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REVISION HISTORY

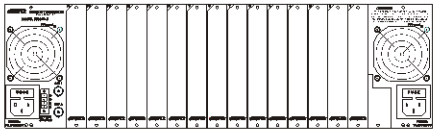
REVISION	DESCRIPTION	DATE
1.0	First Release	May 2008
1.1	Updated Pin out on HD-15 connector	Jun 2008
1.2	Added drawing of HD-15 female connector	Jul 2008
1.3	Updated frame & model numbers, modified rear plate drawings, added info on the 7867VIPA32	Sept 2008
1.4	Added 7867VIPA32 block diagram to section 2, updated the 7867VIPA32 rear plates	Oct 2008
1.5	Updated specs & *Vista*LINK®. General cleanup.	Dec 2008
1.6	Updated 7867VIPA16-DUO-HS-DIN & 7867VIPA16-DUO-3GHS-DIN rear plates in section 3.	Jan 2009
1.7	Added information regarding 7867VIPA18 and 7867VIPA24 modules. Added information on VIP Advanced modes	Jul 2009
1.7.1	Updated HD-15 Pin-Out table. Added LTC Input specification.	Sept 2011

1. VIPA QUICK START GUIDE

This section describes how to quickly start using a standard VIPA system. Further details, specifications, and instructions on the VIPA are provided herein.

1

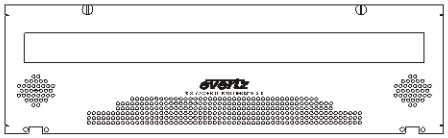
Unpack the 7800FR frame and mount accordingly.



2

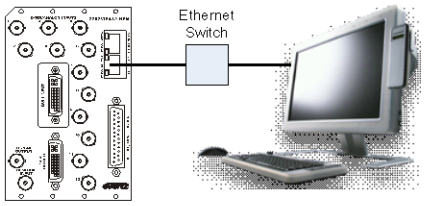
Use the power cords provided to connect to the 7800FR frame.

Switch on the power supply from front of the frame.



3

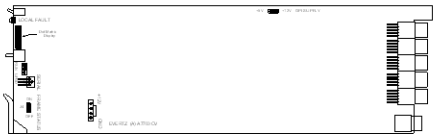
Plug the Ethernet cable into Ethernet port 1 for 7867VIPA12, or port 2 for 78767VIPA8 / 16 / 32 / -DUO. Plug the other end of cable into the Ethernet switch. Connect a PC / laptop to the same switch via Ethernet cable.



4

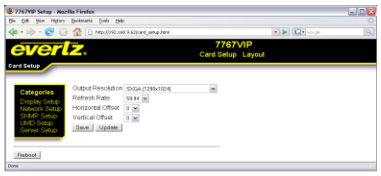
Set the IP address for the VIP card via the front card edge display using the toggle switch or push button.

Power cycle the device after saving the IP address.



5

Using a web browser (ie. Internet Explorer, Fire Fox, etc) type the IP address of the VIP in the address line (for example: 192.168.9.50). The VIP will display a web page containing the output resolution setting of the card. Set the output resolution of the VIP to match the monitor connected to the VIP.



6

Using the web browser, navigate to the "Layout" section of the web page to load a factory stored layout.

If no layouts appear then the device does not have any default layouts loaded.

To create a new layout use the Maestro software. (See step 7)

7

To design new layouts for the VIP, install the Maestro software via the *vs-setup.exe* installer provided with the VIP on a CD. Follow the installation instructions to install the Maestro client.

8

Open Maestro by double clicking on the Maestro icon from the desktop.

If opening Maestro for the first time you will be prompted to create a new system. In the dialog box, provide a name for the VIP and enter it's IP address.

Select the appropriate product type which matches the VIP being used (for example: 7867VIPA12, 7867VIPA8, etc.)

9

Once the new system is created, double click on the system icon to enter *layout* mode.

Select a display to control by double clicking the desired option.

To get started quickly, recall a pre-saved layout from the Maestro design folder. If you wish to create your own layout, start by building a new layout using the template windows and the sources from the source window.

2. OVERVIEW

The VIP Advanced DUO is the most advanced compact multi-image display processor technology available. It supports up to 3Gbps SDI inputs and up to two unique display outputs. The VIP-A DUO takes compact multi-image display to the next level.

The VIP Advanced DUO is available in three sizes: 8 inputs with up to 2 outputs, 16 inputs with up to 2 outputs, and 32 inputs with up to 2 outputs. The VIP-A DUO inputs are auto-sensing SD, HD, and 3Gbps (SMPTE 424M). Each VIP-A DUO input can be displayed in any size, position or aspect ratio on any display. Both display outputs from the VIP-A DUO are provided over DVI and HD-SDI, which are both available simultaneously. The VIP-A DUO provides the best quality input reproduction, borrowing the latest in video processing technology from Evertz industry acclaimed conversion products.

The VIP Advanced DUO is a hot-swappable device, which can be populated in Evertz widely installed 3RU 7800 multi-frame chassis with an option for redundant power supplies.

The VIP Advanced DUO device is *Vista*LINK® - enabled, offering remote monitoring, control and configuration capabilities via Simple Network Management Protocol (SNMP). The VIP-A DUO is easily configurable via the web server interface or card edge. Similar to the MVP, layout creation can be performed in a live control environment using Evertz' Maestro™ software. Other key features include automatic aspect ratio adjustment on a source-by-source basis, graticule generation, VITC/HD time code decode, and much more.

Key VIP™ Features:

- Accepts 8 (VIPA8-DUO), 16 (VIPA16-DUO), 18 (VIPA18-DUO), 24 (VIPA24-DUO) or 32 (VIPA32-DUO) inputs with embedded audio
- Uses Evertz next generation image processing technology, which is the same technology used in conversion products
- Auto-sensing HD/SD and 3Gbps (SMPTE 424M) inputs (3GHS version)
- Supports display resolutions of up to 1920x1080p on both outputs simultaneously
- Allows for full screen viewing of any input on both outputs
- Supports both DVI and HD-SDI outputs (active simultaneously)
- Provides support for dynamic under monitor displays and tallies from router and switcher
- Supports advanced on screen graphics, including analog clocks, transparency control of objects, raised bezels and borders, drop shadows, and bitmap backgrounds
- Supports true type font including non-Latin alphabets
- Built-in graticule generator, user defined per window
- Enables the decoding and display of VITC/HD time code (RP-188)
- Devices can be easily cascaded together to expand the total number of images on the displays
- Built-in video, audio, and data fault monitoring with on screen fault notification
- *Vista*LINK® - capable for configuration and monitoring via SNMP
- Minimal processing delay (~1 frame)
- Real time control of display outputs via Maestro™

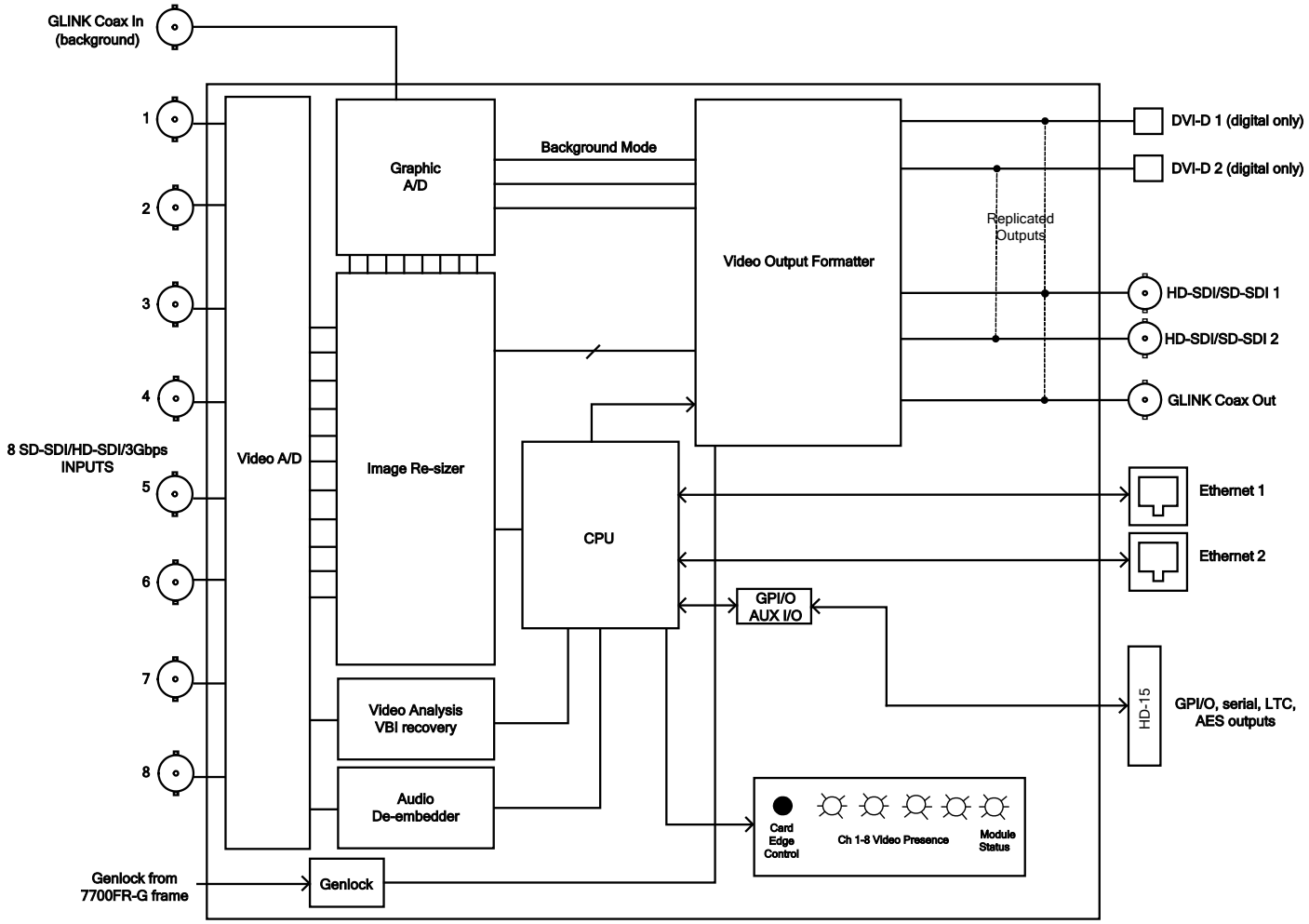


Figure 2-1: 7867VIPA8-DUO-HS Block Diagram

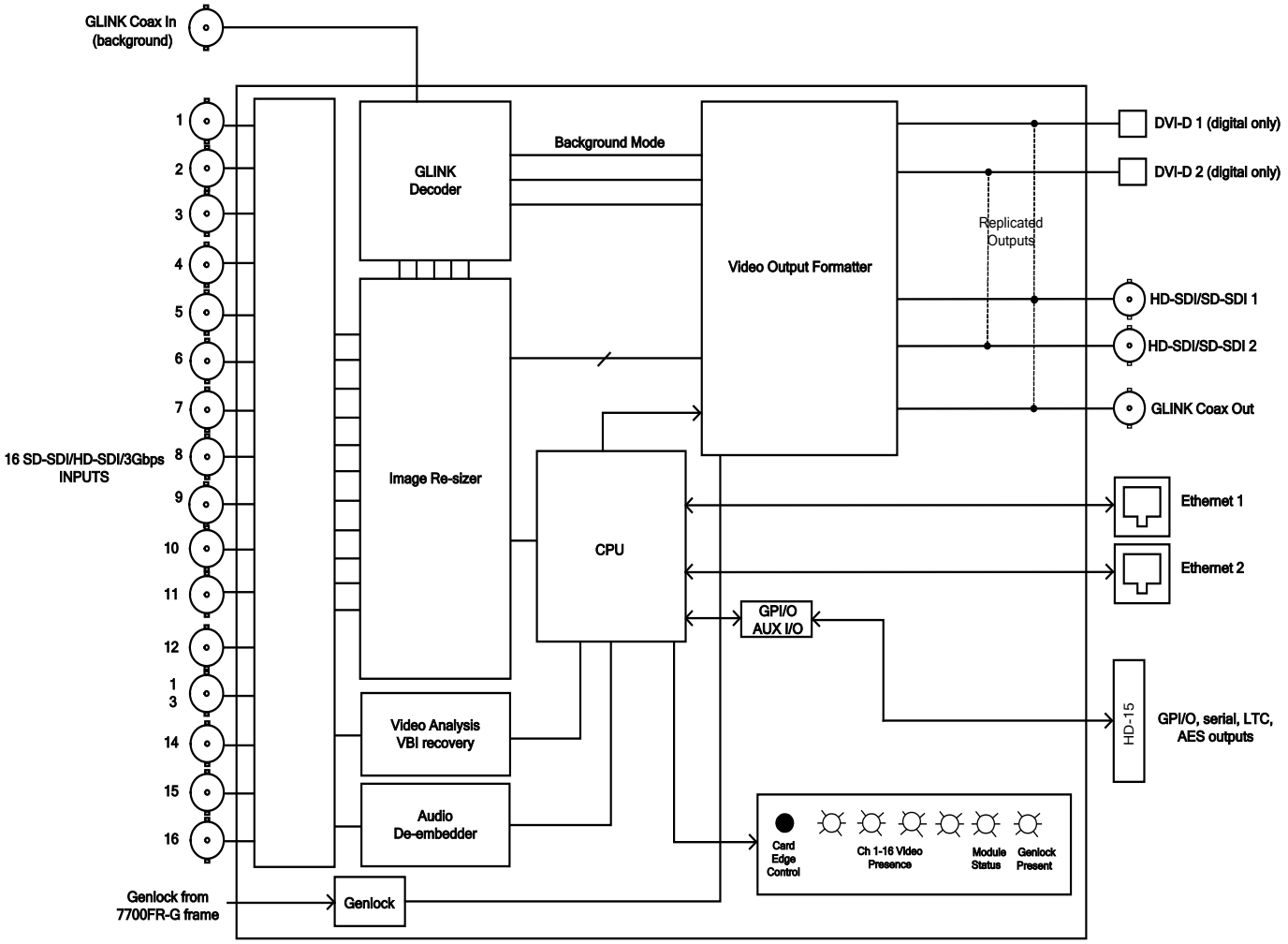


Figure 2-2: 7867VIPA16-DUO-HS Block Diagram

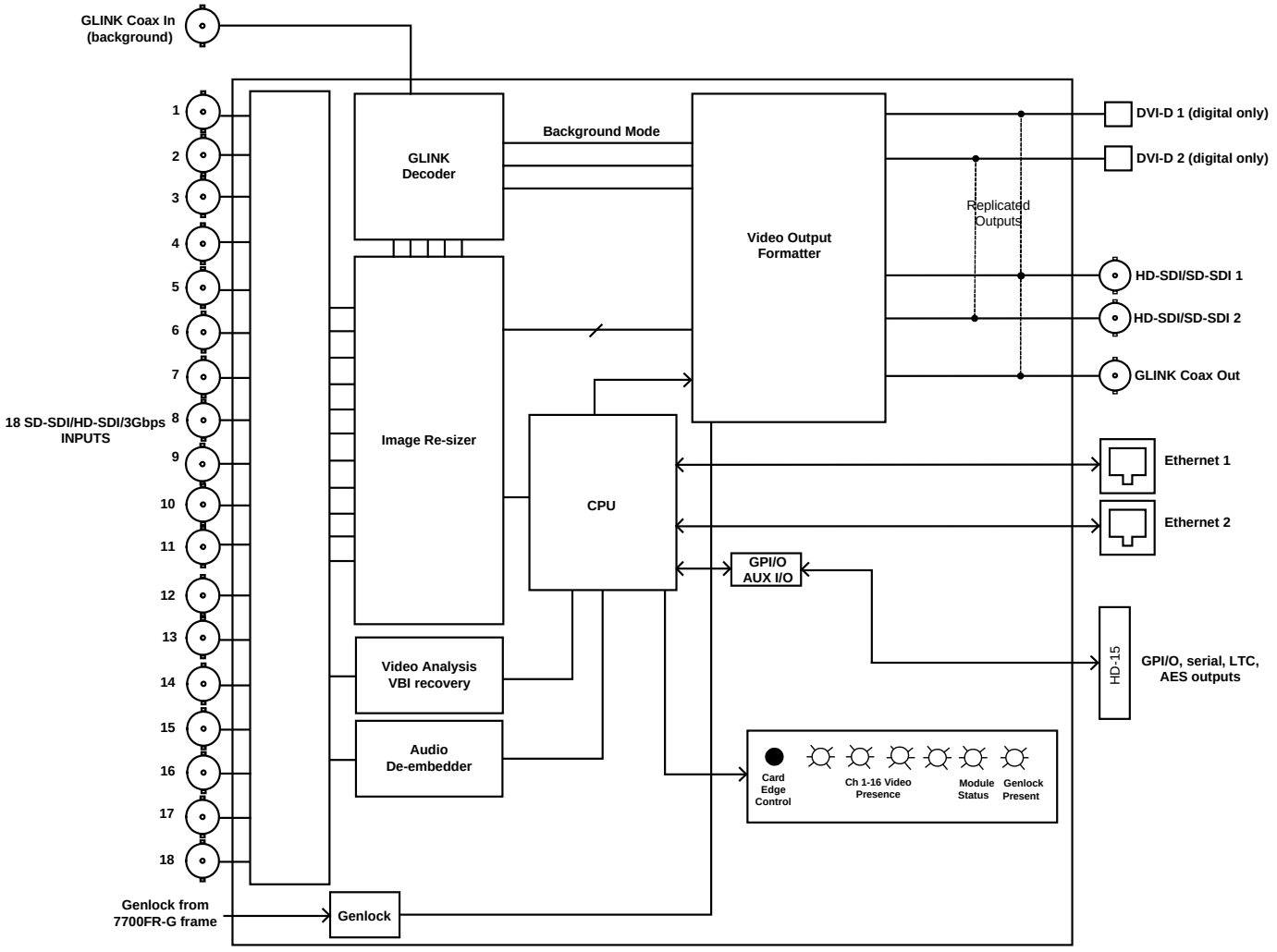


Figure 2-3: 7867VIPA18-DUO-HS Block Diagram

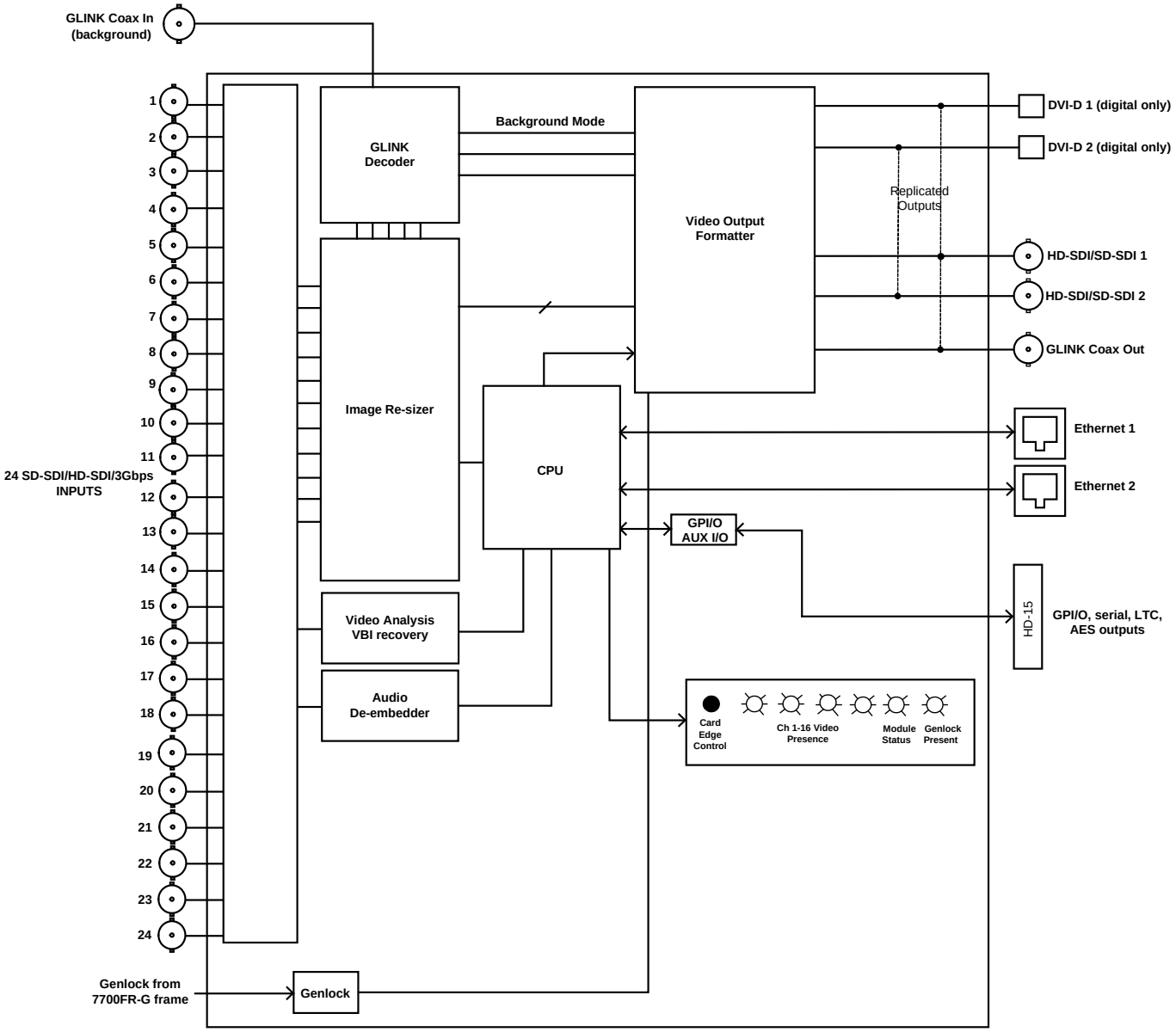


Figure 2-4: 7867VIPA24-DUO-HS Block Diagram

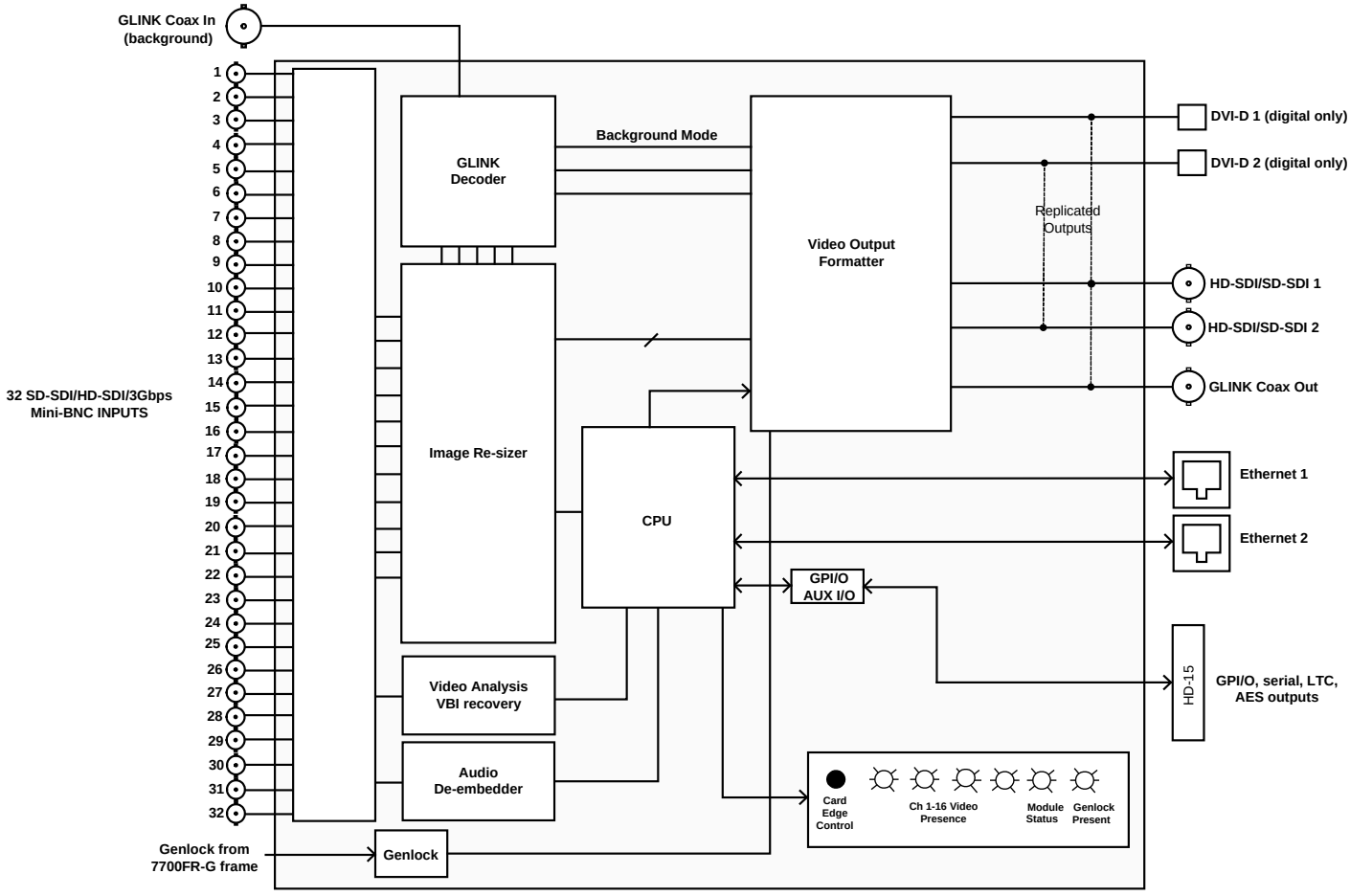


Figure 2-5: 7867VIPA32-DUO-HS Block Diagram

3. INSTALLATION

The 7867VIPA8-DUO-HS/3G, 7867VIPA16-DUO-HS/3G, 7867VIPA18-DUO-HS/3G, 7867VIPA24-DUO-HS/3G and 7867VIPA32-DUO-HS/3G modules come with a companion rear plate. The 7867VIPA8-DUO-HS/3G module occupies 3 slots in a 7800FR frame, the 7867VIPA16-DUO-HS/3G occupies 4 slots in a 7800FR frame, the 7867VIPA16-DUO-HS/3G-DIN* occupies 3 slots in a 7800FR frame, and the 7867VIPA18-DUO-HS/3G-DIN, 7867VIPA24-DUO-HS-/3G-DIN and the 7867VIPA32-DUO-HS/3G-DIN modules occupy 5 slots each in a 7800FR frame. For information on mounting the rear plate and inserting the module into the frame see section 3 of the 7800FR chapter.

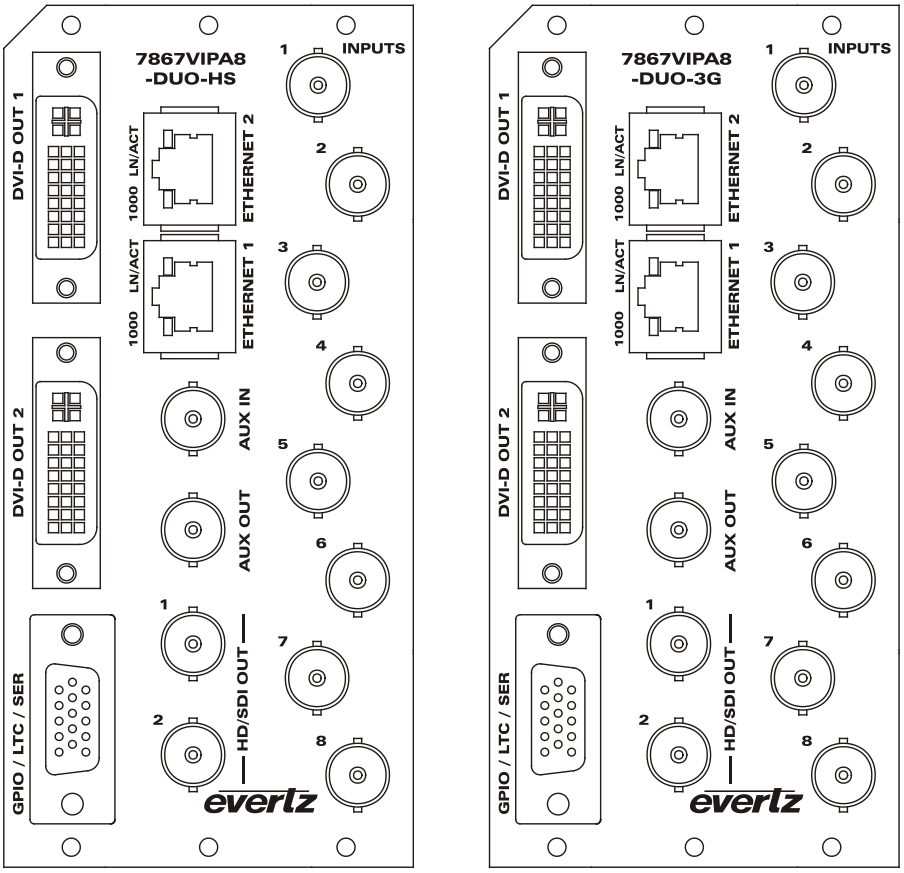


Figure 3-1: 7867VIPA8-DUO-HS and 7867VIPA8-DUO-3G Rear Plates

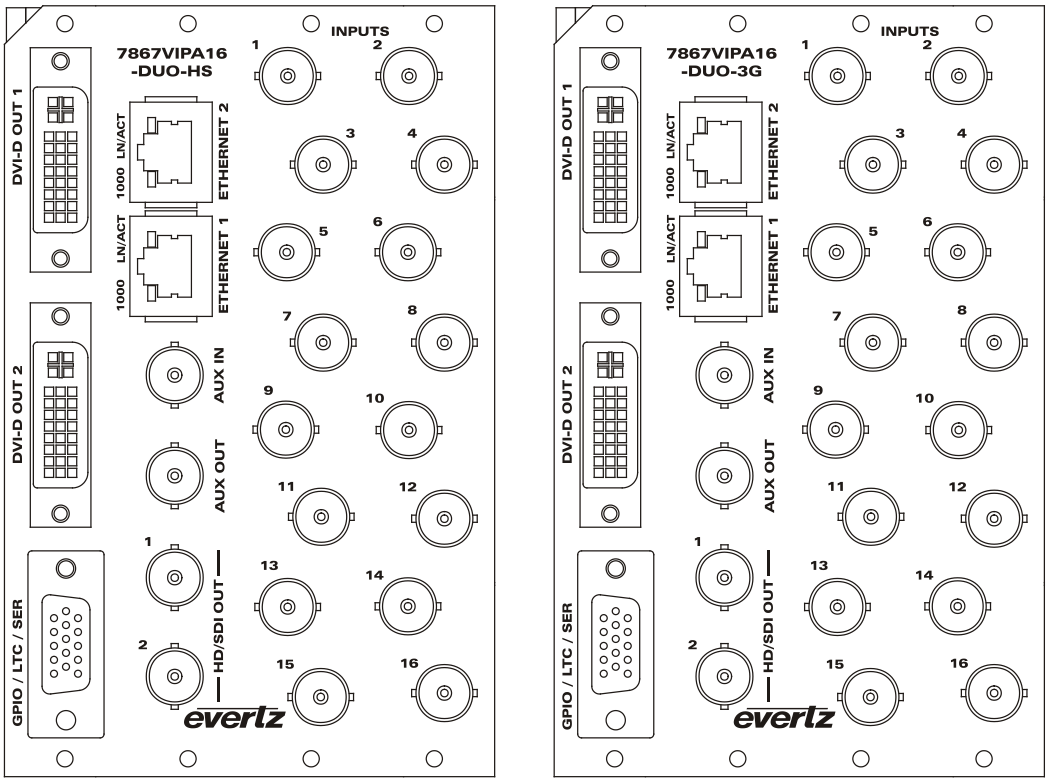


Figure 3-2: 7867VIP16-DUO-HS and 7867VIP16-DUO-3G Rear Plates

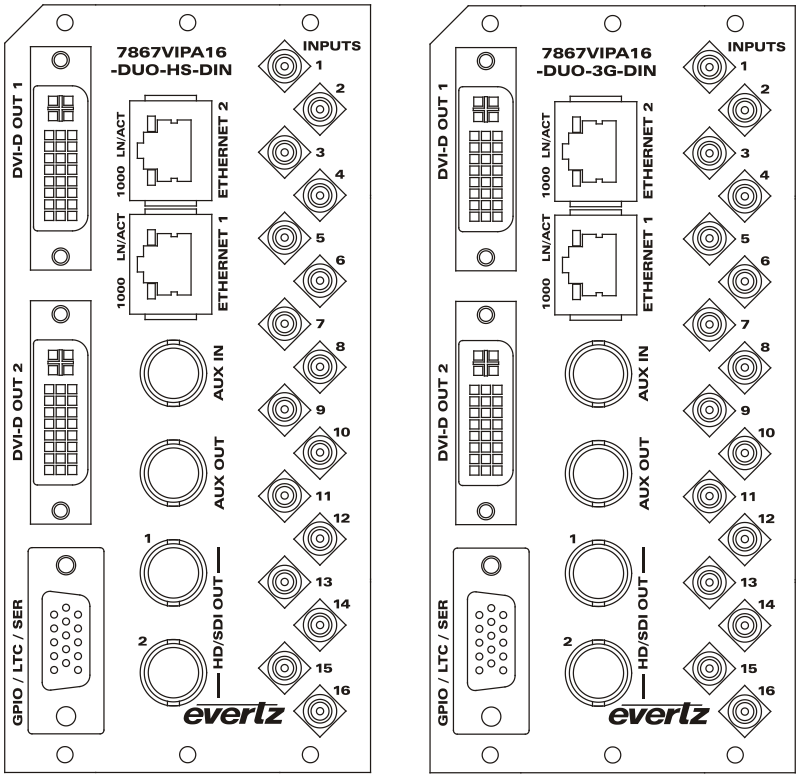


Figure 3-3:, 7867VIPA16-DUO-HS-DIN* and 7867VIPA16-DUO-3G-DIN* Rear Plates

*See section 14 Appendix A for information on the DIN connector.

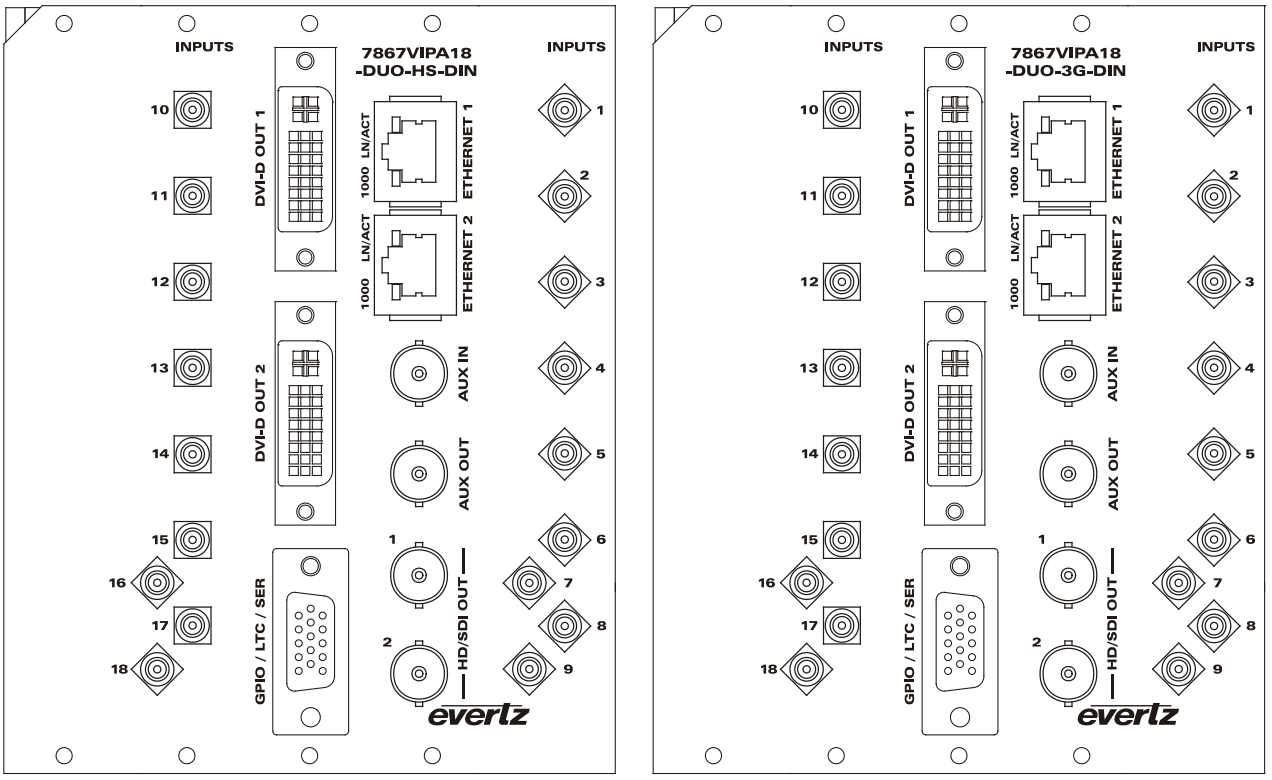


Figure 3-4: 7867VIPA18-DUO-HS-DIN and 7867VIPA18-DUO-3G-DIN Rear Plates

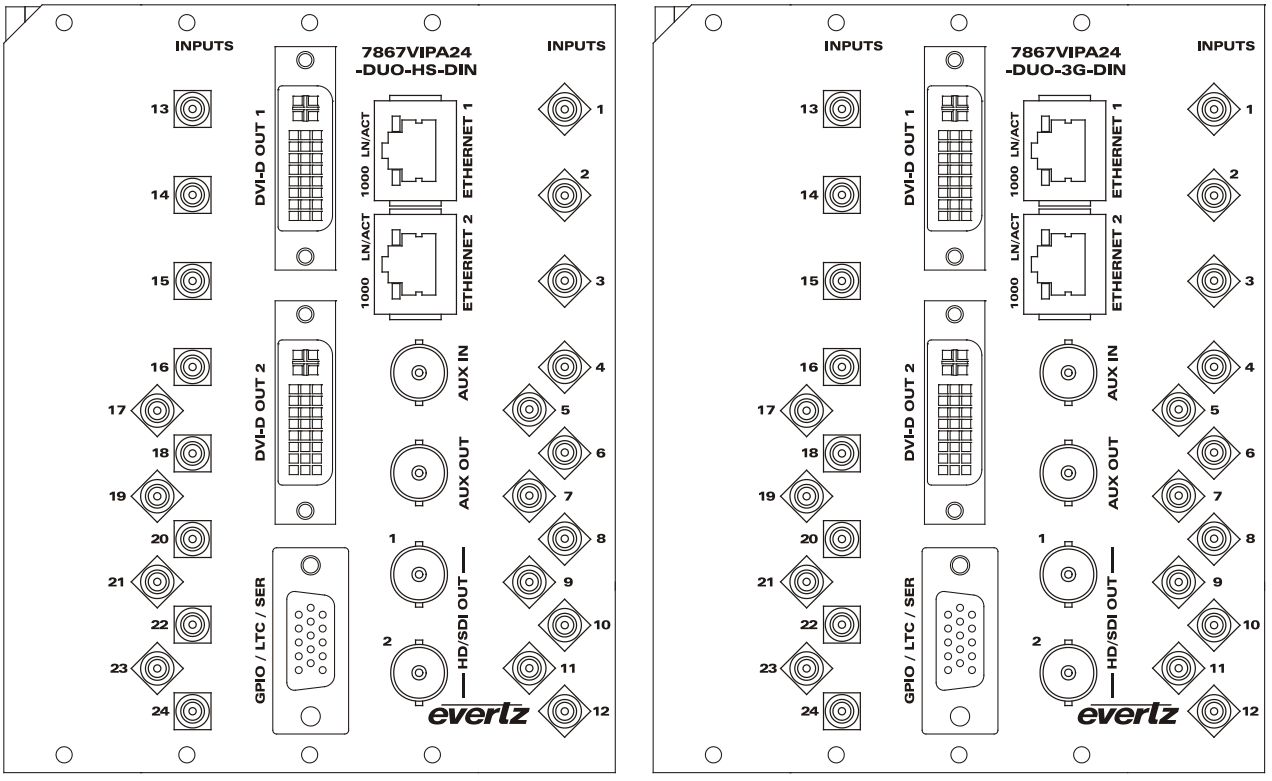


Figure 3-5: 7867VIPA24-DUO-HS-DIN* and 7867VIPA24-DUO-3G-DIN* Rear Plates

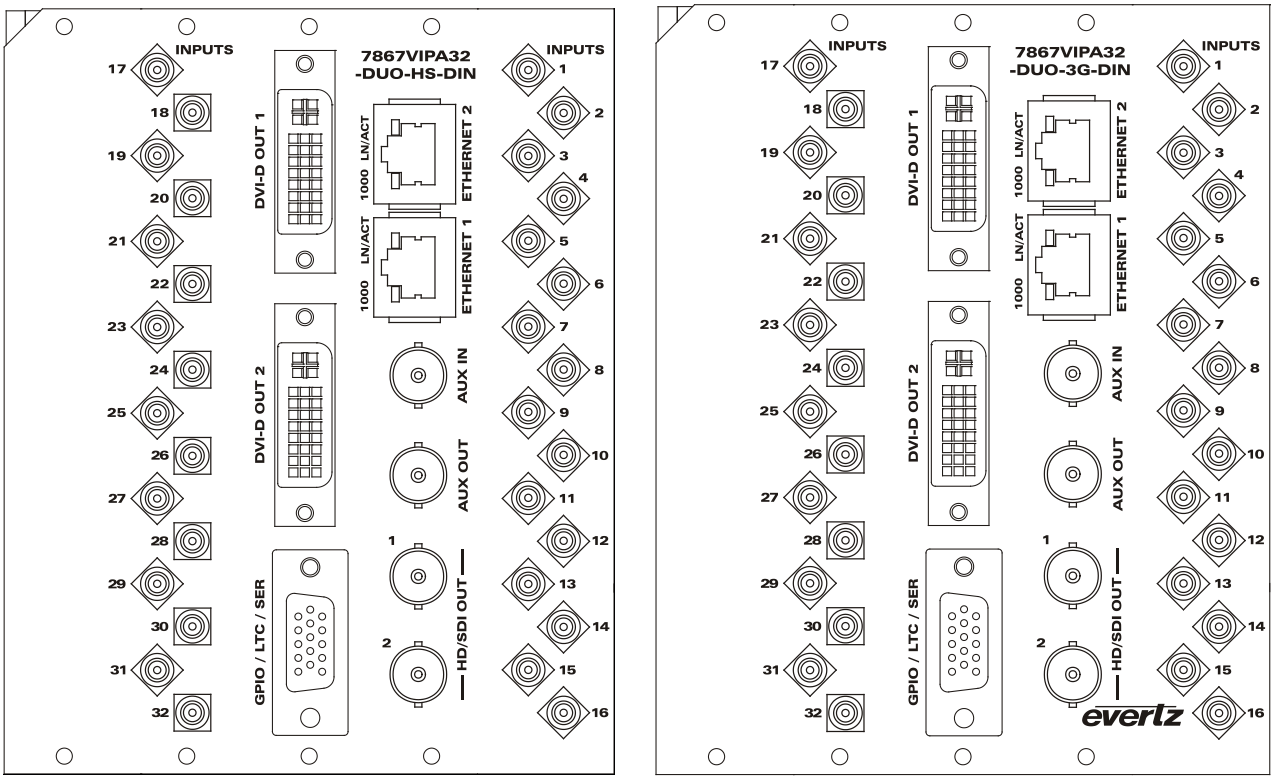


Figure 3-6: 7867VIPA32-DUO-HS-DIN* and 7867VIPA32-DUO-3G-DIN* Rear Plates

3.1. VIDEO INPUTS AND OUTPUTS

INPUTS: The 7867VIPA8-DUO-HS has 8 BNC connector inputs that auto sense 3Gb/s, HD-SDI and SD-SDI, or 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards. The 7867VIPA16-DUO-HS has 16 BNC connector inputs that auto sense 3Gb/s, HD-SDI and SD-SDI, or 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards. The 7867VIPA18-DUO-HS has 18 connector inputs that auto sense 3Gb/s, HD-SDI and SD-SDI, or 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards. The 7867VIPA24-DUO-HS has 24 connector inputs that auto sense 3Gb/s, HD-SDI and SD-SDI, or 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards.The 7867VIPA32-DUO-HS has 32 connector inputs that auto sense 3Gb/s, HD-SDI and SD-SDI, or 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards.

HD/SDI OUTPUT: When the output resolution of the card is set to 720p, 1080i, 1080p, 625i, and 525i this BNC connector has 10-bit serial digital video signals compatible with the SMPTE 424M, SMPTE 292M and SMPTE 259M-C standards. When the output resolution of the card is set to other resolutions, this output will not be active.

AUX IN/OUT: Auxiliary serial data input/output.

3.2. GENLOCK REFERENCE

To lock/time the output of the VIP to house reference the genlock input should be used.

GENLOCK INPUT: The genlock input is applied to the 7800FR frame, which provides genlock to all 7867VIPA modules installed in the frame. The genlock signal may be NTSC or PAL colour black. The reference input type is auto detected. The genlock reference input is terminated to 75 ohms.

3.3. DVI VIDEO CONNECTIONS

DVI OUTPUT: This VESA DVI-I connectors provide DVI-D outputs suitable for driving a computer video monitor. The 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, and the 7867VIPA32-DUO-HS have two DVI-D outputs. The monitor must be capable of scanning at the line and pixel rate of the video input standard you are using. The following resolutions are supported by the VIP module at both 50Hz and 60Hz:

XGA (1024x768)	SXGA (1280x1024)	UXGA (1600x1200)
WXGA (1280x768)	720p (1280x720)	576p/625i(720x576)
480p/525i (720x480)	WXGA Alt (1366x768)	SXGA+(1400x1050)
WSXGA+(1680x1050)	1080p(1920x1080)	WUXGA(1920x1200)
XGA (1024x768)	SXGA (1280x1024)	UXGA (1600x1200)
WXGA (1280x768)	720p (1280x720)	576p/625i(720x576)

Table 3-1: Supported Resolutions at 50Hz and 60Hz

Recommended maximum cable lengths:

- DVI digital max length = 3 meters, or 10 feet
- VGA analog max length = 5 meters, or 15 feet

3.4. GENERAL PURPOSE INPUTS AND OUTPUTS

GPI interfacing with the 7867VIPA is possible through 4 general purpose inputs (pins 10, 11, 12, 13) and 2 general purpose outputs (pins 4, 9) available on the HD-15 connector on the rear plate of the module. The GPIs are active low with internal pull-up resistors (4.7k Ohms) to +5 V. To make an input active, lower the signal to near ground potential (i.e. connect to shell or chassis ground). This can be done with a switch, relay, TTL drive, GPO output, or using another similar method. Figure 3-4 shows the input circuit for the general-purpose inputs. Figure 3-6 shows an example of how to interface the VIP GPI inputs to higher voltage systems.

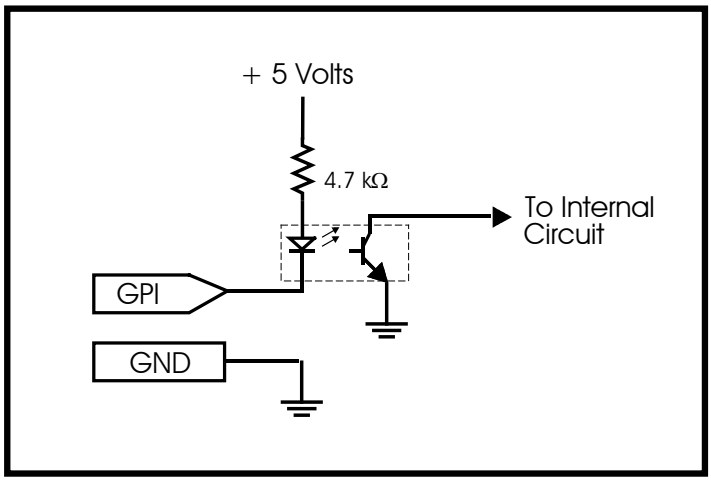


Figure 3-7: GPI Input Circuitry

The GPOs are active low with internal pull-up (10kΩ) resistors to +5 V. When the output goes low, it is able to sink up to 10 mA; when the output goes high, the signal will go high (+5 V). **Do not draw more than 100μA from the output.** Figure 3-5 shows the circuit for the general-purpose output.

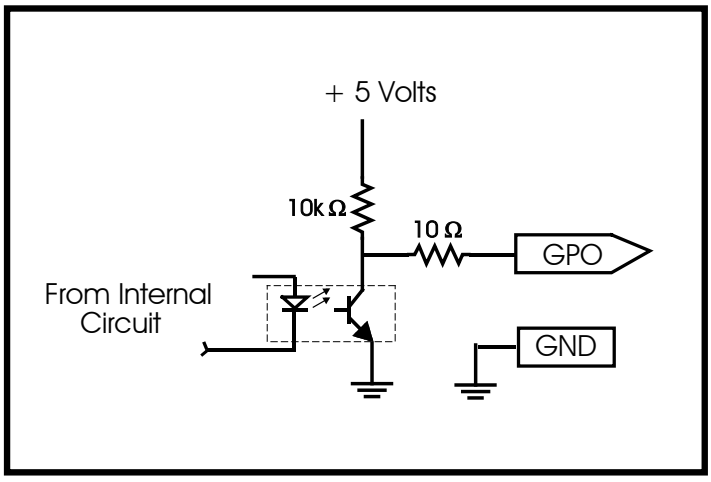


Figure 3-8: GPO Output Circuitry

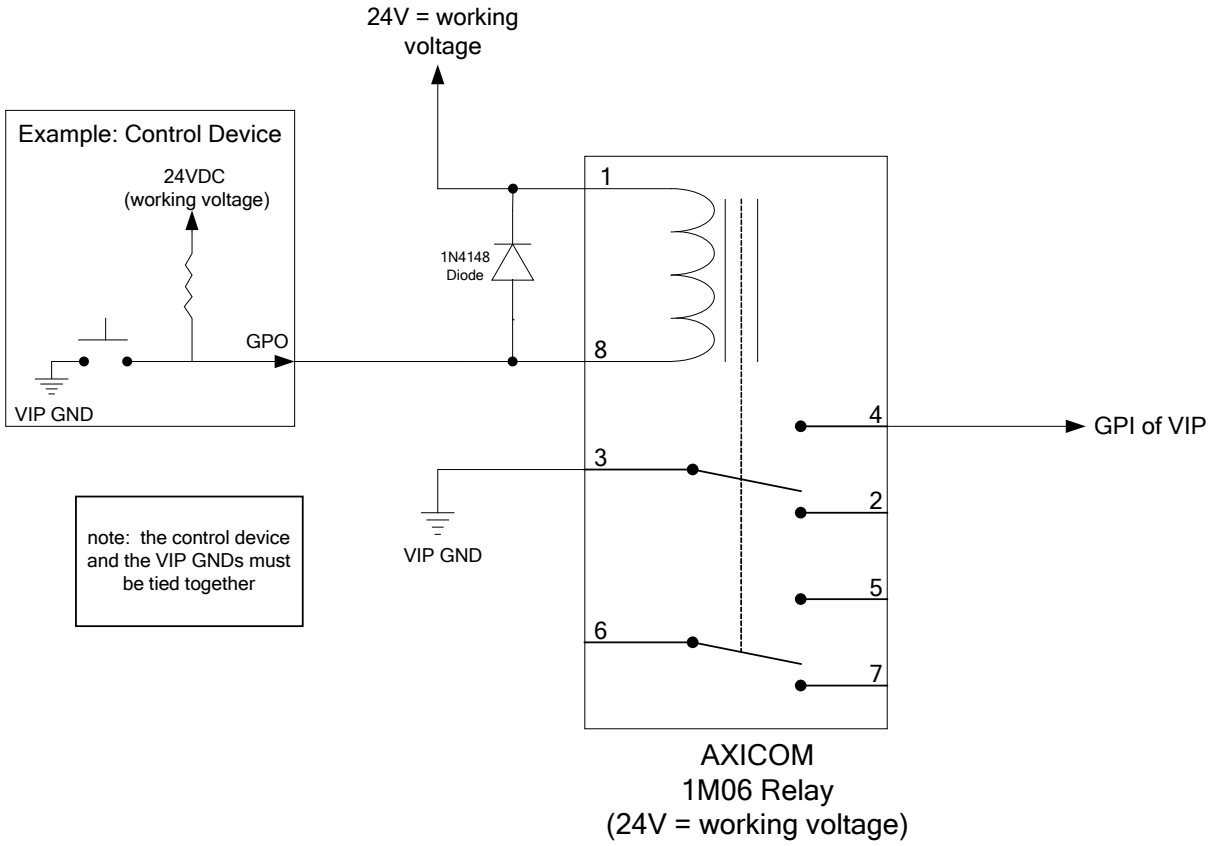


Figure 3-9: Interfacing GPIs to a High Voltage GPI System

3.5. ETHERNET NETWORK CONNECTIONS

ETHERNET1 / 2: These RJ-45 connectors are Ethernet ports which facilitate control via *Vista*LINK® PRO or Maestro software. It is also used for FTP firmware upgrades. The VIP module comes delivered from the factory with Ethernet 2 as the default active port; Ethernet 1 is disabled and is not used at this time.

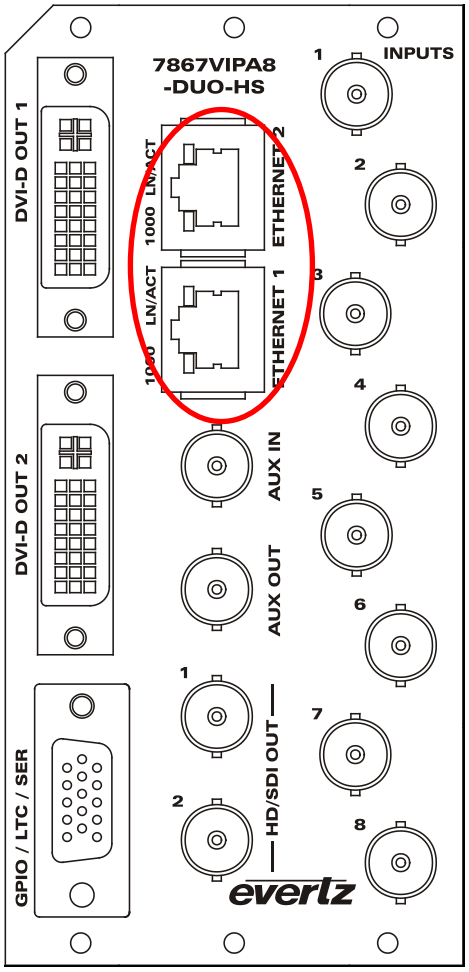


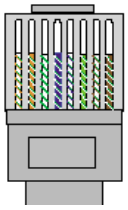
Figure 3-10: Rear Plate – Ethernet Ports

The 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, and the 7867VIPA32-DUO-HS are designed to be used with either 10Base-T (10 Mbps) or 100Base-TX (100 Mbps) also known as *Fast Ethernet*, twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100Ω STP cable may be used. When connecting for 100Base-TX systems, category 5 UTP cable is required. Make the network connection by plugging one end of a “straight through” cable into the RJ-45 receptacle of the 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, or the 7867VIPA32-DUO-HS and the other end into a port of the supporting hub. If you are connecting the VIPA card directly to an Ethernet port on a computer you will have to use a “crossover” cable.

The straight-through RJ-45 cable can be purchased or can be constructed using the pinout information in Table 3-2. A colour code wiring table is provided in Table 3-2 for the current RJ-45 standards (AT&T

258A or EIA/TIA 258B colour coding shown). Also refer to the notes following the table for additional wiring guide information.

Pin 1



Pin #	Signal	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseT
1	Transmit +	White/Green	White/Orange	X
2	Transmit –	Green/White or White	Orange/White or Orange	X
3	Receive +	White/Orange	White/Green	X
4	N/A	Blue/White or Blue	Blue/White or Blue	Not used (required)
5	N/A	White/Blue	White/Blue	Not used (required)
6	Receive –	Orange/White or Orange	Green/White or Green	X
7	N/A	White/Brown	White/Brown	Not used (required)
8	N/A	Brown/White or Brown	Brown/White or Brown	Not used (required)

Table 3-2: Standard RJ45 Wiring Colour Codes

Note the following cabling information for this wiring guide:

- Only two pairs of wires are used in the 8-pin RJ-45 connector to carry Ethernet signals.
- Even though pins 4, 5, 7 and 8 are not used, it is mandatory that they be present in the cable.
- 10BaseT and 100BaseT use the same pins; a crossover cable made for one will also work with the other.
- Pairs may be solid colours and not have a stripe.
- Category 5 cables must use Category 5 rated connectors.

The maximum cable run between the 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, or 7867VIPA32-DUO-HS and the supporting hub is 300 ft (90 m). The maximum combined cable run between any two end points (i.e. 7867VIPA8-DUO-HS and PC/laptop via network hub) is 675 feet (205 m).

Devices on the Ethernet network continually monitor the receive data path for activity as a means of checking that the link is working correctly. When the network is idle, the devices also send a link test signal to one another to verify link integrity. The rear panel is fitted with two LEDs to monitor the Ethernet connection.

10/100: This Amber LED is ON when a 100Base-TX link is last detected. The LED is OFF when a 10Base-T link is last detected (the LINK LED is ON). Upon power-up the LED is OFF as the last detected rate is not known and therefore defaults to the 10Base-T state until rate detection is complete.

LN/ACT: This dual purpose Green LED indicates that the 7867VIPA card has established a valid linkage to its hub, and whether the 7867VIPA card is sending or receiving data. This LED will be ON when the 7867VIPA card has established a good link to its supporting hub. This gives you a good indication that the segment is wired correctly. The LED will BLINK when the 7867VIPA card is sending or receiving data. The LED will be OFF if there is no valid connection.

In order to use the Ethernet connection you will have to configure the IP addresses for your network. See section 7.2.1.

3.6. LTC AND SERIAL DATA INPUTS (AUXILIARY INTERFACE)

The 7867VIPA has an LTC input and a serial data port available on the HD-15 connector on the modules rear plate.

Table 3-3 identifies the pin assignments for the general purpose HD-15 connector mounted on the rear plate for the VIP Advanced Duo modules.

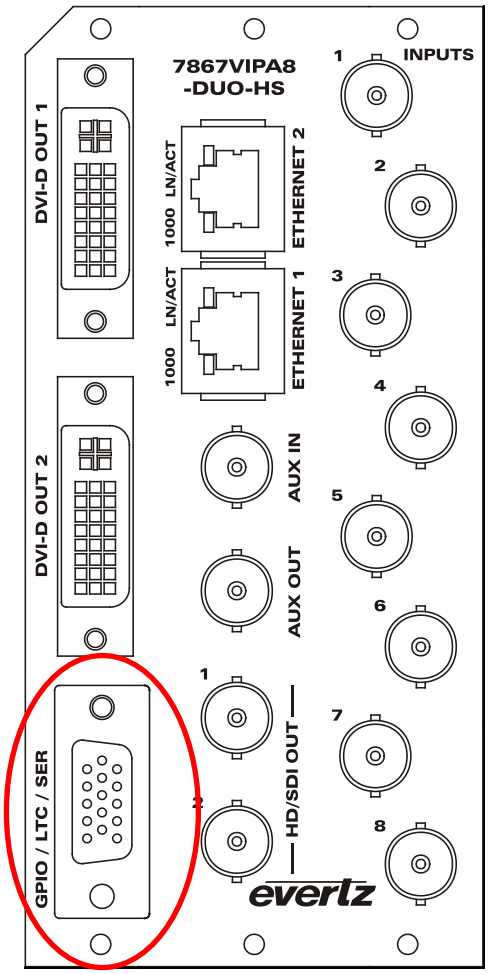


Figure 3-11: Rear Plate – Port for Attaching the HD-15

3.6.1. Rear Panel HD-15 Connector

PIN	FUNCTION	DESCRIPTION
1	RS-422: RX+ (CTSM)	Used for RS-422 communication – VIP RX+, to be connected to upstream devices TX+
2	RS-422: TX+ (RTSM)	Used for RS-422 communication – VIP TX+, to be connected to upstream devices RX+
3	LTC +	LTC interface, positive terminal
4	GPO1	General purpose output 1
5	GND	GND
6	RS-23: RX RS-422: RX- (RXDM)	Used for RS-232 communication – VIP RX, to be connected to upstream devices TX. Also used for RS-422 communication – VIP RX-, to be connected to upstream devices TX-
7	RS-232: TX RS-422: TX- (TXDM)	Used for RS-232 communication – VIP TX, to be connected to upstream devices RX. Also used for RS-422 communication – VIP TX-, to be connected to upstream devices RX-
8	LTC -	LTC interface, negative terminal
9	GPO0	General purpose output 0
10	GPI4	General purpose input 4
11	GPI1	General purpose input 1
12	GPI2	General purpose input 2
13	GPI3	General purpose input 3
14	AES_OUT0	AES output 0 – unbalanced. To be used for monitoring embedded audio from source. Assigned normally to display 1.
15	AES_OUT1	AES output 1 – unbalanced. To be used for monitoring embedded audio from source. Assigned normally to display 2.

Table 3-3: HD 15 Pin-Out

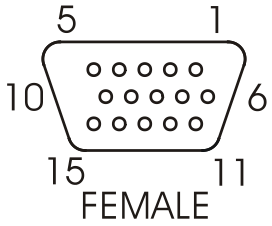


Figure 3-12: 7867VIPA8/16/32 HD-15 General Purpose Pin-Out

4. TECHNICAL DESCRIPTION

4.1. SPECIFICATIONS

4.1.1. Serial Video Inputs

Standard:	3Gb/s (SMPTE 424M) (-3GHS only) HD-SDI (SMPTE 292M) SD-SDI (SMPTE259M-C)
Number of Inputs:	8 (7867VIPA8-DUO-HS), 16 (7867VIPA16-DUO-HS), 18 (7867VIPA18-DUO-HS), 24 (7867VIPA24-DUO-HS) or 32 (7867VIPA32-DUO-HS)
Connector:	BNC IEC 61169-8 Annex A
Equalization:	Automatic to 100m (Belden 1694A)
Return Loss:	> 15dB up to 270Mb/s
Embedded Audio:	SMPTE 272M-A

4.1.2. Serial Video Output

Standard:	Selectable HD/SD serial monitoring output (720p, 1080i, 625i, 525i)
Number of Outputs:	2
Connector:	BNC IEC 61169-8 Annex A
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	200ps nominal (HD), 740ps nominal (SD)
Overshoot:	< 10% of amplitude

4.1.3. Background (Computer) Video Input

Standard:	GLINK (Evertz proprietary) requires video to GLINK formatter (i.e. 7707RGBT-GC)
Number of Inputs:	1
Connector:	BNC IEC 61169-8 Annex A
Input Resolution:	640x480 (VGA) to 1600x1200 (UXGA)
Signal Level:	75Ω

4.1.4. Display Video Output

Standard:	VESA (DVI-D) up to 1080p (1920x1080)
Number of Outputs:	2
Connector:	DVI-I
Video:	1V p-p TMDS 60Hz refresh
Impedance:	100Ω differential

4.1.5. Genlock Input

Type:	NTSC/PAL colour black
Level:	1V p-p nominal
Connector:	Requires 7800FR

4.1.6. General Purpose Interface I/O (GPI/GPO)

Number of Inputs: 4 (pins 10, 11, 12, 13)
Number of Outputs: 2 (pins 4, 9)
Type:
GPI: Opto-isolated, active low with internal pull-ups to +5V
GPO: Relay closure to ground
Input Signal: Closure to ground
Connector: HD-15

4.1.7. Input/Output Serial Port

Number of Ports: 1 RS-232 (pins 6, 7) or 1 RS-422 (pins 1, 2, 6, 7)
Connector: HD-15
Baud Rate: Up to 1Mbaud
Format: Configurable for various UMD Interfaces

4.1.8. AES Output (Unbalanced)

Number of Outs: 2 unbalanced outs (pins 14, 15)
Connector: HD-15
Audio Format: AES-EBU

4.1.9. LTC Input

LTC Input: Differential 0.5 to 2 V P-P

4.1.10. Ethernet

Network Type: Fast Ethernet 100 Base-TX 1EEE, 802.3U standard for 100Mbps base band CSMA/CD local area network
Connector: RJ-45 x 2

4.1.11. Electrical

Voltage: +12V DC

Power: 80W (7867VIPA32, 7867VIPA24, and 7867VIPA18)
72W (7867VIPA16)
68W (7867VIPA8)
EMI/RFI: Complies with FCC Part 15, Class A, EU EMC Directive

4.1.12. Physical

Number of Slots: 3 (VIPA8-DUO)
3 (VIPA16-DUO-DIN)
4 (VIPA16-DUO)
5 (VIPA18-DUO, VIPA24-DUO, and VIPA32-DUO)

5. STATUS LEDS

5.1. MODULE STATUS LEDS

MODULE STATUS: This Green LED will be on when the module is operating properly.

LOCAL FAULT: This Red LED makes it easy to identify one module in a frame that is missing an essential input or has another fault.

The Red LED will blink on and off if the microprocessor is not running.

The Red LED will be on when there is a fault in the module power supply or a user configurable error condition exists (as configured through the Frame Status Trigger menu option).

5.2. VIDEO STATUS LED AND CARD EDGE 4-CHARACTER DISPLAY

Some key user components can be found at the card edge:

1. Toggle Switch
2. Local Fault Status LED
3. 4 Character Dot Matrix Display
4. Push Button

- **Toggle Switch:** This component will become active once the card has completed booting. Its primary function is to navigate through the menu system.

- **Local Fault Status LED:** This component will be set upon initial power up to red. Once the card is in a normal operating mode, it will be set to green. If the card has booted, and the LED remains red or becomes red, this indicates an internal error.

- **4 Character Dot Matrix Display:** This component will become active once power is applied to the card. This component is used to relay text-based information to the user. It will be used to scroll build and card information, or display the menu options to the user.

- **Push Button:** This component will become active once the card has completed booting. It is primarily used for navigating through the menu system.

6. USER JUMPERS

Several jumpers are used to preset various operating modes. Figure 6-1 shows the location of the jumpers on the bottom and top boards respectively.

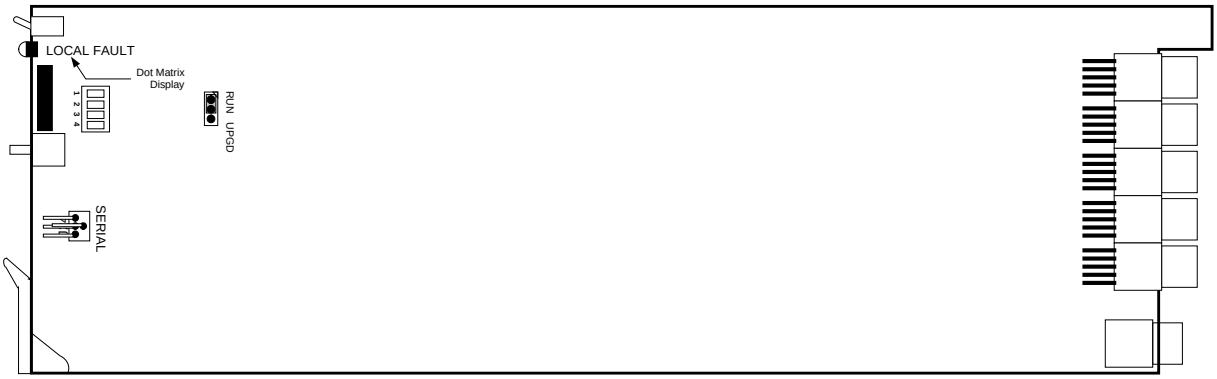


Figure 6-1: Location of Jumpers (7800G4X)

6.1. SELECTING WHETHER LOCAL FAULTS WILL BE MONITORED BY THE GLOBAL FRAME STATUS

The **FRAME STATUS** jumper J4, on the bottom board, determines whether local faults (as shown by the Local Fault indicator) on the bottom board will be connected to the 7800FR frame's global status bus.

FRAME STATUS: To monitor faults on this module with the frame status indicators (on the Power Supply FRAME STATUS LED's and on the Frame's Fault Tally output) install this jumper in the On position. (Default)

When this jumper is installed in the Off position local faults on this module will not be monitored.

6.2. CONFIGURING THE MODULE FOR FIRMWARE UPGRADES VIA SERIAL PORT

RUN/UPGRADE: The RUN/UPGRADE jumper on the bottom board is used when firmware upgrades are being done to the module. For normal operation it should be installed in the *RUN* position. See the *Upgrading Firmware* chapter in the front of the binder for more information.

To upgrade the firmware in the module unit via the serial port pull it out of the frame. Move the RUN/UPGRADE jumper into the *UPGRADE* position. Install the Upgrade cable provided (located in the vinyl pouch in the front of the binder) onto SERIAL header J7 at the card edge. Re-install the module into the frame. Run the upgrade as described in section 8.2. Once the upgrade is complete, remove the module from the frame, move the jumper into the *RUN* position, remove the upgrade cable and re-install the module. The module is now ready for normal operation.

The serial port method of upgrading the firmware will take over 15 minutes and is not recommended unless the FTP method fails.

7. MODULE CONFIGURATION

The parameters of the VIP™ module are configured through the following tools:

- **Module Card-edge:** Enables the user to set the module's network settings.

- **Module Serial Port:** Enables the user to set the module IP address and TRAP destination IP addressing, network identification.

- **Web Server Interface:** A web browser can be used to connect to a VIP. This interface does not require any additional software to be installed other than your standard web browser software (i.e. Internet Explorer, Fire Fox, etc).

- **Maestro:** This is a software configuration tool included with every VIP module used to design preset layouts for one or multiple VIP systems, along with all on screen display elements including audio bar graphs, UMD, tallys and fault messages. Specifically colour, transparency, borders, etc. that are all included in the final display output.

- ***Vista*LINK® PRO:** An SNMP software tool that is used to set the fault monitoring thresholds and durations for each VIP module detected on the network and/or for fault message (TRAP) receipt and data logging.

- **Module Card-edge DIP Switches:** Only to be enabled during boot-up sequence, DIP switches enable the following cases/features:
    1. Used to clear high level NV– DIP switch 2, 3 and 4 open (to the right)
    2. Used to clear low level NV– DIP switch 2, and 4 open (to the right)
    3. If none of the above cases/features are required, leave all DIP switches closed (to the left)

7.1. CONFIGURING THE MODULE VIA THE CARD EDGE MENU

When you are not in the menu system, the user will see product identification and build revision across the 4 character dot matrix display.

To enter the menu on the card-edge, press the card-edge pushbutton once and follow the menu headings on the 4-character display. To adjust any parameter, use the toggle switch to move up or down to the desired parameter and press the pushbutton. Using the toggle switch, adjust the parameter to its desired value. If the parameter is a numerical value, the number will increase if you push up on the toggle switch and decrease if you push down on the toggle switch. If the parameter contains a list of choices, you can cycle through the list by pressing the toggle switch in either direction. The parameter values are changed as you cycle through the list.

When you have stopped at the desired value, depress the pushbutton. This will return to the parameter select menu item you are setting (the display shows the parameter name you were setting). To change another parameter, use the toggle switch to select other parameters. If neither the toggle switch nor pushbutton is operated for several seconds the card edge control will exit the menu system and return to an idle state.

On all menus, there is an extra selectable item: *BACK*. Selecting *BACK* will take you to the previous menu (the one that was used to get into the current menu). On the main menu, *BACK* will take the user to the normal operating mode (indicated by the moving line on the card edge display).

Table 7-1 gives a brief description of the top level of the menu tree that appears when you enter the card edge menu system. Selecting this item will take you down into the next menu level to set the value of that parameter. The details of those parameters are described in section 7.1.1.

NET	Menu item for setting the devices IP address* ***Note:*** After setting the IP address and saving, the card must be power cycled for changes to take effect.

Table 7-1: Top Menu Structure

7.1.1. Configuring the Display

NET
- *BACK*
- *IP*
- *NMSK*
- *GTWY*
- *BCST*
- *DHCP*
- *SAVE*

BACK*:* Option to navigate back up one level from the current menu position. This is the factory default menu option.

IP*:* (NETWORK ADDRESS): Option for setting the IP address for the VIP module. All 4 octets must be set.
NOTE: After changing the IP address, navigate to the SAVE option in order to store the IP address for the device, then power cycle the device for the address to take effect.

NMSK (NETWORK MASK): Option for setting the net mask for the VIP module.
NOTE: After changing the Netmask, navigate to the SAVE option in order to store the setting for the device, then power cycle the device for the address to take effect.

GTWY (GATEWAY ADDRESS): Option for setting the gateway address for the VIP module.

NOTE*: After changing the Gateway address, navigate to the SAVE option in order to store the setting for the device, then power cycle the device for the address to take effect.*

BCST (BROADCAT ADDRESS): Option for setting the broadcast address for the VIP module.
NOTE: After changing the Broadcast address, navigate to the SAVE option in order to store the setting for the device, then power cycle the device for the address to take effect.

DHCP (DHCP ENABLE/DISABLE): Option for enabling or disabling DHCP for the VIP module, normally set to disabled.
NOTE: After changing the DHCP, navigate to the SAVE option in order to store the setting for the device, then power cycle the device for the address to take effect.

SAVE (SAVE NETWORK SETTINGS): Option for saving changes made to the above options. The user is required to save only a single time for multiple changes to be applied.

NOTE*: After saving, the VIP modules must be power cycled.*

7.2. CONFIGURING THE MODULE USING THE MODULE SERIAL PORT

Through the card-edge's serial port, and using the serial 7800 upgrade cable connected to a PC's serial port running HyperTerminal (or equivalent), the VIP module's IP address, subnet, and SNMP TRAP destination address are identified. The 7800 upgrade cable supplied with the 7800FR frame is a multi-coloured ribbon cable with a six pin header socket on one end and a female 9 pin D connector on the other end, (Evertz part number WA-S76) which is normally in the vinyl pouch at the front of the manual binder.

Configure the port settings of the terminal program as follows:

Baud	**115200**
Data bits	**8**
Parity	**None**
Stop bits	**2**
Flow Control	**None**

Once the card is powered-up, the HyperTerminal connection displays boot-up status information and once complete, ends with the "Status Message" as shown below:

```
Initialization Completed - 7867VIP Running
```

Press the <ENTER> key to view the main Menu. In the Main Menu, the following options are present for module configuration. Once changes have been completed and saved, the VIP module should be power-cycled for the changes to take effect.

```
-----------------------------------------------------------
|                    Main Menu                            |
|              (7867VIPA8-DUO-HS 1.0.0)                   |
 -----------------------------------------------------------
(1) Network Configuration
(2) Onboard Server Configuration
(3) SNMP Configuration
(4) Under Monitor Display Setup
(5) Auxiliary Serial Port Setup
(6) SNTP Source
(7) Network Audio Configuration
(8) Nielsen Configuration
(9) Engineering/Debug

(X) Exit
>
```

7.2.1. Network Configuration

1) **Network Configuration** – This menu option is used to set the IP parameters for this VIP module.

```
 ------------------------------------------------
ENET: 1  MAC: 00:02:c5:10:5e:73

IP address:       192.168.9.62
Netmask address:  255.255.255.0
Gateway:          0.0.0.0
Broadcast address: 192.168.9.255
DHCP/Hotswap mode: Off
 ------------------------------------------------
(1) Set IP Address
(2) Set Netmask
(3) Set Gateway
(4) Set Broadcast Address
(5) Set DHCP/Hotswap mode

(S) Save and Exit
(X) Exit
```

7.2.2. On Board Server Setup

2) **On Board Server Configuration** – This menu option is used to set up the internal server properties of the VIP module.

Server: The Server should be enabled for normal VIP operation. In a system where the VIPA external PC based server is used the server should be disabled.

GPId: The *GPId* should be enabled when using GPIs to load layouts on the VIP module.

VGPId: The *VGPId* should be enabled when using virtual GPIs to load layouts on the VIP module.

DCPd: The *DCPd* should be enabled when using the 3000DCP desktop control panel with the VIP.

SYMPHd: The *SYMPHd* should be enabled when using the Symphony Third Party protocol. The third party protocol allows for external control devices to change layouts on the VIP. The communication of this control is done using TCP/IP default port = 9750. Please see Evertz' Symphony Protocol version 1 for more details regarding the protocol itself.

```
 ------------------------------------------------
Onboard Server: Enabled
Onboard GPId: Disabled
Onboard VGPId: Disabled
Onboard DCPd: Disabled
Onboard SymphD: Disabled
 ------------------------------------------------
(1) Display connection status
(2) Enable server
(3) Enable gpid
(4) Enable vgpid
(5) Enable dcpd
(6) Enable symphd

(S) Save and Exit
(X) Exit
>
```

7.2.3. SNMP Configuration

3) **SNMP Configuration** – This menu option is used to set the TRAP destination IP address which originates at this VIP (if enabled).

```
---------------------------------
No Trap Destinations Assigned
---------------------------------

(1) Set Trap IP Address
(2) Remove Trap IP Address
(3) Community Strings

(S) Save and Exit
(X) Exit
> $
```

7.2.4. UMD Setup

4) **UMD Setup** – Set the dynamic UMD.

The UMD Setup is as follows:

Protocol: Image Video
Input Type: Serial

```
 ------------------------------------------------

(1) Set protocol

(S) Save and exit
(X) Exit without saving
```

Select UMD Protocol: (1 - 3)
1. Image Video
2. Philips ASCII
3. XY Integrator
4. TSL 3.1
5. Echo
6. TSL 4.0
7. Harris Image Video

Select Input Type: (1 - 2) – Option for Image Video Protocol only
1. Serial
2. Network

7.2.5. Auxiliary Serial Port Setup

5) **Auxiliary Serial Port Setup** – If utilizing the serial port for dynamic UMD information, use this menu option to set the serial port parameters.

Auxiliary Serial Port Setup: (Use the following settings to configure the auxiliary serial port)

Baud Rate:	9600
Data Bits:	8
Parity:	None
Stop Bits:	2
Standard:	RS-232

---
(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits
(5) Set standard

(S) Save and exit
(X) Exit without saving

7.2.6. SNTP Setup – Network Time Protocol

6) **SNTP Source** – This menu option is used to set the NTP server source IP address. Set the IP address for the NTP server on the network. The VIP must be on the same network in order to contact the server. This menu will also display the last updated network time.

Active sntp source: 0.0.0.0
New sntp source: 0.0.0.0
Last time sntp updated at
sntp time: 0:0:0
---
(1) Set SNTP Source Address

(S) Save and Exit
(X) Exit
>

7.2.7. Network Audio Setup – Future Enhancement Feature

7) **Network Audio Setup** – This option is not available at the time of the manual update.

```
------------------------------------------------------------
          Network audio to video input mapping
 ID      IP address              Video Inputs
                      1  2  3  4  5  6  7  8  9 10 11 12
  0    192.168.9.62     *
 ------------------------------------------------------------
          Audio source to video input mapping
Channel                     Video inputs
pairs     1  2  3  4  5  6  7  8  9 10 11 12
 1 (1 2) 1  .  .  .  .  .  .  .  .  .  .  .
 2 (3 4)    .  .  .  .  .  .  .  .  .  .  .
 3 (5 6)    .  .  .  .  .  .  .  .  .  .  .
 4 (7 8)    .  .  .  .  .  .  .  .  .  .  .
 ------------------------------------------------------------
(1) Set video input
(2) Clear video input
(3) Set audio source for video input
(4) Clear audio source for video input

(S) Save and Exit
(X) Exit
```

7.2.8. Nielsen Configuration

8) **Nielsen Monitoring Setup** – This menu option is used for configuring the IP interface to the 7867ND-HD Nielsen decoder product for the display of Nielsen ratings code.

```
------------------------------------------------------------
          Network audio to video input mapping
 ID      IP address              Video Inputs
                      1  2  3  4  5  6  7  8  9 10 11 12
  0    192.168.9.62     *
 ------------------------------------------------------------
          Audio source to video input mapping
Channel                     Video inputs
pairs     1  2  3  4  5  6  7  8  9 10 11 12
 1 (1 2) 1  .  .  .  .  .  .  .  .  .  .  .
 2 (3 4)    .  .  .  .  .  .  .  .  .  .  .
 3 (5 6)    .  .  .  .  .  .  .  .  .  .  .
 4 (7 8)    .  .  .  .  .  .  .  .  .  .  .
 ------------------------------------------------------------
(1) Set video input
(2) Clear video input
(3) Set audio source for video input
(4) Clear audio source for video input

(S) Save and Exit
(X) Exit
```

7.3. WEB SERVER INTERFACE

A simple web server interface is provided for control over the VIP. This interface is accessed remotely via an IP connection to the device from a PC. To interface to the VIP and control using the web interface simply set the IP address on the VIP, place a PC on the same network either directly connecting to the VIP via cross over Ethernet cable or through a network switch. Ensure the PC's network adapter is set to the same network as the VIP. For example, if the VIP is set to 192.168.9.100, then set the PC to 192.168.9.xxx (any value between 2 and 254 excluding the value 100 which is the VIP module). Once the PC is confirmed to be on the same network as the VIP (use PING in DOS window to confirm), open a web browser (i.e. Internet Explorer, or Fire Fox, etc) in the navigation toolbar (address bar) and type the IP address of the VIP (for example, 192.168.9.100). Upon connecting the VIP, the VIP will display the screen identified in Figure 7-1, where the card provides access to control using standard web interface navigation tools.

The web browser is easy to navigate. Simply select a major category, either Card Setup or Layout, and then use the sub categories in the main body of the page to navigate and setup specific options for the module. To ensure that the settings being viewed are correct, first press the "Update" button on the page to refresh the view. Secondly, make a change using the simple drop down dialog boxes. After a change has been made, press the *Save* button to apply the change to the card. Some changes may require the card to be restarted or reset. The following sections detail the various card options available through the web client interface.

7.3.1. Card Setup: Display Setup

The Display Setup screen enables the user to configure the output properties for the VIP module.

- ***Output Resolution:*** This parameter enables the user to select the resolution format for the DVI output.
- ***Refresh Rate*:** This parameter enables the user to select the refresh rate for the output.
- ***Horizontal Offset*:** This parameter enables the user to adjust the position of the active picture in respect to the amount of horizontal offset for the analog output signal.
- ***Vertical Offset:*** This parameter enables the user to adjust the position of the active picture in respect to the amount of vertical offset for the analog output signal.

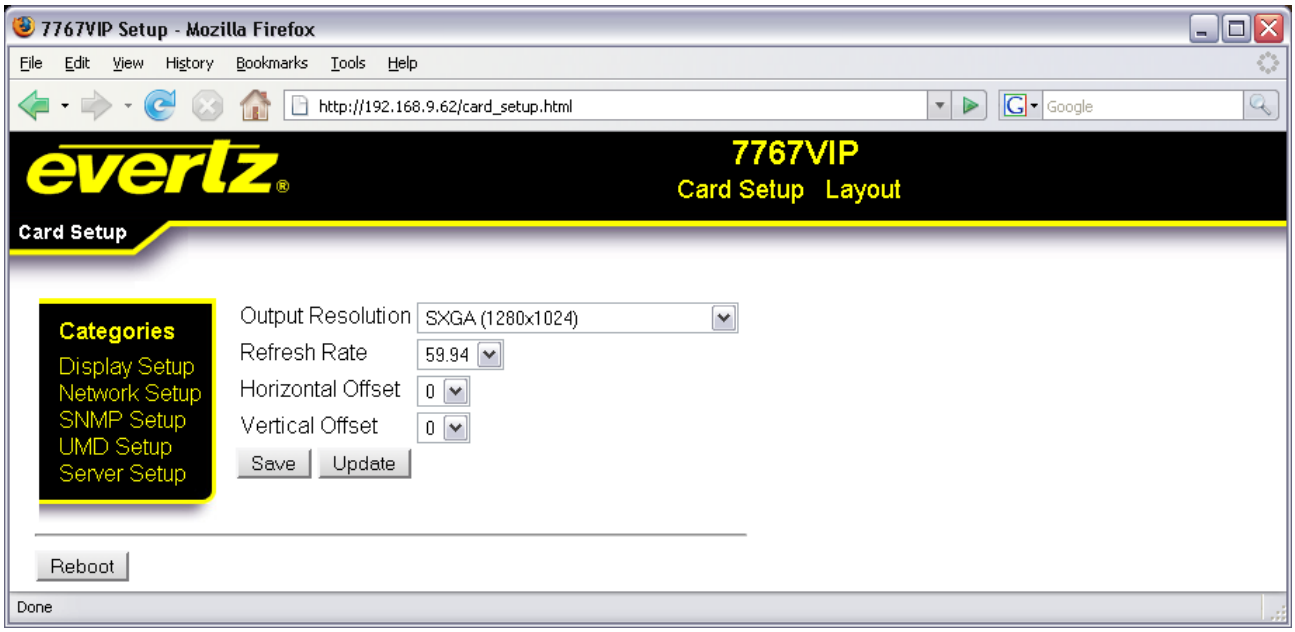


Figure 7-1: Display Setup

7.3.2. Card Setup: Network Setup

The Network Setup screen enables the user to configure the network properties of the VIP module.

- ***IP Address:*** This parameter enables the user to set the IP address for the device.
- ***Netmask*:** This parameter enables the user to set the Netmask for the device.
- ***Gateway*:** This parameter enables the user to set the Gateway address for the device.
- ***Broadcast*:** This parameter enables the user to set the Broadcast address for the device.
- ***DHCP:*** This parameter allows the user to enable or disable DHCP for the device.

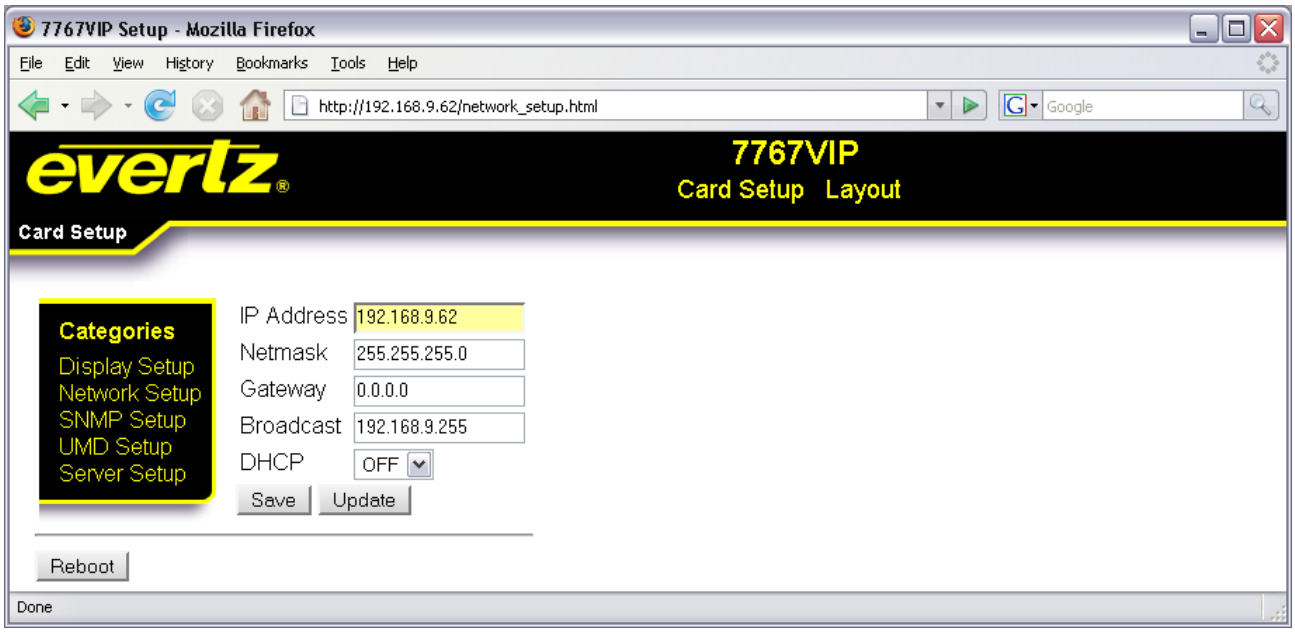


Figure 7-2: Network Setup

7.3.3. Card Setup: SNMP Setup

The SNMP Setup enables the user to configure the SNMP trap destinations for up to five trap destinations that can be supported.

- ***Trap Destination 1 to 5:*** This parameter enables the user to enter an IP Address for the SNMP server.

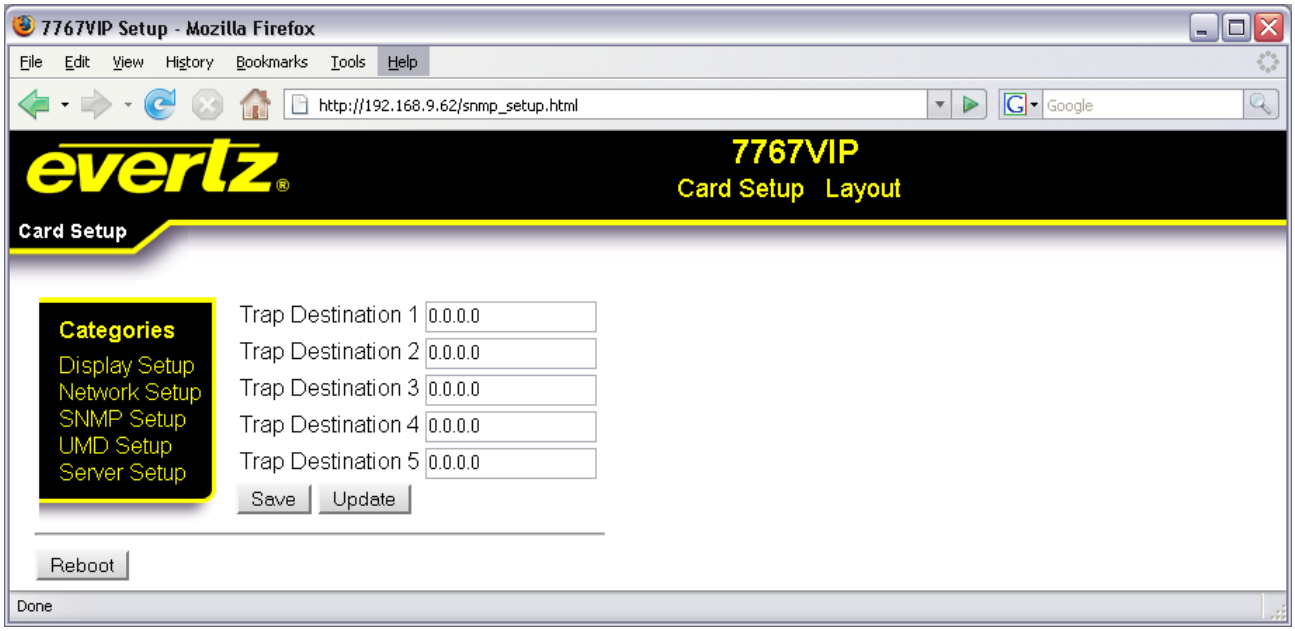


Figure 7-3: SNMP Setup

7.3.4. Card Setup: UMD Setup

The UMD Setup enables the user to configure the UMD protocol for the VIP.

- ***Protocol:*** This parameter enables the user to select the appropriate UMD protocol. The options include:

  - **Image Video:** Supports both Ethernet and serial connections
  - **Philips ASCI (VMSI 3000):** Support for Jupiter control system (requires additional configuration files)
  - **XY Integrator:** Support for Harris routers (requires additional configuration files)
  - **TSL 3.1:** TSL standard protocol, support for both Ethernet and serial
  - **TSL 4.0:** TSL advanced protocol, support for both Ethernet and serial
  - **ECHO:** Echoes commands in bound on auxiliary serial port to configuration serial port (upgrade port)

- ***Input Type:*** This parameter enables the user to select the format for the input. The format will be either serial or Ethernet (requires an IP address port to be defined in the next property)

- ***Network Port:*** This parameter enables the user to set the network port that the protocol device would use to connect to the VIP module, for example 9800.

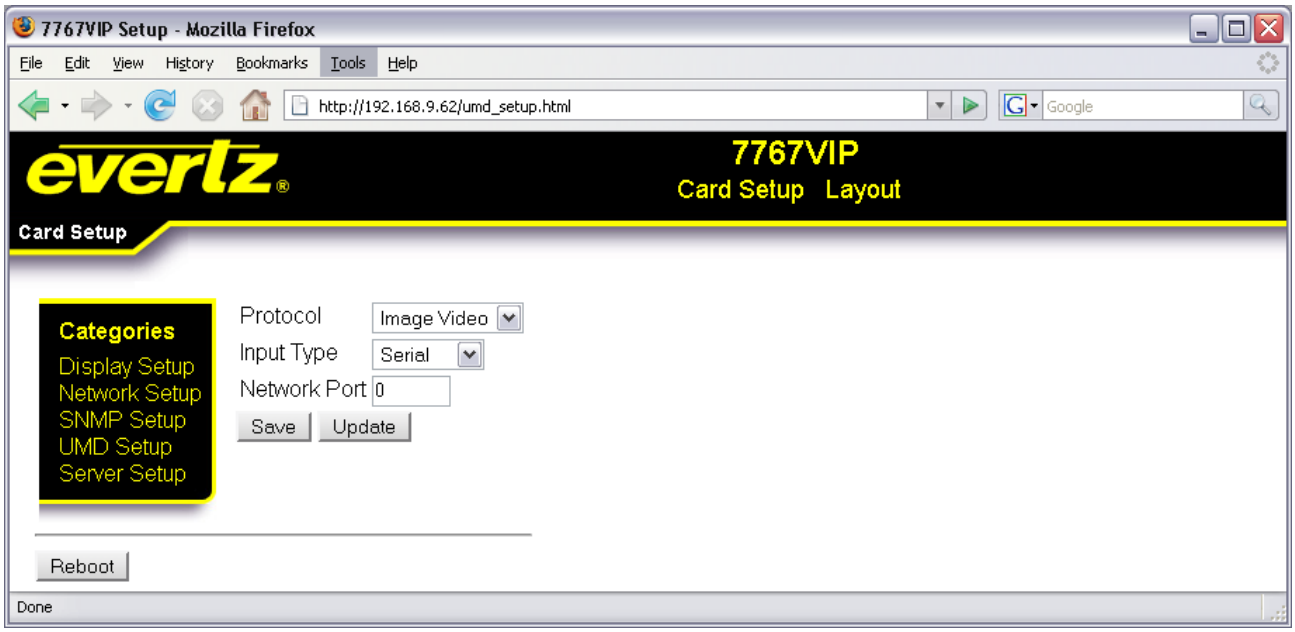


Figure 7-4: UMD Setup

7.3.5. Card Setup: Server Setup

The Server Setup screen enables the user to configure the VIP's server based properties.

- ***Enable Server:*** This parameter allows the user to enable or disable the VIP's on board server. The default setting is enabled. This setting must be disabled when the VIP is to be used in a larger system where the System Manager is being used to control the VIP.

- ***Enable GPId/VGPId:*** This parameter allows the user to enable or disable the ability to use GPIs and VGPIs to load layouts and change sources on the VIP.
- ***Enable DCPd:*** This parameter allows the user to enable or disable the ability to use the 3000DCP desktop control panel with the VIP.
- ***Enable SYMPHd:*** This parameter allows the user to enable or disable the ability to use Symphony third party protocol to control the VIP.

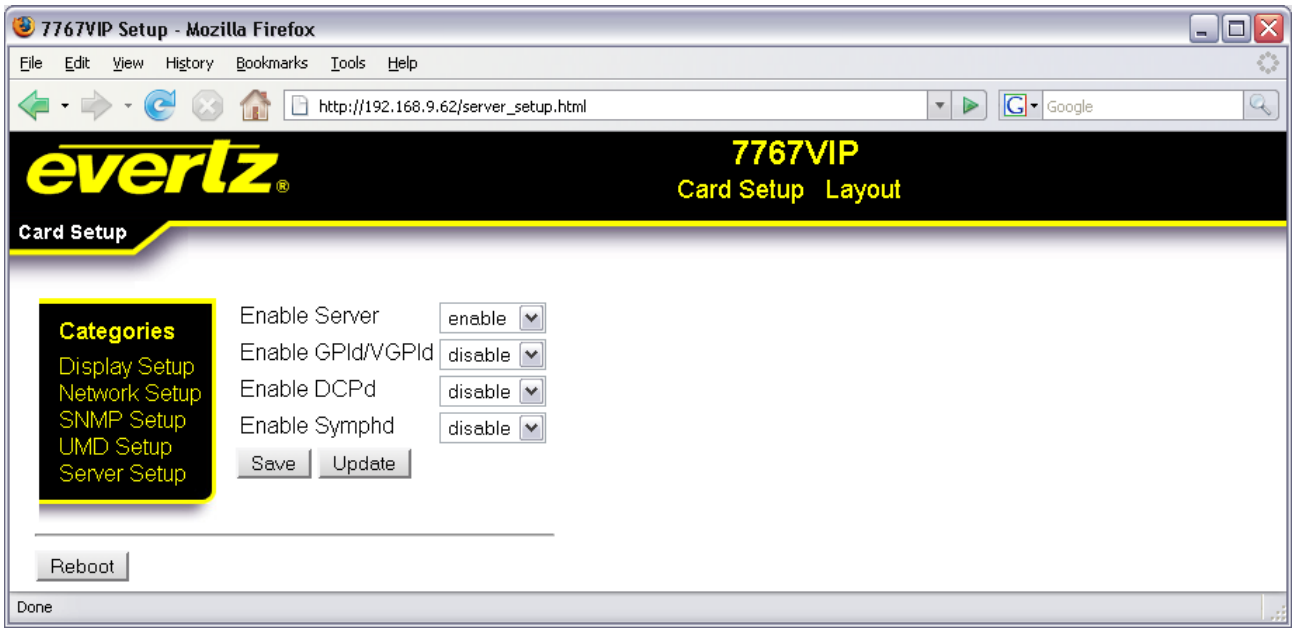


Figure 7-5: Server Setup

7.4. MVP/VIP MAESTRO SOFTWARE

This section describes the VIP Maestro installation and usage instructions.

Minimum PC Requirements for VIP Maestro:

- Standard Pentium 4 class machine
- 512MB RAM
- 100Mb Ethernet Card, TCP/IP configured
- 8MB Video card
- 1024x768 screen resolution
- Windows NT4, 2000, XP, Server 2003 operating system
- CD-ROM drive

Installation Instructions:

1. Copy the MVP/VIP Maestro Installation software to your PC.

2. Launch the installation by double-clicking the icon.

3. Follow the installation instructions detailed on the pop-up windows of the installer.

4. Upon completion, the desktop will show the “MVP/VIP Maestro” icon.

8. VIP ADVANCED MODES

8.1. CHERRY PICK MODE (ROUTER MODE)

When using the Cherry Pick Mode (Router mode), the user is required to be running firmware 1.3.1.

8.1.1. Using On-board server

To enable Cherry Pick mode (router mode) when using an on-board server, navigate to the **I/O Setup** option under the web interface and change the **SDI Out Mode** from *Display* to *Router*. Once complete press the **Submit** button.

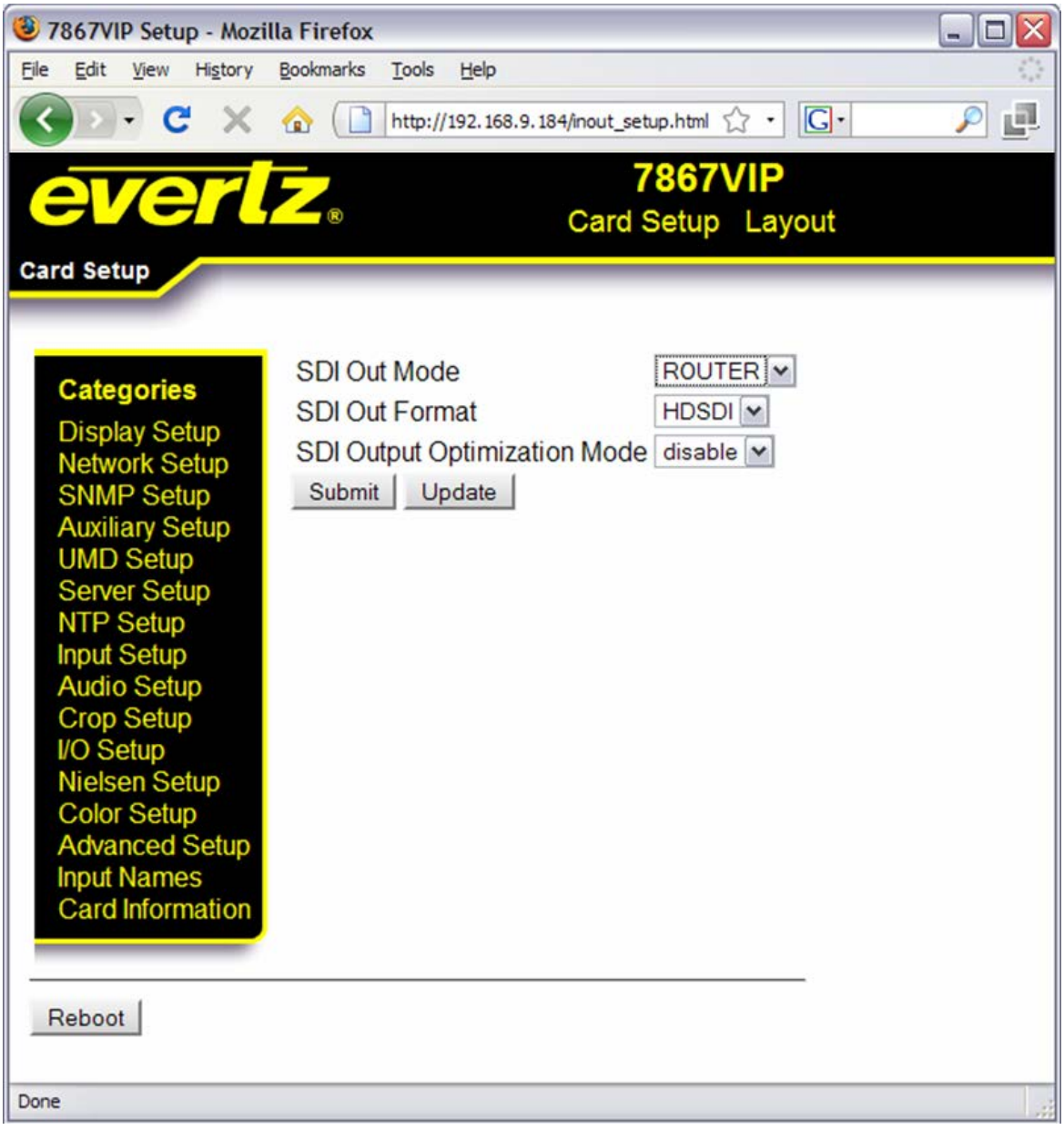


Figure 8-1: Card Setup Layout for Cherry Pick Mode

8.1.2. Using PC Server

To configure Cherry Pick mode using the PC server method, the user must be running installer version 2.12.10 and firmware version 1.3.1.

Using the **System manager**, navigate to the properties page of the card. From the **I/O Settings** Tab change the *SDI Output Mode*: to *Router*. Once changes are made, select the **OK** button and reboot the module.

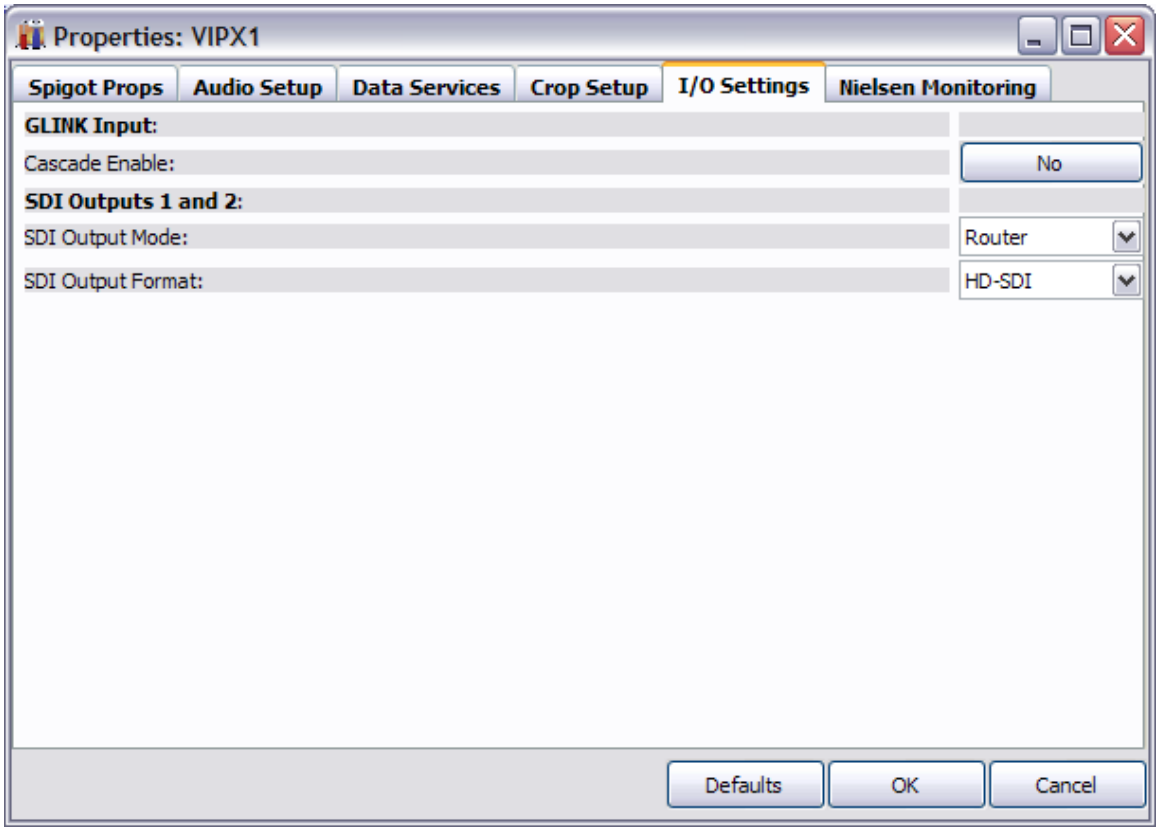


Figure 8-2: I/O Setting Tab for Cherry Pick Mode

8.2. 3G OUTPUT MODE

To configure the 3G Output Mode using the on-board server method the user must be running firmware version 1.3.1.

8.2.1. Using On-Board server

To enable **3G output mode** from the web-interface, navigate to the **I/O setup** page and change the *SDI Out Format* to *3GSDI*. Once complete, press the **Submit** button and reboot the module.

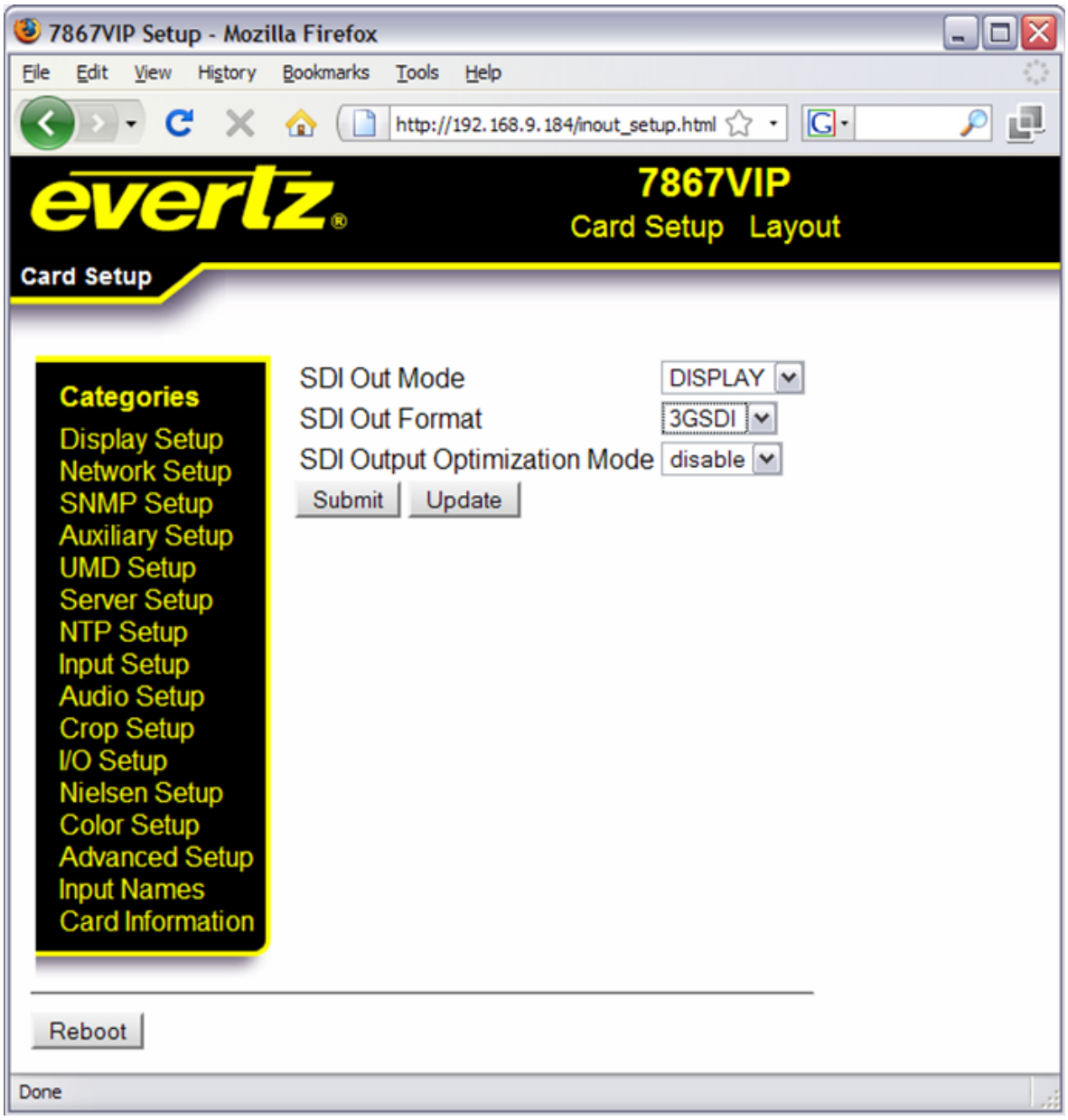


Figure 8-3: Card Setup Layout for 3G Output Mode

8.2.2. Using PC Server

When using PC server method, the user must be running installer version 2.12.10 and firmware version 1.3.1.

Using the **System manager**, navigate to the properties page of the card. From the **I/O Settings** Tab change the *SDI Output Format*: to *HD/3G-SDI*. Once changes are made, select the **OK** button and reboot the module.

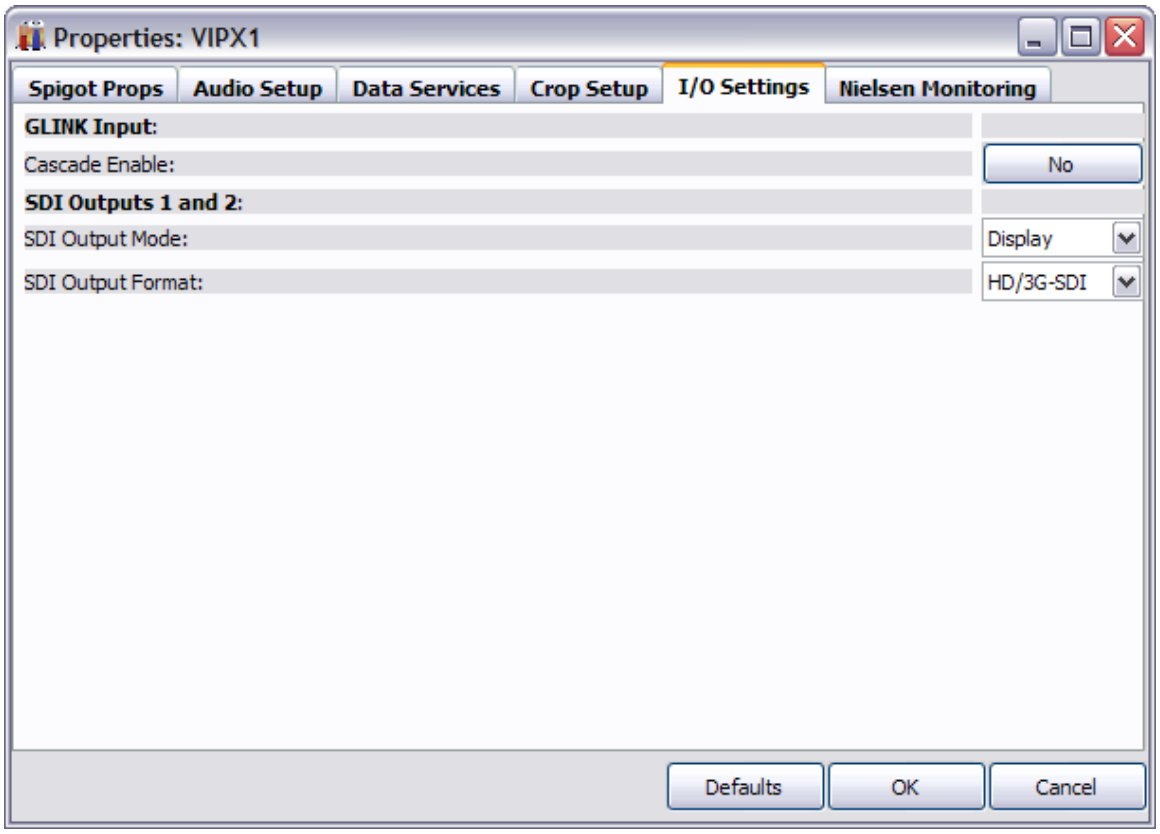


Figure 8-4: I/O Settings Tab for 3G Output Mode

8.3. MULTI-RES MODE

To configure Multi-Res Mode the user must be running Maestro version 2.8.5 and firmware version 1.3.1.

1. From the web-interface navigate to the **Advanced Setup** category and ensure that **Dual Resolution Mode** is set to *enable*. If it is not enabled, set the **Dual Resolution Mode** to *enable* and then reboot the module.

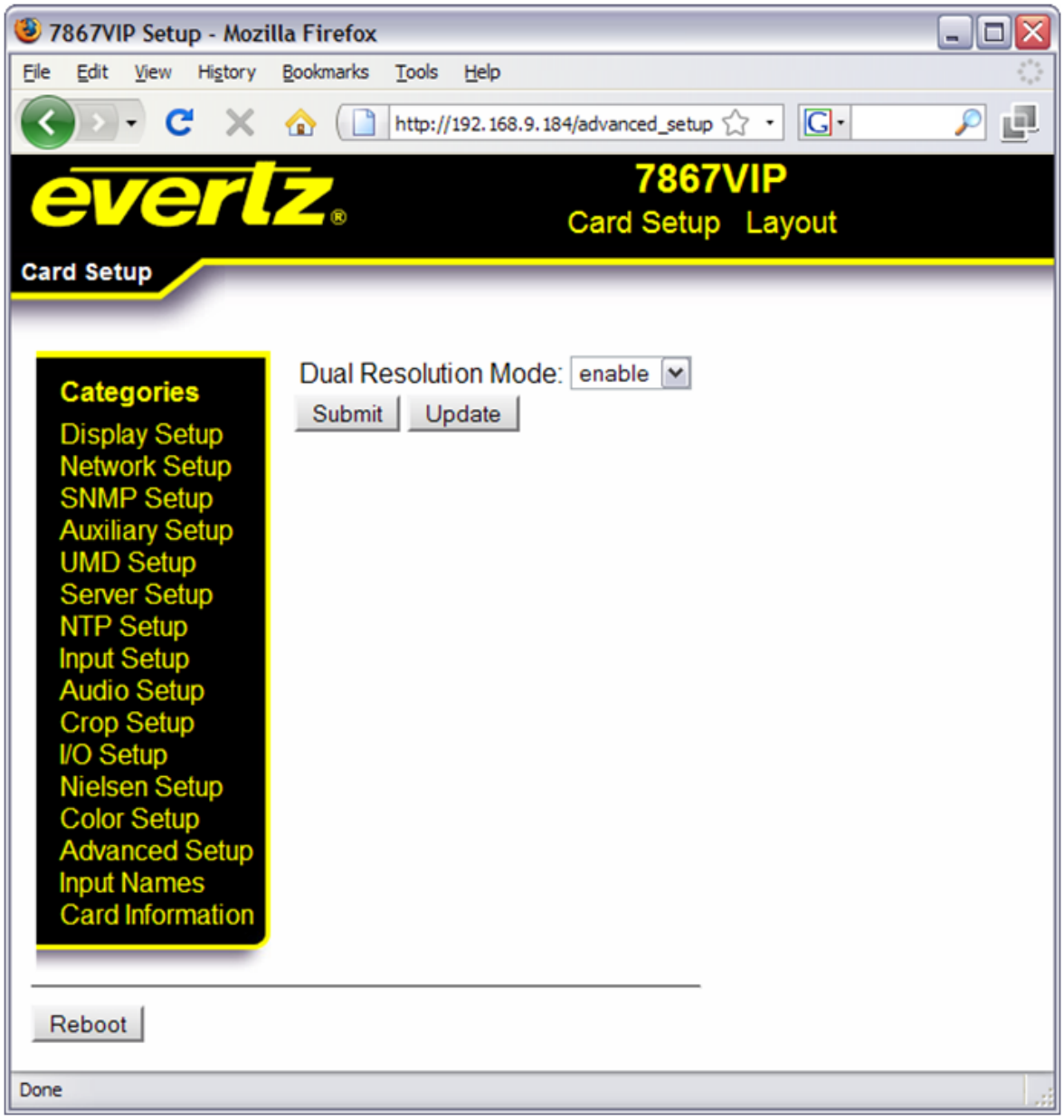


Figure 8-5: Setting Dual Resolution Mode using the Web Interface

2. Next, connect to the card using Maestro.

3. From the **Tools** tab within the **Display Manager** select the **Resolution** tab and then change the resolution to *Multi1 – Multi-Resolution Device 1*.

4. Once complete, select the **Apply** button and then click the **OK** button.

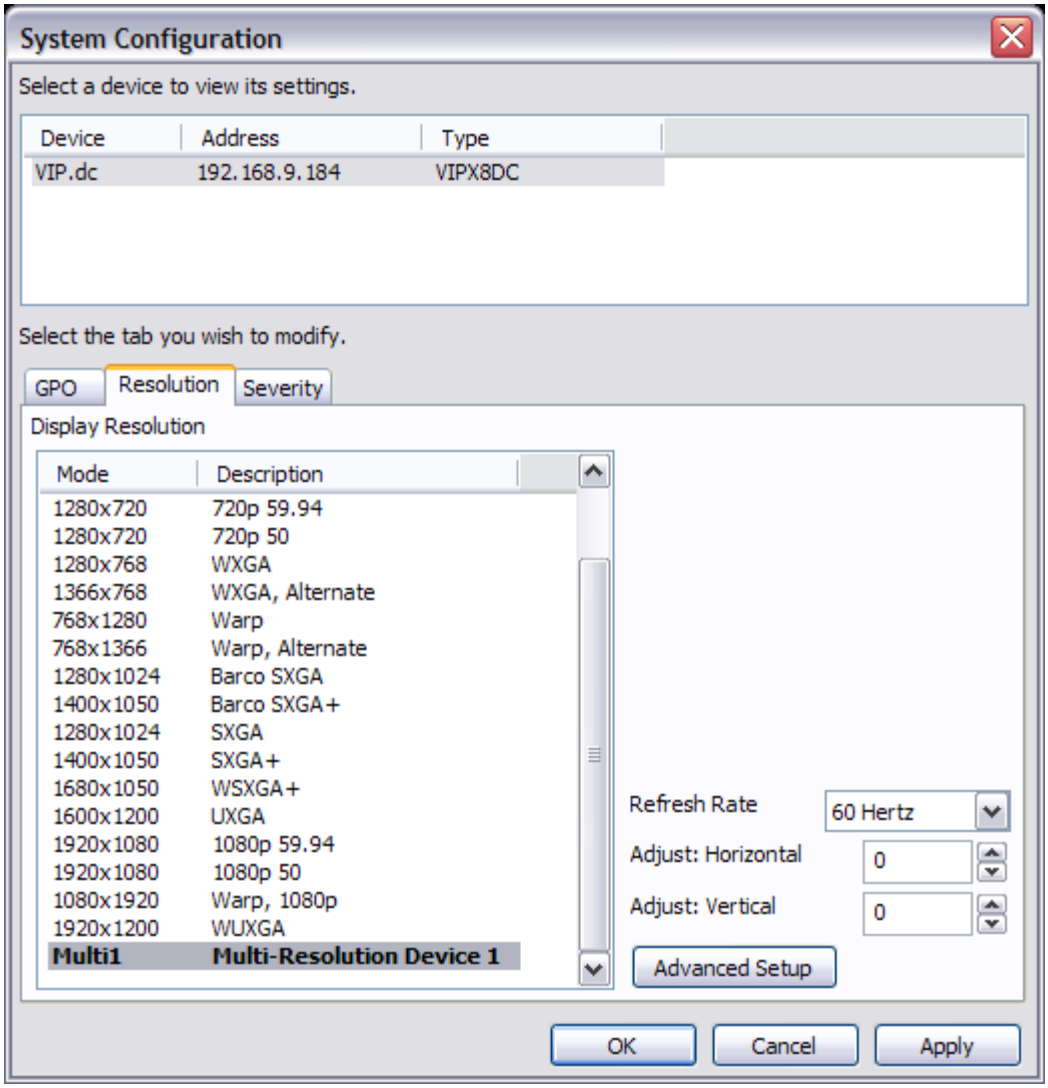


Figure 8-6: System Configuration Window

5. The resolution should now be displayed in a red box.

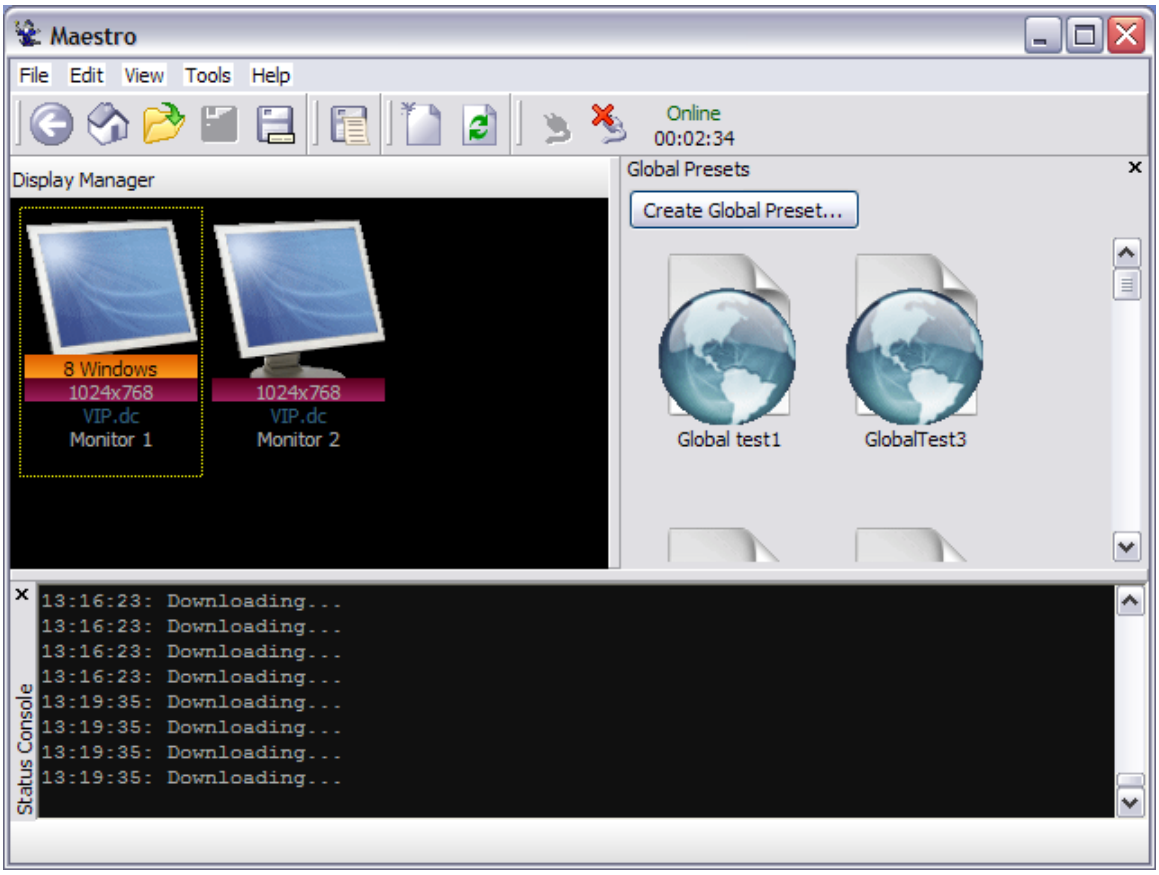


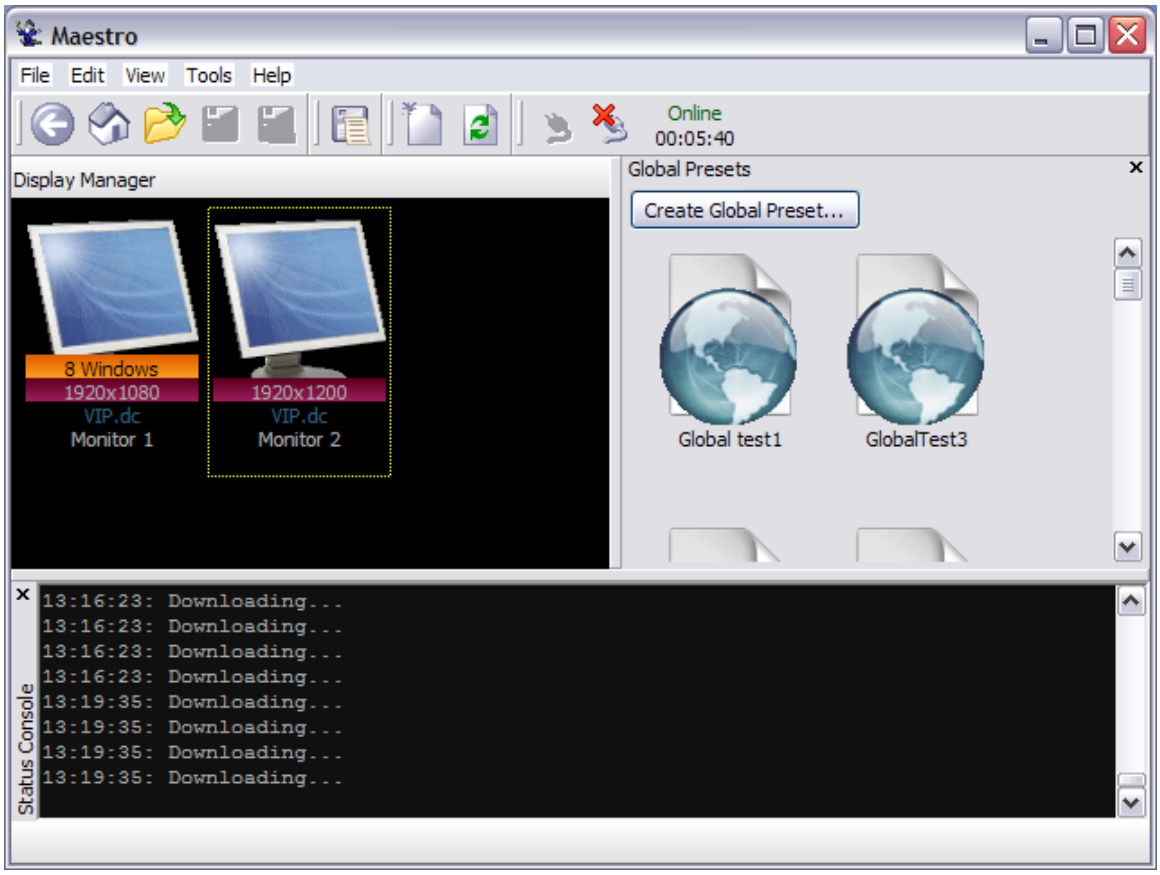
Figure 8-7: Maestro Screen Displaying Resolution

6. Select the desired display and right click on the monitor icon.

7. From the drop down menu select the Properties menu option and change the resolution to your desired output display.

8. Once the resolution has been set, select the **Apply** button and then click **OK**.

9. Follow the same prodecure to set the resolution for the other display.



8-8: Setting the Resolution for Monitor 2

10. Once the resolutions have been set, navigate to the **Tool** tab and select the **Save System Settings** menu option.

8.4. WALL MODE (1X2, 2X1)

To configure Wall Mode the user must be running Maestro version 2.8.5 and firmware version 1.3.1.

1. To enable Wall Mode using the **Display Manager** navigate to the **Tools** tab and then select **System Configuration** option. From within the system configuration, select your desired output resolution.

2. Next, select the **Advanced Setup** option. Using the **Configuration** drop down menu, select the desired wall mode design and enter the display region coordinates, if appropriate.

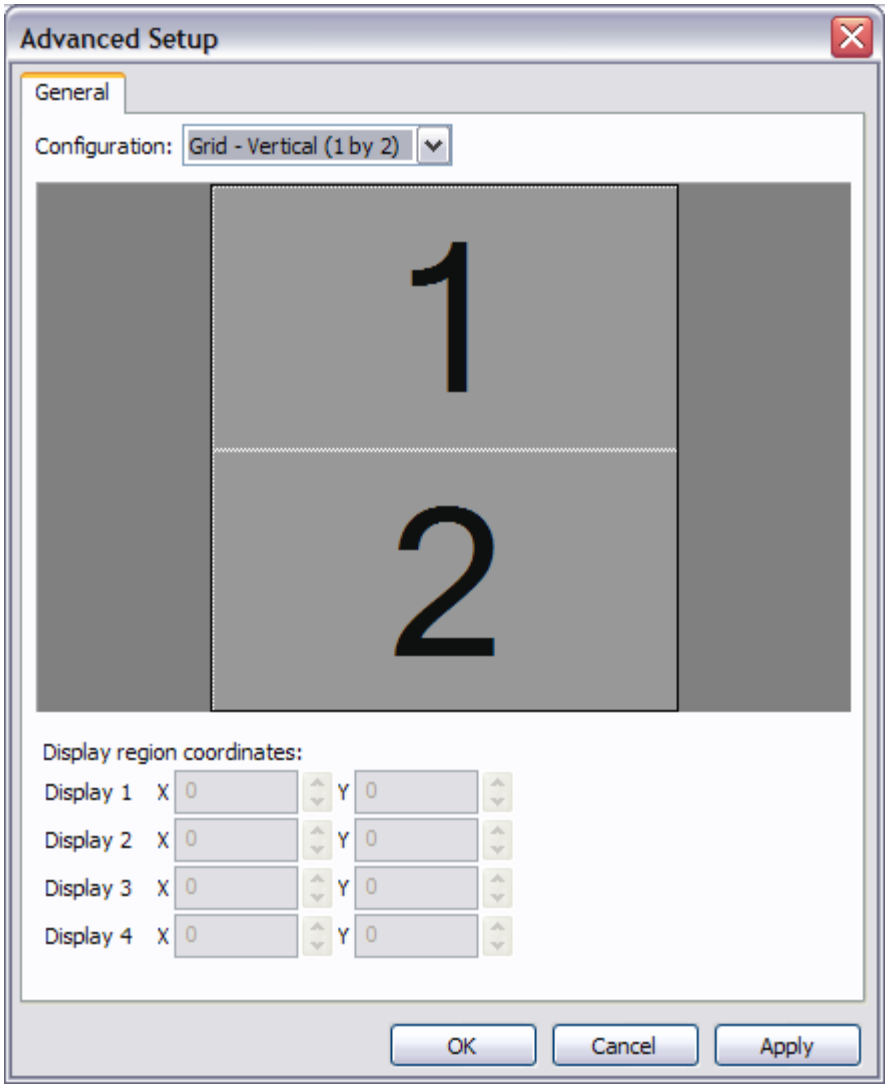


Figure 8-9: Mastro Advanced Setup

3. Once complete, select the **Apply** button and then the **OK** button.

4. Maestro will reflect the change and the canvas will be set to the desired wall mode.

9. UPGRADING FIRMWARE

The 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, and 7867VIPA32-DUO-HS possess firmware that is contained in a FLASH EPROM device. From time to time firmware updates will be provided to add additional features to the unit.

There are two methods of updating the firmware in the 7867VIPA8-DUO-HS, 7867VIPA16-DUO-HS, 7867VIPA18-DUO-HS, 7867VIPA24-DUO-HS, and 7867VIPA32-DUO-HS units: File Transfer Protocol (FTP) and Serial Upload. Due to the large size of the firmware binary file, the FTP method is the preferred method of updating the firmware.

Prior to initiating the upgrade process:

- Confirm the version of code currently installed on the unit by using the front panel display.
- Download the new application code from the Evertz FTP site (www.evertz.com). Unzip the file into a temporary working folder on your PC.

9.1. UPGRADING THE FIRMWARE USING FTP

You will need the following equipment in order to update the Firmware:

- PC with available communications port and Ethernet network port.
- "Straight-thru" serial extension cable (DB9 female to DB9 male) or (DB25 female to DB9 male).
- Special upgrade cable supplied with the 7800FR frame. This multi-coloured ribbon cable with a six pin header socket on one end and a female 9 pin D connector on the other end, (Evertz part number WA-S76) which is normally in the vinyl pouch at the front of the manual binder.
- Appropriate Ethernet cable as outlined in section 3.5.
- Terminal program such as HyperTerminal.
- New firmware supplied by Evertz.

9.1.1. Step 1 – Determine the IP Addresses

Before any FTP (file transfer protocol) upgrades can be initiated, the user must determine the IP address of the 7867VIPA card. Both the PC/laptop and the unit must be on the same subnet for the FTP upgrade to work properly. Follow the procedure outlined in section 7.2.1 to set the IP address for the card.

9.1.2. Step 2 – Establishing a Valid Network Connection

1. Connect a crossover network cable from the PC/laptop to the card.

2. Open a DOS window. This can be accomplished by using the run command under the start button, type "cmd". See Figure 8-1 for more information.

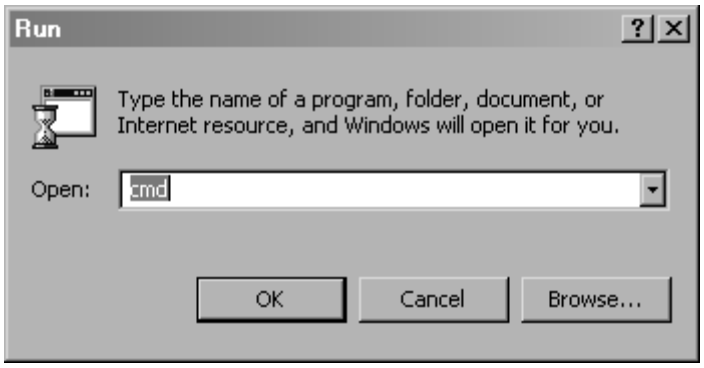


Figure 9-1: Run Window

3. "Ping" the IP address of the module being upgraded to confirm that you have a valid network connection. In the command prompt window type: `ping xxx.xxx.xxx.xxx` (IP address of the module) and press <Enter>.

   If a proper network connection has been established, a "reply" is displayed on the DOS window. If there is a faulty network connection, a "Destination Host Unreachable" message is provided. If this occurs, either the IP addresses of the nodes should be verified or the network (Ethernet) cable is faulty. For more information, please see sections 3.5 and 7.2.1 of this manual.

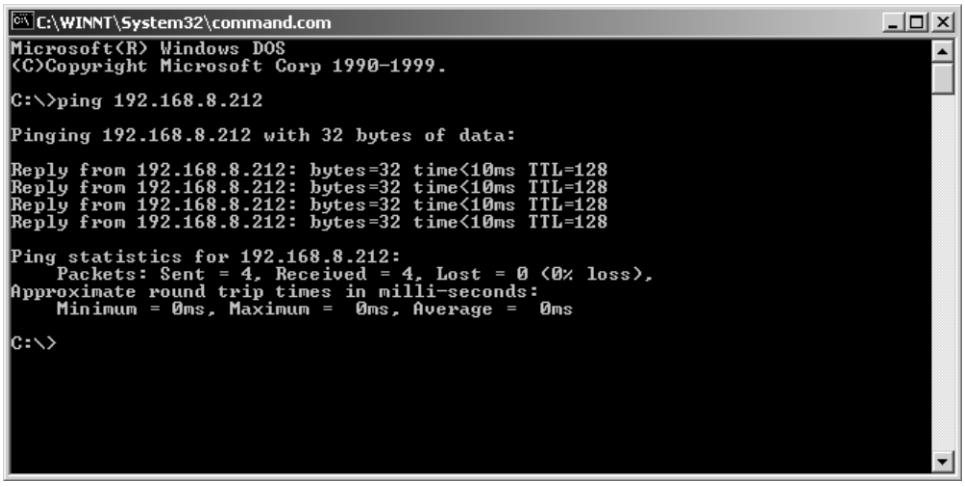


Figure 9-2: Pinging the IP Address

9.1.3. Step 3 – Upgrading the Application Code

4. Obtain the new application code and place it on the local drive of the PC.

5. In the command prompt window type: `ftp xxx.xxx.xxx.xxx` (IP address of the module).

6. Press the <Enter> key when prompted for a "Username".

7. Press the <Enter> key when prompted for a "Password". A message indicating that you have logged in is displayed.

8. At the "FTP>" prompt type `hash` to turn on the progress indicator during the ftp upload.

9. At the "FTP>" prompt type `quote site upgrade` to put the unit in upgrade mode. A message indicating that you are in upgrade mode is displayed.

10. At the "FTP>" prompt type: `put "the name of the file.bin"` to send the firmware to the unit. (For example: `put 7867VIP_1v0b310.bin`)

11. If the application file is not local to where you are performing the ftp, then include the path with the name (For example: `put c:\firmware\ 7867VIP_1v0b310.bin`).

During this time it is mandatory that all power cycles of the unit be avoided. Figure 8-3 displays a successful FTP session.

12. A message indicating the successful connection to the module is displayed.

13. File transfer occurs in several seconds, and the DOS window displays the "FTP>" prompt again.

14. At the "FTP>" prompt type `quit` to exit the FTP procedure.

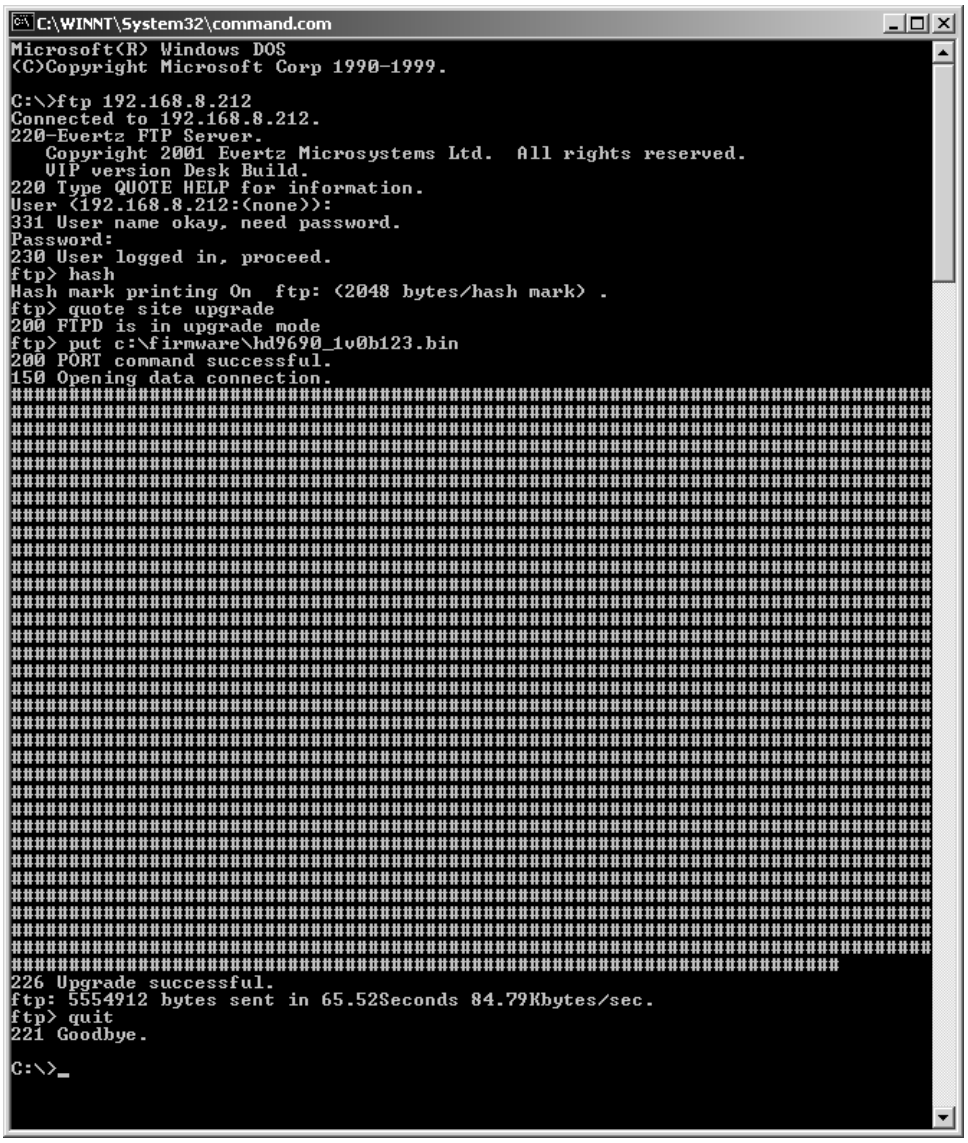


Figure 9-3: Upgrade Window

9.1.4. Step 4 – Completing the Upgrade

15. Disconnect the power to the unit and then plug it back into reboot the unit.

16. You can now close the DOS window and disconnect the network cable.

9.2. UPGRADING THE FIRMWARE USING RS-232 SERIAL CABLE

This method of upgrading the firmware will take over 15 minutes and is not recommended unless the FTP method fails.

You will need the following equipment in order to update the Firmware:

- PC with available communications port. The communication speed is 115200 baud, therefore a 486 PC or better with a 16550 UART based communications port is recommended.
- "Straight-thru" serial extension cable (DB9 female to DB9 male) or (DB25 female to DB9 male).
- Special upgrade cable supplied with the 7800FR frame. This multi-coloured ribbon cable with a six pin header socket on one end and a female 9 pin D connector on the other end, (Evertz part number WA-S76) is normally in the vinyl pouch at the front of the manual binder.
- Terminal program that is capable of Xmodem file transfer protocol. (such as HyperTerminal)
- New firmware supplied by Evertz.

9.2.1. Step 1 – Setup

17. Connect the 7800PB Serial Upgrade cable to the 2 row x 3 pin header on the bottom board.

18. Connect the 9 pin connector on the end of the Serial Update cable to the PCs' RS-232 communications port.

19. Start the terminal program.

20. Configure the port settings of the terminal program as follows:

Baud	**115200**
Parity	**no**
Data bits	**8**
Stop bits	**2**
Flow Control	**None**

9.2.2. Step 2 – Invoke Upload Mode from the Terminal Program

21. Power up the VIPA card. After the unit powers up, a banner with the boot code version information should appear in the terminal window. The cursor to the right of the word "BOOT>" should be spinning for about 5 seconds then the unit will continue to boot. While the cursor is spinning press Ctrl-X to abort the boot-up process.

    For example:

```
PPC BOOT>
```

22. The following is a list of possible reasons for failed communications:

- Defective Serial Upgrade cable.
- Wrong communications port selected in the terminal program.
- Improper port settings in the terminal program. (Refer to step 20 for settings). Note that HyperTerminal will not change port settings while connected. Click on HyperTerminal's "Disconnect" Button then click the "Reconnect" button to activate changes to the port settings.

23. Hit the <ENTER> key on your computer once.

24. Type the word "upload", without quotes, and hit the <ENTER> key once.

25. You should now see a prompt asking you to upload the file.

9.2.3. Step 3 – Uploading the New Firmware

26. Upload the "*.bin" file supplied using the X-Modem transfer protocol of your terminal program. If you do not start the upload within 10 minutes the unit's Boot code will time out. You can restart the upgrade process by power cycling the unit.

27. When the transfer is complete (can take up to 15+ minutes) the terminal will return to the PPCBOOT prompt.

    For Example:

```
UPLOAD OKAY
PPC BOOT> |
```

28. The following is a list of possible reasons for a failed upload:

- If you get the message "transfer cancelled by remote" you must restart the terminal program and load the bin file, then remove and install the module again.
- The supplied "*.bin" file is corrupt.
- Wrong file specified to be uploaded.
- Wrong file transfer protocol used – make sure you specify Xmodem, not Xmodem 1K.
- The PCs' RS-232 communications port cannot handle a port speed of 57600.
- Noise induced into the Serial Upgrade cable.

9.2.4. Step 4 – Completing the Upgrade

29. Power cycle the unit. It should proceed through a normal boot up sequence.

30. You can now close the terminal program and disconnect the RS-232 serial cable from the PC and the unit.

10. CONFIGURING THE 3000DCP DESKTOP CONTROL PANEL

Please note that this section assumes that the System Configuration Tool (SCT) has already been installed and configured.

10.1. FOR SYSTEMS USING ONBOARD SERVER

10.1.1. Creating the System and Setting up the Hardware

1. Launch the **System Configuration Tool** (SCT).
2. Select the **Profile Settings** tab.
3. Select “Onboard Server” as the **System Type**, and enter the output card’s IP address in the text field marked “Enter the server address…”
4. Press the **Get from Server** button at the top of the SCT to retrieve the system configuration for this system.
5. Select the **Hardware Setup** tab.
6. Add a DCP to the hardware list by filling in the name (e.g.: DCP1), type (DCP), and IP address fields. See Figure 9-1.

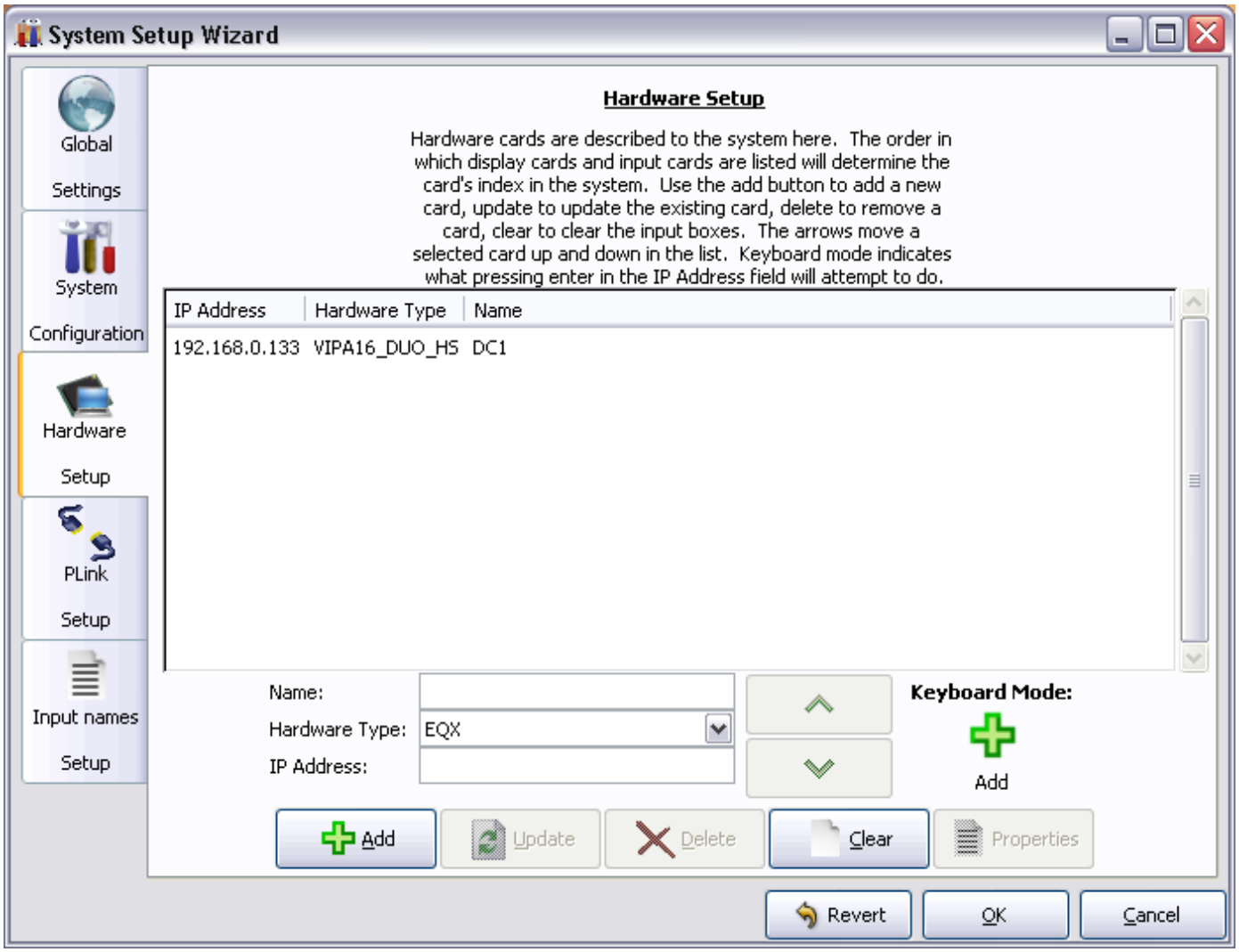


Figure 10-1: Adding DCP to Hardware List

7. Press the **Send to Server** button at the top of the SCT window to send the new configuration to the server.

8. Select the **Transfer Scripts** button located at the top of the SCT.

9. In the **Transfer Scripts** window that appears:

   For **Local File**, browse to and select:

   C:\ProgramFiles\Evertz\mvp\conductor\sys01\samples\dcpbasic.vssl

   For **Server File** select **DCP Config** from the dropdown menu.

10. Press the **Send to Server** button to send the DCP configuration file to the server, and then close the **Transfer Scripts** window.

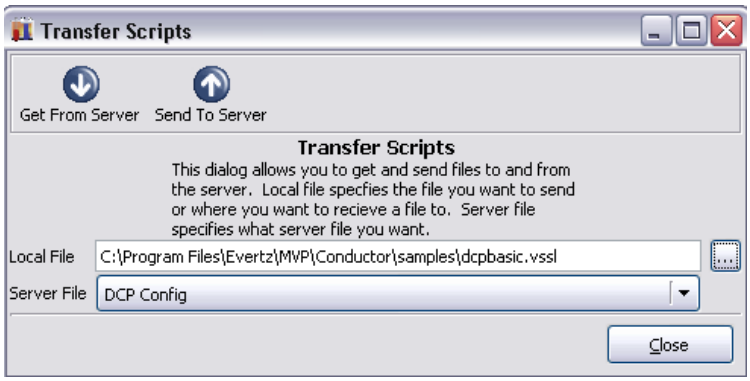


Figure 10-2: Transfer Scripts Window

10.1.2. Enabling the DCP Server

1. Connect a serial cable to the serial port of the output display card running the server.

```
-------------------------------------------------------
|               Onboard Server Configuration           |
|                 (7867VIPA8-DUO-HS 1.0.0)             |
 -------------------------------------------------------
 ------------------------------------------------
Onboard Server: Enabled
Onboard GPId: Disabled
Onboard VGPId: Disabled
Onboard DCPd: Disabled
 ------------------------------------------------
(1) Display connection status
(2) Enable server
(3) Enable gpid
(4) Enable vgpid
(5) Enable dcpd

(S) Save and Exit
(X) Exit
> > 1
```

Figure 10-3: Onboard Server Configuration Menu

2. Select **(5) Enable dcpd** and then select **YES**.

3. Select **(S) Save and Exit**.

4. Reboot the display card.

10.2. FOR SYSTEMS USING PC SERVER

1. Launch the **MVP System Manager** and navigate to the **System** menu and then select **Modify System**.

2. Select the **Hardware Setup** tab.

3. Add a DCP to the Hardware list by filling out the name, type, and IP address fields. See Figure 9-4 below.

4. When you have entered the information, click **Add**, and then **OK**.

5. Select **YES** to restart the server.

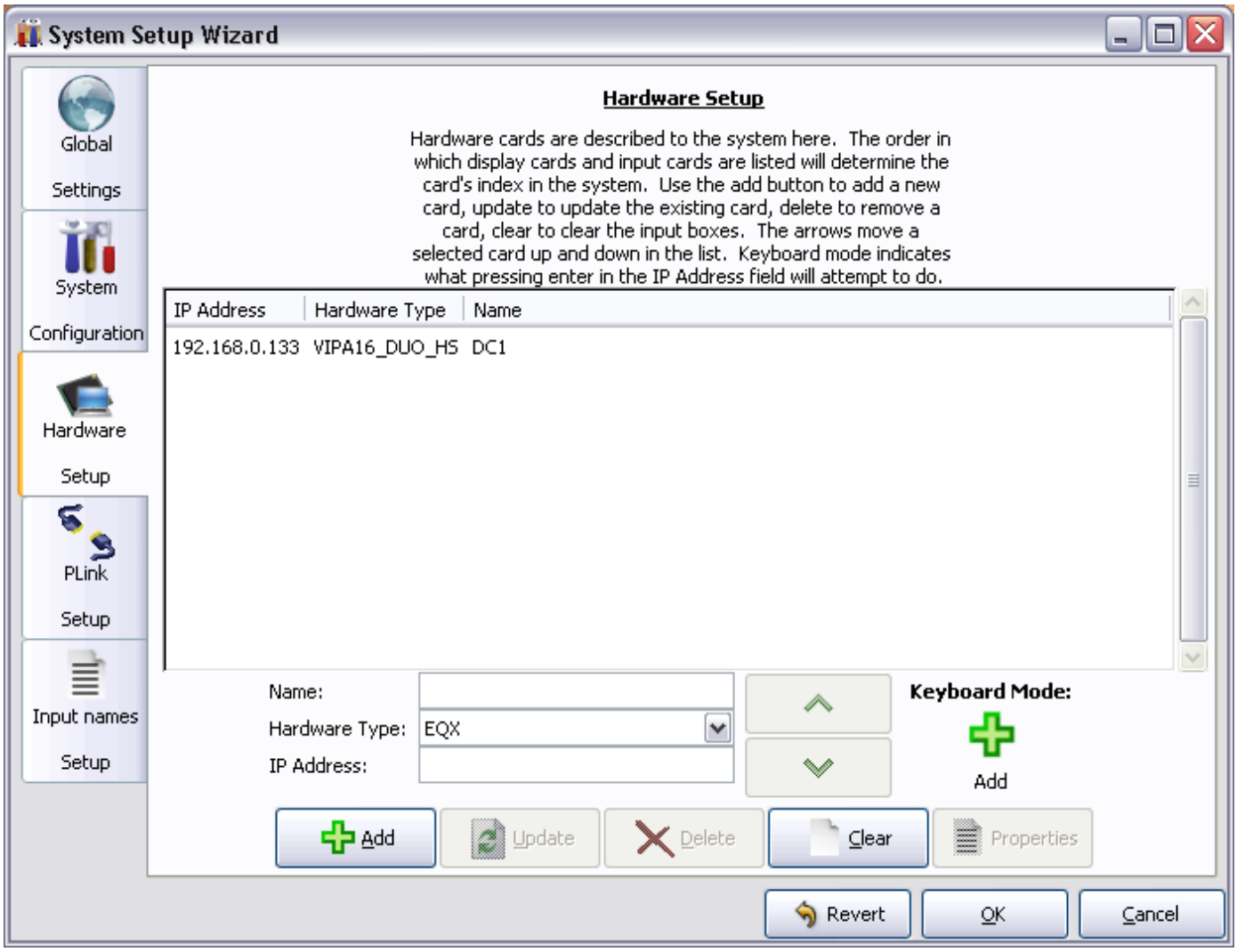


Figure 10-4: Adding the DCP to the Hardware List

6. Click the **Transfer Scripts** button in the MVP System Manager.

A **Transfer Scripts** window will appear.

For **Local File**, browse to and select:

C:\Program Files\Evertz\mvp\conductor\sys01\samples\dcpbasic.vssl

For **Server File,** select **DCP Config** from the dropdown menu (see Figure 9-5 below).

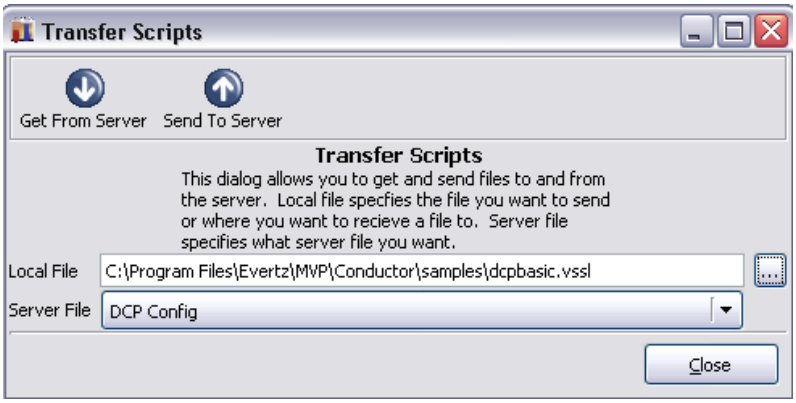


Figure 10-5: Transfer Scripts Window

7. Press the **Send to Server** button to send the DCP configuration file to the server.

8. Close the **Transfer Scripts** window.

9. Stop and restart the server.

10.3. FOR PC AND ONBOARD SERVER – DCP SETUP

1. Press the Select and Setup buttons on the DCP at the same time to enter the setup menu.

2. Ensure that the DCP has the correct IP address as entered in the Hardware Setup Table.

3. Verify all network settings. Use the arrow buttons and rotary knob to enter network information. Also ensure that the DCP is connected to the same network as the VIPA, and can be pinged from the PC running the Maestro application.

It may take a few seconds in order for the DCP to connect.

When it does, the dot-matrix display will go from displaying “No Clients Connected” to “Evertz 3000DCP DCPd@ xxx.xxx.xxx.xxx”.

DCP presets are saved using the format “dnn-pnn”, where nn is the display number and preset button number.

Use the Maestro software to save presets as a script (**File** > **Save as script**) using the described format. Maestro will automatically place the preset for the DCP in the correct location.

Example:

d01-p01, assigns the preset to display 1 preset button 1
d01-p12, assigns the preset to display 1 preset button “shift” 2 (12)
d04-p08, assigns the preset to display 4 preset button 8

10.4. UPGRADING THE 3000DCP

The following are instructions on how to perform a firmware upgrade on the 3000DCP desktop control panel. Please note that these are secondary methods to performing this upgrade, as it is normally completed in **System Configuration Tool (Hardware Settings > Update)**.

To use the serial method (baud rate = 115200, 8 data bits, N parity, 2 stop):

1. Connect a serial port to the DB-9 serial connector on the back of the DCP.
2. Hold down the **Undo** button and the **Setup** button while powering on the DCP.
3. Using the serial terminal, hit **CTRL-X** at the prompt to put the unit in upgrade mode.
4. At the prompt type “upload”.
5. Use the terminal software to send the new firmware file using X-modem.
6. After the firmware has been transferred, power cycle the unit.

To use the FTP method:

1. Open a dos window.
2. At the prompt, type “ftp xxx.xxx.xxx.xxxx” where the x’s represent the IP address of the DCP.
3. Hit <ENTER> for username and password.
4. Type “put filename.bin” at the ftp prompt, where “filename.bin” represents the released firmware for the device.
5. After the file has been transferred successfully, type “quit”.
6. Power cycle the DCP.

11. SETTING UP PRESET LOADS

11.1. SETTING UP A GPI PRESET LOAD - ONBOARD SERVER

Please note that this procedure assumes an SCT has already been installed and configured.

These instructions also assume the default install location of VIP software. If you have installed the VIP software elsewhere, please substitute your install location wherever the default location is referenced in the following sections:

Initial configurations of GPI preset loads require the use of Windows Explorer and Notepad. GPI preset loads are configured through two files: actions.vssl and gpicfg.vssl

11.1.1. The gpicfg.vssl File

The gpicfg.vssl file maps actions to GPIs. These mapped actions are used to define what the gpi will do (e.g: load a preset).

The syntax for the gpicfg.vssl file can be broken down into three parts:

Part 1: obj GPISource ("DC1")

This defines where the GPIs are connected. When running the Onboard Server, the name of the output card must be set to ("**Local**"), and only the GPIs connected to that card may be used for preset loads. For all other output cards in the system, the GPIs will operate normally.

Part 2: obj gpi(1)

This defines the GPI that will trigger the action (i.e.: the preset load).

Part 3: { action = "presetload" }

The action allows the system to link a GPI to an operation (i.e.: a preset load). The name of the action defined in the gpicfg.vssl will then be called in the actions.vssl file, the second configuration file. The actions.vssl file will define that operation.

Example of a configured gpicfg.vssl file:

```
    obj GPISource ("DC1") {
obj gpi(1) { action = "presetload" }
 }
```

This configuration maps GPI 1 for DC1 to an action called "preset load".

11.1.2. The actions.vssl File

The actions.vssl file maps actions to a function. These mapped actions are used to define what action will be executed (e.g.: load a preset).

The syntax for the actions.vssl file may be broken down into three parts:

Part 1: obj ActRunScript("presetload")

This defines the name of the action. The name is referenced by gpicfg.vssl

Part 2: script = "preset1.vssl"

This defines the name of the script file (preset) that will be triggered by the action. The script file is created in Maestro during design mode.

Part 3: display = 1

This defines the output that the preset will be loaded on. This is a logical output number. Example DC1, 1,2,3,4, DC2, 5,6,7,8

Example of a configured actions.vssl file:

```
obj ActRunScript("presetload") {
script = "preset1.vssl"
display = 1
}
```

This configuration maps the action “presetload” to the preset “preset1.vssl” which will be loaded on the first output of the first display card in the system.

11.1.3. How to Set Up a GPI Preset Load

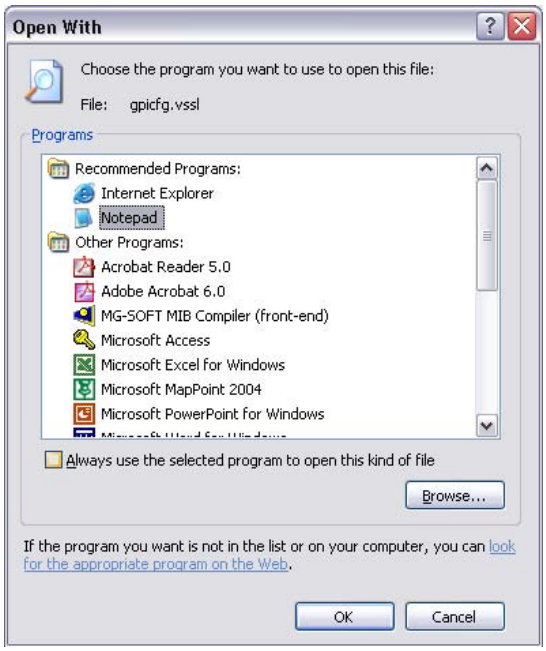
Follow the instructions below to set up a preset load.

Part 1: Editing the gpicfg.vssl File

1. From a Windows 2000/XP operating system, using Windows Explorer, browse to the default install location of VIP software:

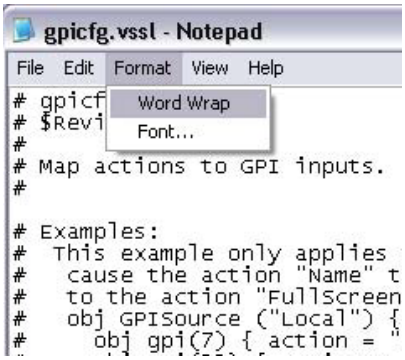
   C:\Program Files\ Evertz\ MVP\ Conductor \Samples

2. Double-click the file called gpicfg.vssl, and then select **Open With** or **Select Program from List**, depending on your operating system.

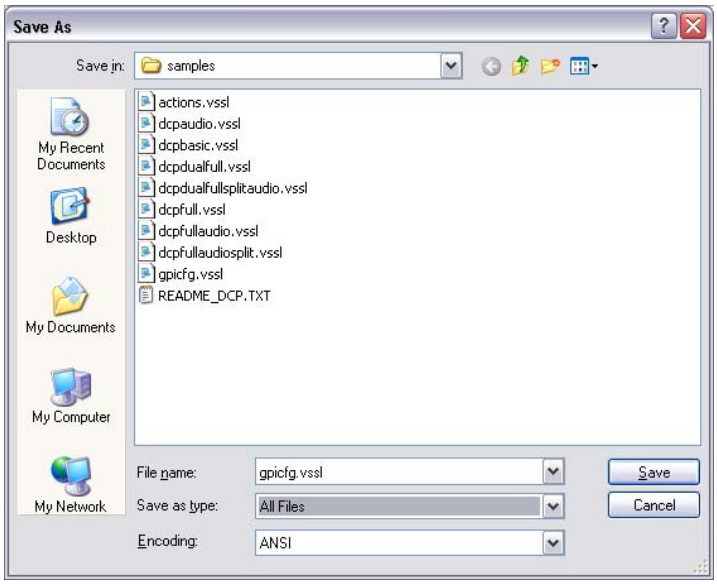


3. Select **Notepad**, and click the checkbox beside **Always use the selected program to open this kind of file** and then click the **OK** button.

Note: When using Notepad, make sure that Word Wrap is disabled. A checkmark appears next to Word Wrap if it is enabled. To disable Word Wrap, click on Word Wrap in the Format menu. This will disable Word Wrap, removing the checkmark.



4. When you are finished editing, save the file, making sure that **Save as Type** is set to **All Files** from the drop-down list.

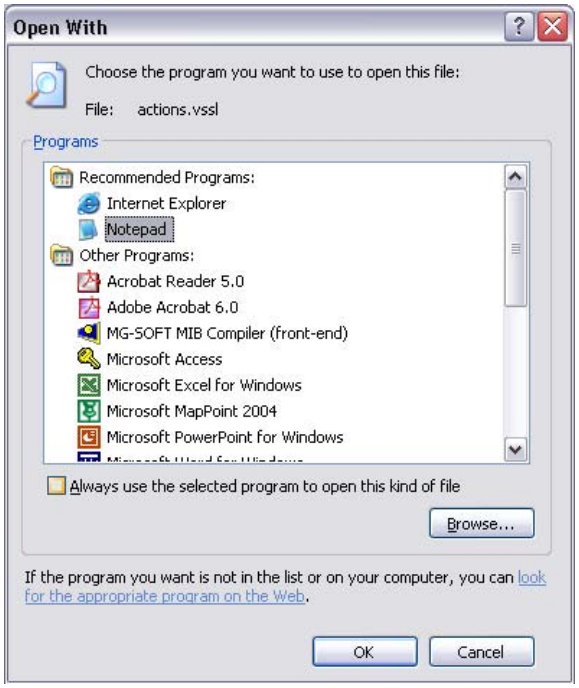


Part 2: Editing the actions.vssl File

1. From a Windows 2000/XP operating system, using Windows Explorer, browse to the default install location of VIP software:
2.

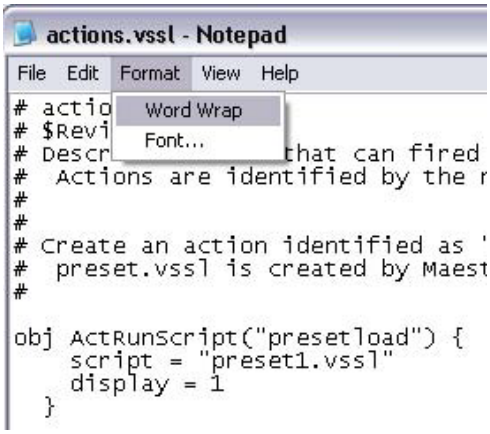
C:\Program Files\ Evertz\ MVP\ Conductor \Samples

3. Double-click the file called actions.vssl, and select **Open With** or **Select Program from List**, depending on your operating system.

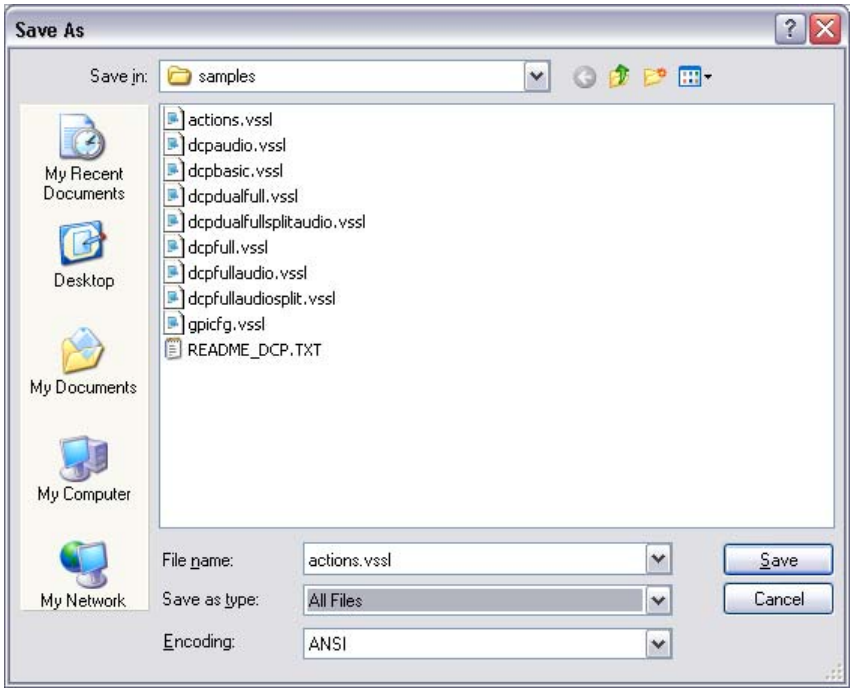


4. Select **Notepad**, and click the checkbox beside **Always use the selected program to open this kind of file** and then click the **OK** button.

Note: When using Notepad, make sure that word wrap is disabled. A checkmark appears next to Word Wrap if it is enabled. To disable Word Wrap, click on Word Wrap in the Format menu. This will disable Word Wrap, removing the checkmark.



5. When you are finished editing, save the file, making sure that **Save as type** is set to **All Files** from the drop-down list.



Now that gpicfg.vssl and actions.vssl have been configured and saved, they need to be sent to the server.

Part 3: Verifying Communication with the Onboard Server

1. Launch the **System Configuration Tool** and select the **System Configuration** tab.

2. Select **System Type: Onboard Server** and enter the IP address of the Onboard Server card in the text field as depicted below.

3. Click on **Get from Server** at the top of the **System Configuration Tool** to retrieve configuration and verify communication with the Onboard Server.

Part 4: Transferring the Gpicfg.vssl and Actions.vssl Files Using an Onboard Server

1. Click on **Transfer Scripts**, which will cause the window below to be displayed.

Figure 11-1: Transfer Scripts

2. Click on the  button to open a browse window. Browse to where the gpicfg.vssl and actions.vssl files were saved.

   The default location is **C:\Program Files\Evertz\MVP\Conductor\Samples**

3. Select **actions.vssl** and click open. The **Transfer Scripts** menu will appear again.

4. From the **Server File** drop-down box, select **Actions**.

Figure 11-2: Transfer Scripts – Local File

5. Click on **Send to Server**. The file actions.vssl will be sent to the server.

6. Click on the box to open a browse window. Browse to where gpicfg.vssl and actions.vssl files were saved.

   The default location is **C:\Program Files\Evertz\MVP\Conductor\Samples**.

7. Select **gpicfg.vssl** and click open. The Transfer Scripts menu will appear again.

8. From the **Server File** drop-down box, select **GPI Config**.

Figure 11-3: Transfer Scripts – Server File

9. Click on **"Send to Server"**. The file **gpicfg.vssl** will be sent to the server.

The last step is to enable the **GPId daemon**.

Part 5: Enabling GPId Daemon on the Onboard Server

The ability to load presets on a display is controlled by a daemon running on the server output card called GPId.

This daemon is ***only*** used to load presets on a display, **it is not required with normal GPI operation**.

The next few steps require a PC with HyperTerminal, a serial port, a serial cable, and a serial upgrade cable.

1. Attach the serial upgrade cable to the server output card and launch HyperTerminal.

2. Once connected with HyperTerminal, hit <ENTER> to display the serial menu of the server output card.

```
-----------------------------------------------------------
|                          Main Menu                      |
|                   (7867VIPA8-DUO-HS 1.0.0)              |
-----------------------------------------------------------
(1) Network Configuration
(2) Onboard Server Configuration
(3) Utilities
(4) Under Monitor Display Setup
(5) Auxiliary Serial Port Setup
(6) Display Wall Test
(7) Hardware Test Menu
(8) Engineering/Debug

(X) Exit
```

Figure 11-4: Main Menu

3. Select option **(2) Onboard Server Configuration**.

```
 ------------------------------------------------------
|               Onboard Server Configuration           |
|                  (7867VIPA8-DUO-HS 1.0.0)            |
 ------------------------------------------------------
 ------------------------------------------------
Onboard Server: Enabled
Onboard GPId: Disabled
Onboard VGPId: Disabled
Onboard DCPd: Disabled
 ------------------------------------------------
(1) Display connection status
(2) Enable server
(3) Enable gpid
(4) Enable vgpid
(5) Enable dcpd

(S) Save and Exit
(X) Exit
```

Figure 11-5: Onboard Server Configuration Menu

4. Select **(3) Enable gpid** to enable the daemon required to load presets through GPIs.

```
 ------------------------------------------------------
|               Onboard Server Configuration           |
|                  (7867VIPA8-DUO-HS 1.0.0)            |
 ------------------------------------------------------
 ------------------------------------------------
Onboard Server: Enabled
Onboard GPId: Enabled
Onboard VGPId: Disabled
Onboard DCPd: Disabled
 ------------------------------------------------
(1) Display connection status
(2) Enable server
(3) Enable gpid
(4) Enable vgpid
(5) Enable dcpd

(S) Save and Exit
(X) Exit
> s
Saving changes..
Please reboot for changes to take effect
```

5. Select **(S) Save and Exit** to save the changes. Reboot the server output card for the changes to take effect.

When the card has been re-booted, GPIs may be used to load the defined presets in the **gpicfg.vssl** and **actions.vssl** files. Please refer to the Maestro manual for more information on how to create the presets.

11.2. SETTING UP A VGPI PRESET LOAD – ONBOARD SERVER

VGPIs are virtual GPIs sent by a 7800MVP-PTX or a third party device adhering to the VGPI protocol format.

Initial configurations of VGPI preset loads require the use of Windows Explorer and Notepad. VGPI preset loads are configured through two files: actions.vssl and gpicfg.vssl

Please note that this procedure assumes the System Configuration Tool has already been installed and configured.

These instructions also assume the default install location of VIP software. If you have chosen an alternate install location, please substitute your install location wherever the default location is referenced below.

11.2.1. The gpicfg.vssl File

The gpicfg.vssl file maps actions to VGPIs. These mapped actions are used to define what the VGPI will do (e.g.: load a preset).

The syntax for the **gpicfg.vssl** file can be broken down into three parts:

Part 1: obj GPISource ("Local")
This defines where the VGPIs are connected. With an onboard server, this entry must be set to ("Local"), and only the VGPIs connected to the onboard server card can be used for the preset load. For onboard systems with two output cards, the VGPIs will operate normally for the card not running the server.

Part 2: obj vgpi(1)
This defines the VGPI that will trigger the action (the preset load).

Part 3: { action = "presetload" }
The action allows the system to link a VGPI to an operation (i.e.: a preset load). The name of the action defined in the **gpicfg.vssl** will then be called in the **actions.vssl** file (the second configuration file). The **actions.vssl** file then will define that operation.

The following is an example of a configured gpicfg.vssl file

```
    obj GPISource ("Local") {
obj vgpi(1) { action = "presetload" }
 }
```

This configuration maps VGPI 1 for an onboard server to an action called "preset load".

11.2.2. The actions.vssl File

The actions.vssl file maps actions to a function. These mapped actions are used to define what the action will do (e.g.: load a preset).

The syntax for the **actions.vssl** file can be broken down into three parts:

Part 1: obj ActRunScript("presetload")

This defines the name of the action. The name is referenced by gpicfg.vssl

Part 2: script = "preset1.vssl"

This defines the name of the script file (preset) that will be triggered by the action. The script file is created in Maestro during design.

Part 3: display = 1

This defines the output that the preset will be loaded on. This is a logical output number.

The following is an example of a configured **actions.vssl** file

```
obj ActRunScript("presetload") {
script = "preset1.vssl"
display = 1
}
```

This configuration maps the action "presetload" to the preset "preset1.vssl", which will be loaded on the first output of the first display card in the system.

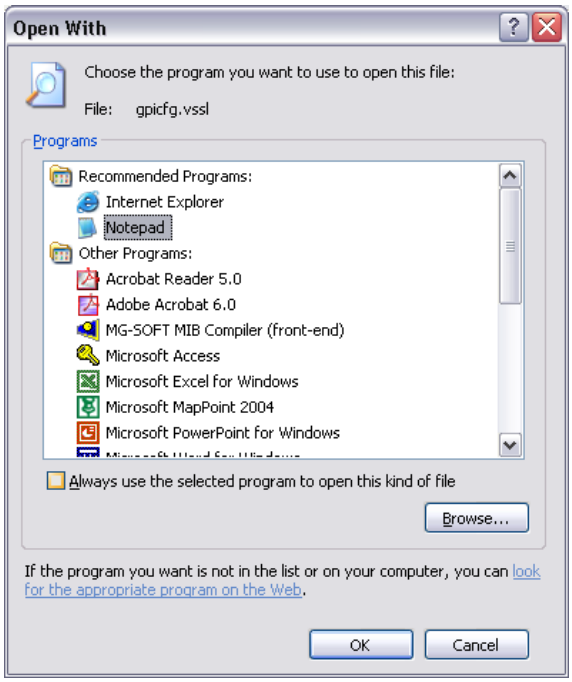
11.2.3. How to Set Up a VGPI Preset Load

Follow the instructions below to set up a VGPI preset load.

Part 1: Editing the gpicfg.vssl File

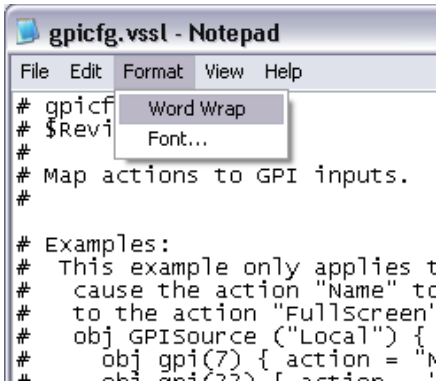
1. From a Windows 2000/XP operating system, using Windows Explorer, browse to the default install location of VIP software:
   C:\Program Files\ Evertz\ MVP\ Conductor \Samples

2. Double-click the file called **gpicfg.vssl**, and then select **Open With** or **Select Program from List,** depending on your operating system.

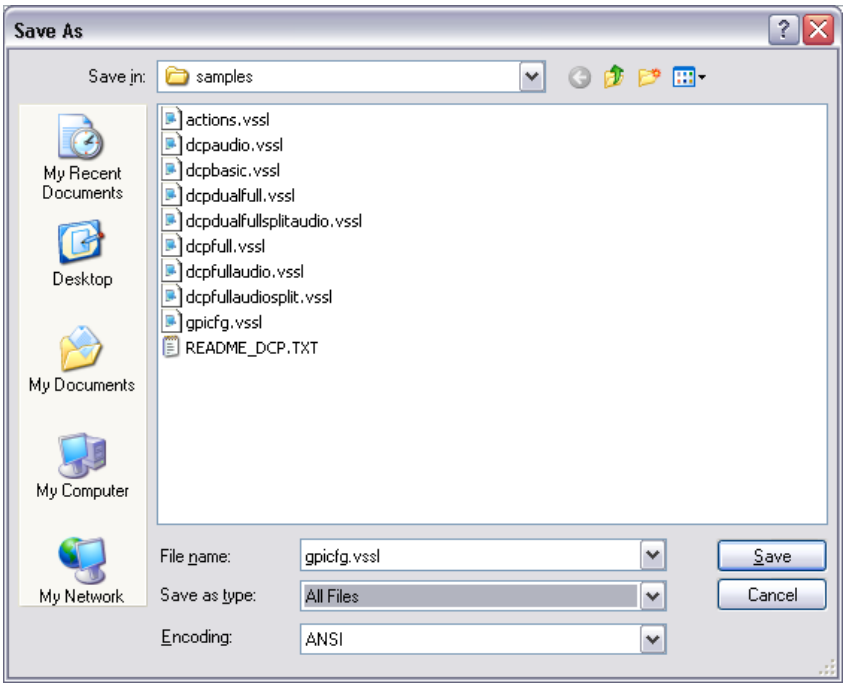


3. Select **Notepad**, and click the checkbox beside **Always use the selected program to open this kind of file** and then click **OK** button.

Note: When using Notepad, make sure that Word Wrap is disabled. A checkmark appears next to Word Wrap if it is enabled. To disable Word Wrap, click on Word Wrap in the Format menu and remove the checkmark.



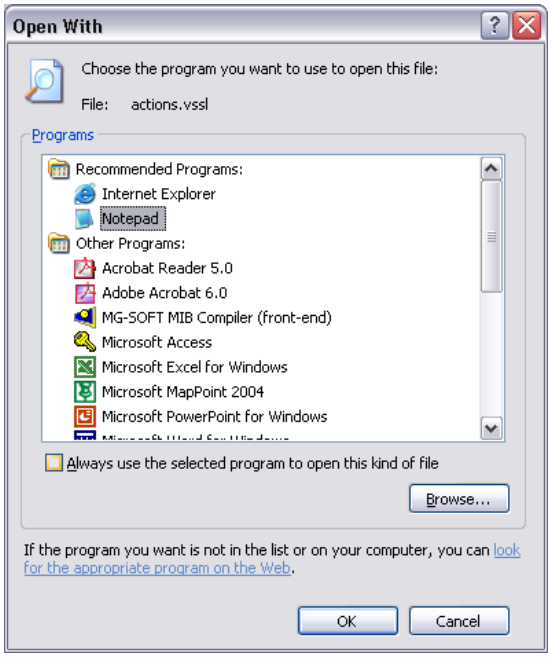
4. When you are finished editing, save the file, making sure that **Save as type** is set to **All Files** from the drop-down list.



Part 2: Editing the actions.vssl File

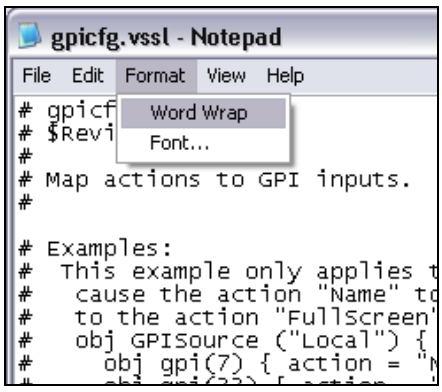
1. From a Windows 2000/XP operating system, using Windows Explorer, browse to the default install location of VIP software:
   C:\Program Files\ Evertz\ MVP\Conductor\Samples

2. Double-click the actions.vssl file, and select **Open With** or **Select Program from List**, depending on your operating system.

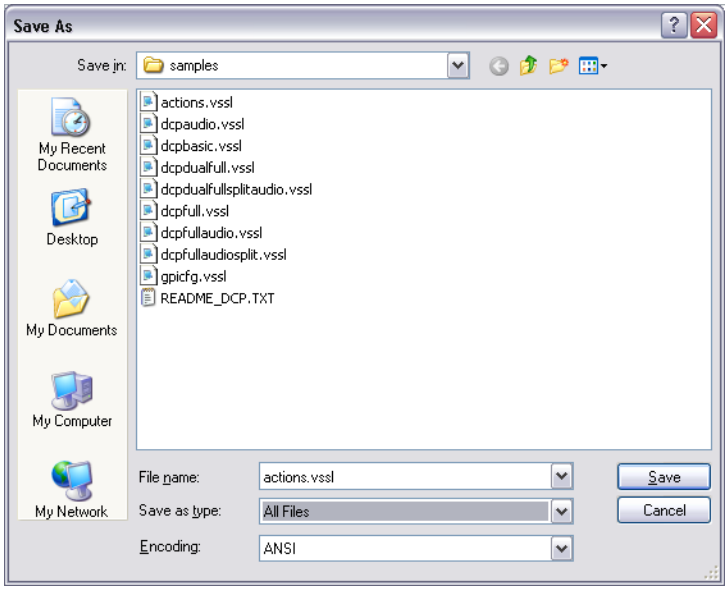


3. Select **Notepad** and click the checkbox beside **Always use the selected program to open this kind of file** and then click **OK** button.

Note: When using Notepad, make sure that Word Wrap is disabled. A checkmark appears next to Word Wrap if it is enabled. To disable Word Wrap, click on Word Wrap in the Format menu and remove the checkmark.



4. When you are finished editing, save the file, making sure that **Save as type** is set to **All Files** from the drop-down list.



Now that **gpicfg.vssl** and **actions.vssl** have been configured and saved, they need to be sent to the server.

Part 3: Verifying Communication with the Onboard Server

1. Launch the **System Configuration Tool** and select the **System Configuration** tab.

2. Select **System Type: Onboard Server**. Enter the IP address of the onboard server card in the text field as depicted below.

3. Click on **Get from Server** at the top of the **System Configuration Tool** to retrieve configuration and verify communication with the Onboard Server.

Part 4: Transferring the Gpicfg.vssl and Actions.vssl Files Using an Onboard Server

1. Click on **Transfer Scripts**, which will cause the window below to be displayed.

Figure 11-6: Transfer Scripts

2. Click on the  button to open a browse window. Browse to where the gpicfg.vssl and actions.vssl files were saved.

   The default location is ***C:\Program Files\Evertz\MVP\Conductor\Samples*****.**

3. Select **actions.vssl** and click open. The **Transfer Scripts** menu will appear again.

4. From the **Server File** drop-down menu, select **Actions**.

Figure 11-7: Transfer Scripts – Local File

5. Click on **Send to Server**. The file **actions.vssl** will be sent to the server.

6. Click on the button to open a browse window. Browse to where the gpicfg.vssl and actions.vssl files were saved.

   The default location is ***C:\Program Files\Evertz\MVP\Conductor\Samples*.**

7. Select **gpicfg.vssl** and click open. The Transfer Scripts menu will appear again.

8. From the **Server File** drop-down menu, select **GPI Config**.

Figure 11-8: Transfer Scripts – Server File

9. Click on **Send to Server**. The file **gpicfg.vssl** will be sent to the server.

The last step is to enable the **VGPId daemon**

Part 5: Enabling VGPId Daemon on the Onboard Server

The ability to load presets on a display is controlled by a daemon called **"VGPId",** running on the server output card.

This daemon is ***only*** used to load presets on a display. **It is not required with normal VGPI operation.**

The next few steps require a PC with HyperTerminal, a serial port, a serial cable, and a serial upgrade cable.

1. Attach the serial upgrade cable to the server output card and launch HyperTerminal.

2. Once connected with HyperTerminal, hit <ENTER> to display the serial menu of the server output card.

```
------------------------------------------------------------
|                         Main Menu                        |
|                  (7867VIPA8-DUO-HS 1.0.0)                |
------------------------------------------------------------
(1) Network Configuration
(2) Onboard Server Configuration
(3) Utilities
(4) Under Monitor Display Setup
(5) Auxiliary Serial Port Setup
(6) Display Wall Test
(7) Hardware Test Menu
(8) Engineering/Debug

(X) Exit
```

3. Select **(2) Onboard Server Configuration**.

```
------------------------------------------------------------
|               Onboard Server Configuration               |
|                  (7867VIPA8-DUO-HS 1.0.0)                |
 ----------------------------------------------------------
 ------------------------------------------------
Onboard Server: Enabled
Onboard GPId: Disabled
Onboard VGPId: Disabled
Onboard DCPd: Disabled
 ------------------------------------------------
(1) Display connection status
(2) Enable server
(3) Enable gpid
(4) Enable vgpid
(5) Enable dcpd

(S) Save and Exit
(X) Exit
```

4. Select (**3) Enable vgpid** to enable the daemon required to load presets through VGPIs.

```
 ------------------------------------------------------------
 |                Onboard Server Configuration               |
 |                   (7867VIPA8-DUO-HS 1.0.0)                |
  ----------------------------------------------------------
  ------------------------------------------------
 Onboard Server: Enabled
 Onboard GPId: Disabled
 Onboard VGPId: Enabled
 Onboard DCPd: Disabled
  ------------------------------------------------
 (1) Display connection status
 (2) Enable server
 (3) Enable gpid
 (4) Enable vgpid
 (5) Enable dcpd

 (S) Save and Exit
 (X) Exit
 > s
 Saving changes..
 Please reboot for changes to take effect
```

5. Select **(S) Save and Exit** to save the changes. Reboot the server output card for the changes to take effect.

When the card has been re-booted, VGPIs may be used to load the defined presets in the **gpicfg.vssl** and **actions.vssl** files. Please refer to the Maestro manual for instructions on how to create the presets.

12. SETTING UP PROTOCOLS

Sections 11.1 to 11.4 explain how to set up the following protocols on the VIP system:

- Image Video Protocol
- TSL Protocol
- X-Y Protocol
- ASCII Protocol

Only set up the protocols that are relevant to your system.

12.1. SETTING UP VIP TO WORK WITH IMAGE VIDEO PROTOCOL

1. Select either RS-422 or RS-232 serial operation by setting jumpers J33 and J34 to one of these two positions on the auxiliary daughter card of the display card.

2. Power up the system.

3. Set up the auxiliary (rear) serial port baud rate to match the router/switcher device.

   This is performed via the upgrade serial port on the front of the card.

4. Select **(5) Auxiliary Serial Port Setup** from the main menu of the terminal program.

   Ensure the settings match those listed below:

```
-----------------------------------------------
|          Auxiliary Serial Port Setup          |
|           (7867VIPA8-DUO-HS 1.0.0)            |
 ---------------------------------------------
 ---------------------------------------------
Baud Rate:      115200
Data Bits:           8
Parity:            None
Stop Bits:           2
 ---------------------------------------------
(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits

(S) Save and Exit
(X) Exit
>
```

Figure 12-1: Auxiliary Port Setup Menu

5. Select **(4) Under Monitor Display Setup** from the main menu to set up the display card for Image Video protocol operation.

```
-----------------------------------------------
|          Under Monitor Display Setup         |
|           (7867VIPA8-DUO-HS 1.0.0)           |
 ---------------------------------------------
 ---------------------------------------------
 Protocol:     Image Video
 Input Type:   serial
 ---------------------------------------------
(1) Set protocol

(S) Save and Exit
(X) Exit
>
```

Figure 12-2: Under Monitor Display Setup

6. Wire the serial connection from the router/switcher to the auxiliary serial port of the VIPA.

7. Power-cycle the VIPA frame.

8. Using Maestro, add a UMD to a video object by dragging and dropping it onto the video object.

9. In **Mode Settings > Mode > Function**, select Protocol ID from the drop-down box.

10. Set the Active Protocol ID to match the video mapping defined by the router/switcher.

When the VIPA receives a command from the router/switcher it will now be displayed on the output display.

12.2. SETTING UP VIP TO WORK WITH TSL PROTOCOL

1. Select RS-422 serial operation by setting jumpers J33 and J34 to this position on the auxiliary daughter card on the display card.

2. Power up the system.

3. Set up the auxiliary (rear) serial port baud rate to match the router/switcher device.

   This is performed via the upgrade serial port on the front of the card.

4. Select **(5) Auxiliary Serial Port Setup** from the main menu of the terminal program.

Ensure the settings match those listed below:

```
-----------------------------------------------
|          Auxiliary Serial Port Setup          |
|            (7867VIPA8-DUO-HS 1.0.0)           |
 -----------------------------------------------
 -----------------------------------------------
Baud Rate:        38400
Data Bits:        8
Parity:           even
Stop Bits:        1
 -----------------------------------------------
(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits

(S) Save and Exit
(X) Exit
>
```

Figure 12-3: Auxiliary Serial Port Settings

5. Select **(4) Under Monitor Display Setup** from the main menu to set up the display card for TSL protocol operation.

Ensure the settings match those listed below:

```
-----------------------------------------------
|          Under Monitor Display Setup          |
|             (3000PPV v1.06 b1248)             |
 -----------------------------------------------
 -----------------------------------------------
 Protocol:     TSL
 Input Type:   serial
 -----------------------------------------------
(1) Set protocol

(S) Save and Exit
(X) Exit
>
```

Figure 12-4: Under Monitor Display Setup Settings

6. Wire the serial connection from the router/switcher via the HD-15 connector.

7. Power-cycle the VIP frame.

8. Using Maestro, add a UMD to a video object by dragging and dropping it onto the video object.

9. Navigate to **Mode Settings** > **Mode** > **Function**, and select **Protocol ID** from the drop-down box.

10. Set the Active Protocol ID to match the video mapping defined by the router/switcher.

When the VIPA receives a command from the router/switcher it will now be displayed on the output display.

12.3. SETTING UP VIPA TO WORK WITH X-Y PROTOCOL

Use the following set of instructions to configure the VIPA to use the X-YI protocol.

12.3.1. Creating the Text Files

1. Create two text files named “router_src.cfg” and “router_dst.cfg”, and save both files to the compact flash card on the display card(s) in the VIPA system.

   Please use the following example to create these two files:

   `router_src.cfg`

# src id	string
0	“name 1”
1	“name 2”
2	“name 3”
3	“name 4”

Example:
Sample `router_src.cfg` file:

```
0 name1
1 name2
2 name3
3 name4
```

`router_dst.cfg`

# umd protocol id	dst id
0	1
1	2
2	3

Figure 12-5: Sample Text Files

Example:
Sample `router_dst.cfg` file:

```
0 1
1 2
2 3
```

2. FTP both files to the compact flash cards of all display cards in the system:

```
C:\ftp “ip address of display card”
ftp>put router_src.cfg
ftp>put router_dst.cfg
ftp>quit
```

12.3.2. Setting Up the Display Card(s)

1. Select either RS-422 or RS-232 serial operation by setting jumpers J33 and J34 to one of these two positions on the auxiliary daughter card of the display card.

2. Power up the system.

3. Set up the auxiliary (rear) serial port baud rate to match the router/switcher device.

4. This is performed via the upgrade serial port on the front of the card.

5. Select **(5) Auxiliary Serial Port Setup** from the main menu of the terminal program.

   Ensure the settings match those listed below:

```
-----------------------------------------------
|          Auxiliary Serial Port Setup          |
|           (7867VIPA8-DUO-HS 1.0.0)            |
 -----------------------------------------------
 -----------------------------------------------
Baud Rate:        9600
Data Bits:           8
Parity:           None
Stop Bits:           1
 -----------------------------------------------
(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits

(S) Save and Exit
(X) Exit
>
```

Figure 12-6: Auxiliary Serial Port Setup

6. Select **(4) Under Monitor Display Setup** from the main menu to set up the display card for XY Integrator protocol operation.

```
-----------------------------------------------
|          Under Monitor Display Setup          |
|           (7867VIPA8-DUO-HS 1.0.0)            |
 -----------------------------------------------
 -----------------------------------------------
 Protocol:     XY Integrator
 Input Type:   serial
 -----------------------------------------------
(1) Set protocol

(S) Save and Exit
(X) Exit
>
```

Figure 12-7: Setting up XY Integrator Protocol Operation

7. Wire the serial connection from the router/switcher to the auxiliary serial port of the VIPA.

8. Power-cycle the VIPA frame.

9. Using Maestro, add a UMD to a video object by dragging and dropping it onto the video object.

10. Navigate to **Mode Settings > Mode > Function**, and select **Protocol ID** from the drop-down box.

11. Set the Active Protocol ID to match the video mapping defined by the router/switcher.
When the VIPA receives a command from the router/switcher it will now be displayed on the output display.

The command that we expect to see is as follows:

```
S:02,0     = 02:  level 0, destination 2
     = ,1:  source 1
```

Figure 12-8: Command Displayed on the Output Display

Therefore, using the above files as an example – we would display at UMD protocol id 1, the text string "name 2".

12.4. SETTING UP VIPA TO WORK WITH ASCII PROTOCOL

12.4.1. Creating the Text File

1. Create a text file named "router.cfg" and save it to the compact flash on the display card.

   Use the following example to setup the file:

# Input id	String
0	Source 0
1	Source 1
2	Source 2
3	Evertz MVP

Sample:

```
0 Source0
1 Source1
2 Source2
3 EvertzMVP
```

2. FTP the file to the compact flash cards of all display cards in the system:

```
C:\ftp "IP address of display card"
ftp>put router.cfg
ftp>quit
```

12.4.2. Setting Up the Display Card(s)

1. Select either RS-422 or RS-232 serial operation by setting jumpers J33 and J34 to one of these two positions on the auxiliary daughter card of the display card.

2. Power up the system.

3. Set up the auxiliary (rear) serial port baud rate to match the router/switcher device.

   This is performed via the upgrade serial port on the front of the card.

4. Select **(5) Auxiliary Serial Port Setup** from the main menu of the terminal program.

   Ensure the settings match those listed below:

```
------------------------------------------------
|          Auxiliary Serial Port Setup          |
|            (7867VIPA8-DUO-HS 1.0.0)           |
 ------------------------------------------------
 ------------------------------------------------
Baud Rate:      115200
Data Bits:           8
Parity:            None
Stop Bits:           2
 ------------------------------------------------
(1) Set baud rate
(2) Set number of data bits
(3) Set parity
(4) Set number of stop bits

(S) Save and Exit
(X) Exit
>
```

Figure 12-9: Auxiliary Serial Port Setup Menu

5. Select **(4) Under Monitor Display Setup** from the main menu to set up the display card for ASCII protocol operation.

```
------------------------------------------------
|          Under Monitor Display Setup          |
|            (7867VIPA8-DUO-HS 1.0.0)           |
 ------------------------------------------------
 ------------------------------------------------
 Protocol:     Philips ASCII
 Input Type:   serial
 ------------------------------------------------
(1) Set protocol

(S) Save and Exit
(X) Exit
>
```

Figure 12-10: Under Monitor Display Setup Menu

6. Wire the serial connection from the router/switcher to the auxiliary serial port of the VIPA.

7. Power-cycle the VIPA frame.

8. Using Maestro, add a UMD to a video object by dragging and dropping it onto the video object.

9. Navigate to **Mode Settings > Mode > Function**, and select **Protocol ID** from the drop-down box.

10. Set the Active Protocol ID to match the video mapping defined by the router/switcher.

When the VIPA receives a command from the router/switcher it will now be displayed on the output display.

13. CONFIGURING FONTS

The MVP installer comes with a selection of predefined fonts. If installed to the default location, these fonts can be found at:

C:\\Program Files\Evertz\MVP\Resources\Fonts

To configure fonts on the VIPA, follow the procedure outlined below:

1. Using the System Manager, click the **Configure Fonts** button.

2. In the window that appears, click on the browse button, and then navigate to the save location for fonts.

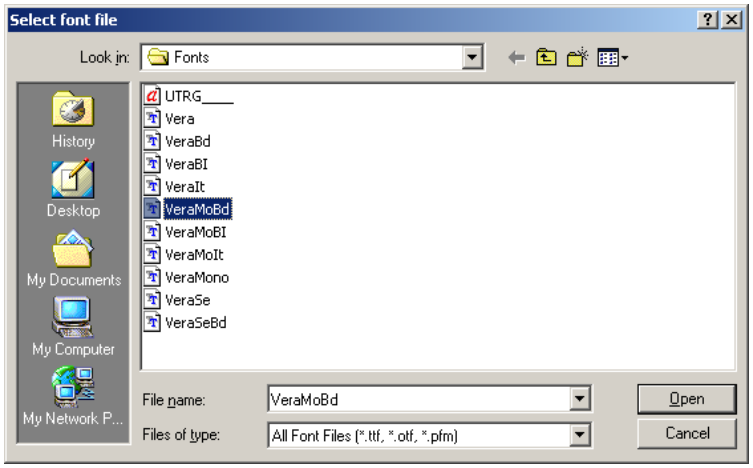


Figure 13-1: Select Font File

3. When finished, you will send the fonts to the appropriate card.

   To send the fonts to a specific card, select the card in the Font Configuration window, and then click the **Send Fonts to Selected Cards** button.

   To send the fonts to all cards, do not select any card, and then click the **Send Fonts to All Cards** button.

4. Reboot the display card.

5. Open Maestro, and right click on the system. From the menu that appears, choose **Download System Configuration**.

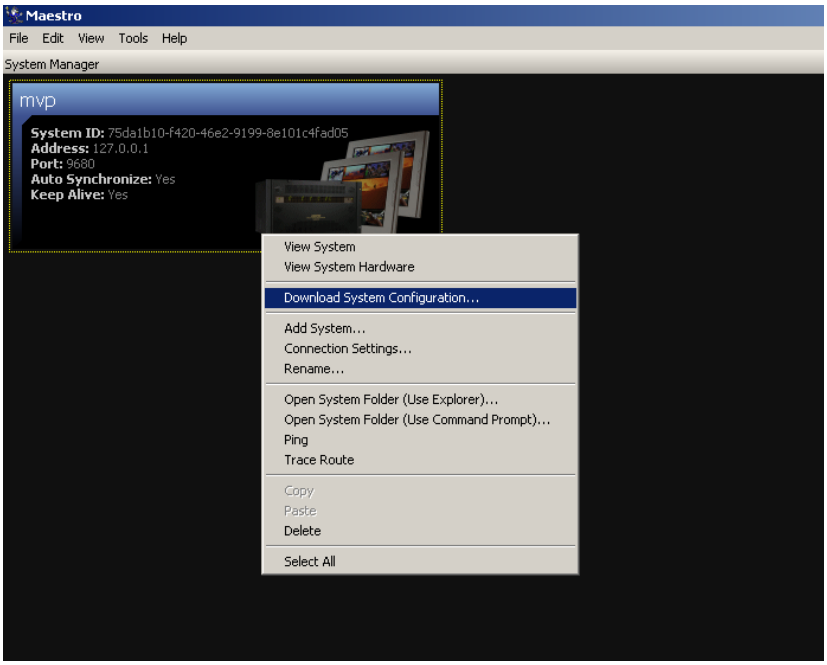


Figure 13-2: Maestro

The fonts have now been successfully configured.

14. *VISTA*LINK® REMOTE MONITORING/CONTROL

14.1. WHAT IS *VISTA*LINK®?

*Vista*LINK® is Evertz' remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. *Vista*LINK® provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through *Vista*LINK® PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, *Vista*LINK® enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

There are 3 components of SNMP:

1. An SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz *Vista*LINK®-C Configuration Utility graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *Vista*LINK® enabled products.

2. Managed devices, each with a unique address (OID), communicate with the NMS through an SNMP Agent. The 7867VIPA8/16/32-DUO-HS communicates directly with the manager using its internal Agent.

3. A virtual database known as the Management information Base (MIB) lists all the variables being monitored, which both the Manager and Agent understand. Please contact Evertz for further information about obtaining a copy of the MIB for interfacing to a third party Manager/NMS.

15. APPENDIX A

15.1. DIN SPECIFICATIONS

15.1.1. Evertz DIN1.0/2.3 Connector Details

As I/O density increases and size decreases today's broadcast manufactures are constantly looking for ways to find a happy medium between these two diametrically opposed concepts. One simple way is to move away from standard 75Ω BNC connectors and to begin using some smaller form factor 75 Ω connector. Recent developments from connector manufactures has resulted in the availability of a new type of connector quickly becoming popular to meet exactly this need. The connector is referred to as a DIN type connector. Sometimes mistakenly referred to as MiniDIN, Mini BNC or SMA connectors DIN type 75 Ω connectors are becoming very popular both due to their high performance capability, easily supporting 3G applications, their obvious high density, and the fact that the connector offers a positive locking style connector instead of BNC's compression style fit. Evertz's next generation of smaller high density applications must not only work well in terms of performance and signal quality. They must also support 3Gb/s signals, work well in difficult physical environments such as Trucks and OB vans. That is why for applications requiring a connector with a higher density than that of BNC while offering 3Gb/s performance and a positive lock onto their mating jack Evertz has chosen to use the DIN connector.

The particular connector chosen is the DIN1.0/2.3 connector. This connector, originally established as a 50 Ω connector for the telecommunications industry, has been redesigned as a 75 Ω connector for the broadcast industry. The connectors are typically rated to 3.7-4Gb/s data rates (a 4Gb/s capable connector might be referred to as a 2GHz connector) and support typical mini hi-res cable or standard HD/3G cable depending on the connector.

For small diameter cable, Belden 1855A is the cable Evertz uses as a reference, but of course any cable with appropriately matching specifications to that of Belden 1855A cable will work. When choosing a different cable take care to compare the AWG/diameter of the center conductor, the OD (outside diameter) of the outer shield, and the OD of the jacket (total cable OD), as the measurements that should be carefully matched to ensure the cable will properly perform with the DIN1.0/2.3 connectors that support this size cable. Information on 1855A style connector is included below.

For large diameter cable, Belden 1694A is the cable Evertz uses as a reference but of course any cable with appropriately matching specifications to that of Belden 1694A cable will work. Information on 1694A style connectors is included below. There are several other types of connectors available from different manufacturers, which meet the DIN1.0/2.3 specification, and these connectors will work too. We offer this information on 3rd party connectors as a result of empirical anecdotal testing and not as an endorsement of one vendor over another. Please contact Evertz for further support and information regarding DIN Specifications.

15.1.2. ITT Cannon DIN1.0/2.3 Connector Details

The Cannon 75 _ 1.0/2.3 connector series are widely used in applications requiring a high density solution and have become a standard in telecommunications in many parts of the world. Designed to meet the requirements of DIN 47247 and CECC 22230, these connectors feature a push/pull coupling mechanism to ensure mating integrity and a snap-on interface for ease of connection. Due to their small size these connectors can be densely packed while providing significant space savings over other 75Ω connector products.

Connectors and Tooling are available from ITT Cannon or your local ITT Cannon distributor. Additional information can be found at ITT Cannon's website: www.ittcannon.com under: products, RF75, 1.0/2.3

Electrical	
Impedance	75 Ω nominal
Frequency Range	With 75 Ω connector on 75 Ω cable = 0 -2 GHz
Voltage Rating	At Sea Level = 250 Vrms
Insulation Resistance	1000 M Ω minimum
Contact Resistance	Inner contact = 6 m Ω typical maximum Outer contact = 2.5 m Ω maximum
With 75 connector on 75 Ω cable and F=1GHz	0.1 maximum
Mechanical	
Withdrawal Force, inner female contact	0.2 N (0.04 lbs.) minimum
Withdrawal force, outer male contact	0.7 N (0.15 lbs.) minimum
Insertion force between jacks and plugs	10 N (2.24 lbs.) maximum
Withdrawal force between jacks and plugs	0.9 N (0.20 lbs.) minimum
Materials	Bodies and nuts: Brass
	Inner male contact: Brass of Berylium Copper.
	Inner and outer female contacts:Berylium Copper.
	Insulators: PTFE or Thermoplastics
	Crimp ferrules: Copper alloy
Finish / Plating:	Contact surfaces: Gold over Nickel.
	Bodies and crimp ferrules: Nickel or Gold over Nickel
Environmental	
Temperature Rating	-40 degrees C to 85 degrees C
General	
Connector Durability	500 matings minimum
Standards	CECC 22230, DIN 47297, RC9333 (T54 only)

15.1.3. ITT Cannon DIN1.0/2.3 Assembly Details

ITT

JAYS CLOSE,
VIABLES INDUSTRIAL ESTATE,
BASINGSTOKE. UK.
RG22 4BA

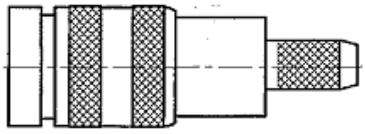
No. BBAI-1269 iss/rev H
ECO/DCN K5861
Dimensions in: mm

ASSEMBLY INSTRUCTIONS

1.0/2.3 Full Crimp\Solder Crimp Straight Plug Connector

IF IN DOUBT ASK

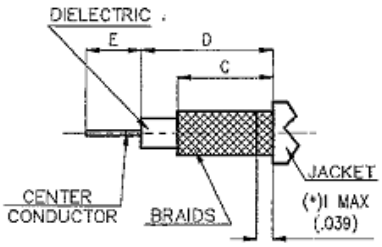
Tools Required: Locator: T4852 Crimp Tool: See Table.



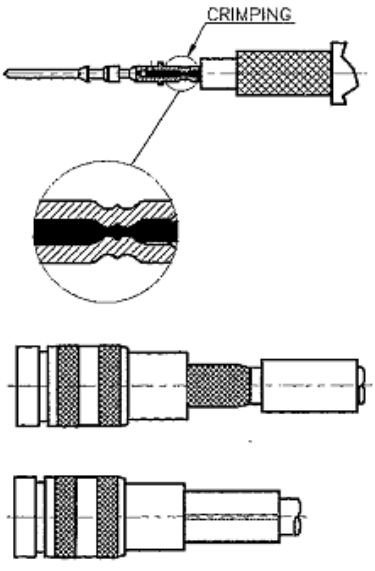
BODY ASSEMBLY

INNER MALE CONTACT

FERRULE



(*) TRIM THE INTERMEDIATE FOIL TO THE INDICATED DIMENSION.



1. Prepar cable to the dimensions shown, being carefu! not to damage the braid, dielectric, foil or inner conductor.

Stripping Detail	C +0.00(+.000) −0.50(−.019)	D +0.00(+.000) −0.30(−.012)	E +0.00(+.000) −0.20(−.008)
A	6.00(.236)	8.30(.327)	3.50(.138)
B	8.00(.315)	10.50(.413)	3.50(.138)

For cables with a foil under the braid, spread braid and trim back to dimensions shown. Except RA 7000 cable where the foil should be left in place over the dielectric.

2. Crimp contact on to inner conductor using a M22520/2-01 (ITT Cannon part number 995-0001-584) set to the selector number shown in the table below, fitted with positioner T4852.
Ensure that the conductor is visible through the inspection hole in the side of the contact.
This contact may also be soldered.

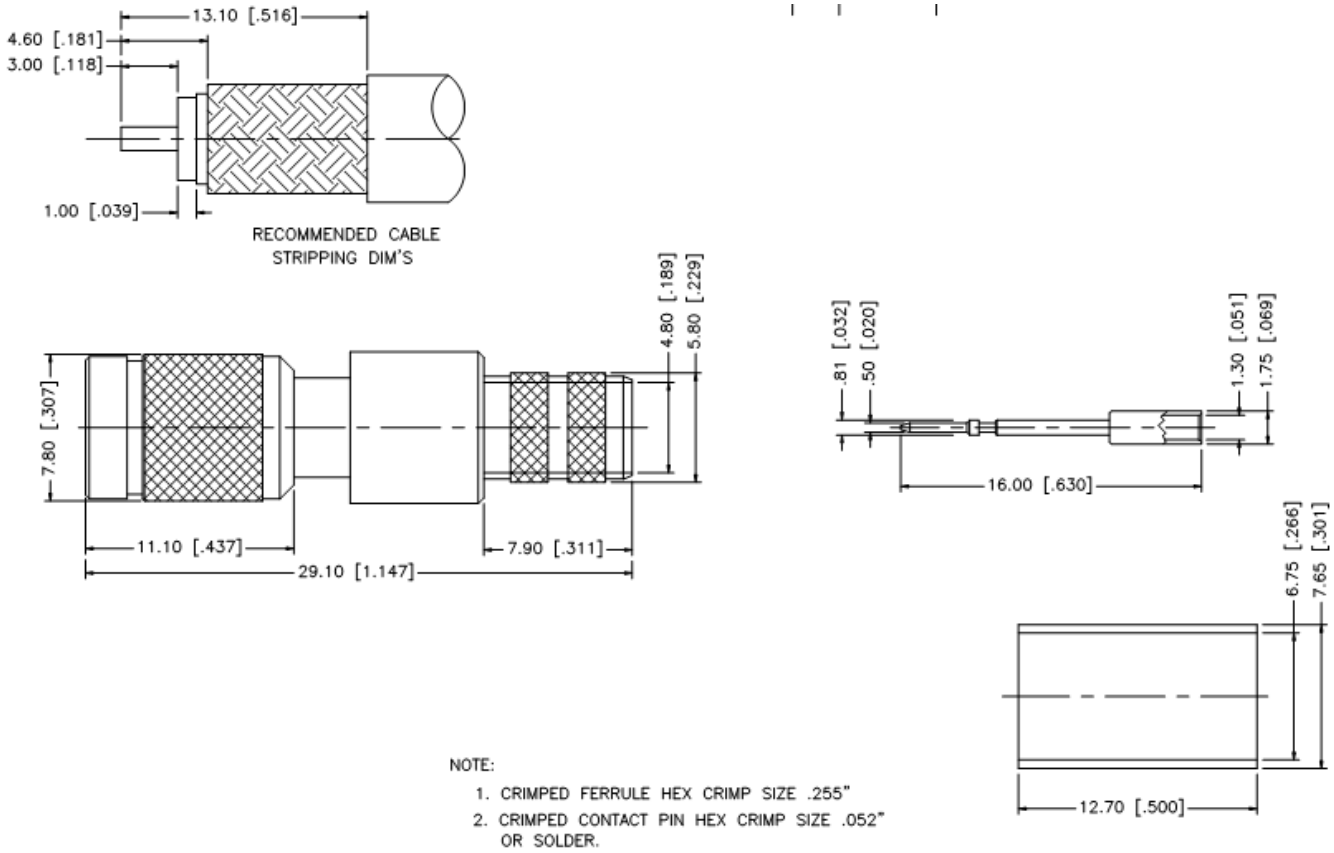
3 Place the crimp ferrule over the cable sheath.

4. Fit the connector body onto the cable/conductor so that the rear body slides between the dielectric and braid (gently twisting and rocking the connector body to spread the braids will help). Push home until a click is felt.

5. Slide the crimp ferrule forward, over the braid until it butts against the rear of the connector. Crimp using ITT Cannon crimp tool T1025/- fitted with a suitable die set (see table).

Cable Type	Stripping Detail	Selector Setting	Die Size	Die Part Number
A (0.4/2.4)	B	3	5.4 (.213)	K29265
B (0.25/1.45)	A	3	3.25 (.128)	K29263
BT3002	A	3	4.3 (.170)	T1025/36
FLEX 2	A	3	3.25 (.128)	K29263
RA7000	B	4	5.18 (.204)	T1025/6
RA8000	A	3	3.25 (.128)	K29263
RD179	A	3	3.84 (.151)	T1025/9
RG179	A	3	3.25 (.128)	K29263
ST212	A	3	3.8 (.151)	T1025/9
TZC75005	B	4	6.5 (.255)	T1025/11
1855A	B	4	5.4 (.213)	K29265

15.1.4. Evertz OEM DIN1.0/2.3 Connector Details (CRIMP/CRIMP) for 1694A Assembly Details



15.1.5. White Sands DIN1.0/2.3 Connector Details (1 piece CRIMP) for 1855A

SPECIFICATIONS:

Impedance	75 Ohm
Frequency Range	DC – 3.0 GHz (dependent upon cable limitations)
Insertion Loss	<0.1 dB @ 1 GHz
Cable Retention Force	> 40 lbs.
Center Pin Retention	> 150 grams
Mating Style	Positive Locking
Current Rating	2 Amps
Working Voltage	< 300 vrms
Center Conductor Contact & Plating	Phosphor Bronze with Gold Plate
Body Material	Brass
Body Plating	Nickel
RFI	> 85 dB

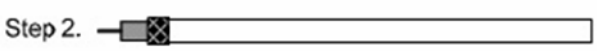
White Sands Engineering's 1.0/2.3FP plug features a fixed pin, one-piece design which can be installed quickly and reliably in the field. It is compatible with our YR46940 mini RG59 precision video cables as well as Belden 1855A, Gepco VDM230, Commscope 7538B, Coleman 99401. White Sands can provide connectors and tools, or cable assembles terminated with 1.0/2.3FP or other connectors as needed.

For more information on the 1.0/2.3FP and our entire line of fixed pin, one-piece connectors for mini RG59, visit our website at www.whitesandsengineering.com.

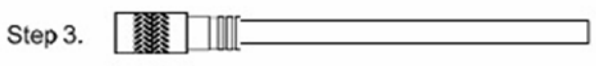
15.1.6. White Sands DIN1.0/2.3 Connector Details (1 piece CRIMP) for 1855A Assembly Details

STEP 1: Use CPT7538125 tool to strip cable to proper dimensions as shown. Make sure there is no braid wrapped around the center conductor creating a short.

STEP 2: Fold Braid back over jacket. Leave foil on dielectric, ensuring foil is smooth all around dielectric.



STEP 3: Insert the center conductor and dielectric with foil into the center diameter of the connector. Push the connector onto the cable while rotatin the connection ½ a turn. Ensure cable is inserted completely into the connectior with no braid visible behind the connector.



Note: Continuity test cable before crimping to ensure a good connection.

STEP 4: Crimp one time on all 3 rings of the connector where shown using the .213 die on the ACT483 crimp tool.

The positive locking mechanism in this connector ensure secure mating that will not be affected by vibration or accidental tugs on the cable. Connectors can only be unmated from high density panels using the 1.0REMTOOL.

CPT7538125: Strip tool, ¼ " x 1/8 " for mini RG59 cable.

ACT483: Crimp tool, .270" and .213" hex dies for mini RG59 connectors.

1.0REMTOOL: Removal tool for 1.0/2.3FP connectors.