web page (192.168.1.134 primary, 192.168.1.135 secondary) are different from the IP addresses manually set on a Concerto at the factory before shipment.

## Concerto Matrix Local Configuration

The Local Configuration page only has active controls when Local Control is selected in the System Configuration web page.

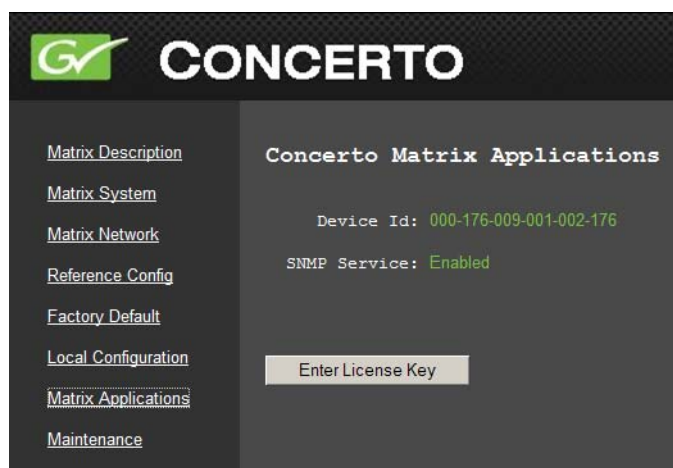
Figure 11. Concerto Matrix Local Configuration Web Page



## Concerto Matrix Applications

This screen is used to enter an SNMP license key, which is an optional feature available on Concerto systems.

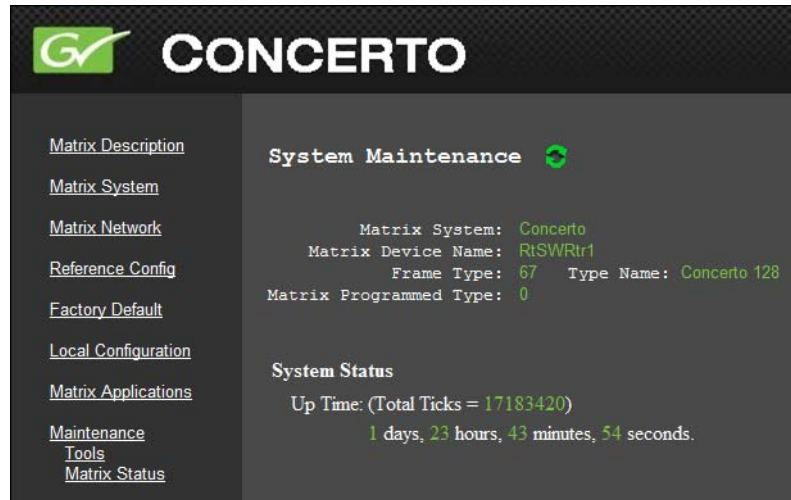
Figure 12. Concerto Matrix Applications Web Page



## System Maintenance

The System Maintenance page is not intended for customer use. It is for Grass Valley factory setup and engineering system development.

Figure 13. System Maintenance Web Page



## Specific Control System Configurations

For specific control system settings, see the *Concerto Installation and Service manual*.

## Verifying the FPGA Version

SNMP support is only available on Concerto Combo controllers with an FPGA version that is eight (8) and above. The `showFpgaVersion` command will display the current version of FPGA.

Follow these steps to verify the FPGAs version.

1. Establish a Telnet session to Concerto matrix.
2. Type “en” to enter the engineering mode on the telnet session.
3. Type “showFpgaVersion” to display the current FPGA version that is loaded on the Concerto Matrix.