



MViP-II

IP Based Multi-Image Display & Monitoring Solution

USER MANUAL

© Copyright 2015-2019

EVERTZ MICROSYSTEMS LTD.

5292 John Lucas Drive
Burlington, Ontario
Canada,
L7L 5Z9

Phone:	+1 905-335-3700	Internet:	Sales:	sales@evertz.com
Sales Fax:	+1 905-335-3573		Tech Support:	service@evertz.com
Tech Support Phone:	+1 905-335-7570		Web Page:	http://www.evertz.com
Tech Support Fax:	+1 905-335-7571			

Version 1.2, May 2019

The material contained in this manual consists of information that is the property of Evertz Microsystems and is intended solely for the use of purchasers of the MViP-II product. Evertz Microsystems expressly prohibits the use of this manual for any purpose other than the operation of the Servers.

All rights reserved. No part of this publication may be reproduced without the express written permission of Evertz Microsystems Ltd. Copies of this guide can be ordered from your Evertz products dealer or from Evertz Microsystems.

This page left intentionally blank

TABLE OF CONTENTS

1. OVERVIEW	1
2. SPECIFICATIONS	3
2.1. PHYSICAL	3
2.2. POWER SUPPLY	3
2.3. I/O PORTS	3
2.4. IP INPUT	3
2.5. VIDEO OUTPUTS	4
2.6. ADDITIONAL INPUT FORMAT	4
3. GETTING STARTED	5
3.1. SETTING UP THE MViP-II HARDWARE	5
3.2. NETWORK SETTINGS	7
3.2.1. Multicast Interface	9
3.3. MViP-II UPGRADE INSTRUCTIONS	9
3.3.1. Upgrading MViP-II Using WEB	9
3.3.2. Upgrading MViP-II Using WinSCP and Putty SSH	11
3.3.3. Upgrading MViP-II Using User Interface	13
4. VERSION, LICENSING & ADDING PLUS OPTIONS	15
4.1.1. Version Information	15
Adding Product Licenses for the Plus Options on the MViP-II	15
5. MViP-II UI (USER INTERFACE)	17
5.1. MODES OF OPERATION	17
5.1.1. Operations Mode	17
5.1.2. Layout Edit Mode	18
5.1.3. Widget Edit Mode	19
5.2. NAVIGATING AROUND THE MViP-II VUE UI	20
5.3. ADDING WIDGETS TO THE CANVAS	22
5.4. MViP-II UI KEYBOARD SHORTCUTS	23
5.5. MViP-II RADIAL MENU	24
6. LAYOUT EDIT MODE	27
6.1. GENERAL SIDEBAR	27
6.1.1. Layouts Menu	27
6.1.1.1. Load Layout	27
6.1.1.2. Save Layout	28
6.1.1.3. Autosave Interval (Minutes)	29
6.1.2. General Settings Menu	29

6.1.2.1. Appearance.....	29
6.1.2.2. Set Edit Lockout Password.....	30
6.1.2.3. Audio Configurations.....	30
6.1.2.4. Firmware Upgrade.....	30
6.1.2.5. About VUE & Licensing.....	30
6.1.2.6. Display Configuration.....	30
6.1.2.7. Display Encoder.....	33
6.1.2.8. Network Settings.....	36
6.1.2.9. VLPro Thumbnail Client.....	36
6.1.2.10. Network Proxy Settings.....	36
6.2. WIDGETS SIDEBAR.....	38
6.2.1. AUDIO/VIDEO WIDGET.....	38
6.2.1.1. Video widget.....	39
6.2.1.2. Audio Bars Widget.....	39
6.2.1.3. Closed Captioning widget.....	39
6.2.1.4. Subtitles widget.....	39
6.2.1.5. Bit Rate Monitor widget.....	40
6.2.1.6. Stat Mux Monitor widget.....	40
6.2.1.7. Fault Window widget.....	41
6.2.1.8. Tally widget.....	41
6.2.2. VistaLink Pro widget.....	41
6.2.3. Graphical Elements.....	45
6.2.3.1. Analog Clock widget.....	45
6.2.3.2. Digital Clock widget.....	45
6.2.3.3. Graphic widget.....	45
6.2.3.4. Label widget.....	45
6.2.3.5. Screen Lock widget.....	45
6.2.3.6. Action Button Widget.....	45
6.2.4. Remote Systems.....	45
6.2.4.1. Remote Desktop.....	45
6.3. SOURCES SIDEBAR.....	46
6.3.1. Configure Sources.....	46
6.3.1.1. Sources.....	46
6.3.1.2. Source Specific.....	47
6.3.1.3. MPTS settings.....	47
6.3.1.4. Video Monitoring - Fault Settings.....	49
6.3.1.5. Closed Captioning – Fault Settings.....	50
6.3.1.6. Program Monitoring Settings.....	50
6.3.1.7. Metadata Monitoring Settings.....	50
6.4. SYSTEMS SIDEBAR.....	51
6.4.1. Compliance Recording option (+REC).....	51
6.4.2. Display Encoder (+ENC).....	52
6.4.3. Screen Cast.....	55
6.4.4. SNMP Services.....	55
6.4.5. Source Cycling (+CCA).....	55
6.4.5.1. Source Cycle Tab (+CCA).....	56
6.4.6. Umd Protocol.....	57
7. WIDGET EDIT MODE.....	59

7.1. VIDEO WIDGET	59
7.1.1. Settings	60
7.1.2. Aspect Ratio	60
7.1.3. Video Crop	60
7.1.4. Border	60
7.1.5. Source.....	60
7.1.6. Size	60
7.1.7. Background	60
7.1.8. Video Loss Settings.....	61
7.2. CLOSED CAPTIONING.....	61
7.2.1. Captions	61
7.2.2. Subtitles	61
7.3. AUDIO WIDGET	62
7.3.1. Audio Bar Settings.....	62
7.3.2. Appearance	63
7.3.3. Audio Streams.....	63
7.4. BITRATE MONITORING	63
7.5. STATMUX	64
7.6. FAULT WIDGET.....	65
7.6.1. Fault Window Settings.....	65
7.6.1.1. Active faults Menu	65
7.7. TALLY WIDGET	65
7.8. GRAPHIC WIDGET	66
7.8.1. Border:	67
7.8.2. Background:	67
8. WEB INTERFACE	69
8.1. MVP-IP-II MAIN MENU	69
8.1.1. File Manager	69
8.1.2. Install firmware	70
8.1.3. Download system log Files	70
8.1.4. Display Configuration	70
8.1.5. Input settings.....	71
8.1.6. View streaming Output	71
8.1.7. VNC Viewer.....	71
8.1.8. Download SNMP MIBs	71
8.1.9. Multicast Interrogator.....	71
8.1.10. Source Importer and Exporter	71
8.1.11. Change SNMP Community String	71
8.2. INPUT SETTINGS	72
8.2.1. General Settings.....	72
8.2.2. Video Info	73
8.2.3. Audio Info	74
8.2.4. Program Monitoring.....	75

8.2.5. Video Monitoring	75
8.2.6. Audio Monitoring	77
8.2.7. Channel Monitoring	77
8.2.8. Source Cycle (+CCA)	78
8.2.9. Output Control	80
8.2.10. Display Encoder (+ENC)	81
8.3. THUMBNAIL CONTROLS.....	82
9. FAULT DEFINITIONS.....	83
10. CONFIGURING SETTINGS WITH LEGACY FIRMWARE	87
10.1. LEGACY NETWORK SETTINGS METHOD.....	87
10.1.1. Multicast Interface	88
10.2. LEGACY METHOD TO UPGRADE FIRMWARE USING WINSCP AND PUTTY SSH.....	89

FIGURES

Figure 3-1 : Rear Connections for DVI Port, Display Port, HDMI Port and Ethernet Ports.....	5
Figure 3-2 : Rear Connections for USB Ports, IPMI Port, Serial Port, VGA Port and Audio Outputs ..	6
Figure 3-3 : MViP-II Splash Screen.....	7
Figure 3-4 : Server Configuration Login	7
Figure 3-5 : Main Configuration Menu.....	8
Figure 3-6 : Network Configuration Menu.....	8
Figure 3-7 : Web Interface - MViP-II main menu\Install Firmware.....	10
Figure 3-8 : Selecting Firmware file to install.....	11
Figure 3-9 : WinSCP Login	11
Figure 3-10 : PuTTY Configuration	12
Figure 3-11 : PuTTY Configuration	12
Figure 3-12 : PuTTY Configuration	13
Figure 4-1 : About VUE & Licensing Menu.....	15
Figure 4-2 : Web Interface, MViP-II Main Menu	15
Figure 4-3 : Adding a Product License Key	16
Figure 5-1 : Operations Mode of MViP-II.....	17
Figure 5-2 : Layout Edit Mode.....	18
Figure 5-3 : Widget Edit Mode	19
Figure 5-4 : Navigating the MViP-II UI Workflow	20
Figure 5-5 : Widget Edit Mode	21
Figure 5-6 : Drag and Drop widgets Onto the VUE Canvas	22
Figure 5-7 : Radial Menu	24
Figure 5-8 : Resize the Widget with the Scaling Anchors	24
Figure 5-9 : Additional Edit Functions	25
Figure 6-1 : Layouts\Load layout Menu.....	27
Figure 6-2 : Layouts\Save layout Menu.....	29
Figure 6-3 : General Settings\Appearance Menu	29
Figure 6-4 : General Settings\Set Edit Lockout Password Menu	30
Figure 6-5 : General Settings\Display Configuration	31
Figure 6-6 : General Settings\Change Resolution, Rotation.....	32
Figure 6-7 : General Settings\Display Encoder	33
Figure 6-8 : Display Encoder\Video Settings menu	34

Figure 6-9 : Selecting Video Standard for the Encoded Output	34
Figure 6-10 : Display Encoder\Audio settings Menu.....	35
Figure 6-11 : UDP Output Settings.....	35
Figure 6-12 : HLS Settings.....	36
Figure 6-13 : Network Proxy Settings.....	37
Figure 6-14 : Widget Sidebar Menu	38
Figure 6-15 : Audio/Video Widgets.....	38
Figure 6-16 : Closed Captioning Widget.....	39
Figure 6-17 : Subtitles Widget.....	40
Figure 6-18 : Bit Rate Monitor Widget	40
Figure 6-19 : Stat Mux Monitor Widget.....	40
Figure 6-20 : Fault Window Widget.....	41
Figure 6-21 : Tally Settings menu	41
Figure 6-22 : Alarm Log Settings menu.....	42
Figure 6-23 : VistaLink Pro Widget menu.....	42
Figure 6-24 : Add Vistalink Pro in Systems Section.....	43
Figure 6-25 : VistaLink Pro window on canvas.....	43
Figure 6-26 : Alarm log Settings.....	44
Figure 6-27 : Graphical Elements.....	45
Figure 6-28 : Drag and Drop a Source on to the canvas	46
Figure 6-29 : Source Settings	46
Figure 6-30 : Source Specific Settings on the Ethernet Ports.....	47
Figure 6-31 : Selections on the MPTS Settings.....	48
Figure 6-32: Setting the Fault Parameters for Video Monitoring.....	49
Figure 6-33 : Setting the fault parameters for Video Monitoring	50
Figure 6-34 : Compliance Recording Configuration Tab.....	51
Figure 6-35 : Compliance Recording Menu	51
Figure 6-36 : Encoder Output Configuration Tab.....	52
Figure 6-37 : Display Encoder Menu	53
Figure 6-38 : Selecting Video Standard for the Encoded Output	53
Figure 6-39 : UDP Output Settings.....	53
Figure 6-40 : HLS Settings.....	54
Figure 6-41 : Web Interface, MViP-II Main Menu	55
Figure 6-42 : Source Cycle Tab – Part 1	56
Figure 6-43 : Source Cycle Tab – Part 2.....	57
Figure 6-44 : Source Cycle Tab – Part 3	57
Figure 7-1 : Video Settings Menu.....	59
Figure 7-2 : Video Crop.....	60
Figure 7-3 : Closed Captioning Settings Menu	61
Figure 7-4 : Audio Bar Settings Menu	62
Figure 7-5 : Bit Rate Monitor Settings	63
Figure 7-6 : Stat Mux Monitor Settings	64
Figure 7-7 : Active Faults Menu	65
Figure 7-8 : Tally Settings	66
Figure 7-9 : Graphic.....	66
Figure 8-1 : MViP-II Main Menu	69
Figure 8-2 : WebEASY [®] - MViP-II Login Menu	72
Figure 8-3 : WebEASY [®] - General settings.....	72
Figure 8-4 : WebEASY [®] - Video Info	73
Figure 8-5 : WebEASY [®] - Audio Info	74
Figure 8-6 : WebEASY [®] - Program Monitoring	75

Figure 8-7 : WebEASY® - Video Monitoring.....	76
Figure 8-8 : WebEASY® - Audio Monitoring.....	77
Figure 8-9 : WebEASY® - Channel monitoring.....	77
Figure 8-10 : WebEASY® - Source Cycle - Part 1.....	78
Figure 8-11 : WebEASY® - Source Cycle Tab – Part 2.....	79
Figure 8-12 : WebEASY® - Source Cycle Tab – Part 3.....	80
Figure 8-13 : WebEASY® - Output Control	80
Figure 8-14 : WebEASY® - Display Encoder (+ENC option)	81
Figure 8-15 : WebEASY® - Thumbnail Control	82
Figure 10-1 : Server Configuration Login	87
Figure 10-2 : Configuration Menu	87
Figure 10-3 : Network Configuration Menu.....	88
Figure 10-4 : WinSCP Login	89
Figure 10-5 : PuTTY Configuration	90
Figure 10-6 : PuTTY Configuration	90
Figure 10-7 : PuTTY Configuration	91

TABLES

Table 3-1 : Ethernet Port Mappings	6
Table 5-1 : VUE UI Keyboard Shortcuts.....	23

REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	First Release	May 2015
1.1	Added Product License for the Plus options / Added Encoder, Source Cycle and Compliance Recording options / Added Tally and VistaLink Pro Widgets	Dec 2017
1.2	Minor Updates	May 2019

Information contained in this manual is believed to be accurate and reliable. However, Evertz assumes no responsibility for the use thereof nor for the rights of third parties, which may be affected in any way by the use thereof. Any representations in this document concerning performance of Evertz products are for informational use only and are not warranties of future performance, either expressed or implied. The only warranty offered by Evertz in relation to this product is the Evertz standard limited warranty, stated in the sales contract or order confirmation form.

Although every attempt has been made to accurately describe the features, installation and operation of this product in this manual, no warranty is granted nor liability assumed in relation to any errors or omissions unless specifically undertaken in the Evertz sales contract or order confirmation. Information contained in this manual is periodically updated and changes will be incorporated into subsequent editions. If you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.

This page left intentionally blank

1. OVERVIEW

MViP-II is an IP based multi-image display & monitoring solution targeted at applications where simple and efficient monitoring of audio and video from an IP transport stream is required. It leverages industry leading AVM (Audio/Video Monitoring) technology from the MVP[®] to determine faults with the audio and video at the baseband level.

MViP-II has been developed to be used as a tool for digital headends, IPTV networks, and sites using IP for distribution with a requirement to monitor and display audio and video along with fault information and transport details on a simple-to-configure DVI based monitor.

MViP-II supports all major video compression standards, and therefore can be used in almost any application where video and audio are being transported over IP. MViP-II is SNMP-enabled, which allows [VistaLINK[®] PRO](#) to configure and store all monitoring values and alarms.

Features & Benefits

- Supports video compression formats: MPEG-2, H.264/AVC
- Supports audio compression formats: MPEG-1, MPEG-2, AC-3, AAC, Dolby E
- Up to 8 audio program decode Stereo or Dolby 5.1
- Dual output resolution up to 4K
- Audio monitoring output
- Decoded video can be displayed multiple sizes up to full screen on the multiviewer outputs
- Decoded and display up to 9 different DVB subtitle or caption per program.
- Simple and easy to use on screen user interface
- Stream capture based on fault
- Remote access using VNC software to MViP-II
- Supports all major transport: UDP, RTP, HLS, LSS, HDS, MPEG-DASH, MMSH, MMST, RTMP

Advanced Monitoring

- Video Monitoring: Black, Freeze, Macroblock detection
- Audio Monitoring: Low, High, Loudness monitoring
- Closed captioning, DVB/teletext subtitling and XDS metadata decode and Monitor
- MPTS/SPTS bandwidth information display
- Macroblock detection
- Loudness Monitoring
- SCTE-35 status monitoring
- TR101290 monitoring via 7880TSM-IP or 3480TSM-IP

Additional Input Format

- RF via 7780DM-LB+IP series
- ASI via 7880IP-ASI-IP and 3080ASI-IPGE series.
- Set-top-box via 160RM

Options

- +REC Stream capture based on faults
- +ENC H.264 Encoded output and HLS streaming (mirror copy of outputs)
- +CCA Source Cycling

2. SPECIFICATIONS

2.1. PHYSICAL

Form Factor	2 RU Rackmount
Gross Weight	36 lbs (16.4 kg)
Dimension	25.5"D x 17.2"W x 3.5"H (647mm D x 437mm W x 89mm H)
Cooling FAN	4x 8cm fans

2.2. POWER SUPPLY

Redundancy	1x1
Serviceability	Hot-swap
Input Range	Full-range AC (100-240V)
Input Range Frequency	50/60 Hertz
Output Watts	1000 watts

2.3. I/O PORTS

USB	(2) ports (at rear)
COM	(1) DB-9 COM port
VGA	(1) D-Sub 15-pin port
RJ45	(4) ports
RJ45	(1) Dedicated IPMI

2.4. IP INPUT

Type	Gigabit Ethernet
Connector	4 x RJ45

Transport Stream Specifications

Type	TS over UDP (Multicast or Unicast)
	TS over RTP/UDP (Multicast or Unicast)
	TS over TCP
	CBR, VBR

Supported Video Compression Formats

Type	MPEG-2 SD (MP@ML)
	MPEG-2 HD (MP@HL)
	MPEG-4 Part 2
	H.264/MPEG-4 AVC SD (MP@L3)
	H.264/MPEG-4 AVC HD (MP@L4)
	VC-1 (SMPTE 412M)
	HEVC
	RTMP
	HTTP -> HLS /HDS/Smooth Streaming
	MMSH
	MMST

Supported Audio Compression Formats

Type	MPEG-1 L2
	DOLBY
	E-AC3
	AAC

Additional I/O Option

RJ45	4 Ports
10G	2 Ports SFP

2.5. VIDEO OUTPUTS

Type	Dual output support from 1280x720 up to 1920x1200
Connector	1 x DVI-I connector
	1 x HDMI connector
	1 x Display Port connector

2.6. ADDITIONAL INPUT FORMAT

- RF via 7780DM-LB+IP series (Optional)
- ASI via 7880IP-ASI-IP and 3080ASI-IPGE series (Optional)
- Set-top-box via 160RM (Optional)

3. GETTING STARTED

3.1. SETTING UP THE MVIP-II HARDWARE

Instructions:

1. Cable up the MVIP-II before powering on the unit
 - Plug in DVI to display port video cable (included in packaging) to the top DVI port, ensure cable is connected to monitor. An optional second screen can be connected to HDMI port.
 - Plug in Keyboard and Mouse.
 - Plug in network cable for the CONTROL network (left-hand Ethernet port).
 - Plug in network cables to the DATA ports. Up to 3 network connections can be made.

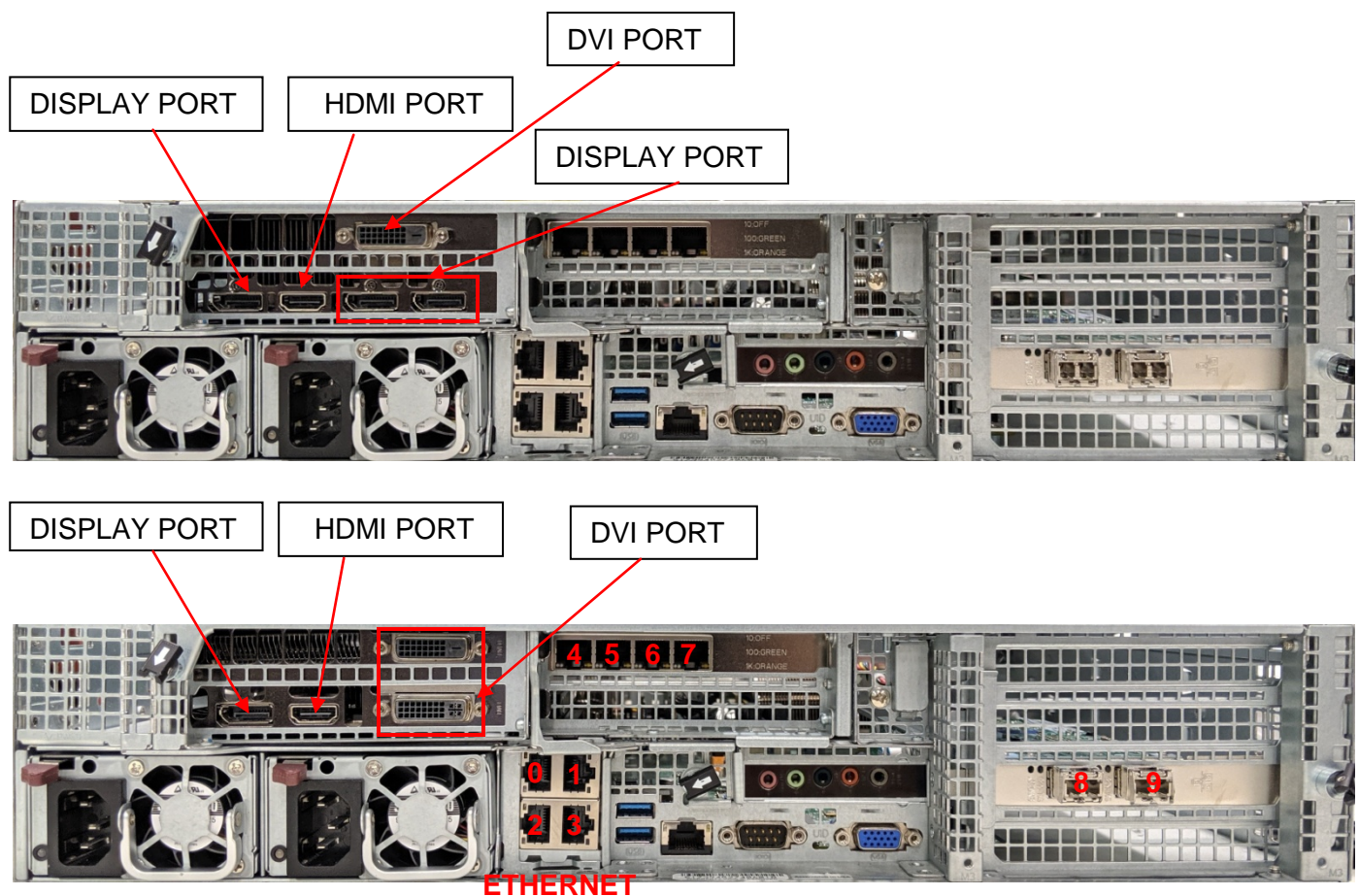


Figure 3-1 : Rear Connections for DVI Port, Display Port, HDMI Port and Ethernet Ports



NOTE: Figure 3-1 top rear panel covers the products which were purchase by customers before 2019. Users who have bought a unit after 2019 should refer to bottom rear panel which is shown in Figure 3-1.

ETHERNET 0	CONTROL
ETHERNET 1	DATA 1
ETHERNET 2	DATA 2
ETHERNET 3	DATA 3
ETHERNET 4	DATA 4
ETHERNET 5	DATA 5
ETHERNET 6	DATA 6
ETHERNET 7	DATA 7
ETHERNET 8	DATA 8
ETHERNET 9	DATA 9

Table 3-1 : Ethernet Port Mappings

2. Plug in the audio cables, green is the main output.

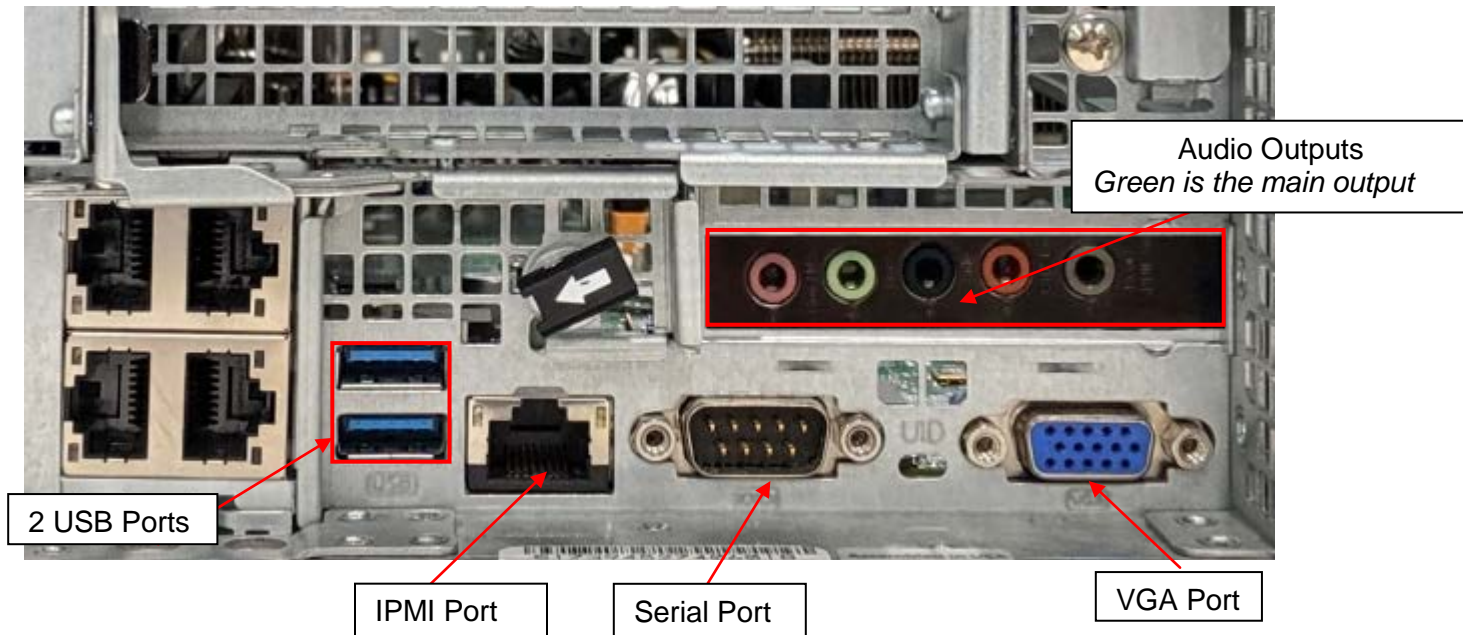


Figure 3-2 : Rear Connections for USB Ports, IPMI Port, Serial Port, VGA Port and Audio Outputs

3. Plug in two power cables.
4. Power on MViP-II.

5. The MViP-II Splash Screen will be displayed on MViP-II startup.



Figure 3-3 : MViP-II Splash Screen

6. Toggle between Operations Mode and Edit Mode to verify MViP-II is running.
 - o Press Ctrl + E, the sidebar should appear on the left.
7. Toggle between screens using Ctrl 1 and 2 if there are two screens connected.

3.2. NETWORK SETTINGS

To set IP Address settings on MViP-II:

1. Press CTRL+ALT+F2 to access local terminal command line
2. Login to Configshell (username: admin / password: admin)



Figure 3-4 : Server Configuration Login

3. Navigate to **Network** > eth0, eth1, eth2, eth3 (control port, data ports 1 to 3)

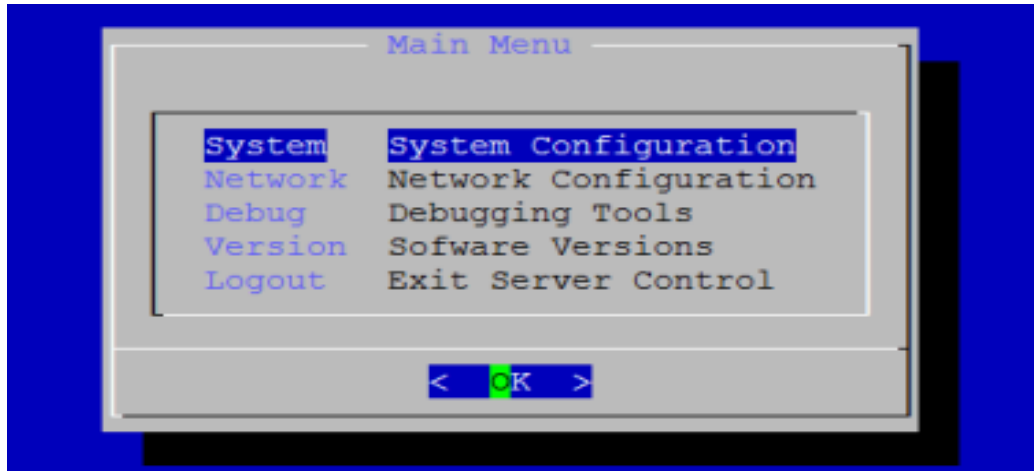


Figure 3-5 : Main Configuration Menu

4. Enter in the IP Address settings, select "Save and Apply".

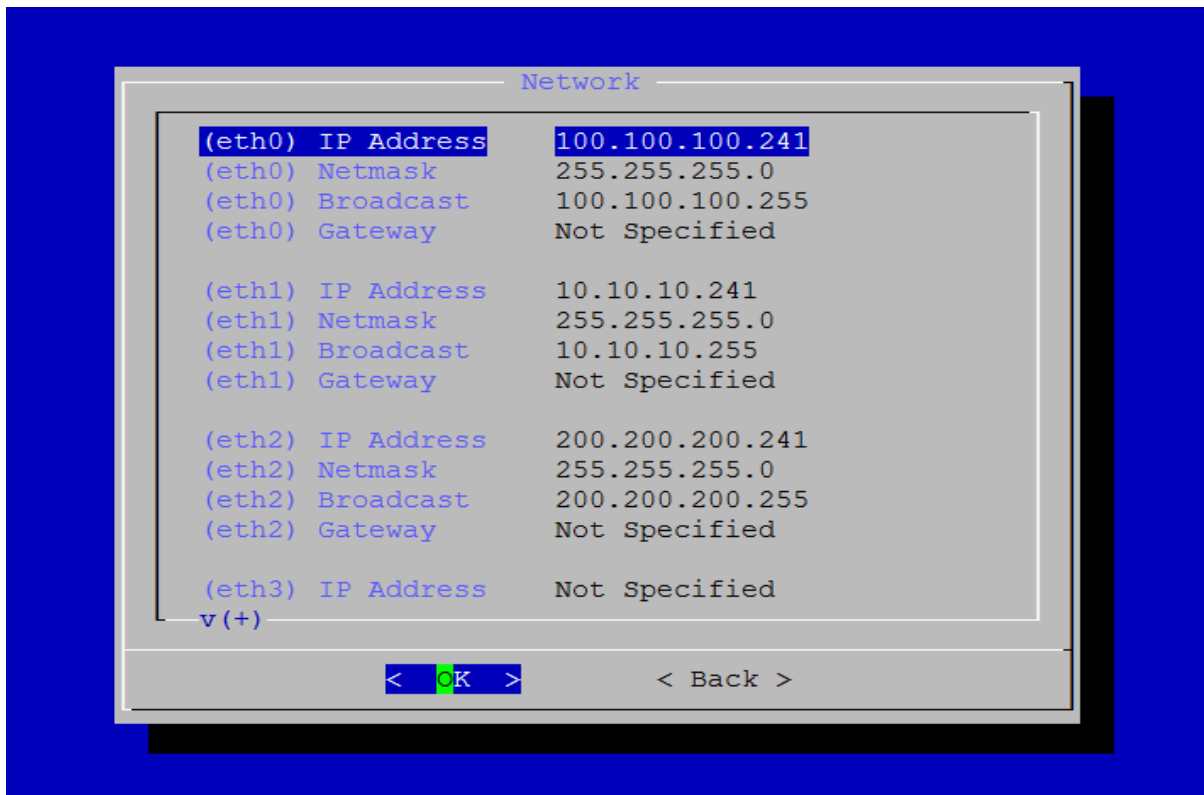


Figure 3-6 : Network Configuration Menu

5. Confirm network communication to eth0 of the MViP-II unit from a remote computer (ping the IP address).
6. Navigate to **System Configuration > Reboot**.

3.2.1. Multicast Interface



NOTE: These steps must be followed in order to receive multicast to the interfaces.

Specify which Ethernet port will receive multicast data.

- Login to Configshell
- Navigate to "Network", scroll down and select **Multicast Interface**
- Select an interface, select "Save and Apply"
 - Default interface is set to **eth1**

3.3. MVIP-II UPGRADE INSTRUCTIONS

3.3.1. Upgrading MVIP-II Using WEB

- 1) Click on "Install Firmware"

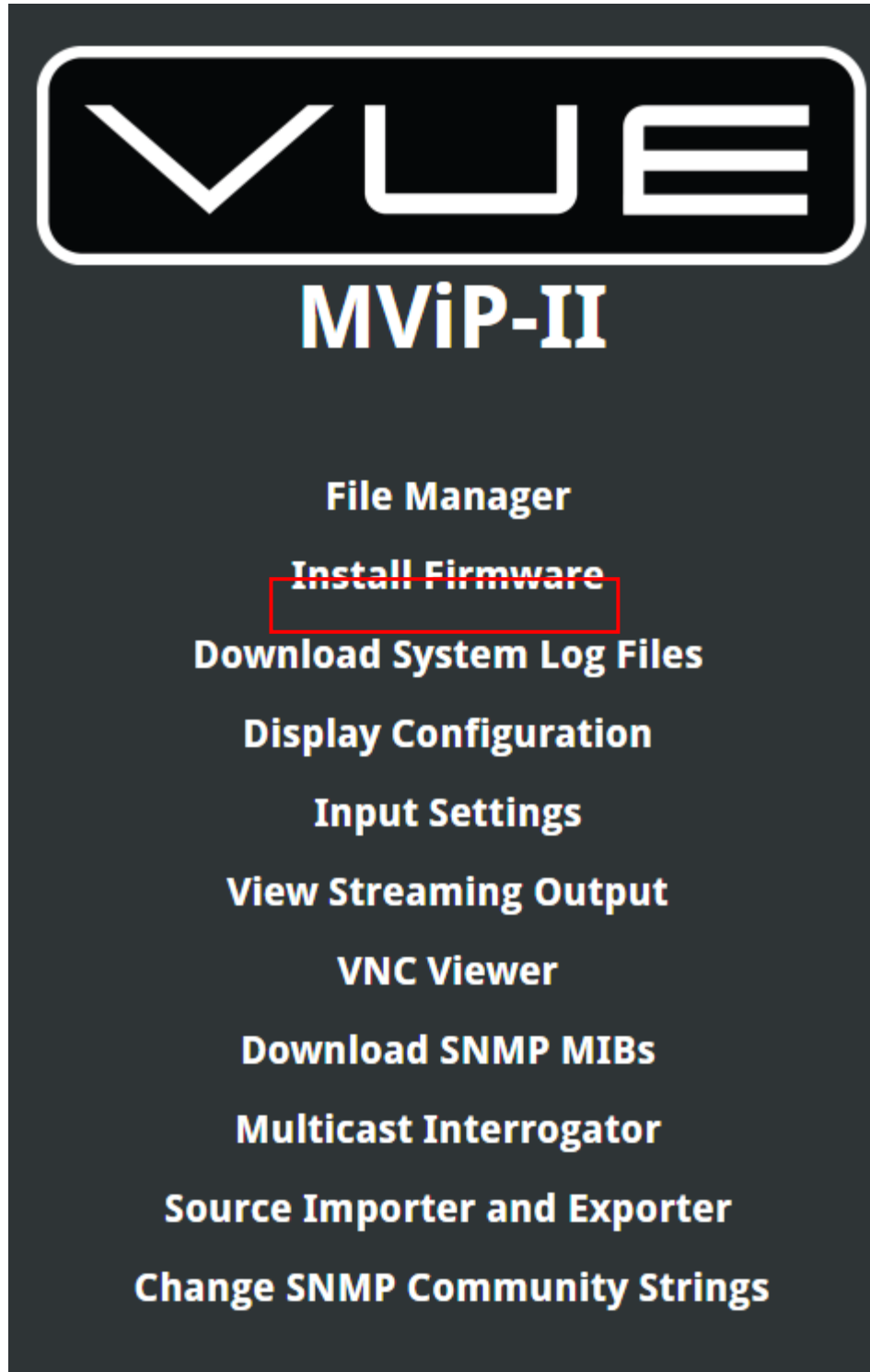


Figure 3-7 : Web Interface - MViP-II main menu\Install Firmware

2) Choose File and click on install. Once finished, the unit will be “rebooted”.



Figure 3-8 : Selecting Firmware file to install

3.3.2. Upgrading MViP-II Using WinSCP and Putty SSH

1. Download WinSCP and PuTTY software from their official websites.
2. Install it on the PC from where you can ping the MViP unit. Run WinSCP, Host name = IP address of MViP, User name and Password = "mvip", set protocol to **SCP**.



NOTE: If the MViP box is running Initial firmware, the "User Name" is "mvip" and "Password" is "mvip"

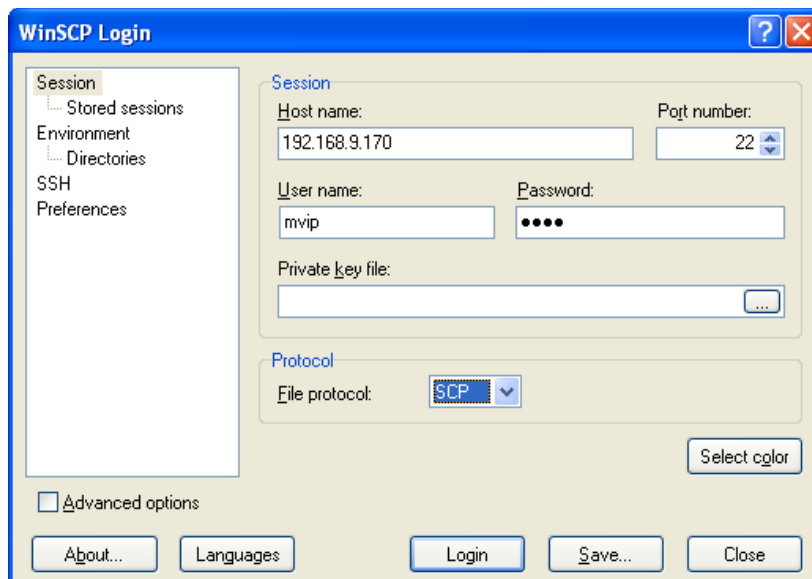


Figure 3-9 : WinSCP Login

3. Copy the .efp file to the MViP default directory.

- Run the PuTTY program. Enter the IP address of the unit in the **Host Name** field.

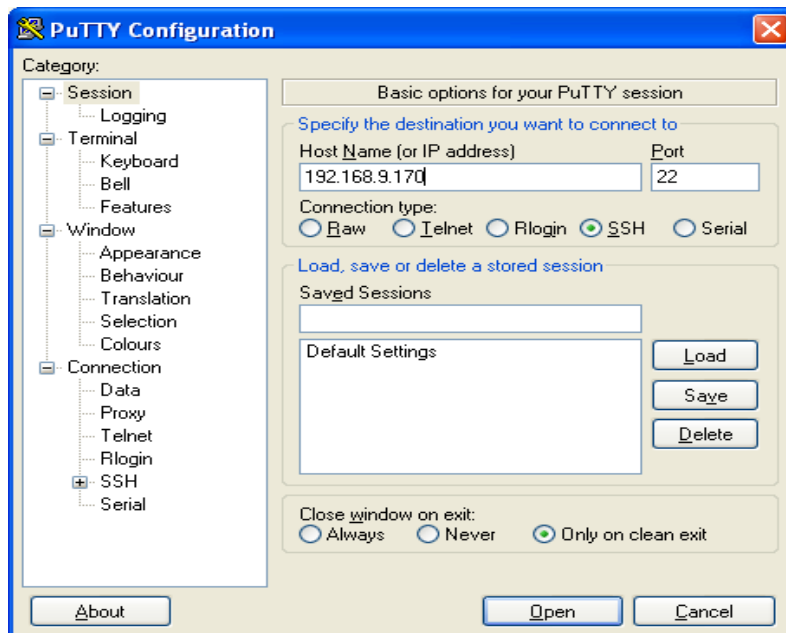


Figure 3-10 : PuTTY Configuration

- Login is “**mvip**” and password is “**mvip**”.
- Type the following command: “**sudo efpinstall <firmware file name>**”

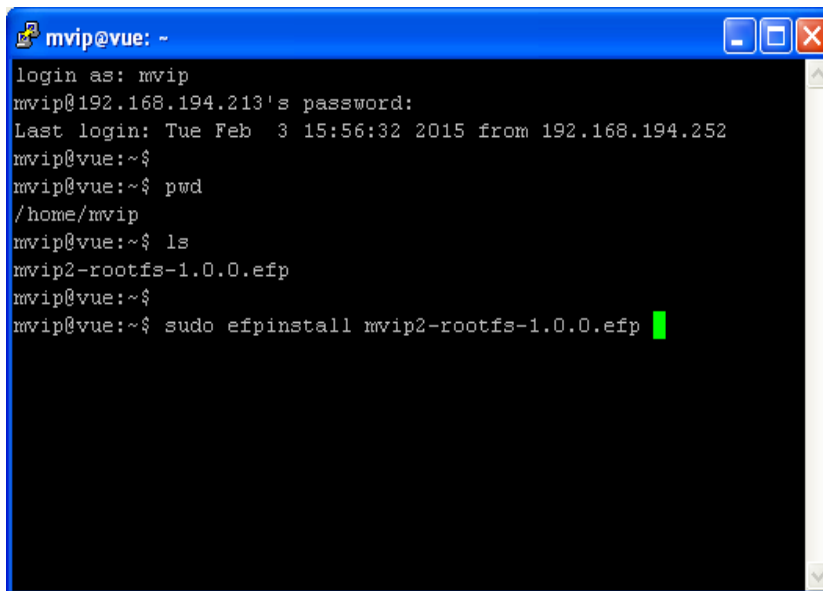
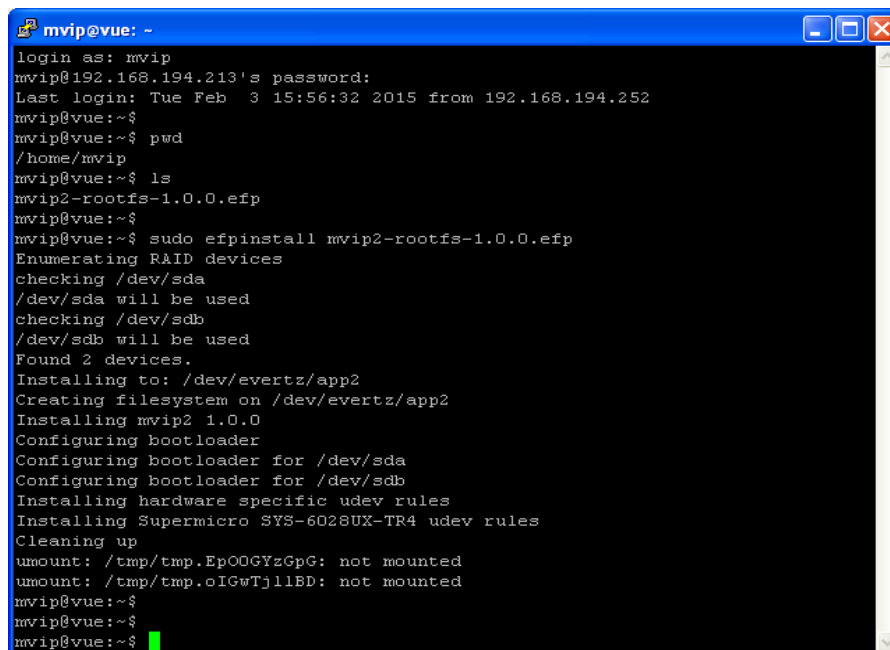


Figure 3-11 : PuTTY Configuration

- When the following appears, reboot the MVIP.



```
mvip@vue: ~  
login as: mvip  
mvip@192.168.194.213's password:  
Last login: Tue Feb  3 15:56:32 2015 from 192.168.194.252  
mvip@vue:~$  
mvip@vue:~$ pwd  
/home/mvip  
mvip@vue:~$ ls  
mvip2-rootfs-1.0.0.efp  
mvip@vue:~$  
mvip@vue:~$ sudo efpinstall mvip2-rootfs-1.0.0.efp  
Enumerating RAID devices  
checking /dev/sda  
/dev/sda will be used  
checking /dev/sdb  
/dev/sdb will be used  
Found 2 devices.  
Installing to: /dev/evertz/app2  
Creating filesystem on /dev/evertz/app2  
Installing mvip2 1.0.0  
Configuring bootloader  
Configuring bootloader for /dev/sda  
Configuring bootloader for /dev/sdb  
Installing hardware specific udev rules  
Installing Supermicro SYS-6028UX-TR4 udev rules  
Cleaning up  
umount: /tmp/tmp.EpOOGYzGpG: not mounted  
umount: /tmp/tmp.oIGwTj1lBD: not mounted  
mvip@vue:~$  
mvip@vue:~$  
mvip@vue:~$
```

Figure 3-12 : PuTTY Configuration

3.3.3. Upgrading MViP-II Using User Interface

1. Place the firmware .efp package onto a top level of a **fat32 formatted** USB stick.
2. Press CTRL+E to open General Sidebar.
3. Select “Firmware Update”.
4. Select Browse, the MViP-II will search the system for available firmware packages.
5. Select the appropriate EFP and click Upgrade.
6. Once Upgrade procedure is finished, remove USB stick then reboot MViP-II.

This page left intentionally blank

4. VERSION, LICENSING & ADDING PLUS OPTIONS

4.1.1. Version Information

In the Layout Edit Mode (refer to section 5.2) follow below steps:

- General sidebar > About VUE & Licensing > Version info located near the top of the About page (Figure 4-1).

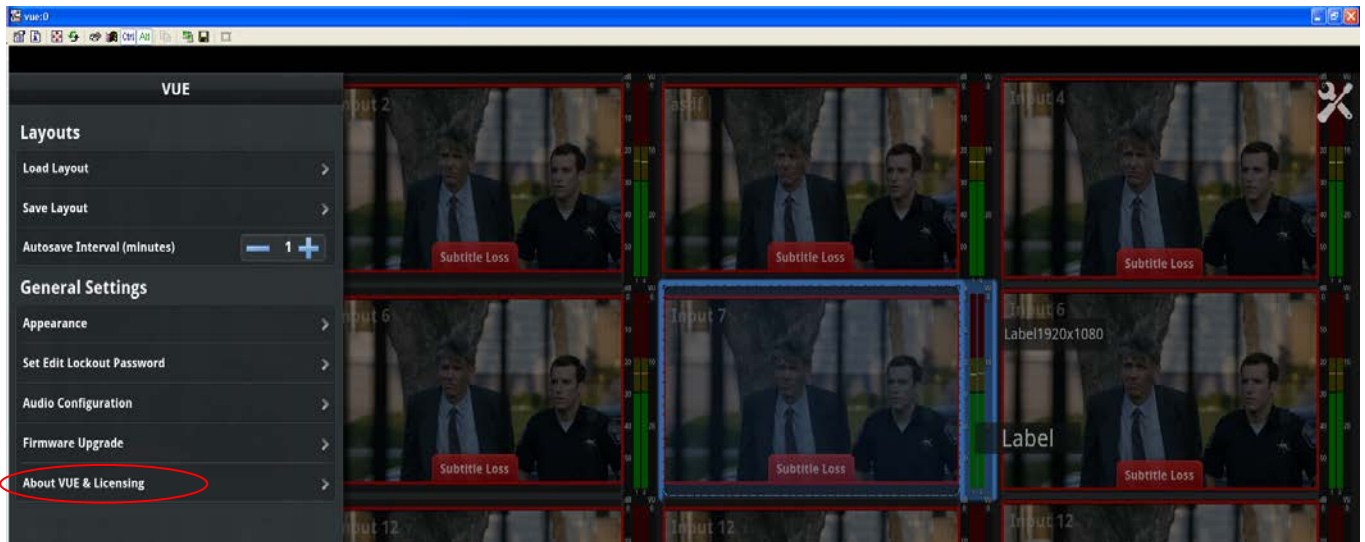


Figure 4-1 : About VUE & Licensing Menu

Adding Product Licenses for the Plus Options on the MViP-II

Product License keys are used to add options for the MViP-II using the Web Interface. For ordering options, please contact Evertz Sales.

To access the web interface, enter in the IP address configured for the control port on Ethernet 0. Select *Input Settings* on the MViP-II main screen (Figure 4-2).



Figure 4-2 : Web Interface, MViP-II Main Menu

For Login and Password, type “**root**” and “**evertz**” respectively to login on to the MViP-II server. Add the *Product License* key provided by Evertz and *Apply* settings. Product Features will list all the enabled features for the MViP-II (Figure 4-3).

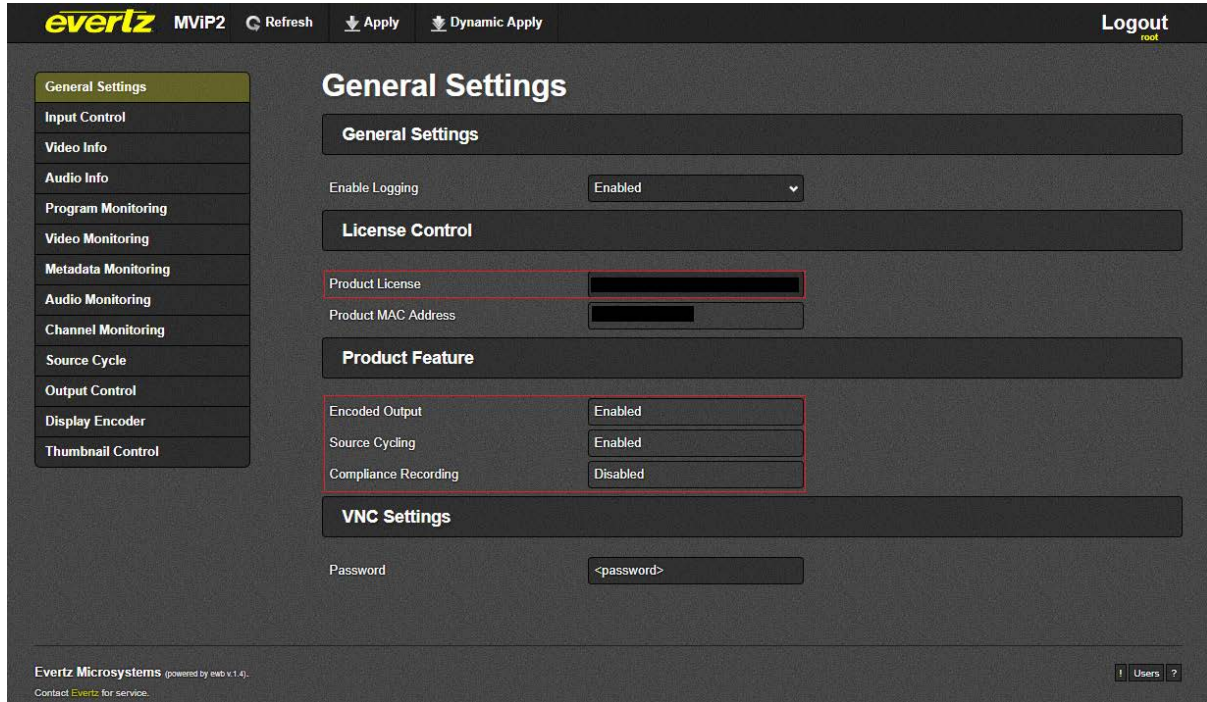


Figure 4-3 : Adding a Product License Key

5. MViP-II UI (USER INTERFACE)

5.1. MODES OF OPERATION

There are three modes of operation, Operation mode, Layout Edit Mode and Widget Edit Mode. Section 5.2 describes how to navigate through the different modes.

5.1.1. Operations Mode

- Interact with widgets

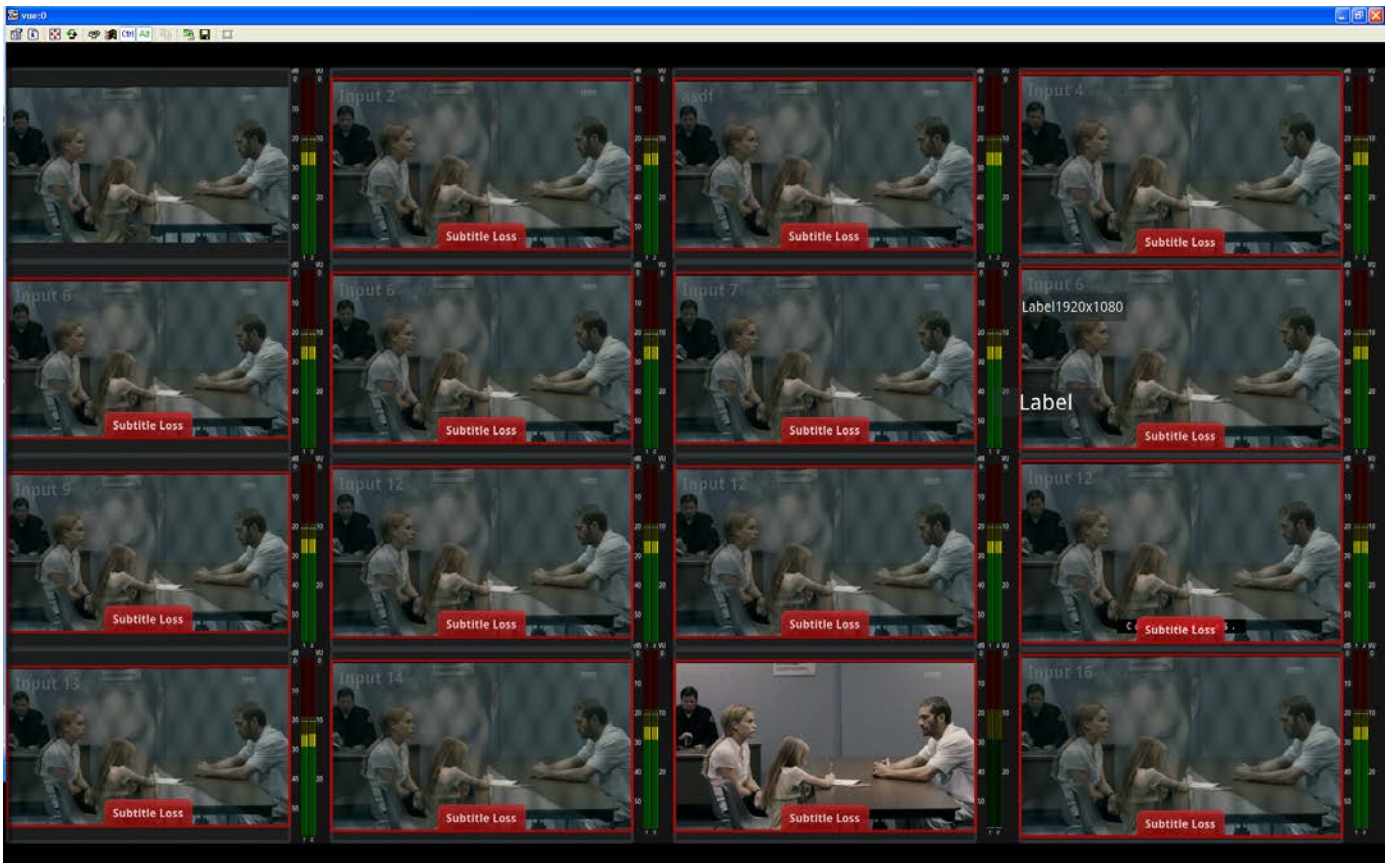


Figure 5-1 : Operations Mode of MViP-II

5.1.2. Layout Edit Mode

In the Layout Edit Mode, the user can add/delete widgets, resize widgets, and move widgets on the canvas.

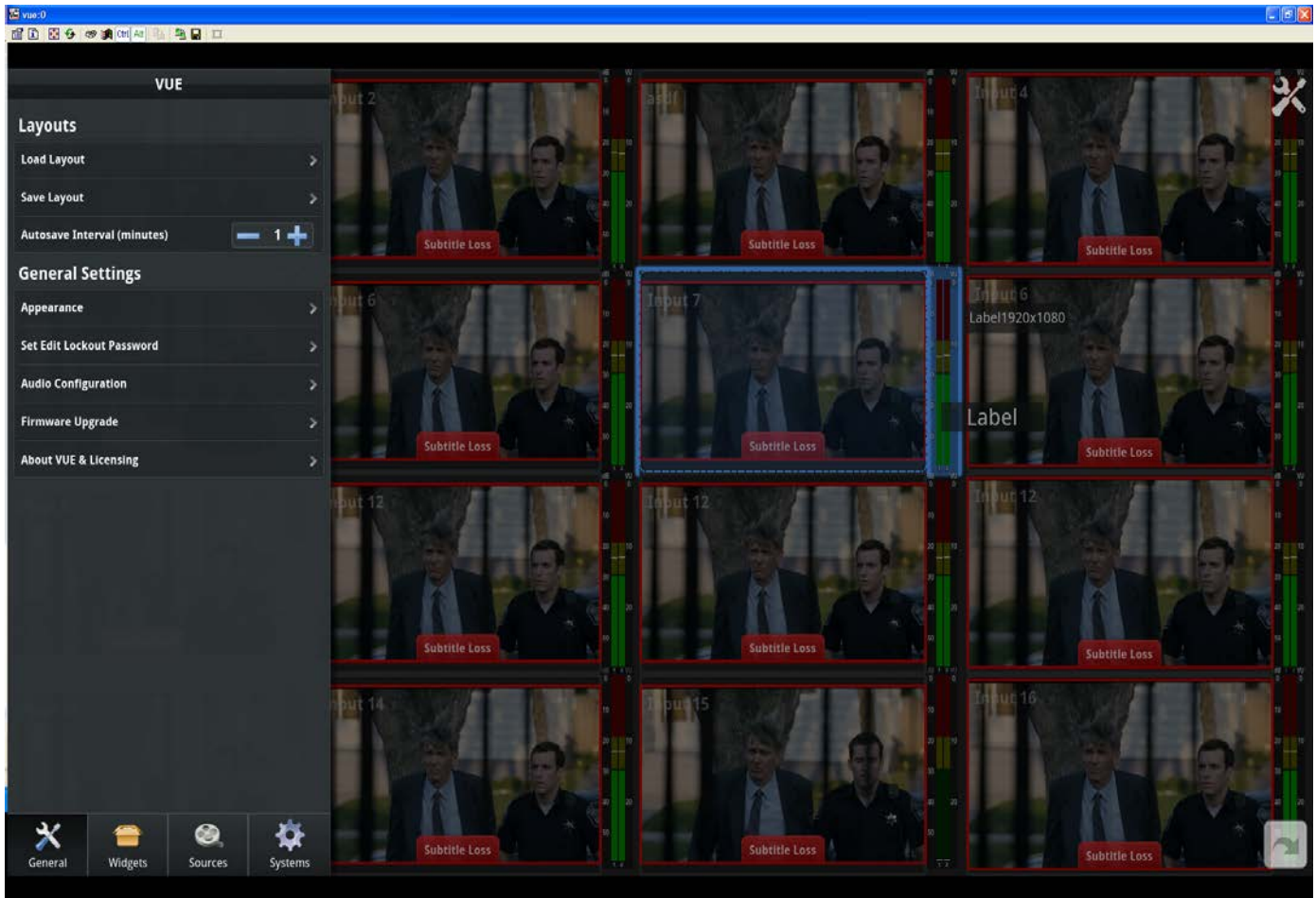


Figure 5-2 : Layout Edit Mode

5.1.3. Widget Edit Mode

- Select a widget to modify settings
- The widget is focused to the center (zoomed in) and interaction with the widget is available (system commands are disabled).

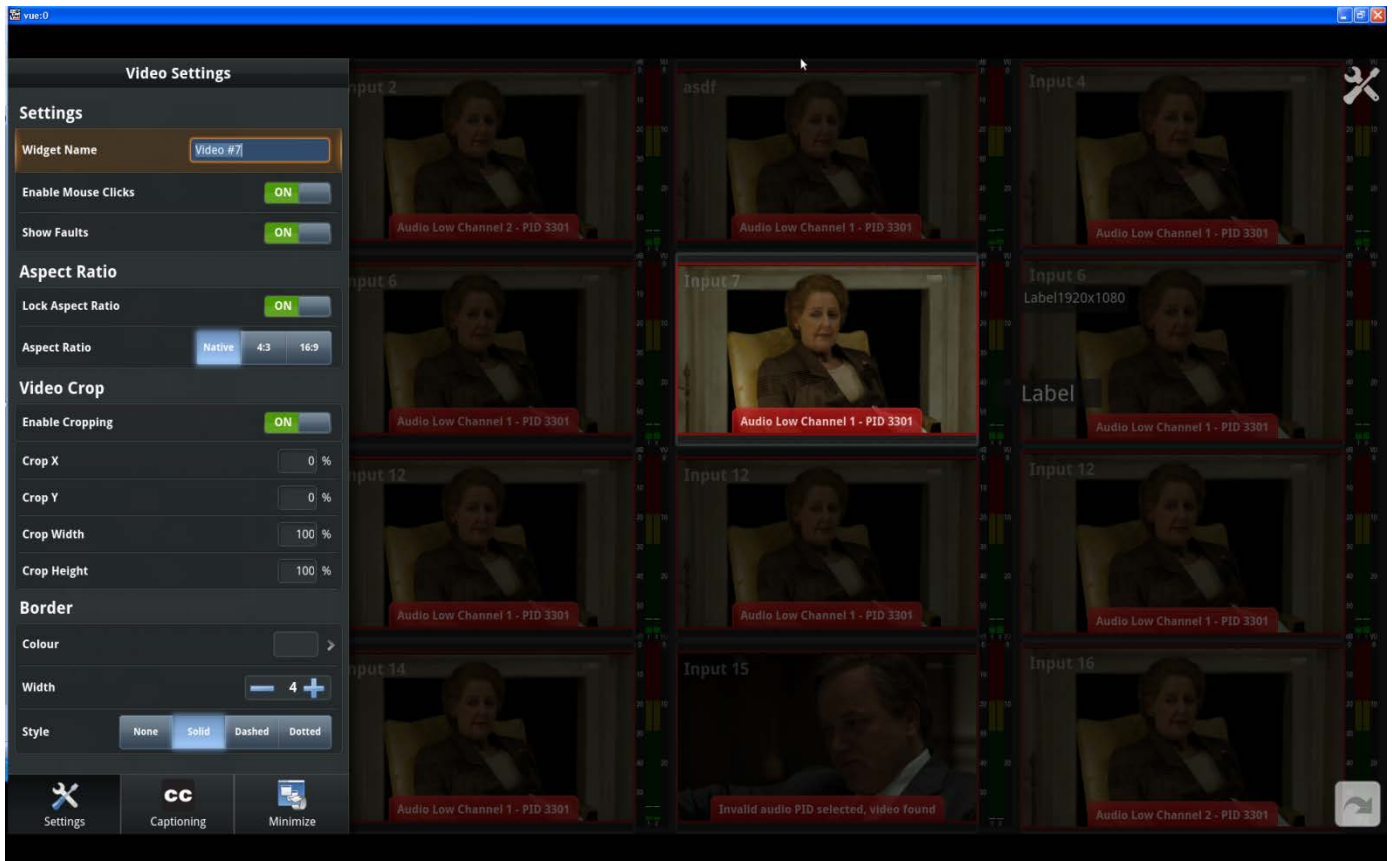


Figure 5-3 : Widget Edit Mode

5.2. NAVIGATING AROUND THE MViP-II VUE UI

Get a feel for moving between the different MViP-II Modes.

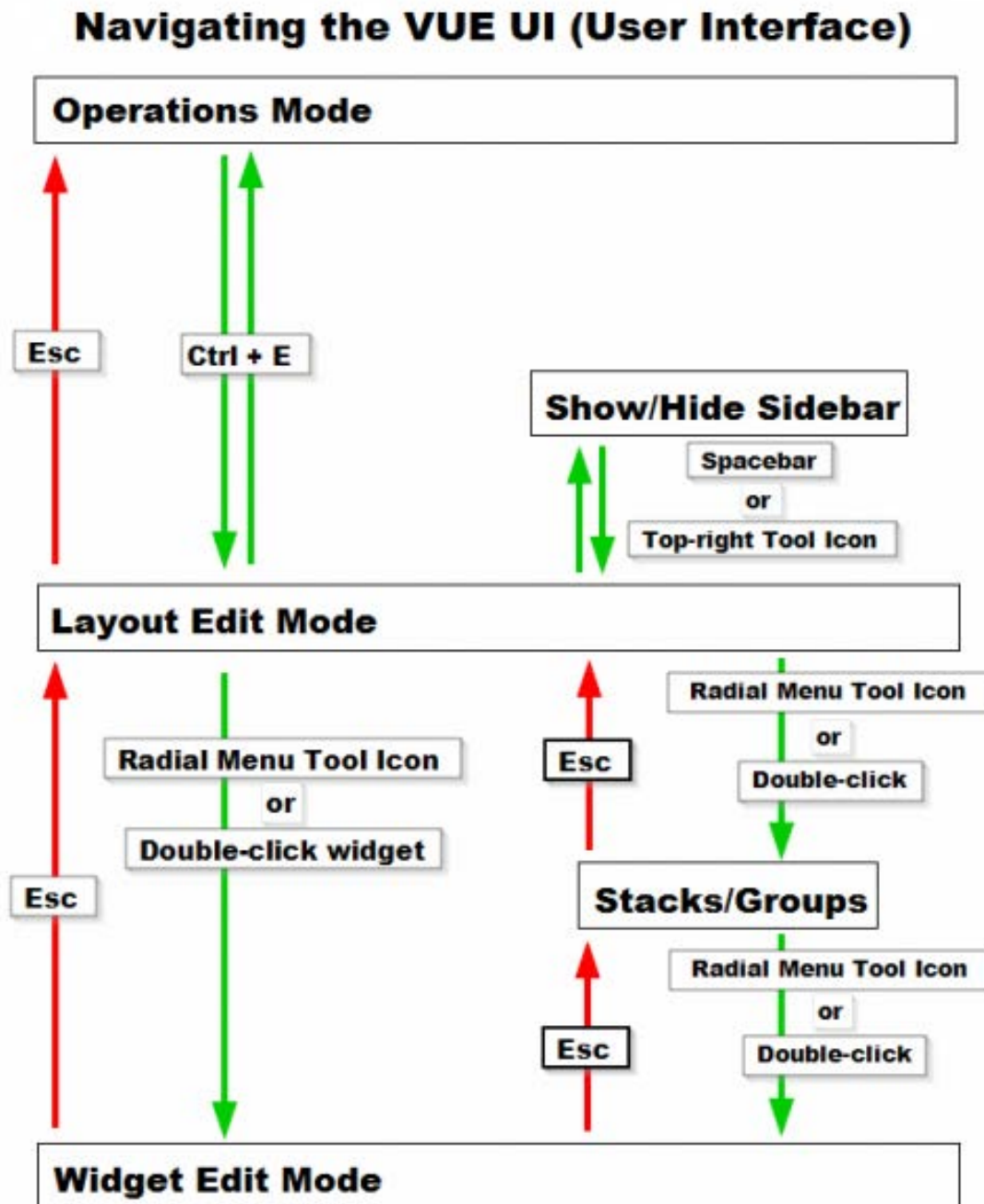


Figure 5-4 : Navigating the MViP-II UI Workflow

From Operations Mode:

Show/Hide the VUE Sidebar

- Tap on the tool icon located at the top right to show/hide the VUE Sidebar
- Hiding the Sidebar allows the user to move/resize widgets with better precision



Jump to Widget Edit Mode

- Tap on the widget to bring up the Radial Menu. Tap the tool icon on the bottom of the menu to open the widget settings
- Alternatively, double click the widget to open the widget settings

From Widget Edit Mode:



Jump back to Layout Edit Mode

- Select the tool icon located at the top right to go back to Layout Edit Mode as shown in Figure 5-5.
- Alternatively, press **ESC** or double click anywhere around the widget to go back to Layout Edit Mode.

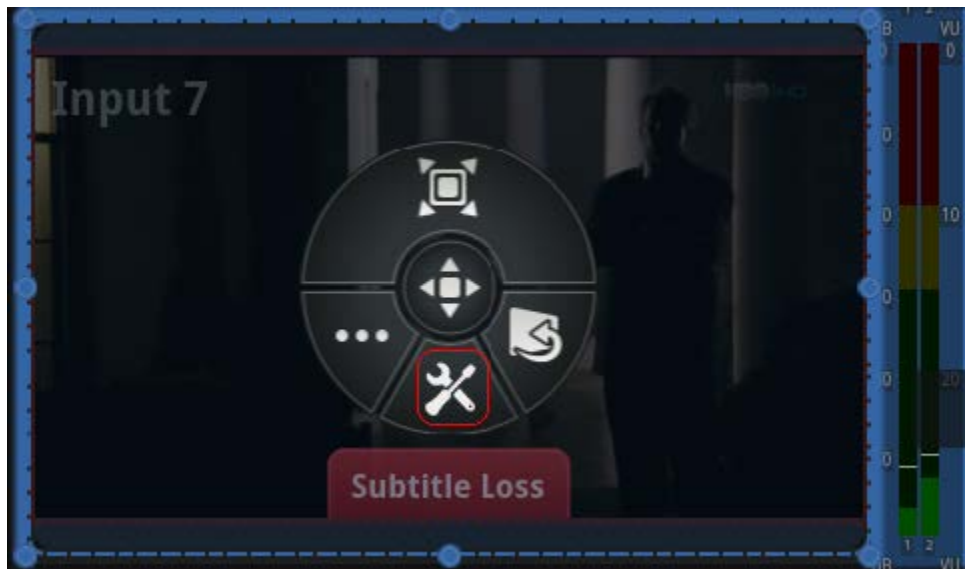


Figure 5-5 : Widget Edit Mode

5.3. ADDING WIDGETS TO THE CANVAS

1. Go into Layout Edit Mode
2. Navigate to the **Widgets** tab in the VUE Sidebar
3. Click and drag a widget onto the VUE canvas

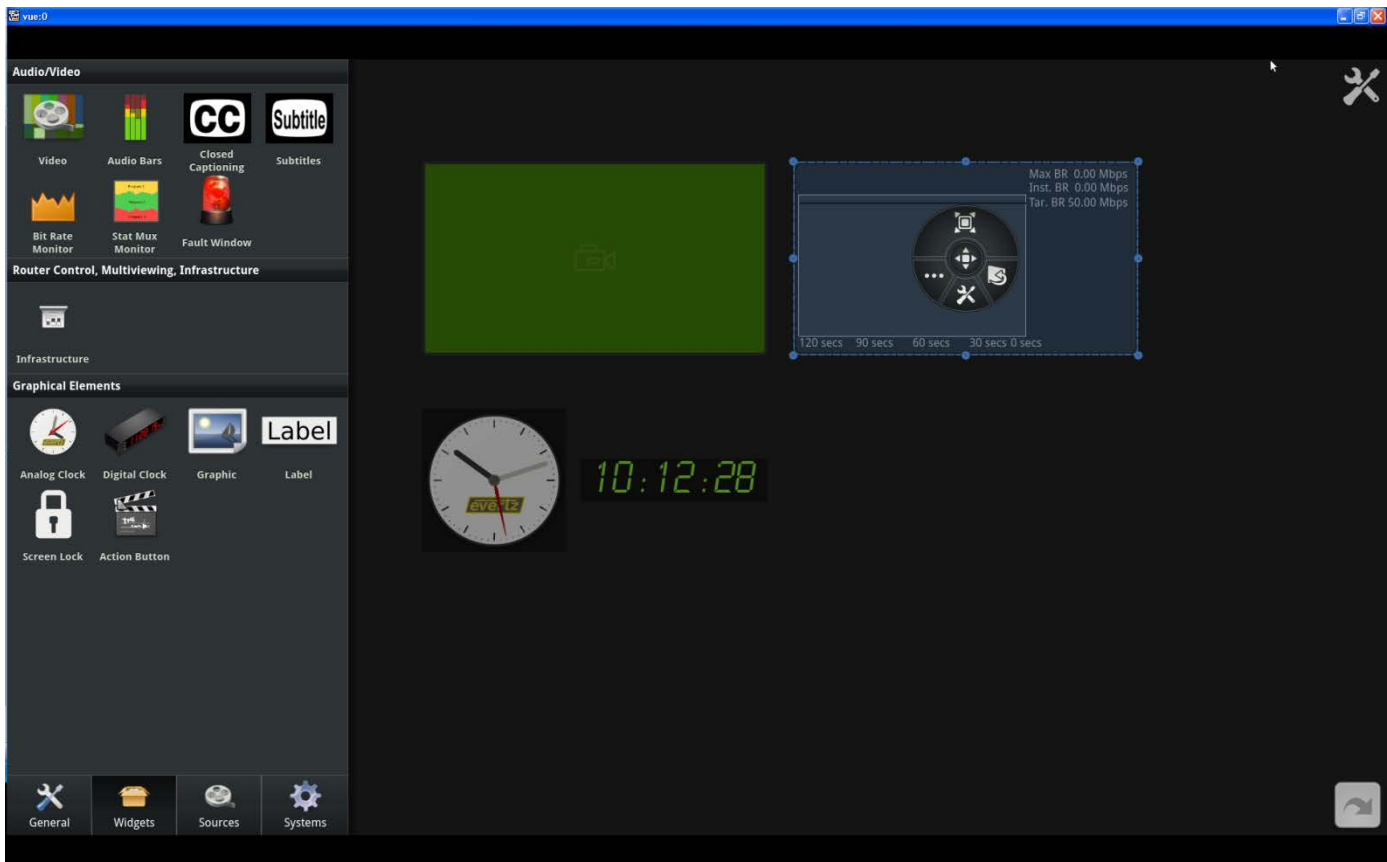


Figure 5-6 : Drag and Drop widgets Onto the VUE Canvas

5.4. MViP-II UI KEYBOARD SHORTCUTS

Function	Shortcut/Hotkeys
Toggle between Display 1 and Display 2 (While in Edit Mode)	Ctrl + 1 or Ctrl + 2
Restart VUE	Alt + Ctrl + R
Go to Operations Mode	Ctrl + E <i>or</i> press ESC
Go to Layout Edit Mode	Ctrl + E
Display/Hide VUE Sidebar	Tap on Tool icon (located top-right of screen) <i>or</i> press spacebar
Widget Edit Mode	Double-click on widget <i>or</i> tap on widget to display Radial Menu and select the tool icon
Exit Widget Edit Mode	Tap on Tool icon (located top-right of screen) <i>or</i> press ESC
Save the current layout	Ctrl + S <i>or</i> General sidebar > Save Layout
Open a saved layout	Ctrl + O <i>or</i> General sidebar > Open Layout
Open Terminal into VNC	Ctrl + Shift + F12
Open console	Ctrl + `
Input interrogator	Ctrl + i
Open Layout	Ctrl + O
Fit widget to display	Ctrl + Shift + F
Move widget to edge of the screen	Shift + Arrow Key (up, down, left, right)
Duplicate widget in direction	Ctrl + Arrow Key (up, down, left, right)
Duplicate widgets	Ctrl + D

Table 5-1 : VUE UI Keyboard Shortcuts

5.5. MViP-II RADIAL MENU

MViP-II provides a friendly editing tool in Layout Edit Mode. There are various functions that are available when interacting with the Radial Menu. Tap on a widget in Layout Edit Mode to display the Radial Menu.



Figure 5-7 : Radial Menu



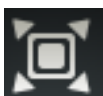
Move / Change widget position

Click and Drag the center move icon to place the selected widget anywhere on the canvas.



Open Widget Edit Settings

Tap the tool icon on the bottom of the menu to open the widget settings for the selected widget.



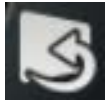
Scaling

Tap on the scale icon to expand the wheel to show the anchors which can be used to resize the widget from the sides or corners. Click and Drag an anchor to resize.



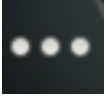
Figure 5-8 : Resize the Widget with the Scaling Anchors

Holding down the top half of the wheel and moving towards or away from the center of the wheel allows scaling evenly around all sides of the widget.



Keystone

Tap the *keystone* icon on the bottom right of the wheel to show the anchors to adjust the keystone of the selected widget



Additional Edit Functions

Tap the more icon on the bottom left of the wheel to show additional edit functions.

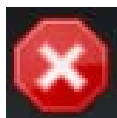


Figure 5-9 : Additional Edit Functions



Duplicate (Copy)

Create a copy of the selected widget (with all customized widget settings) onto the canvas.



Delete

Remove the selected widget.



Linker/Add Custom widget

Linking: Create a link/association between widgets for added functionality.

Add Custom widget: Add custom widgets to the Widget Drawer for re-usability.



Adjust Order

Adjust the z-order of the selected widget in relation to other widgets on the canvas to the bottom most layer.



Adjust Order

Adjust the z-order of the selected widget in relation to other widgets on the canvas to the Top most layer.



Adjust Order

Decrease Layer position of widget to 1.



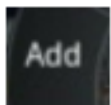
Adjust Order

Increase Layer position of widget to 1.



Scale

Scale your window size from 25% to 200 % (to size of window or to the size of video).



Add

Add new widgets like Closed Captioning, Audio Bar, StatMUX, Label, Subtitle, Fault window and Bitrate Monitor.



6. LAYOUT EDIT MODE

6.1. GENERAL SIDEBAR

Refer to Figure 5-2 for the Layout Menu Screen.

6.1.1. Layouts Menu

6.1.1.1. Load Layout

The Load layout section allows the user to load a saved layout into MViP-II and view a preview of the layout before loading it into MViP-II display.

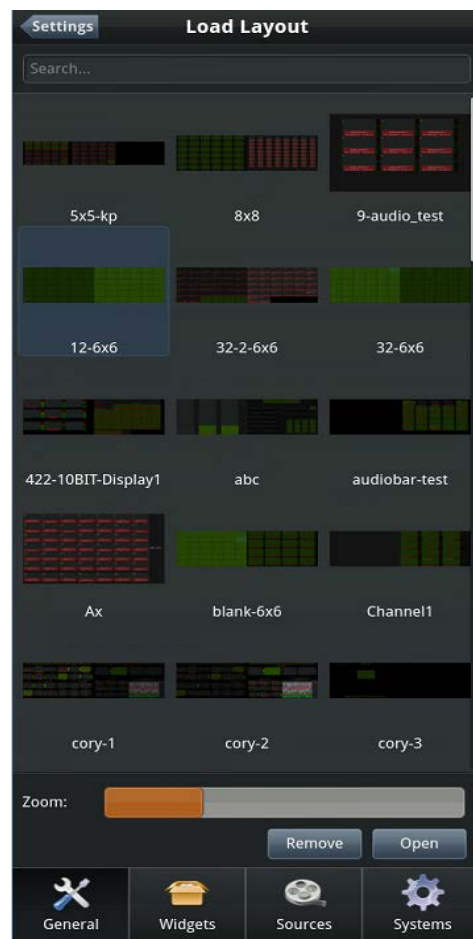


Figure 6-1 : Layouts\Load layout Menu

To load a layout, follow below steps:

- Press Ctrl + O.
- Select your layout and click open or double click your layout preview.

In order to load a layout from the general side bar, follow below steps:

1. Press **CTRL + E** to go to Layout Edit Mode and bring up the General sidebar
2. Under Layouts, select **Load Layout**
3. Use the Zoom slider to enlarge the Layout Preview
4. Select a layout to load
 - o Double click on the layout or press the **Open** button

6.1.1.2. Save Layout

The “Save Layout” section allows the user to save the current layout into MViP-II by adding a new filename for the layout or overwriting an existing layout.

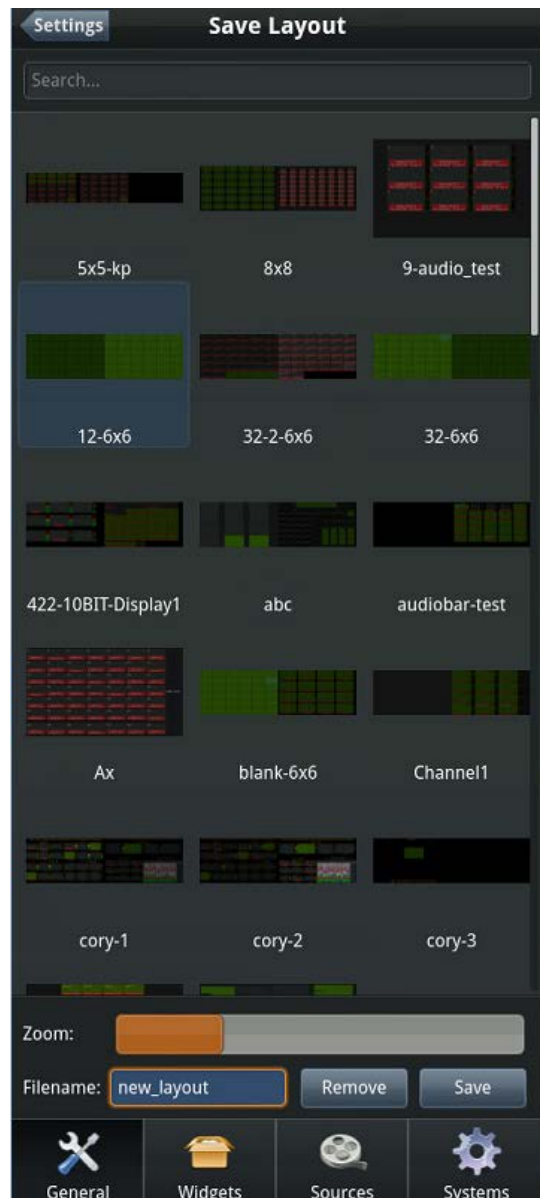


Figure 6-2 : Layouts\Save layout Menu

To Save a Layout, follow below steps:

1. Press **CTRL + S** to jump to the Save Layout menu
 - o Accessible from the General sidebar > Layouts > **Save Layout**
2. Enter a filename
3. Select the **Save button**
 - o Double click an existing layout to overwrite with the new layout

6.1.1.3. Autosave Interval (Minutes)

This section allows autosaving the current system settings on the MViP-II.

6.1.2. General Settings Menu

6.1.2.1. Appearance

**Figure 6-3 : General Settings\Appearance Menu**

The Appearance section allows the user to:

- Customize font family, size, and color.
- Customize widget buttons to show text&icon, text only or icon only.
- Customize the widget's row and columns layout.

6.1.2.2. Set Edit Lockout Password

This section allows the user to set a password to lock or unlock displays.



Figure 6-4 : General Settings\Set Edit Lockout Password Menu

6.1.2.3. Audio Configurations

The Audio configurations section allows the user to set “Error Regions” and “Warning Regions” for Audio Level Bars.

6.1.2.4. Firmware Upgrade

This section allows the user to upgrade Firmware by using efp.

6.1.2.5. About VUE & Licensing

This section allows the user to view the Firmware and licensing information. See section 4 for more information.

6.1.2.6. Display Configuration

There are two display modes:

- 1) Headless Mode (Virtually connected display)
- 2) Connected Display Mode (Physically connected display)

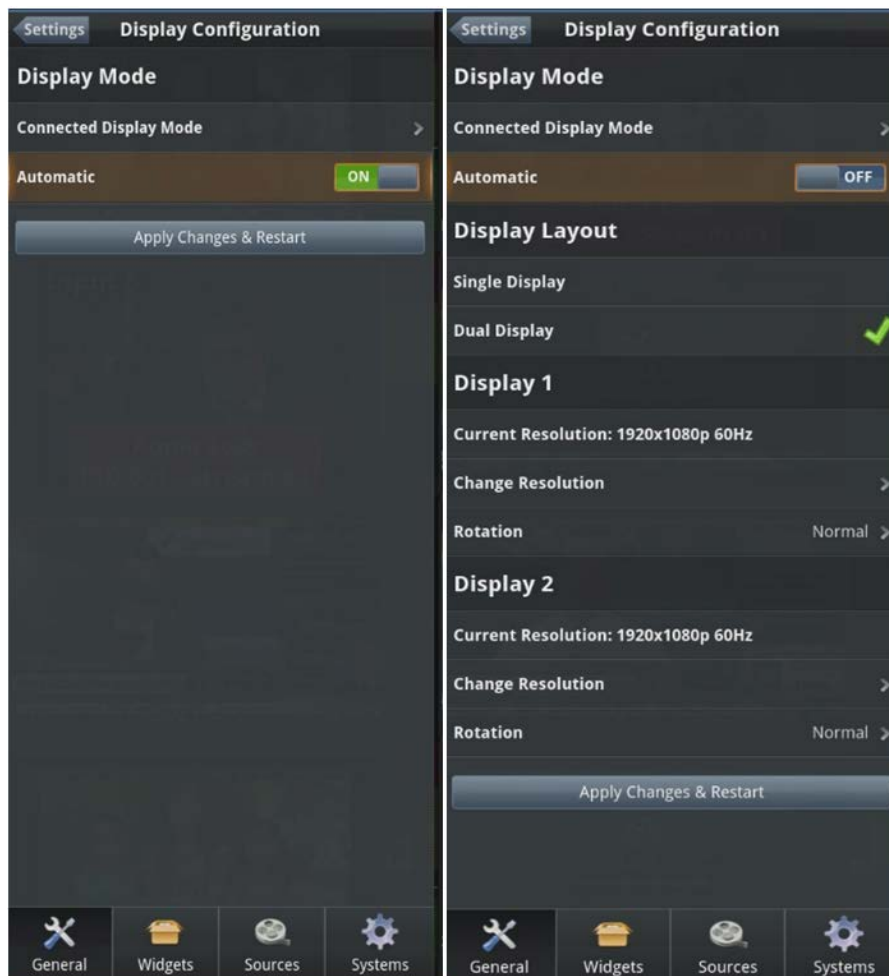


Figure 6-5 : General Settings\Display Configuration

Automatic Mode

It performs same functionality for both Headless and Connected display modes. It will automatically detect whether two displays are connected or single displays is connected with MViP-II and it will select highest resolution from the list for both displays.

Manual Mode

In manual mode there is the possibility to adjust display configuration manually. There are two options to select display layout, Single display and Dual display.

In manual mode, the user can see current resolution applied to both displays if there are two displays connected.

It is possible to apply separate resolution for both displays. In Headless mode some of the standard resolutions will be available in this list. In manual mode, the user can select resolutions supported by particular display device which is connected to MViP-II.

The display can be rotated. Rotation schemes are Normal, Inverted, Left and Right.

After making any changes, it is needed to press "Apply Changes & Restart" to take effect the changes.



NOTE: While using 4K displays, it is preferred to use cables that have enough bandwidth to support 4K output. HDMI (Like 1.4, 2.0, 2.1) and Display port (Like 1.1).

Any DVI to HDMI or Display port to HDMI conversion cables might affect display resolution.



Figure 6-6 : General Settings\Change Resolution, Rotation

6.1.2.7. Display Encoder

This section allows the user to set display encoding properties.

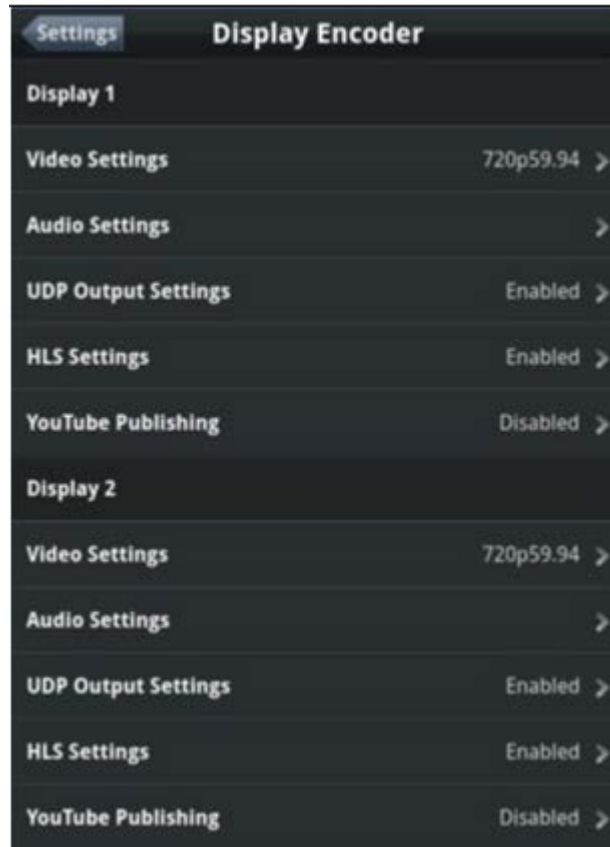


Figure 6-7 : General Settings\Display Encoder

Video Settings: This section allows the user to setup video standards, video PID, video Intra period (GOP size), consecutive B-Frames, profile, scan type, Bitrate mode, video bitrate, pixel format and color range.

Audio settings: This section allows the user to set the Audio PID.

UDP Output Settings: This section allows the user to set IP address, Port, TTL (Time To Live) and Ethernet port for UDP.

HLS Settings: If enabled, the user can set Playlist size and chunk durations (in seconds).

YouTube Publishing: If enabled, the user can set Stream name and server URL to publish on YouTube.

Video Settings

This menu presents a list of all available settings for the output encoder video stream. (Figure 6-8)



Figure 6-8 : Display Encoder\Video Settings menu

Video Standard: This menu presents a list of all available output resolutions and frame rates that are supported (Figure 6-9).



Figure 6-9 : Selecting Video Standard for the Encoded Output

Video PID: This section allows the user to choose a PID for video data.

Video Intra Period (GOP SIZE): This field allows the user to specify the Group of Pictures Size for the Encoder.

Consecutive B Frames: This field allows the user to specify the number of consecutive B frames allowed during encoding

Profile: This field allows selecting of an encoding profile. Possible options are Baseline, Main and High.

Scan Type: This field allows the Interlace scan type to be selected. Possible options are Top field First and Bottom field First.

Bitrate Mode: This field allows the output video stream to be either encoded as a Constant Bit Rate (CBR) or Variable Bit rate (VBR) format.

Video Bitrate: This field allows the user to set the output video program bitrate (Kbps).

Audio Settings

This menu presents a list of all available settings for the output encoded audio stream (Figure 6-10).

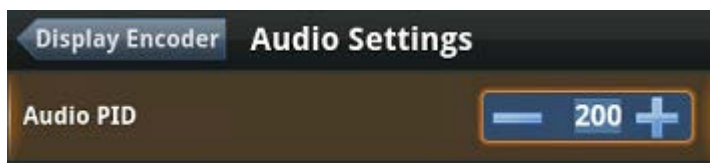


Figure 6-10 : Display Encoder\Audio settings Menu

Audio PID: This field allows the user to set the Program ID of the output audio stream.

UDP Output Settings

This section allows the user to Enable/Disable the Encoder, Specify a Multicast/Unicast address of the Encoded Stream, and specify which Physical network interface the stream the mosaic outputs to.

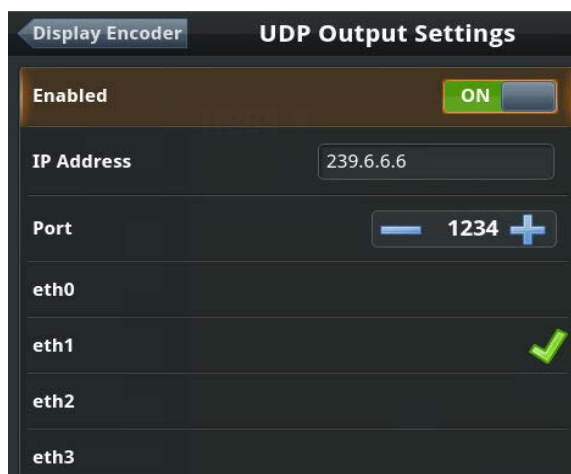


Figure 6-11 : UDP Output Settings

Enabled: The On/Off switch allows the user to enable/disable the output Encoder.

IP Address: This field allows the user to specify a Multicast or Unicast address of the Output Encoder.

Port: This field allows the user to specify the UDP port number of Multicast or Unicast Address.

Interface Selection: eth0, eth1, eth2, or eth3 can be selected as the output interface for each encoded output.

HLS Settings

This configuration menu allows the user to enable the MViP-II mosaic outputs to be encoded into a web formatted HLS (HTTP Live Streaming) stream. This can be used simultaneously with the UDP encoded output stream. This stream is hosted internally on MViP-II.

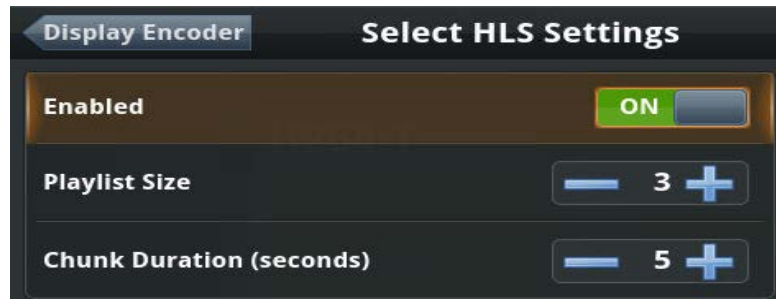


Figure 6-12 : HLS Settings

Enabled: The On/Off switch allows the user to enables/disables the output Encoder.

Playlist Size: This field allows the user to set the number of TS segments or “chunks” that are present in playlist before playlist rolls over, the default value is 3.

Chunk Duration: This field allows the user to set the duration (s) of each TS segment or “Chunk”. Default and recommended setting is 10 seconds.

6.1.2.8. Network Settings

The network settings section allows the user to configure IP address, Netmask, Netmask preset, Gateway and DNS Nameservers for all Ethernet ports. The user can also select Multicast interface from available Ethernet interfaces.

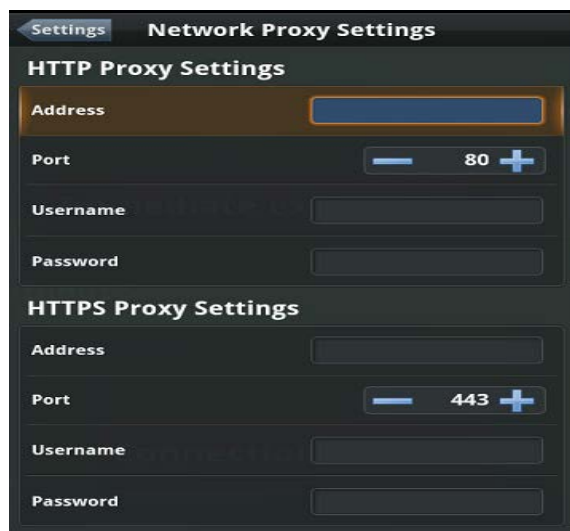
This section indicates link speed, status, transmit, receive and MAC address for all Ethernet inputs.

6.1.2.9. VLPro Thumbnail Client

This section allows the user to select the destination to send VLPro Thumbnail. The user is able to set the Server URL, Port, and Size of the thumbnail and also allocate Bandwidth.

6.1.2.10. Network Proxy Settings

This menu allows a network proxy server to be set on the MViP-II. All HTTP requests will use the proxy once it is configured.



The screenshot shows a 'Network Proxy Settings' window. It is divided into two sections: 'HTTP Proxy Settings' and 'HTTPS Proxy Settings'. Each section contains four input fields: 'Address', 'Port', 'Username', and 'Password'. In the HTTP section, the 'Port' field is set to 80. In the HTTPS section, the 'Port' field is set to 443. The 'Address' fields are currently empty. The 'Username' and 'Password' fields are also empty.

Figure 6-13 : Network Proxy Settings

HTTP Proxy Settings

Address: This field allows the user to set the IP address of the proxy server that is used for HTTP requests.

Port: This field allows the user to set the Port of the proxy server.

Username: This field allows the user to set the username which is used to authenticate with the proxy server. If unused leave it blank.

Password: This field allows the user to set the password which is used to authenticate with the proxy server. If unused leave it blank.

HTTPS Proxy Settings

If the application requires HTTPS communication, the following settings must be set.



NOTE: If the same Proxy server is used for both HTTP and HTTPS communication, duplicate settings in fields below.

Address: This field allows the user to set the IP address of the proxy server that is used for HTTPS requests.

Port: This field allows the user to set the Port of the proxy server.

Username: This field allows the user to set the username which is used to authenticate with the proxy server. If unused leave it blank.

Password: This field allows the user to set the password which is used to authenticate with the proxy server. If unused leave it blank.

6.2. WIDGETS SIDEBAR



Figure 6-14 : Widget Sidebar Menu

6.2.1. AUDIO/VIDEO WIDGET

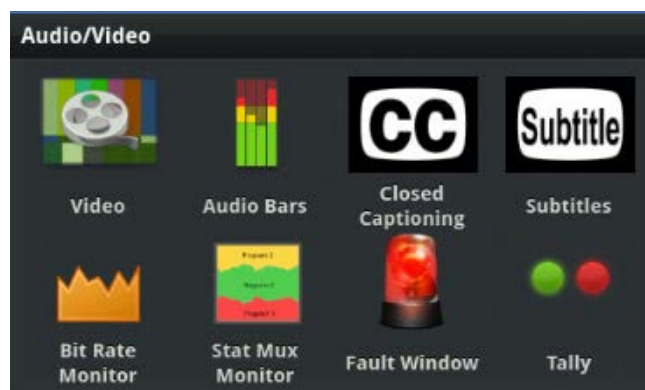


Figure 6-15 : Audio/Video Widgets

6.2.1.1. Video widget

The video widget section is used to decode Multicast IP streams.

The user can assign a video source by clicking the file reel to the left of widget while it's not in edit mode. While it is in edit mode, for selecting the source, simply double click on widget then select source tab and select the source that is going to be assigned to this widget.

The video can be enlarged by clicking the full screen icon on the right of widget.

6.2.1.2. Audio Bars Widget

The Audio Bars widget is used to critically monitor levels of audio programs.

This widget can monitor:

- Mono to 7.1 channels of program audio
- Up to 8 audio PID's per source
- Selected audio to speakers by clicking headphone icon

This widget allows the user to assign source to audio bars by clicking on film reel icon. And also allows the user to link to a video widget to display incoming data on the selected video source.

6.2.1.3. Closed Captioning widget

The closed captioning widget is used for decoding closed caption data embedded on an incoming video source.



Figure 6-16 : Closed Captioning Widget

This section allows the user to link/associate the Closed Captioning widget to a Video widget in order to display incoming data on the selected video source.

6.2.1.4. Subtitles widget

The Subtitle widget is used for decoding the subtitle stream accompanying the incoming IP-based video source.



Figure 6-17 : Subtitles Widget

This section allows the user to link/associate the Subtitles widget to a Video widget to display incoming data on the selected video source.

6.2.1.5. Bit Rate Monitor widget

The Bit Rate Monitor Widget is used to present the video bit rate of a program.

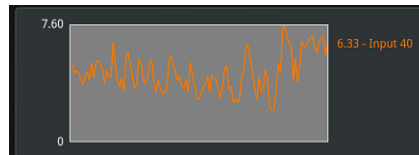


Figure 6-18 : Bit Rate Monitor Widget

This section allows the user to select defined video sources to monitor their bit rate usage and also allows the user to link/associate the Bit rate Monitor Widget to multiple Video Widgets to display the bandwidth usage from the selected video sources.

6.2.1.6. Stat Mux Monitor widget

The Stat Mux Monitor Widget is used to present the defined multicast source on the transport streams.

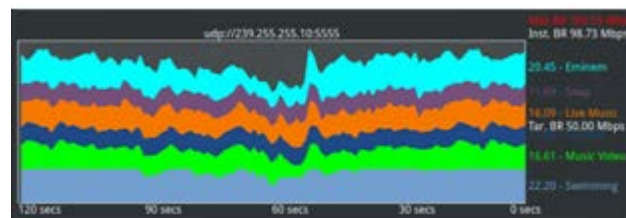


Figure 6-19 : Stat Mux Monitor Widget

It displays the total bandwidth usage of the multi program transport stream and has a configurable maximum bandwidth threshold that will display red if the stream exceeds this limit.

This widget can be configured include/exclude PID 8191, Audio data, Video Data and Metadata in this calculation.

Individual bandwidth plots are broken down on the right of the display along with their associated program names.

6.2.1.7. Fault Window widget

The fault Window Widget is used to display on screen fault alerts to the operator if a fault condition has been met.

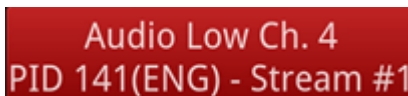


Figure 6-20 : Fault Window Widget

Multiple fault windows can be assigned to the same source allowing the user to organize alarms in different areas of the screen.

For example if all audio faults configured to one widget, video alarms can be configured to second widget.

6.2.1.8. Tally widget

This widget will be used for tally, tally state and status from discrete devices based on VGPIs.

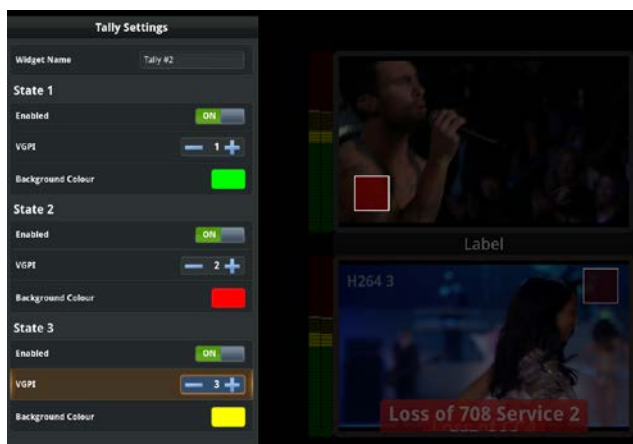


Figure 6-21 : Tally Settings menu

Tally Settings

Widget name: This field allows the user to set a name for Tally widget.

For State1, State2 and State3

Enabled: The user can enable or disable tally widget here.

VGPI: This field allows the user to set the VGPI in order to change the color of tally box (Figure 6-21).

6.2.2. VistaLink Pro widget

Alarm Log Settings

This widget can be used to show alarm logs from Vistalink on MViP-II display (Figure 6-22).

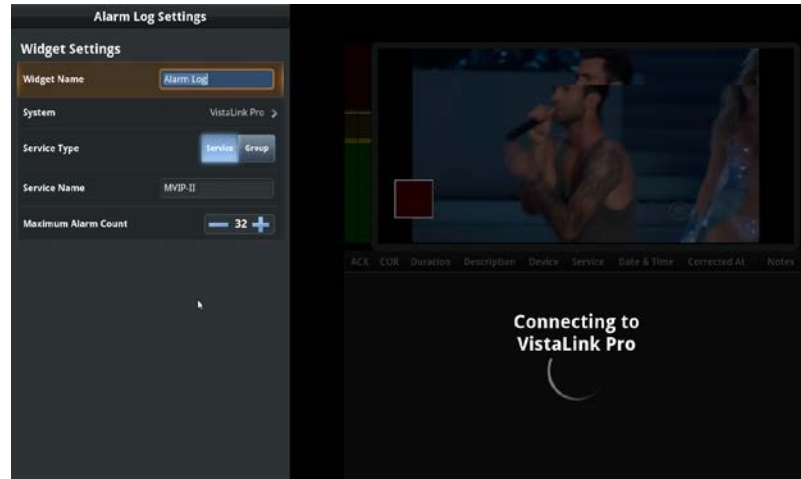


Figure 6-22 : Alarm Log Settings menu

Widget Settings

Widget Name: This field allows the user to define a name for the Widget.

System: This field allows the user to select a Vistalink system which was created before in System's Tab.

Service Type: This field allows the user to select a service type. Available types are Service or Group from Vistalink.

Service name: This field allows the user to define a name for the Service which is created in Vistalink.

Maximum Alarm Count: This field allows the user to set the maximum alarm to fetch from Vistalink

For having a view of VistaLink Pro on the canvas, select the icon for Alarm Log at the VistaLink Pro widget, drag and drop it to the canvas (Figure 6-23).

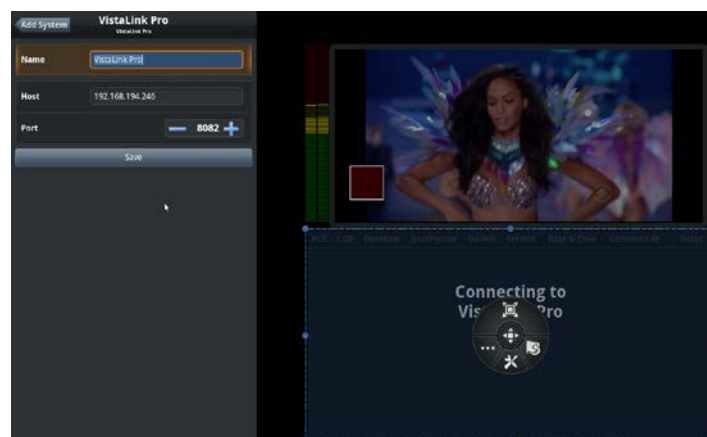


Figure 6-23 : VistaLink Pro Widget menu

Create Vistalink Pro system in Systems Section

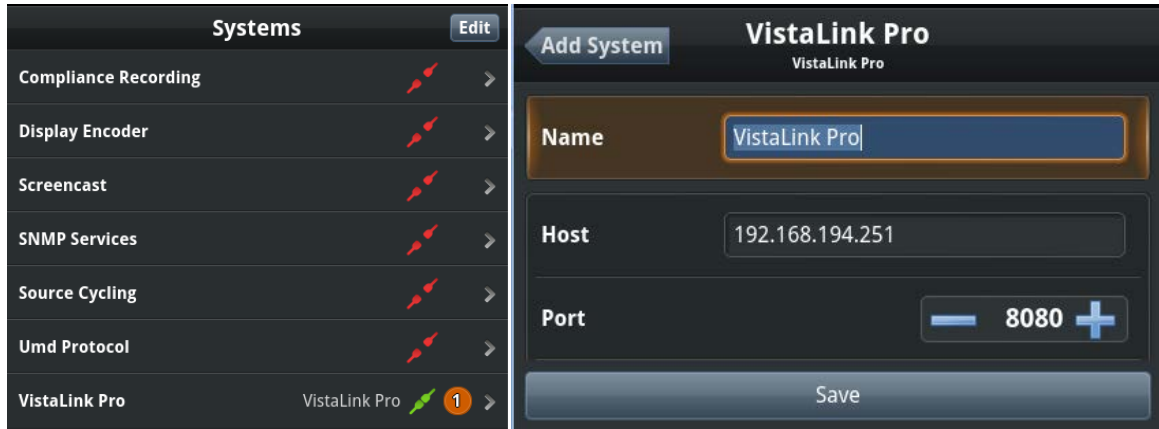


Figure 6-24 : Add Vistalink Pro in Systems Section

Name: This field allows the user to set the name of VistaLink Pro.

Host: This field specifies the Multicast IP address.

Port: This field allows the user to specify the port number of Multicast IP.



NOTE: The Vistalink **Web Client** license is required for this operation.

Click on the widget tool icon on the Radial menu, the related VistaLink Pro scene will be displayed on the canvas (Figure 6-25).

ACK	COR	Duration	Description	Device	Service	Date & Time	Corrected At	Notes
<input type="checkbox"/>	<input checked="" type="checkbox"/>	---	Audio Loss Error Alert	Source : London [1]	215	2015-10-20 14:54:00	---	
<input type="checkbox"/>	<input type="checkbox"/>	---	Video Loss Alert	Source : London [1]	215	2015-10-20 14:54:00	---	
<input type="checkbox"/>	<input type="checkbox"/>	00:00:01	Connection Error Alert	Source : London [1]	215	2015-10-20 14:53:58	2015-10-20 14:53:59	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	---	Audio Loss Error Alert	Source : Rio [8]	215	2015-10-20 14:53:59	---	
<input type="checkbox"/>	<input type="checkbox"/>	---	Video Loss Alert	Source : Rio [8]	215	2015-10-20 14:53:59	---	
<input type="checkbox"/>	<input type="checkbox"/>	00:00:01	Connection Error Alert	Source : Rio [8]	215	2015-10-20 14:53:57	2015-10-20 14:53:58	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	---	Audio Loss Error Alert	Source : New York [3]	215	2015-10-20 14:53:58	---	
<input type="checkbox"/>	<input type="checkbox"/>	---	Video Loss Alert	Source : New York [3]	215	2015-10-20 14:53:57	---	
<input type="checkbox"/>	<input type="checkbox"/>	00:00:18	Connection Error Alert	Source : New York [3]	215	2015-10-20 14:53:39	2015-10-20 14:53:57	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	00:01:08	Video Frozen Error Alert	Source : US no DMS female [15]	215	2015-10-20 14:52:42	2015-10-20 14:53:50	

Figure 6-25 : VistaLink Pro window on canvas

How to use this:

- From VistaLink Pro server, Enable JSON-RPC and set Port number to be used in VUE
- Create service on the VistaLink Pro for device
- Add system from VUE
 - Systems > Add new system
 - Give it a name ,host
 - Host is the IP address of that device that is running VistaLink Pro client.
 - Give it a port
 - To get port it is needed to go to VistaLink Pro server
 - Tools > Server properties > JSON RPC tab
 - Locate JSON RPC PORT
 - This port number should be added here
- After creating system now it is possible to drag and drop VistaLink Pro Alarm log to display
- Go to settings of Alarm Log



Figure 6-26 : Alarm log Settings

- In systems it is needed to select system that is created previously
- Select service type as
 - Service: if the service has been created into the VPro client
 - Group: if the group of services has been created
- Give a name to the service that has been created in VLPro
- In Maximum alarm count, the user can set total number of Alarms that they want to display

6.2.3. Graphical Elements



Figure 6-27 : Graphical Elements

6.2.3.1. Analog Clock widget

This section allows the user to add an analog clock onto the MViP-II layout. The clock can be synchronized to the facility time using NTP. And also allows adding multiple clocks to the MViP-II layout with time offsets for monitoring multiple time zones.

6.2.3.2. Digital Clock widget

This section allows the user to add a digital clock onto the MViP-II layout. The clock can be synchronized to the facility time using NTP. And also allows adding multiple clocks to the MViP-II layout with time offsets for monitoring multiple time zones.

6.2.3.3. Graphic widget

This section allows the user to add a graphic with relevant pictures/diagrams/icons to visually customize the MViP-II layout or to provide additional information.

6.2.3.4. Label widget

This section allows the user to add a Label widget with static or dynamic text to customize the MViP-II layout or to provide additional information, and allows using the Label widget as a UMD that can display the current source on a specified destination.

The user has to associate Label to the video widget of the source that want to use UMDs of.

To set UMD, the user should go to label settings and set text entry mode to UMD. From the UMD parameters list, any (single or multiple) UMDs per label can be selected.

6.2.3.5. Screen Lock widget

This section allows the user to lock the MViP-II surface to prevent any user input. The Lock Screen widget is still available to unlock.

6.2.3.6. Action Button Widget

Action Button is used to create shortcuts to perform specific task.

There are pre specified actions like global action as loading layout on clicking the action button. The user can also write action script and perform actions based on that script.

6.2.4. Remote Systems

6.2.4.1. Remote Desktop

This widget is used to connect remotely to any desktop over network via VNC Protocol. In order to get connected, it is needed to have Host IP address and port number.

6.3. SOURCES SIDEBAR

This section allows the user to drag and drop a source to the canvas. Sources which were defined in the sources tab can be placed on the canvas using a drag and drop action. In order to do it, simply select the icon beside the defined source and drag it over to the canvas.

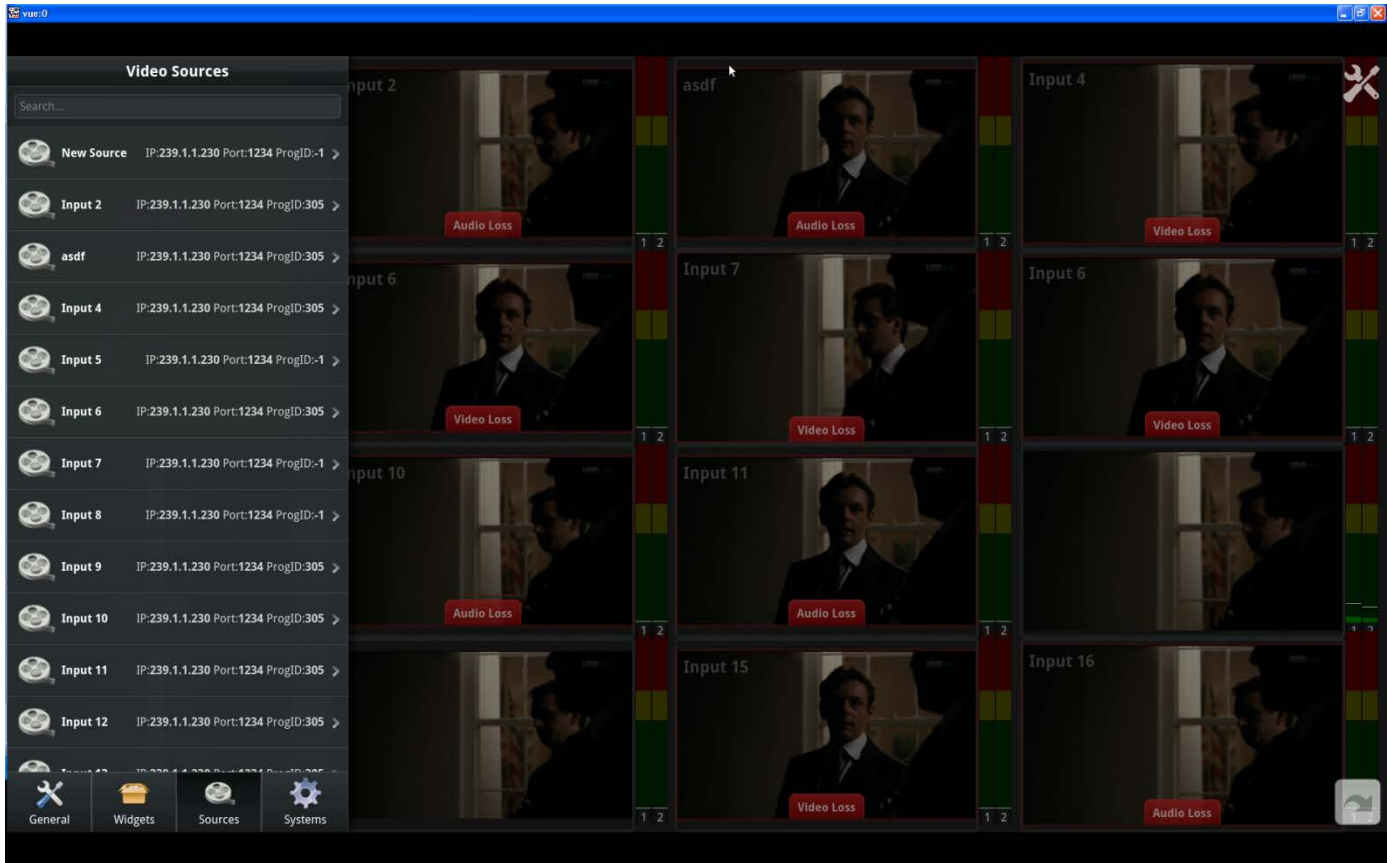


Figure 6-28 : Drag and Drop a Source on to the canvas

6.3.1. Configure Sources

6.3.1.1. Sources



Figure 6-29 : Source Settings

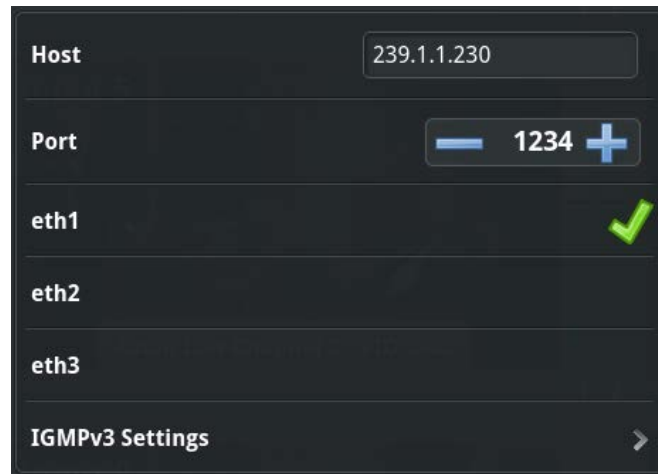
Select the Sources section and click on a Source.

Name: This field allows the user to define the source name.

ICON: This field allows the user to assign an icon to the source.

Type: This field allows the user to set the type of the source. The options are UDP, RTP, and HTTP etc.

6.3.1.2. Source Specific



Host	239.1.1.230
Port	1234
eth1	<input checked="" type="checkbox"/>
eth2	<input type="checkbox"/>
eth3	<input type="checkbox"/>
IGMPv3 Settings	>

Figure 6-30 : Source Specific Settings on the Ethernet Ports

Host: This field indicates the Multicast IP address.

Port: This field indicates the port number which is used on the Multicast IP address.

Eth1-3: These fields allow the user to select the Ethernet ports to the assigned Multicast IP address.

IGMPv3Setting: This field defines source specific Multicast settings.

6.3.1.3. MPTS settings

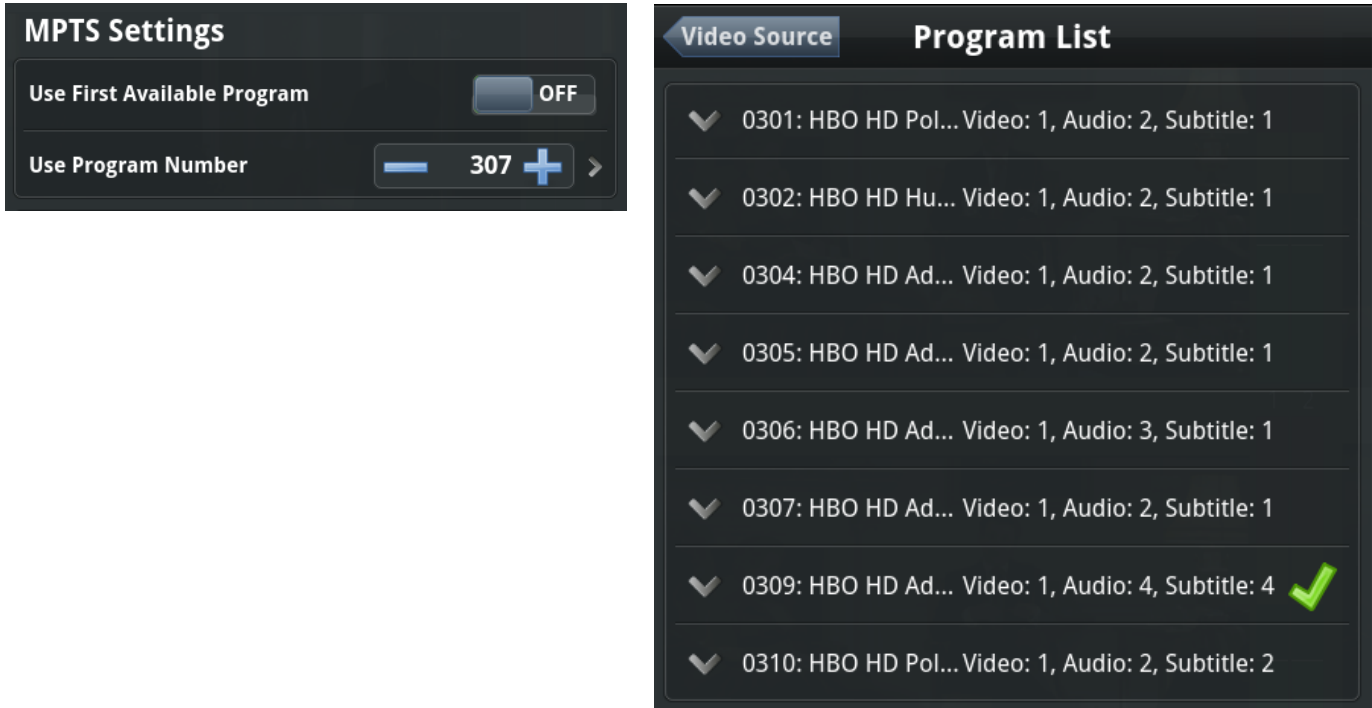


Figure 6-31 : Selections on the MPTS Settings

Use First Available Program: This mode will always use the first program in the MPTS.

Use Program Number: This field allows the user to pick any program in the MPTS. User can also click on the arrow, and choose a program name from an interrogated list. As seen on right image of Figure 6-31.

6.3.1.4. Video Monitoring - Fault Settings

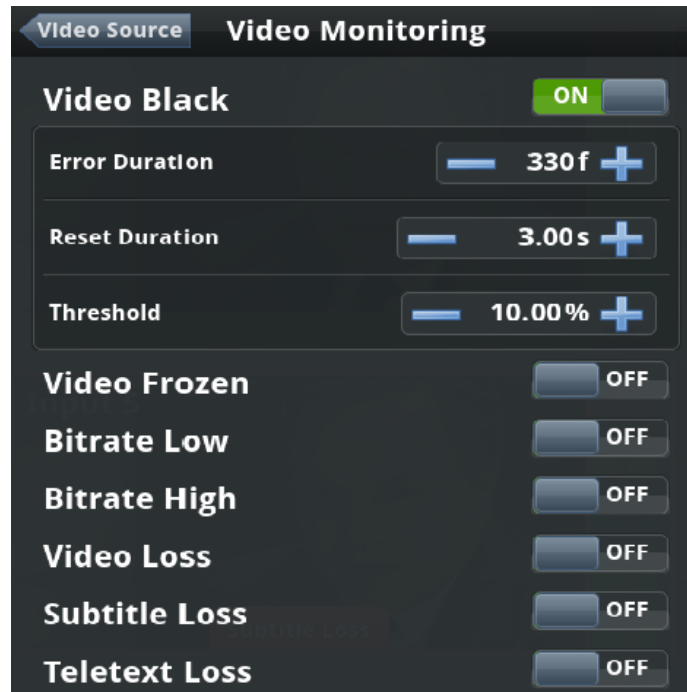


Figure 6-32: Setting the Fault Parameters for Video Monitoring

Video Black: This fault is triggered when the decoded frame is considered black (Luma Y pixel values < 20).The threshold controls how many pixels may be non-black in the decoded frame. It is the non-black tolerance level.

- A Value of 0% means all pixels must be black to trigger a fault (Strict Case).
- A Value of 50% means that half of the pixels must be black to trigger a fault.
- A Value of 100% means that no pixels need to be black to trigger a fault (Relaxed Case).

Video Frozen: This fault is triggered when two consecutive frames have no motion. The motion is decided using the threshold and comparing change in the Luma Y pixel value. The threshold controls how much motion or changes in Luma Y pixel is accepted before triggering a fault.

- A Value of 0% means consecutive frames must have no motion changes to trigger a fault (Strict Case).
- A Value of 50% means that half of the frame may change or move to trigger a fault.
- A Value of 100% means that consecutive frames may have any motion change and trigger a fault (Relaxed Case).

Bitrate Low: This Fault is triggered when the bit rate of the stream falls below the threshold for specified error duration in seconds. The threshold is the target bit rate value. This applies to all decoded streams from the source.

Bitrate High: This Fault is triggered when the bit rate of the stream falls above the threshold for specified error duration in seconds. The threshold is the target bit rate value. This applies to all decoded streams from the source.

Video Loss: This Fault is triggered when no video frames have been decoded for error duration amount of time.

Subtitle Loss: This fault is triggered when no DVB or SCTE-27 subtitles have been decoded for error duration amount of seconds.

Teletext Loss: This fault is triggered when no Teletext Subtitles have been decoded for error duration amount of seconds.

6.3.1.5. Closed Captioning – Fault Settings

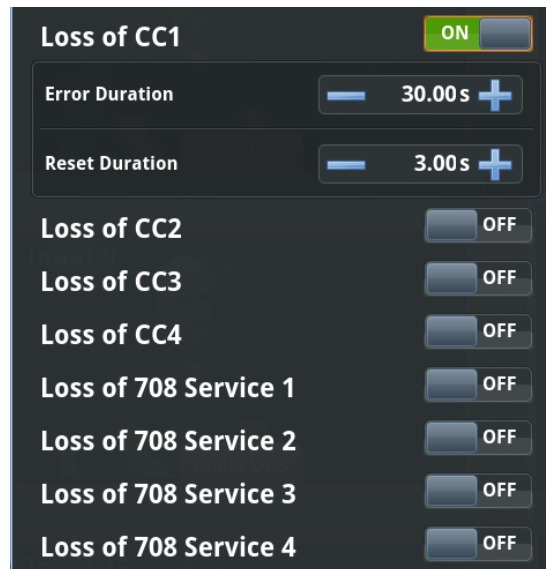


Figure 6-33 : Setting the fault parameters for Video Monitoring

Loss of CC1 – CC4: These fields allow the user to enable or disable faults for closed captioning.

Error Duration: This field allows the user to set the amount of time of an error state condition to occur before a fault is set.

Reset Duration: This field allows the user to set the amount of time for closed captioning to be presented before the fault condition is reset.

Loss of 708 Services 1-16: These fields allow the user to enable or disable faults for captioning.

Error Duration: This field allows the user to set the amount of time of an error state condition to occur before a fault is set.

Reset Duration: This field allows the user to set the amount of time for subtitles to be presented before the fault condition is reset.

6.3.1.6. Program Monitoring Settings

This section is used to Set Error duration, Reset Duration, Threshold to monitor Program Bit rate Low/High. Set parameters of Error duration, Reset Duration to monitor PID loss.

6.3.1.7. Metadata Monitoring Settings

This section is used to set Error duration, Reset Duration to monitor ID3 Metadata Loss.

6.4. SYSTEMS SIDEBAR

6.4.1. Compliance Recording option (+REC)

The MViP-II, when enabled with +REC, provides the user the ability to record TS based on specified faults and store or upload directly to a remote FTP server.

Click on the *Systems* tab in edit mode. Select the *Compliance Recording* for configuring the output as seen in Figure 6-34.



Figure 6-34 : Compliance Recording Configuration Tab

Once selected, the *Compliance Recording* menu will appear as seen in Figure 6-35.



Figure 6-35 : Compliance Recording Menu

Record Settings

Enabled: This control allows the user to enable or disable record settings.

Number of Records: This field allows the user to set number of records.

Clip Settings

Pre Record Time: This field refers to TS clip recording time before the fault occurs.

Post Record Time: This field refers to TS clip recording time after the fault occurs.

Storage Settings

Local Storage: This control enables the recording to be saved on the MViP-II server and used for exporting.

Upload to FTP Server: This control enables the recording to be uploaded automatically to a remote FTP server. When enabled, an FTP Server URL window will appear to set the address.

6.4.2. Display Encoder (+ENC)

The MViP-II, when enabled with +ENC, provides the user with the ability to send out the mosaic views over IP in any of the four Data Ethernet ports.

In the *Edit Mode*, click on the *System* tab. Select the *Display Encoder* for configuring the output. (Figure 6-36)

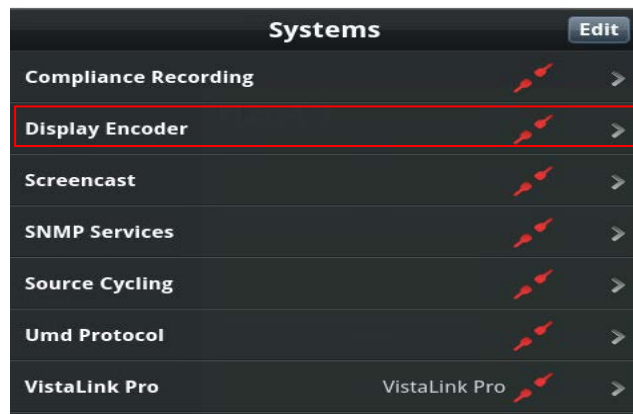


Figure 6-36 : Encoder Output Configuration Tab

Once selected, the *Display Encoder* menu will appear as seen in Figure 6-37. Each display monitor can be configured according to the user needs.

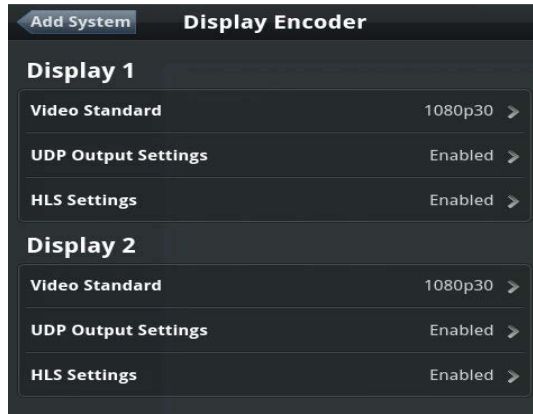


Figure 6-37 : Display Encoder Menu

For Display 1 and Display 2:

Video Standard: There are different options that can be selected for the encoded video output (Figure 6-38).

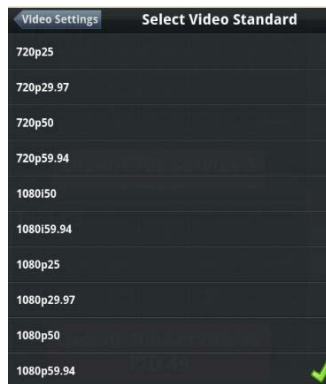


Figure 6-38 : Selecting Video Standard for the Encoded Output

UDP Output Settings: This section allows the user to enable the output of the stream using UDP; select the output multicast address and port number for the encoded stream, and also select which Ethernet port to be used as shown in Figure 6-39.

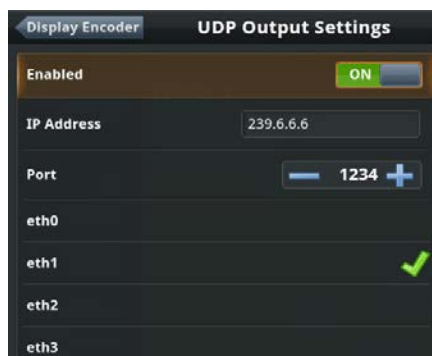


Figure 6-39 : UDP Output Settings

HLS Settings: This configuration menu allows the user to enable the HLS on the encoded output stream. The *Playlist Size* and *Chunk Duration* can be configured for the HLS output as shown in Figure 6-40.

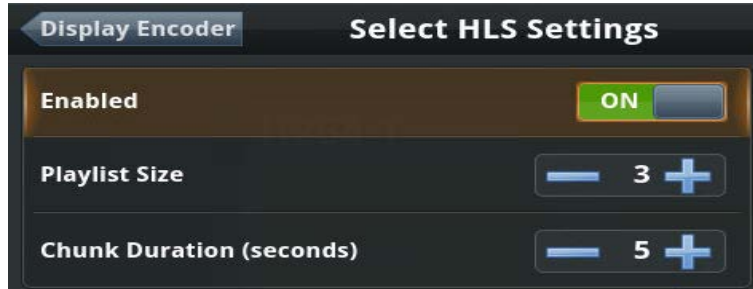


Figure 6-40 : HLS Settings

Example: Consider that a client computer is connected to eth2 @ 192.168.3.214 with HLS player. To stream out Display 1 video mosaic, type the following URL in HLS player (ex. VLC player).

Display 1 Video Mosaic URL

<http://192.168.3.214/hls/0/playlist.m3u8>

Display 2 Video Mosaic URL

<http://192.168.3.214/hls/1/playlist.m3u8>

Limitation: Display encoder frame rate is affected by Display configuration frame rate. Example: if Display Configuration frame rate is set to 50 Hz and display encoder is set to 59.94 Hz then encoded output will be 50 Hz only.

6.4.3. Screen Cast

This feature is not available now.

6.4.4. SNMP Services

This feature is not available now.

6.4.5. Source Cycling (+CCA)

The MViP-II, when enabled with +CCA, provides the user with the ability to cycle through the specified sources for a particular input coming in from any of the four Ethernet ports.

Configuration for the Source Cycle is on the Web Interface. To access the web interface, enter in the IP address configured for the control port on Ethernet 0. Select *Input Settings* on the MViP-II main screen as seen in Figure 6-41.

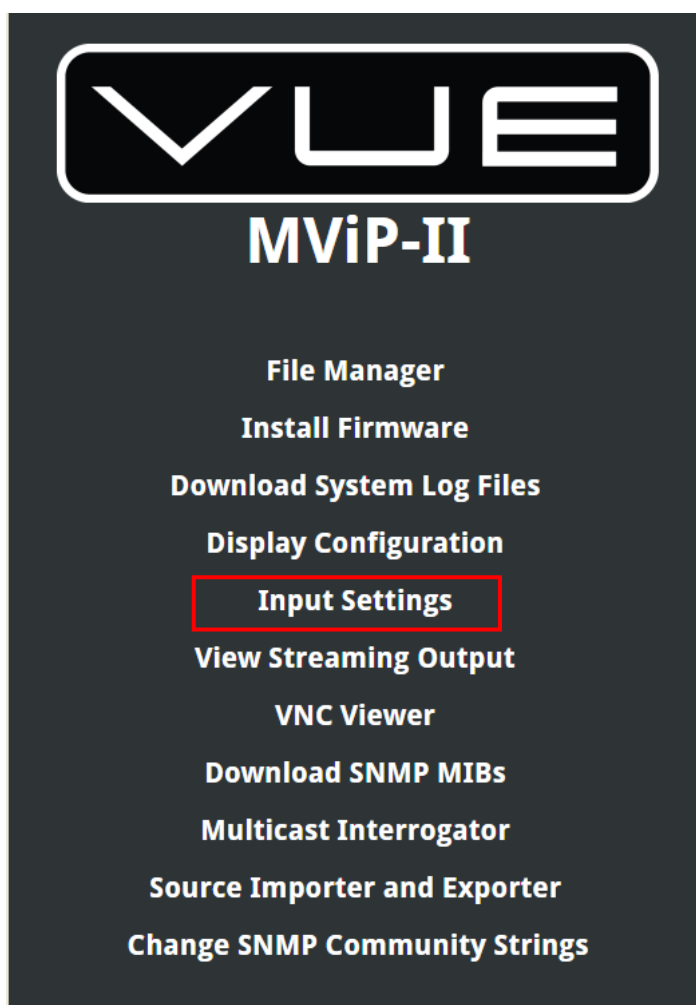


Figure 6-41 : Web Interface, MViP-II Main Menu

For Login and Password, type “*root*” and “*evertz*” respectively to login on to the MViP-II server.

In the Web Interface, the *Source Cycle* tab will be available when licensed with the +CCA option as seen in Figure 6-42.

6.4.5.1. Source Cycle Tab (+CCA)

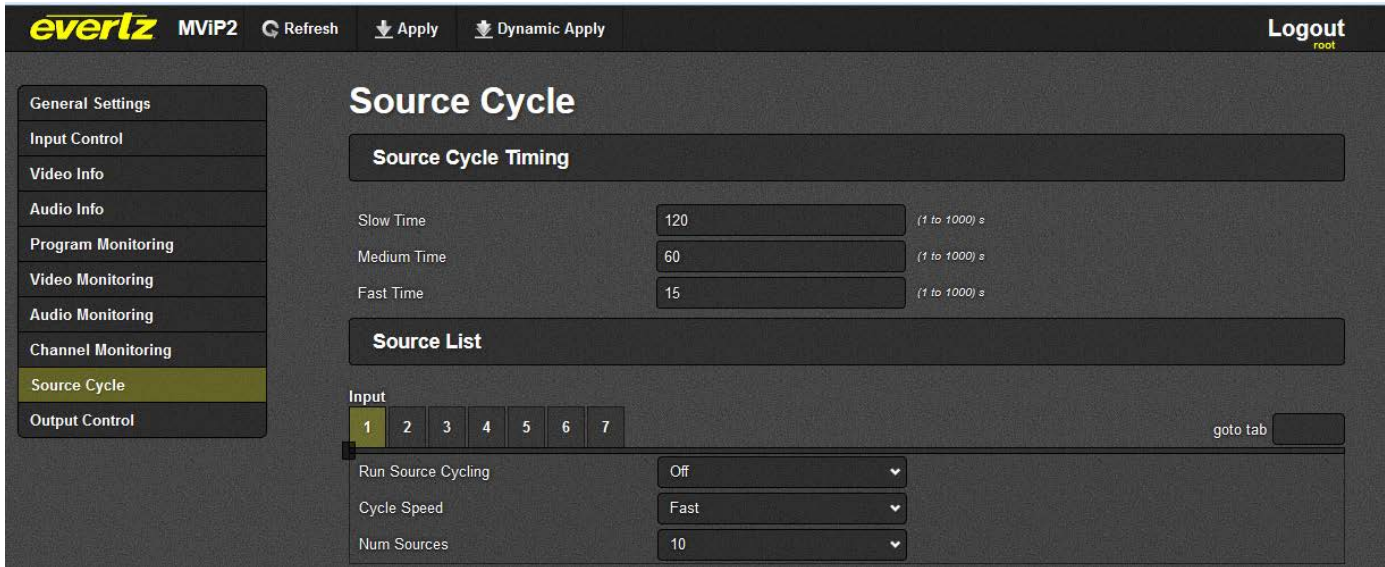


Figure 6-42 : Source Cycle Tab – Part 1

Source Cycle Timing

These settings are used to set the cycle speed duration in *seconds*. The user can then select the desired cycle time, Slow or Medium or Fast, for each source cycle on the input in the Source List section.

Depending on the number of sources in the cycle, the amount of time for switching between the sources will change.

Source List

For the 64 inputs

Run Source Cycling: This control is used for enabling the source cycling. If not enabled, the source selected in the Input Control will be used.

Cycle Speed: This control is used to select the cycle speed. Options are Slow, Medium and Fast as configured in the Source Cycle Timing section.

Num Sources: This control is used to set the number of sources for the source cycle on the input and used for configurations in the Source List section.

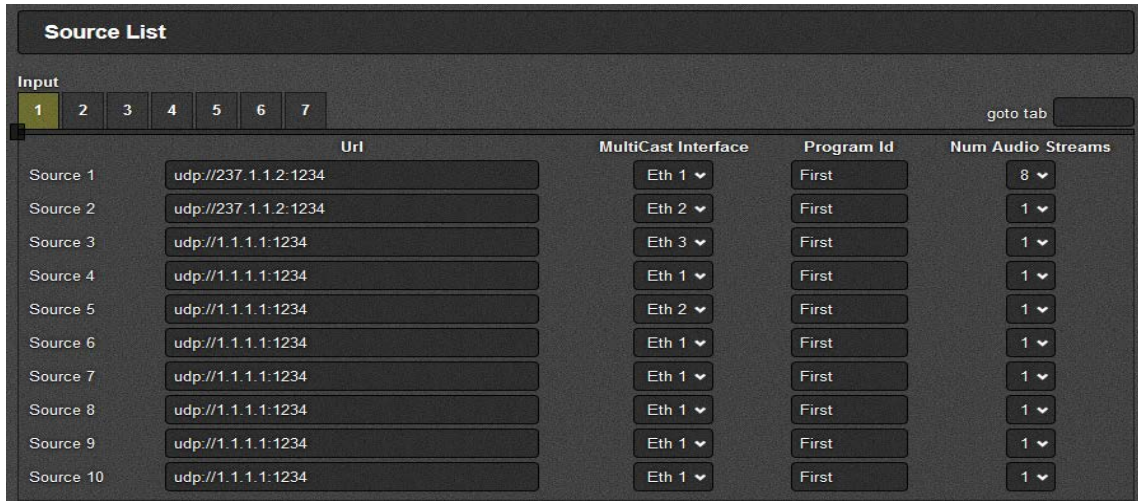


Figure 6-43 : Source Cycle Tab – Part 2

Source List

For the 64 inputs:

Url: This control is used to specify the multicast address for inputting on the source.

Multicast Interface: This control is used to specify the Ethernet port used for the source.

Program ID: This control is used to enter the Program ID on the stream.

Num Audio Streams: This control is used to specify the number of audio streams on the source.

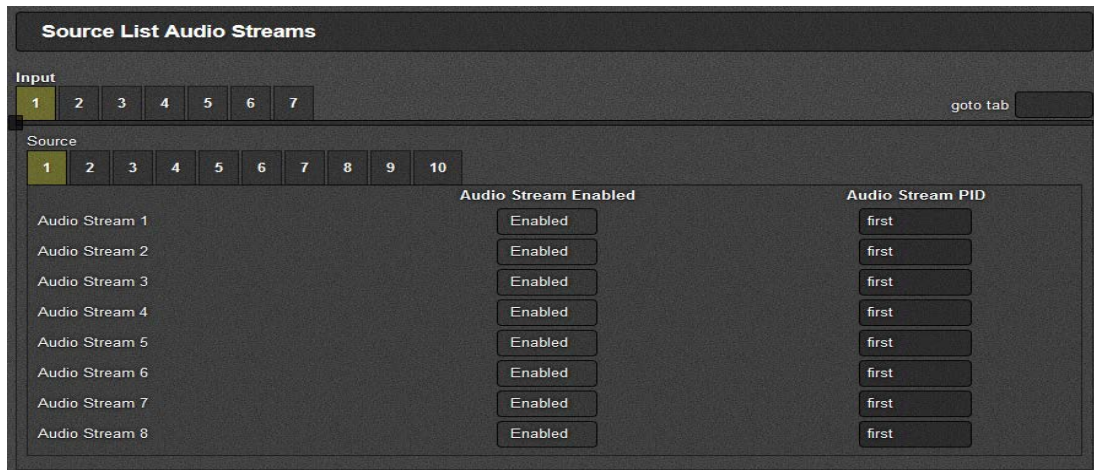


Figure 6-44 : Source Cycle Tab – Part 3

Audio Stream Enabled: This control allows the user to enable/disable Audio Stream.

Audio Stream PID: This field allows the user to enter the Audio Stream PID.

6.4.6. Umd Protocol

This option is used for tally as explained in Tally widget menu. See section 6.2.1.8.

This page left intentionally blank

7. WIDGET EDIT MODE

7.1. VIDEO WIDGET

Follow below steps:


- Go to Edit Mode
- Bring up the Redial Menu
- Open the Widget Setting by clicking the 
- Video Setting Sidebar will open as shown in Figure 7-1



Figure 7-1 : Video Settings Menu

7.1.1. Settings

Widget Name: This field allows the user to define a user friendly name of the video window widget.

Enable Mouse Clicks: This field allows video window to be sized full screen and sources to be changed in Operations Mode

Show Faults: This field allows the user to ON/OFF the toggles on screen faults.

7.1.2. Aspect Ratio

Lock Aspect Ratio: This field allows the user to lock video source to currently selected aspect ratio. It will maintain aspect ratio of the source when scaling the window larger or smaller.

Aspect Ratio: This field allows the user to choose aspect ratio of the video source. User can choose between native, 16:9 or 4:3 aspect ratios.

7.1.3. Video Crop

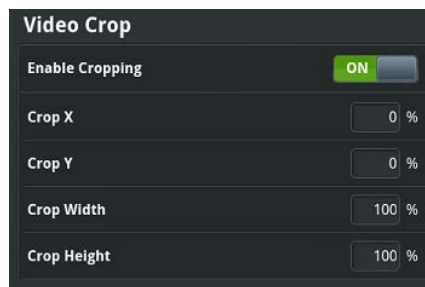


Figure 7-2 : Video Crop

Enable Cropping, When Enabled:

Crop X: Allows the input video image to be cropped horizontally by % of active horizontal pixels.

Crop Y: Allows the input video image to be cropped vertically by % of active vertical pixels.

Crop Width: Allows the horizontal width of the input video image to be cropped by % of active horizontal pixels

Crop Height: Allows the vertical height of the input video image to be cropped by % of active vertical pixels.

7.1.4. Border

This section allows the user to set the Color, Width and Style of video widget.

7.1.5. Source

This section allows the user to assign source to video widgets from inputs.

7.1.6. Size

This section allows the user to set the size of window by manually typing into width and height fields.

7.1.7. Background

This section allows the user to set the color. If video scaling is smaller than window size, that area will be filled with color.

7.1.8. Video Loss Settings

Video Loss Color: In case of video lost, selected color will be displayed on the screen.

Show Video Scrambled Message (ON/OFF): In case of video is scrambled whether to show “Scrambled Video” or not.

7.2. CLOSED CAPTIONING

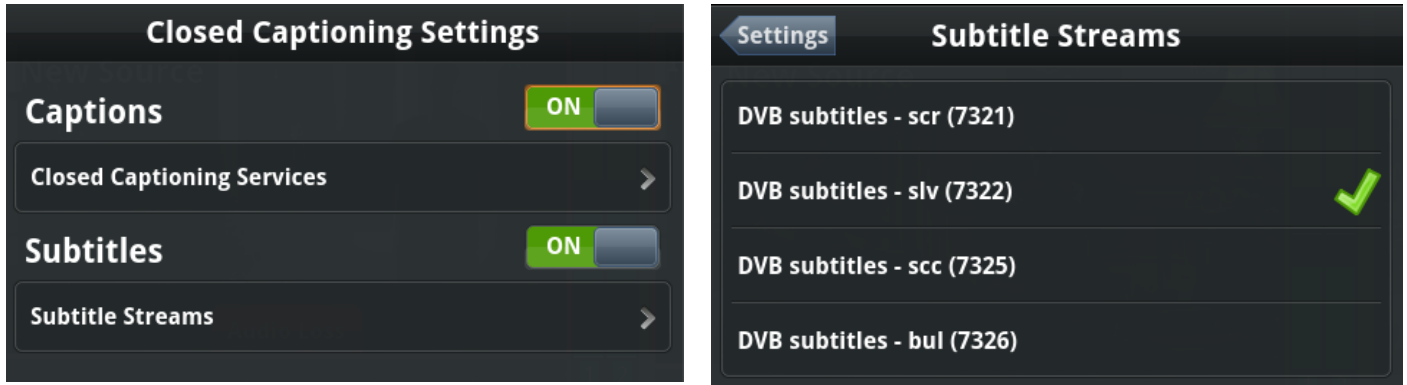


Figure 7-3 : Closed Captioning Settings Menu

This option enables the user to turn on and off Captions and Subtitles on the transport streams.

7.2.1. Captions

Captions: On/Off switch toggles Captioning on screen display service monitoring.

Closed Captioning Services: Interrogates all current captioning services present in current transport stream and lists them.

User can check off which service is to be monitored. If no captioning services are present, there is no data PID present.

7.2.2. Subtitles



Subtitles: On/Off switch toggles Subtitle (teletext, DVB) on screen display service monitoring

Subtitle Stream: Interrogates all current subtitle services present in current transport stream and lists them.

User can check off which service is to be monitored. If no subtitle services are present, there is no data PID present.

7.3. AUDIO WIDGET

Follow below steps:

- Go to Edit Mode
- Bring up the Redial Menu on Audio Bar 
- Open the Widget Setting by clicking the 
- Audio Setting Sidebar will open as in Figure 7-4

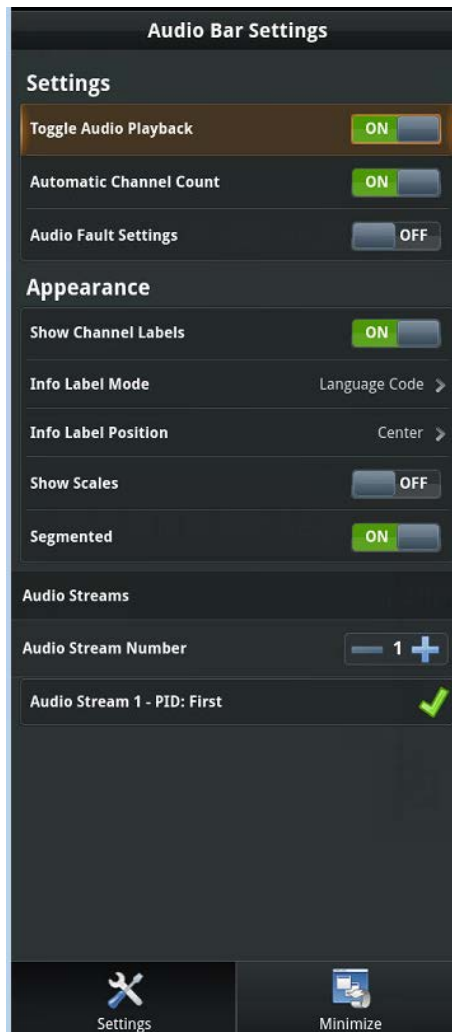


Figure 7-4 : Audio Bar Settings Menu

7.3.1. Audio Bar Settings

This menu allows the user to enable and disable different settings on the audio bars.

- Toggle Audio Playback
- Automatic Channel Count
- Audio Fault Settings
- Override Number of Channels
- Show Labels

- Show Scales

7.3.2. Appearance

Info label mode: This field allows the user to set the Info Label Mode. Possible options are None/Language Code/Language/PID.

Info label Position: This field allows the user to set the Info label Position. Possible options are Base and Center.

Segmented: ON/OFF

7.3.3. Audio Streams

Audio Streams Number: This field is used to map audio streams for the audio bar.

Audio Streams 1 – PID: First: This field allows the user to choose first audio PID for the audio bar.

7.4. BITRATE MONITORING

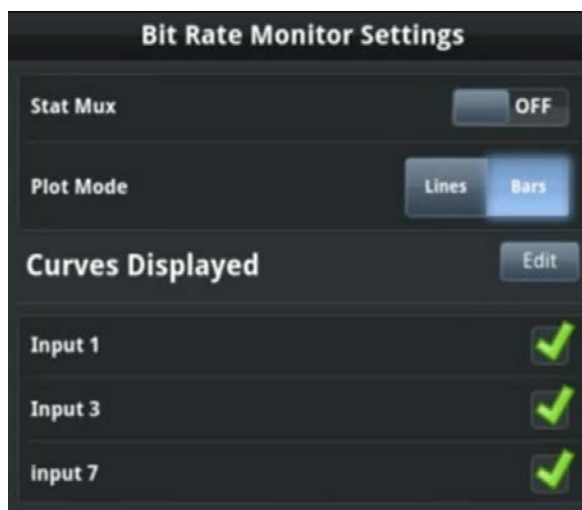


Figure 7-5 : Bit Rate Monitor Settings

Stat Mux: This field allows the user to ON/OFF statmux which monitors if bitrate all combined as one stream.

Plot Mode: This field allows the user to select Plot Mode which can be Line graph or Bar visualization.

Curves Displayed: This field allows the user to select as many inputs from added inputs.

7.5. STATMUX



The screenshot shows the 'Stat Mux Monitor Settings' interface. It is divided into several sections: 'Source Settings' with 'Scheme' (UDP/RTP), 'Host', and 'Port' (1234); 'IGMPv3 Settings' with a right arrow; 'Bandwidth' with 'Available Bandwidth' (50); and 'Included Data' with five toggle switches: 'Pid 8191 Visible' (OFF), 'Include Metadata' (ON), 'Include Data Streams' (ON), 'Include Subtitle Streams' (ON), and 'Include Audio Streams' (ON). The 'Include Video Streams' toggle is partially visible at the bottom.

Figure 7-6 : Stat Mux Monitor Settings

Scheme: This field allows the user to set the Multicast Protocol. The options are UDP and RTP.

Host: This field allows the user to set the IP address of multicast.

Port: This field allows the user to set the Port number.

IGMPv3 Settings: This field allows the user to set the block list of multicast or list of multicast that we need to add in.

Available Bandwidth: This field allows setting the Maximum Bandwidth available for this StatMUX.

Include Data: This field allows the user to set which information to show by include/exclude them.

7.6. FAULT WIDGET

This widget is a fault monitoring area that can be assigned to any video source window; used to visually view active faults.

It is possible to organize faults in different areas on the VIP depending on preference, priority of fault, type of fault etc by utilizing multiple fault widgets per video source.

7.6.1. Fault Window Settings

Widget Name: User friendly name for widget.

Active Faults: This menu allows the user to configure which faults will cause the widget to become active or in a faulting state.

7.6.1.1. Active faults Menu

This menu allows the user to configure which faults will cause the fault widget to become in an active state or faulting state when triggered.

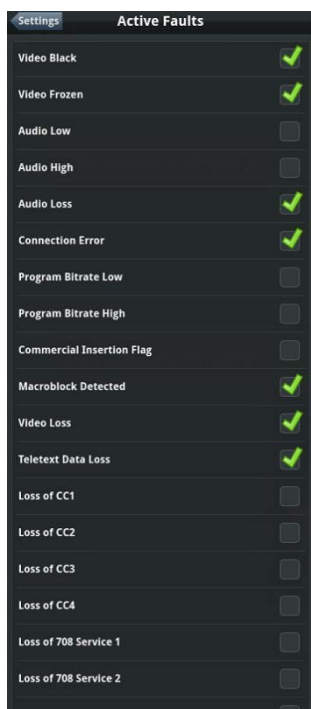


Figure 7-7 : Active Faults Menu

7.7. TALLY WIDGET

The Tally Widget allows integration with external VGPI triggers over IP. User can utilize these triggers to control the tally widgets externally for custom integrations, or integrating MViP-II into a production tally

system. Each tally widget has 3 selectable states triggered by individual VGPI's. Each of these 3 states should be assigned a specific color. MViP-II is capable of assigning VGPI's 1-99 to the tally widgets.



Figure 7-8 : Tally Settings

Enabled: On/off switch toggles the tally active state. When it is off, VGPI's won't trigger the state.

VGPI: Allows the user to set a unique VGPI ID to each of the 3 states

Background Colour: This field allows setting the default Colour of the Active tally state.

7.8. GRAPHIC WIDGET



Figure 7-9 : Graphic

Select Image: Allows selecting a graphic image from the MViP-II image library

Keep Aspect Ratio: Maintains original aspect ratio of the image to prevent stretching.

7.8.1. Border:

Colour: This field allows setting the color of the outer border of widget.

Width: This field allows the user to set the width of border in pixels.

Style: This field allows the user to set the Style of border. Options are none, solid, dashed, and dotted border decorations.

7.8.2. Background:

Colour: This field allows setting the color of the widget's background.

This page left intentionally blank

8. WEB INTERFACE

By opening an HTML 5 compatible web browser such as Google chrome (recommended) and typing <http://ipaddressofmvip> user will enter the web interface

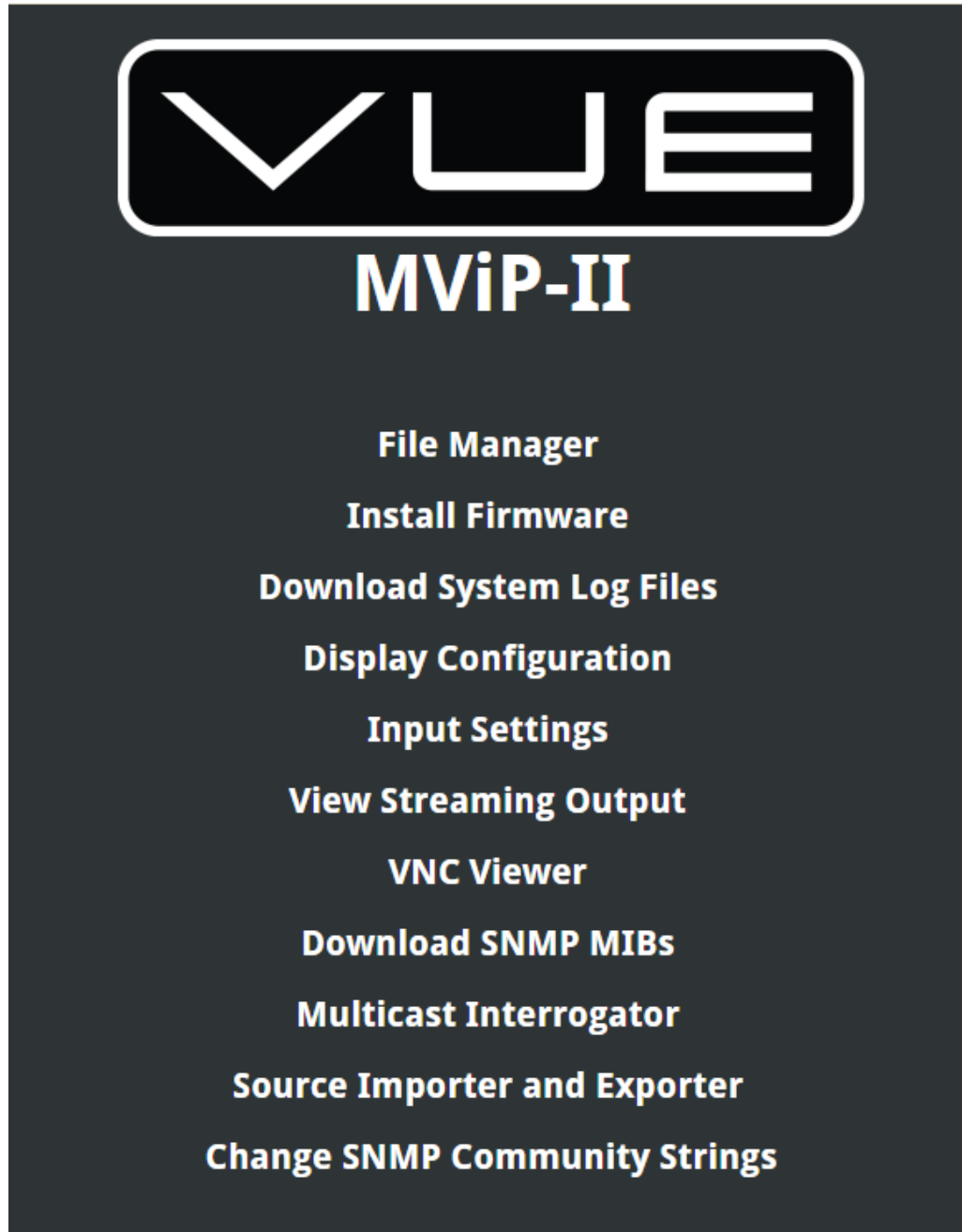


Figure 8-1 : MViP-II Main Menu

8.1. MViP-II MAIN MENU

8.1.1. File Manager

The file manager interface allows an easy user interface to the MViP-II's file system.

Name	Permissions	Modified	Size	File Type
AV	read and write	Today 02:26 PM	0 b	Folder
crash_dumps	read and write	Today 11:25 AM	0 b	Folder
images	read and write	Today 09:47 AM	0 b	Folder
layouts	read and write	Today 12:26 AM	0 b	Folder
src_cycle	read and write	Apr 21, 2016 12:12 AM	0 b	Folder
videos	read and write	Today 03:10 PM	0 b	Folder
config.ini	read and write	Today 12:34 AM	3 KB	Plain text
display_1.xml	read and write	Today 03:49 PM	225 KB	XML document
display_2.xml	read and write	Today 03:49 PM	42 KB	XML document
layouts.xml	read and write	Apr 08, 2016 06:14 PM	384 b	XML document
license.key	read and write	Apr 10, 2016 03:23 PM	128 b	Plain text
models.xml	read and write	Today 03:49 PM	1013 b	Plain text
mvi2_trapinks.xml	read and write	Today 12:26 AM	61 b	Plain text

Here user can Upload/Download:

- Layouts
- Images including icons, graphics, and backgrounds
- Configuration Files

8.1.2. Install firmware

This will allow the user to install new MViP-II firmware directly from web interface. Details are provided in section 3.3.1.

vue Firmware Installer

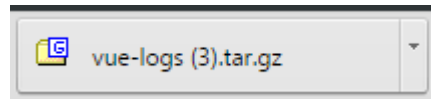
Current Version: 1.25.0-rc2-dev20160427~c525baf

1. Click the 'Browse' button to select the firmware to install.
2. Click the 'Install' button to start the install.

No file chosen

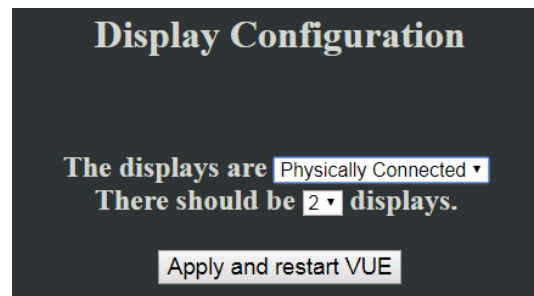
8.1.3. Download system log Files

If MViP-II encounters problems, Evertz may ask to download a copy of the system log files for debugging. BY clicking this link, a complete copy of these logs is downloaded directly from web browser. Then user can forward them to Evertz for debugging.



8.1.4. Display Configuration

This Link allows you to configure display outputs.



8.1.5. Input settings

This menu provides access to a configurable subsystem of MViP-II configuration settings that can be accessed via web interface.

8.1.6. View streaming Output

If MViP-II unit is licensed with **+ENC** option, this menu will provide access to a web player compatible with an HTML5 web browser such as Google Chrome to view the HLS encoded Mosaic output of the MViP-II when configured for HLS streaming. Details are provided in “Viewing HLS output from MViP-II Webpage” section.



8.1.7. VNC Viewer

This section allows the user to VNC into MViP-II unit.



NOTE: The VNC Viewer will only be available if the +ENC option is available and the encoded output settings for both displays have been configured.

8.1.8. Download SNMP MIBs

This section allows the user to download latest SNMP MIBs from this page.

8.1.9. Multicast Interrogator

This section allows the user to interrogate multicast from this page.

8.1.10. Source Importer and Exporter

This section allows the user to download Source File (.csv) using Exporter. After modification, the source file can be imported. The imported modified source file (.csv) won't take effect until VUE is restarted.

8.1.11. Change SNMP Community String

This section allows the user to change SNMP community strings (Public and/or private).

8.2. INPUT SETTINGS

The Input settings subsystem allows the user to configure source and input parameters on MViP-II through the web interface without the need to do the same in UI or via SNMP.

To Login to the MViP-II server, type “**root**” for username and “**evertz**” for password respectively.

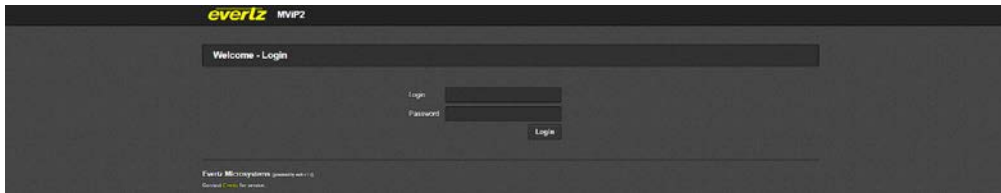


Figure 8-2 : WebEASY® - MViP-II Login Menu

8.2.1. General Settings

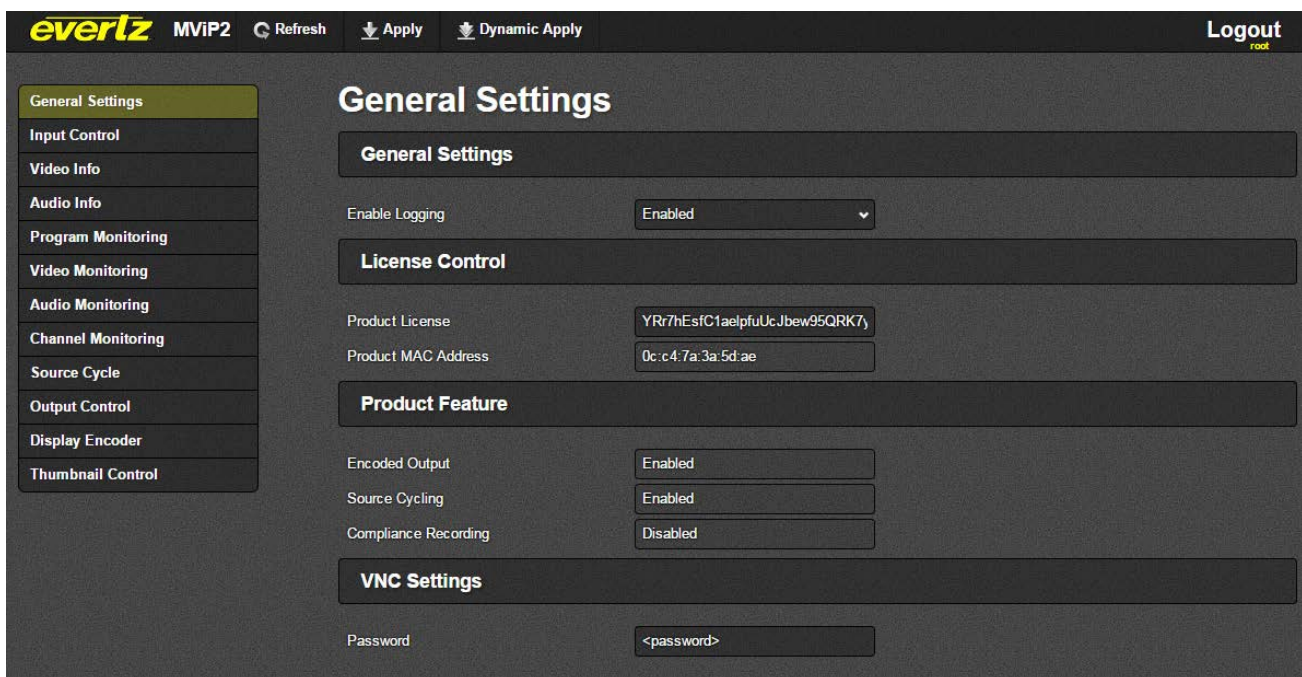


Figure 8-3 : WebEASY® - General settings

General Settings

Enable Logging: This field allows the user to Enables/Disable the internal syslog server.

License Control

Product License: This field allows the user to apply a feature license to the MViP-II server.

Product Mac Address: This field displays the MAC address of the Product.

Product Features

Encoded Output: This field indicates if this feature is currently licensed.

Source Cycling: This field indicates if this feature is currently licensed.

Compliance Recording: This field indicates if this feature is currently licensed.

VNC Settings

VNC Password: This field allows the user to set a password to the VNC server.

8.2.2. Video Info

This menu displays video program information for each of the 64 configurable video inputs.

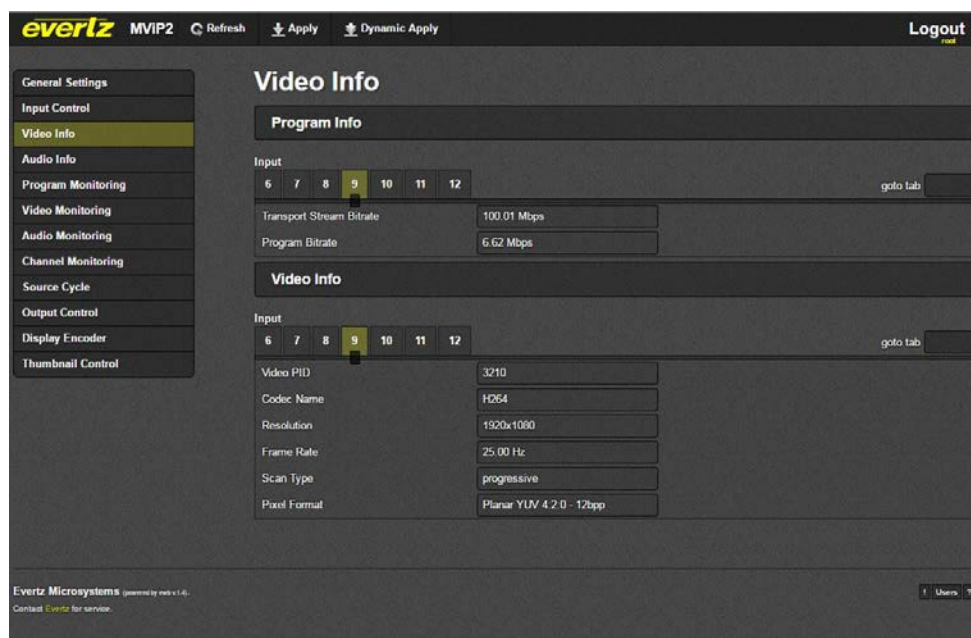


Figure 8-4 : WebEASY[®] - Video Info

Program Info

Input: Indicates the input slider controls selection of sources 1-64.

Transport Stream Bitrate: This field indicates the total bitrate of the subscribed transport Stream.

Program Bitrate: This field indicates the total Bitrate for the currently subscribed program.

Video Info

Video PID: This field displays video program ID.

Codec Name: This field displays video codec detected.

Resolution: This field displays detected video frame size.

Frame Rate: This field indicates detected video frame rate.

Scan Type: This field indicates detected Scan type which can be Interlaced or Progressive.

Pixel Format: This field indicates detected format of Pixel sampling.

8.2.3. Audio Info

This section provides Audio information of each one of the configurable audio sources.

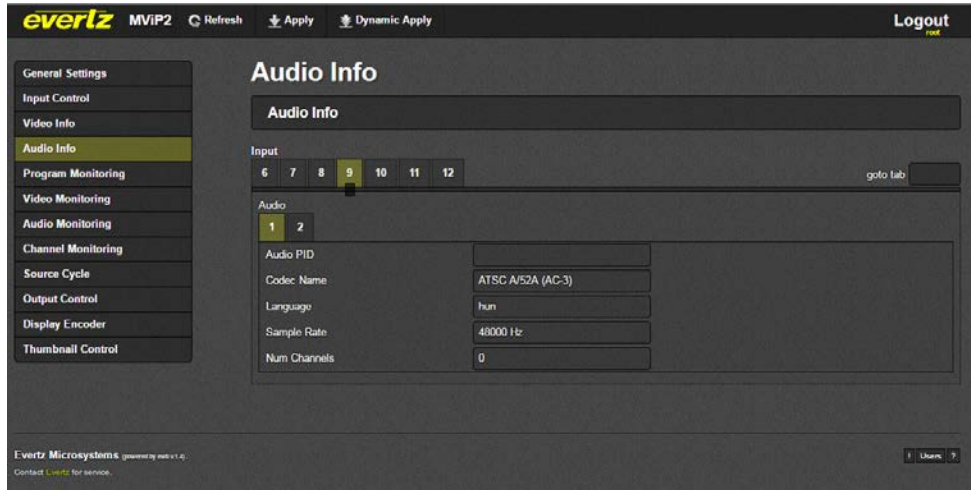


Figure 8-5 : WebEASY® - Audio Info

Audio Info

Input slider: This section allows all configurable inputs 1-64 to be selected.

Audio tabs: This section shows settings for each of the 8 configurable audio services per Input.

Audio PID: This field shows subscribed audio Program ID.

Codec Name: This field indicates the name of detected audio codec.

Language: This field displays detected Language.

Sample Rate: This field indicates sample rate of audio.

Num Channels: This field indicates the number of detected audio channels.

8.2.4. Program Monitoring

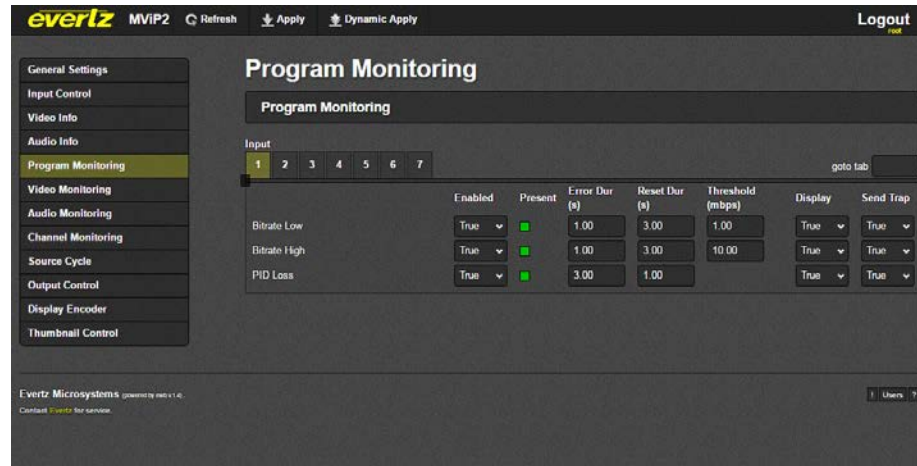


Figure 8-6 : WebEASY® - Program Monitoring

Input slider: This section allows all configurable inputs 1-64 to be selected.

Bitrate Low: This section allows the user to configure the bitrate low alarm settings.

Bitrate High: This section allows the user to configure bitrate high alarm settings.

PID Loss: This section allows the user to configure the PID loss alarm settings.

8.2.5. Video Monitoring

This Menu allows for user to configure all Video Monitoring settings that are available through the MViP UI.



Figure 8-7 : WebEASY® - Video Monitoring

Video Black: This field allows the user to configure Video Black detection alarm settings.

Video Loss: This field allows the user to configure Video Loss alarm settings.

DVB Subtitle loss: This field allows the user to configure DVM subtitle loss alarm settings.

SCTE27 Subtitle Loss: This field allows the user to configure SCTE27 subtitle Loss alarms.

Teletext Data Loss: This field allows the user to configure Teletext Data loss alarms.

Loss of CC 1-4: This field allows the user to configure closed captioning service 1-4 alarms.

Loss of 708 Services 1-16: This field allows the user to configure Closed Captioning 708 service alarms.

8.2.6. Audio Monitoring

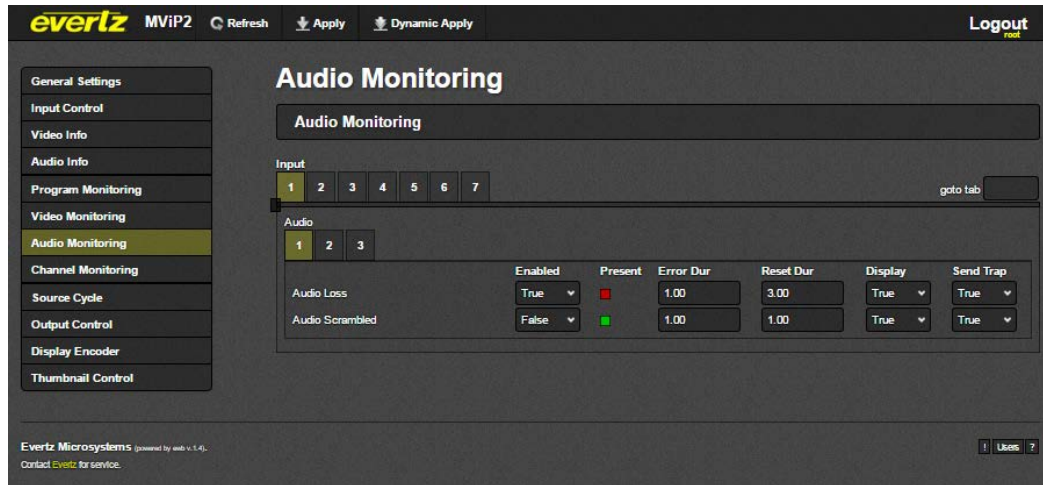


Figure 8-8 : WebEASY® - Audio Monitoring

Input slider: This section allows selecting all configurable inputs 1-64.

Audio tabs: This field indicates the settings for each of the 8 configurable audio services per Input.

Audio Loss: This section allows the user to configure Audio Loss settings can be configured here.

Audio Scrambled: This section allows the user to configure audio scramble detection settings.

8.2.7. Channel Monitoring

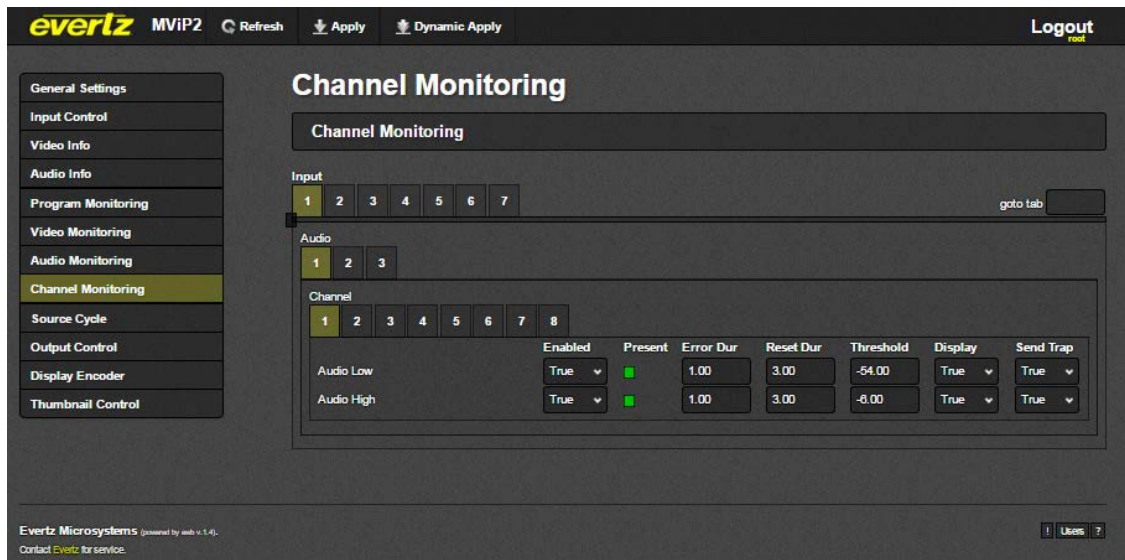


Figure 8-9 : WebEASY® - Channel monitoring

Input slider: This section allows all configurable inputs 1-64 to be selected

Audio tab: This field shows settings for each of the 8 configurable audio services per Input.

Channel tab: This Tab represents each individual audio channel of the selected audio service.

Audio Low: This section allows the user to configure audio low channel settings

Audio High: This field allows the user to configure audio high channel settings.

8.2.8. Source Cycle (+CCA)

The source cycling controls allow the user to enable one or more inputs to allow cycling of up to 10 sources per channel.

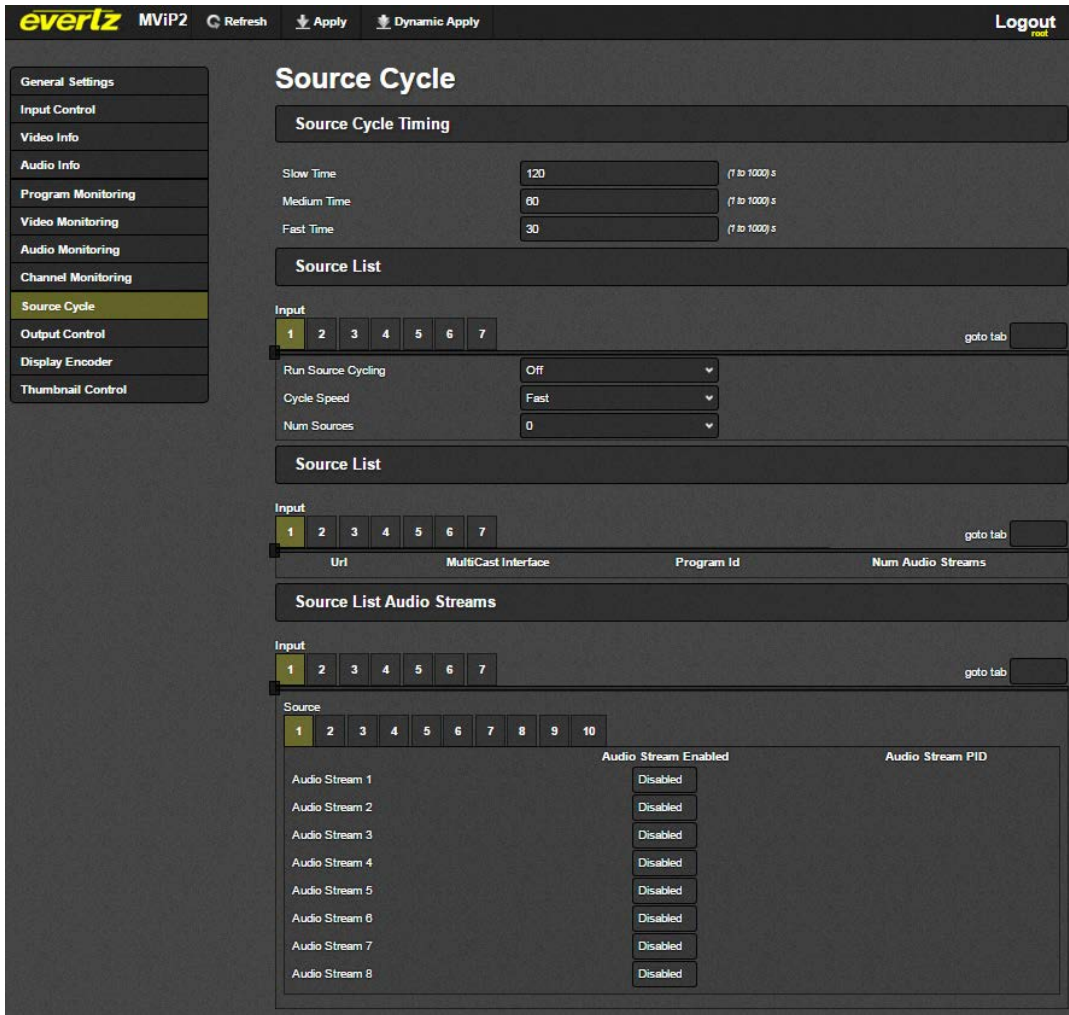


Figure 8-10 : WebEASY® - Source Cycle - Part 1

Source Cycle Timing

These settings are used to set the cycling interval speed duration in *seconds*. There are three user configurable presets labeled Slow, Medium or Fast. Each source can be assigned one of the 3 presets depending on the speed of cycling desired.

Depending on the number of sources in the cycle, the amount of time for switching between the sources will change.

Source List

For the 64 inputs

Run Source Cycling: This control is used for enabling/disabling source cycling. If not enabled, the source selected in the Input Control will be used.

Cycle Speed: This control is used to select the cycle speed. Options are Slow, Medium and Fast as configured in the Source Cycle Timing section.

Num of Sources: This control is used to set the number of sources for the source cycle on the input and used for configurations in the Source List section. Maximum of 10 sources can be cycled on each input

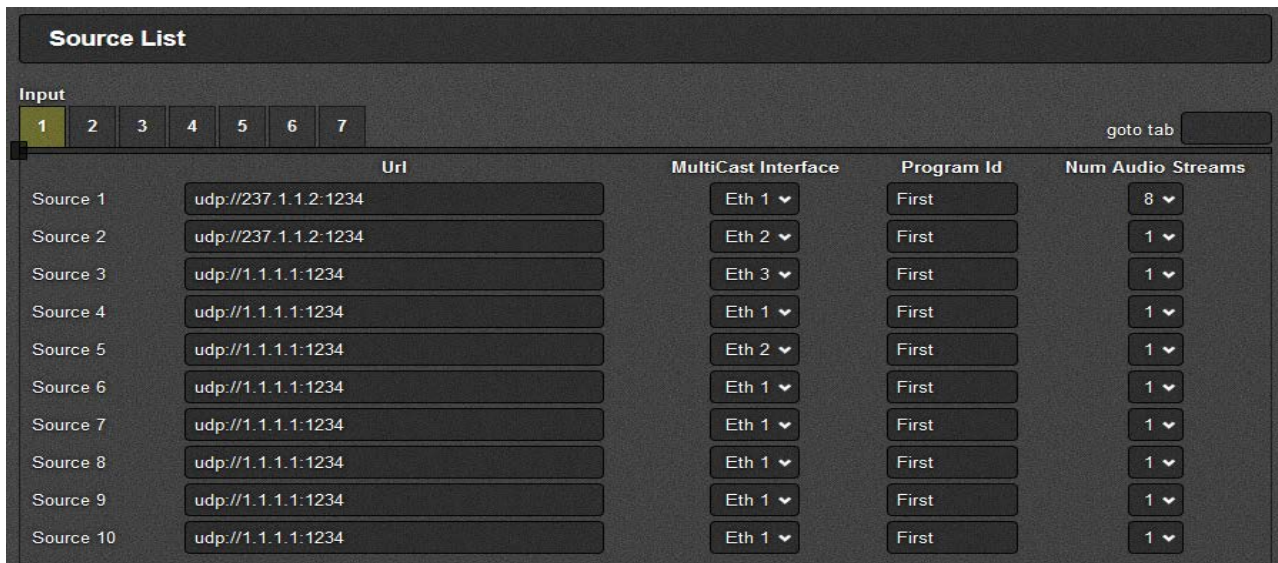


Figure 8-11 : WebEASY® - Source Cycle Tab – Part 2

Source List

For the 64 inputs:

Url: This control is used to specify the URL/multicast address for the input source.

Multicast Interface: This control is used to specify the Ethernet port used for the source.

Program ID: This control is used to enter the Program ID of the stream.

Num Audio Streams: This control is used to specify the number of audio streams for the source.

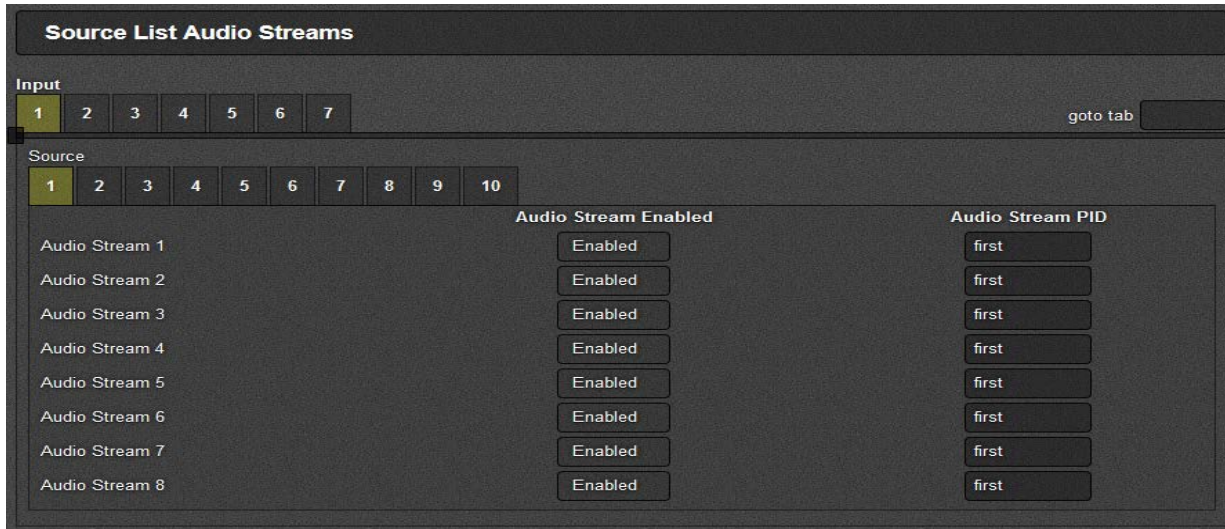


Figure 8-12 : WebEASY® - Source Cycle Tab – Part 3

Source List Audio Streams

For the 64 inputs:

Source Selection 1-10: This section allows audio monitoring controls for each of the 10 possible cycling URL/multicast addresses that can be set.

Audio Stream Selection 1-8: Each cycling address is capable of monitoring 8 audio services at once.

Audio Stream Enabled: This status shows the user which services are enabled for audio monitoring. To enable a service, change num audio streams in source cycle tab.

Audio Stream PID: This is the program ID of the audio stream to be monitored.

8.2.9. Output Control

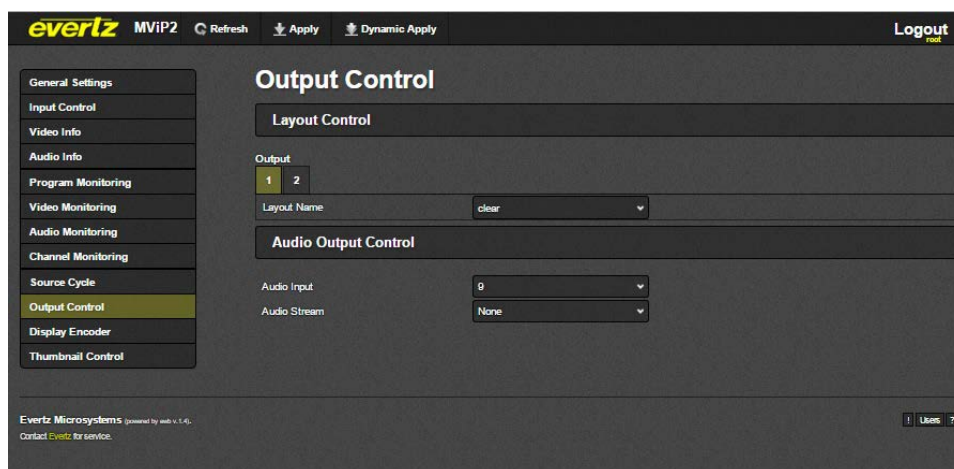


Figure 8-13 : WebEASY® - Output Control

Output Tabs: This section allows the user to select controls for output 1 or 2.

Layout Name: This field allows the user to select a current layout to load on each input. A list will be provided with currently saved layouts.

Audio input: This dropdown allows the user to select the source input of the audio channel to be monitored externally.

Audio Steam: This dropdown allows the user to select an available audio service of the selected source to be monitored.

8.2.10. Display Encoder (+ENC)

When +ENC option is licensed, the display encoder settings can be configured in this menu.

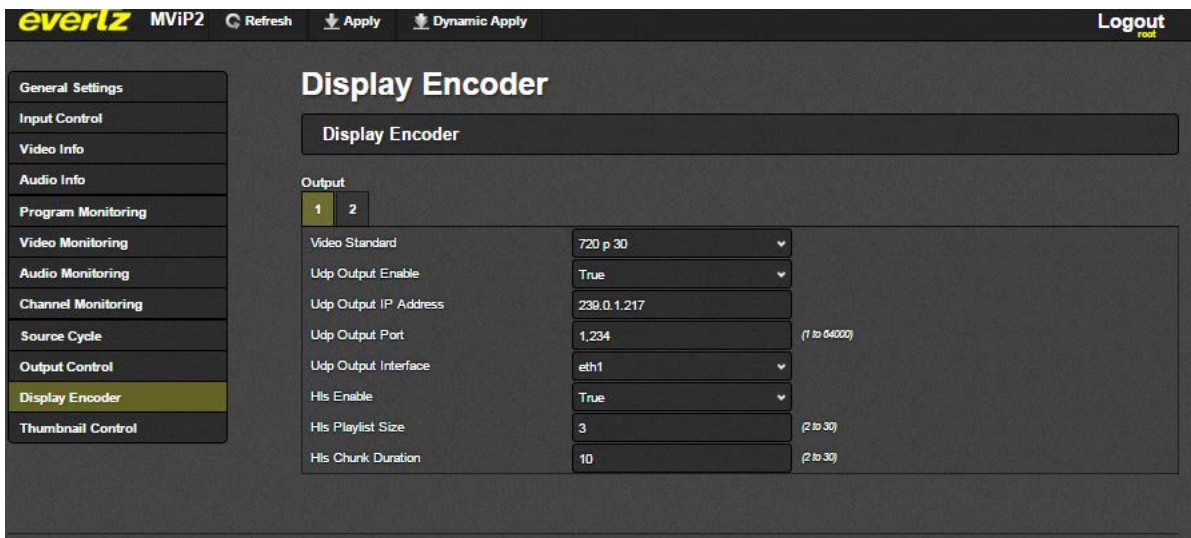


Figure 8-14 : WebEASY® - Display Encoder (+ENC option)

Output Tab: This section allows the user to select encoded Output 1 or Output 2

Video Standard: This dropdown allows the user to set the desired standard of the output encoder.

UDP Output Enable: This dropdown allows the user to enable UDP TS output of the encoder.

UDP Output IP Address: This field allows the user to set the multicast/unicast IP address of the UDP output encoder.

UDP Output Port: This field allows the user to define the specified port number or the UDP output encoder.

UDP Output Interface: The specified physical interface that UDP output encoder will stream from.

HLS Enable: This field allows the user to enable the HLS (HTTP Live Streaming) output of the output encoder.

HLS Playlist Size: This field allows the user to set the number of chunks (segments) available to the playlist at one time.

HLS Chunk Duration: This field allows the user to set the time duration of each chunk (segment) in seconds.

8.3. THUMBNAIL CONTROLS

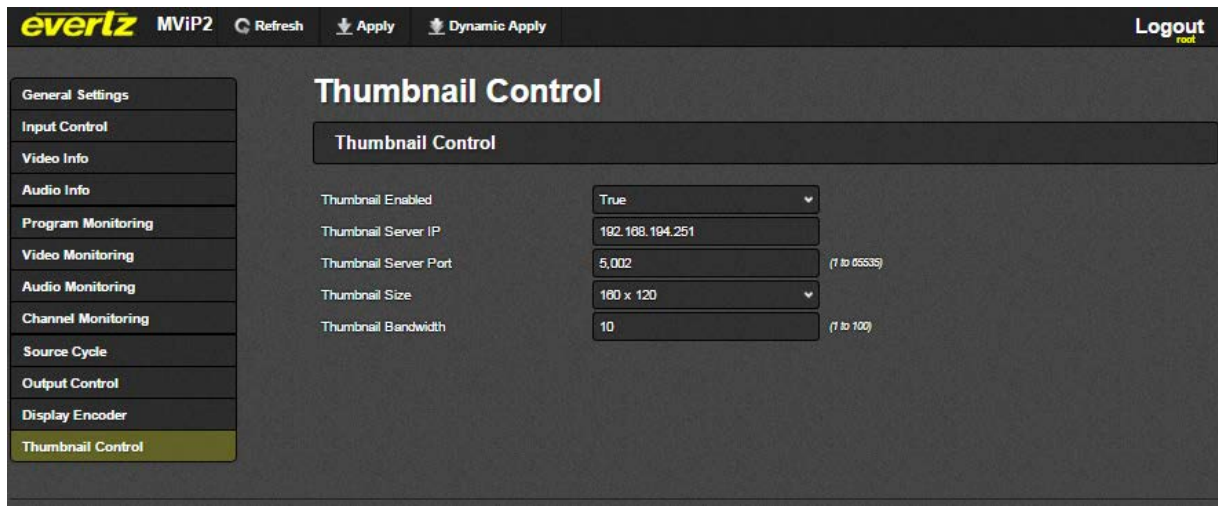


Figure 8-15 : WebEASY® - Thumbnail Control

Thumbnail Control

Enable Thumbnail: This dropdown allows the user to set the Thumbnail as True or False. This will toggle thumbnail sending on/off.

Thumbnail Server IP: This field allows the user to set the IP of the Vistalink Pro Thumbnail server.

Thumbnail Server Port: This field allows the user to set the thumbnail port number of the Vistalink Pro server.

Thumbnail Size: This dropdown allows the user to set the size of thumbnail image to send.

Thumbnail Bandwidth: This field allows the user to send the total bandwidth used by the thumbnail stream in Mbps.

9. FAULT DEFINITIONS

Connection Error: This system fault will appear if a connection to the desired multicast address or HTTP address cannot be made.

Video Black: This fault is triggered when the decoded frame is considered black.

- **Error Duration Control (Frames):** The error duration control specifies how many frames that will be detected as black consecutively before the detection fault is triggered.
- **Reset Duration Control (Frames):** The Reset Duration control specifies how many consecutive frames will be detected as not black before the fault is cleared.
- **Threshold Control:** The threshold controls how many pixels may be non-black in the decoded frame. It is the non-black tolerance level.
 - A Value of 0% means all pixels must be black to trigger a fault (Strict Case).
 - A Value of 50% means that half of the pixels must be black to trigger a fault.
 - A Value of 100% means that no pixels need to be black to trigger a fault (Relaxed Case)

Video Frozen: This fault is triggered when two consecutive frames have no motion. The motion is decided using the threshold and comparing changes between the two frames.

Error Duration (Frames): The Error Duration control specifies how many pairs of frames that will be detected as frozen consecutively before the detection fault is triggered.

Reset Duration (Frames): The Reset Duration control specifies how many pairs of frames that will be detected as frozen consecutively before the detection fault is cleared.

- **Threshold Control (percentage):** The threshold controls how much motion or changes are accepted before triggering a fault.
 - A Value of 0% means consecutive frames must have no motion changes to trigger a fault (Strict Case).
 - A Value of 50% means that half of the frame may change or move to trigger a fault.
 - A Value of 100% means that consecutive frames may have any motion change and trigger a fault (Relaxed Case).

Video loss: This Fault is triggered when a connection is made to the Input stream but no elementary video frames have been decoded successfully.

- **Error Duration (Seconds):** The error duration controls how many seconds of video loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of successful video decode must pass before the fault is cleared.

DVB Subtitle loss: This Fault is triggered when no valid DVB subtitles are decoded. Independent faults are triggered for each subtitle service monitored.

- **Error Duration (Seconds):** The error duration controls how many seconds of DVB subtitle loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid DVB subtitle decodes must pass before the fault is cleared.

SCTE 27 Subtitle Loss: This Fault is triggered when no valid SCTE 27 subtitles are decoded. Independent faults are triggered for each subtitle service monitored.

- **Error Duration (Seconds):** The error duration controls how many seconds of SCTE 27 subtitle loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid SCTE 27 subtitle decodes must pass before the fault is cleared.

Teletext Bitrate loss: Teletext Bitrate Loss is triggered when the bitrate of the teletext data stream is not detected.

- **Error Duration (Seconds):** The error duration controls how many seconds of teletext bitrate loss must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid teletext bitrate must elapse before the fault is cleared.

Teletext Data Loss: This Fault is triggered when no valid Teletext subtitle data is decoded. Independent faults are triggered for each Teletext service monitored.

- **Error Duration (Seconds):** The error duration controls how many seconds of Teletext subtitle loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid Teletext subtitle decodes must pass before the fault is cleared.

Loss of Closed captioning CC1-Cc4: This Fault is triggered when no valid Closed Captioning CC1-CC4 services are decoded.

- **Error Duration (Seconds):** The error duration controls how many seconds of CC1-CC4 loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid CC1-CC4 decodes must pass before the fault is cleared.

Loss Of 708 Service 1-16: This Fault is triggered when no valid Closed Captioning 708 services 1-16 are decoded.

- **Error Duration (Seconds):** The error duration controls how many seconds of 708 services 1-16 loss state must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid 708 Service 1-16 decodes must pass before the fault is cleared.

Video Scrambled: This fault will trigger if video is detected scrambled or encrypted.

- **Error Duration (Seconds):** The error duration controls how many seconds of video that is detected scrambled must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid unscrambled video must pass before the fault is cleared

Bitrate Low: This Fault is triggered when the bit rate of the stream falls below a set threshold in mbps.

- **Error Duration (Seconds):** The error duration controls how many seconds of bitrate below specified threshold that must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of bitrate above specified threshold that must pass before the fault is cleared

Threshold (Mbps): The threshold is the target bit rate value. This applies to all decoded streams from the source.

Bitrate High: This Fault is triggered when the bit rate of the stream rises above a set threshold.

- **Error Duration (Seconds):** The error duration controls how many seconds of bitrate below specified threshold that must pass before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of bitrate above specified threshold that must pass before the fault is cleared.

PID Loss: If video program ID (PID) is missing in the input transport stream the PID Loss fault will trigger.

- **Error Duration (Seconds):** The error duration controls how many seconds of that video PID is detected as missing must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of valid video PID detection must elapse before the fault is cleared

Commercial Insertion Flag: This fault will be triggered when MViP-II receives a SCTE-35 commercial insertion flag. The fault will trigger when each flag is received.

Audio Loss: Audio loss is detected when no valid audio data can be decoded.

- **Error Duration (Seconds):** The error duration controls how many seconds of audio that cannot be decoded must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of audio that cannot be decoded must elapse before the fault is cleared.

Audio Scrambled: If audio is detected as scrambled or encrypted then the audio fault will trigger.

- **Error Duration (Seconds):** The error duration controls how many seconds of audio that is detected as encrypted must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of audio that is detected as encrypted must elapse before the fault is cleared.

Audio low: This Fault is triggered when the dBFS value of the audio channel monitored falls below a set dBFS threshold. Audio Low alarms can be configured on each audio channel monitored.

- **Error Duration (Seconds):** The error duration controls how many seconds of audio detected below the set threshold must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of audio detected above the set threshold must elapse before the fault is cleared.

Threshold (dBFS): The threshold is the target Decibel Full Scale value

Audio high: This Fault is triggered when the dBFS value of the audio channel monitored rises above a set dBFS threshold. Audio Low alarms can be configured on each audio channel monitored.

- **Error Duration (Seconds):** The error duration controls how many seconds of audio detected above the set threshold must elapse before the fault is triggered.
- **Reset Duration (Seconds):** The error duration controls how many seconds of audio detected below the set threshold must elapse before the fault is triggered.

This page left intentionally blank

10. CONFIGURING SETTINGS WITH LEGACY FIRMWARE

10.1. LEGACY NETWORK SETTINGS METHOD

To set IP Address settings on MViP-II:

7. Press CTRL+ALT+F2 to access local terminal command line
8. Login to Configshell (username: admin / password: admin)

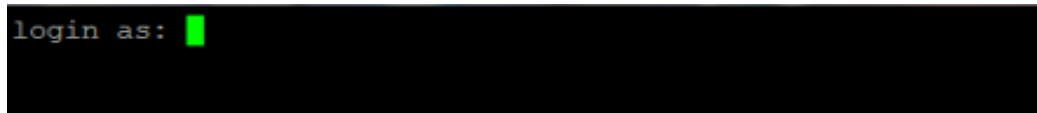


Figure 10-1 : Server Configuration Login

9. Navigate to **Network Configuration**> eth0, eth1, eth2, eth3 (control port, data ports 1 to 3)

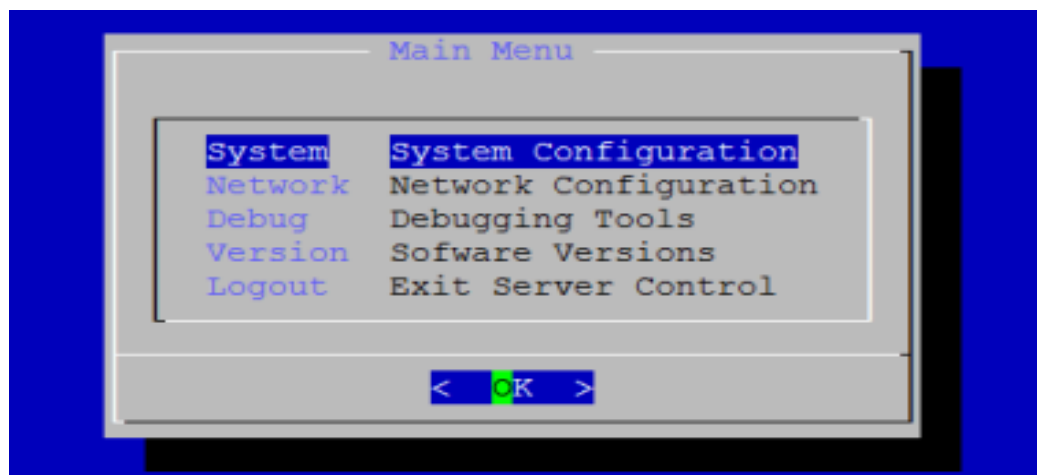


Figure 10-2 : Configuration Menu

10. Enter in the IP Address settings for all ports used, navigate to bottom and select "Save and Apply".
11. User will be prompted to enter a password to confirm these settings. Type "admin". The interfaces will configure automatically

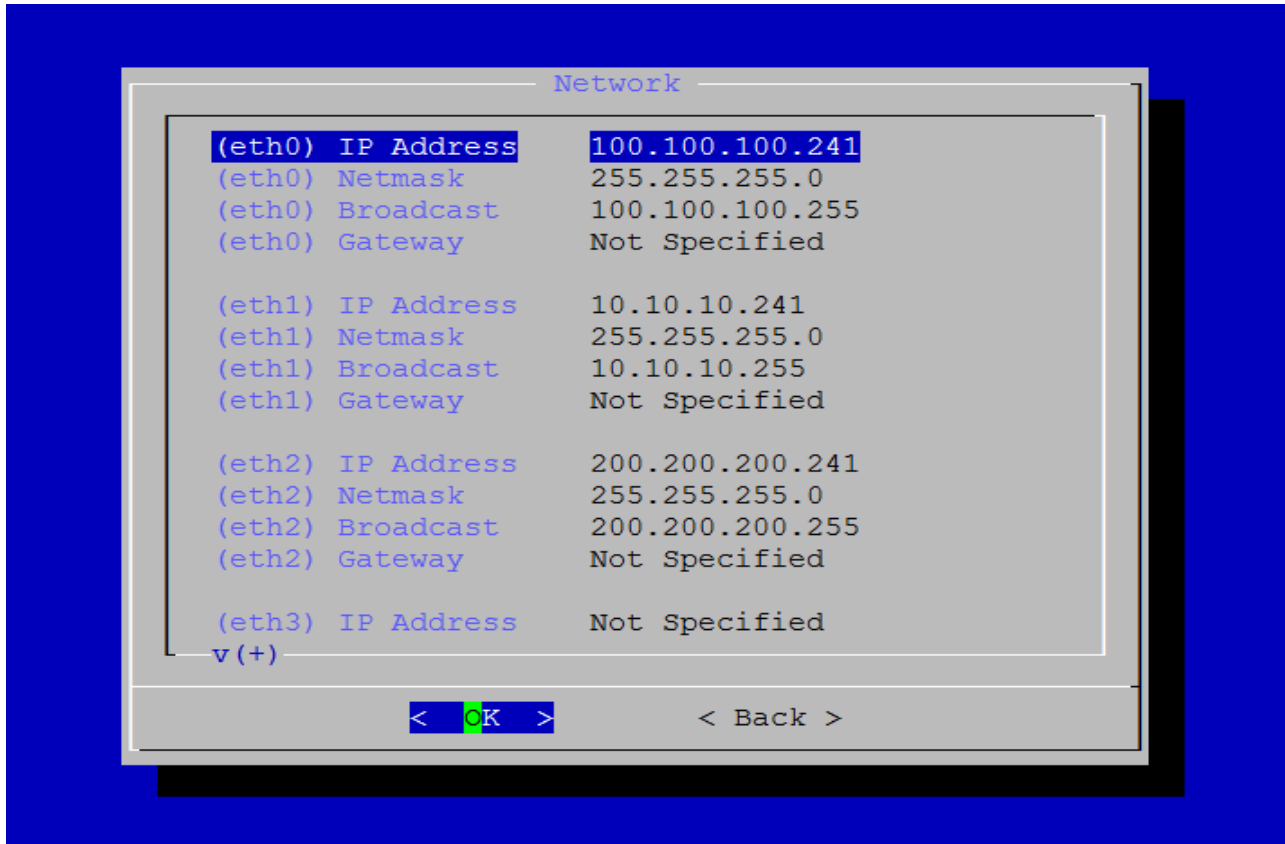


Figure 10-3 : Network Configuration Menu

12. Confirm network communication to eth0 of the MViP-II unit from a remote computer (ping the IP address).
13. Navigate to **Back > Logout**.

10.1.1. Multicast Interface



NOTE: These steps must be followed in order to receive multicast to the interfaces.

Specify which Ethernet port will be the primary port to receive multicast data, eth1 usually is default. This will not affect ability to receive streams on eth2 or eth3.

- Login to Configshell
- Navigate to "Network", scroll down and select **Multicast Interface**
- Select an interface, select "Save and Apply"
 - Default interface is set to **eth1**

10.2. LEGACY METHOD TO UPGRADE FIRMWARE USING WINSCP AND PUTTY SSH

- Download WinSCP from <http://winscp.net/eng/index.php> and PuTTY software from <http://www.chiark.greenend.org.uk/~sgtatham/putty/>
- Install it on the PC from where you can ping the MVIP unit. Run WinSCP, Host name = IP address of MVIP, User name and Password = “**mvip**”, protocol can be **SCP or SFTP**.



NOTE: If the MVIP is running default configuration the User Name = “mvip” and password = “mvip”.

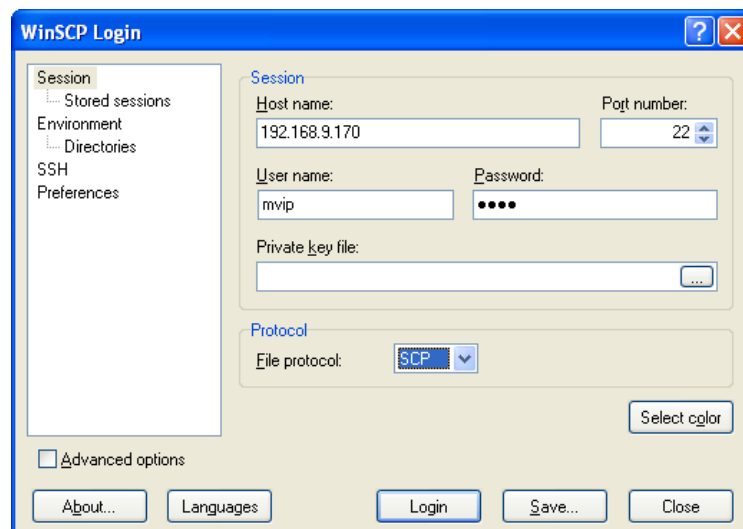


Figure 10-4 : WinSCP Login

- Copy the .efp file to the MVIP default directory.
- Run the PuTTY program. Enter the IP address of the unit in the **Host Name** field.

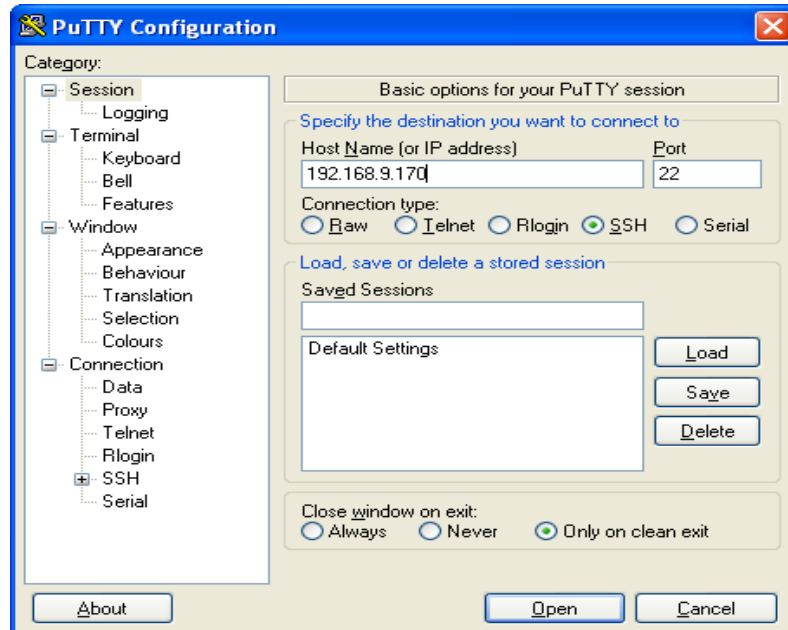


Figure 10-5 : PuTTY Configuration

12. Login is “**mvip**” and password is “**mvip**”.

13. Type the following command: “**sudo efpinstall <firmware file name>**”

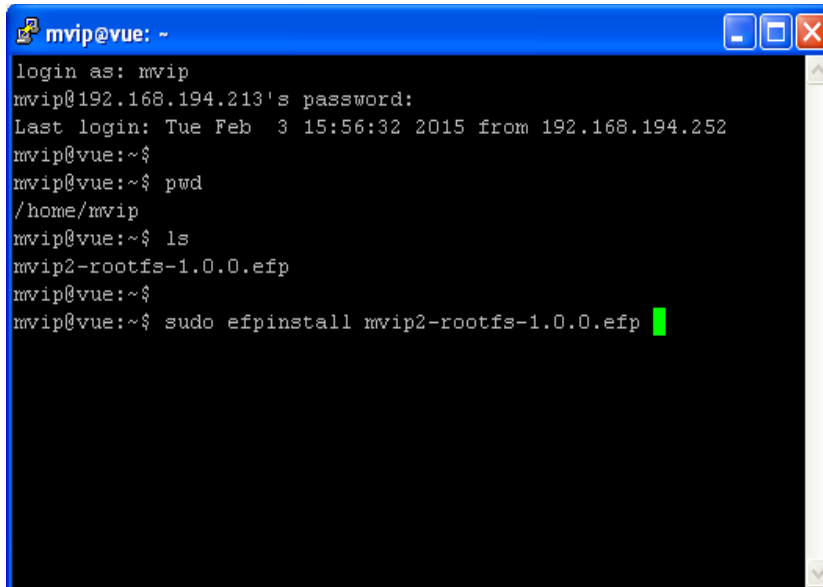
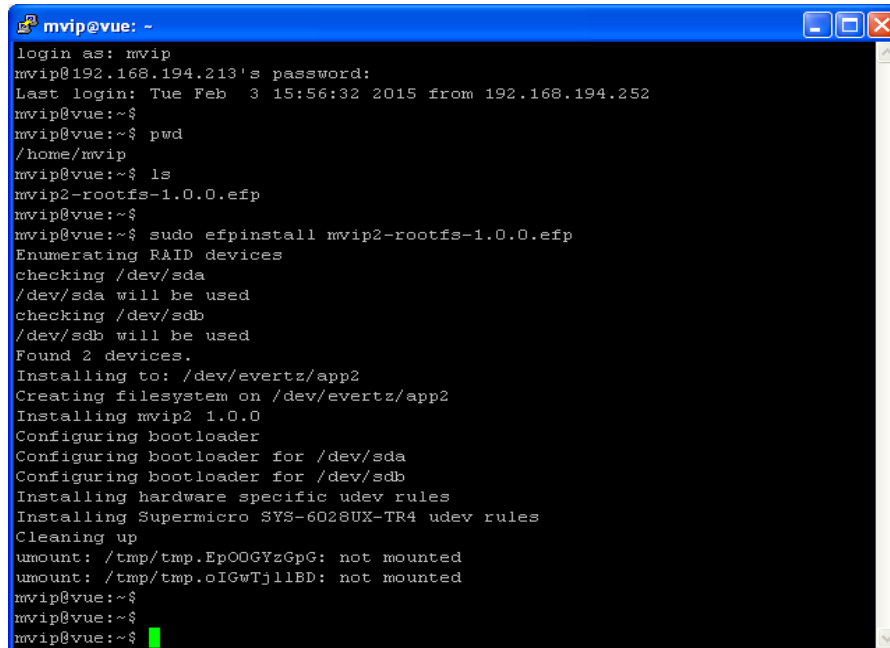


Figure 10-6 : PuTTY Configuration

14. When the following appears, reboot the MViP.



```
mvip@vue: ~  
login as: mvip  
mvip@192.168.194.213's password:  
Last login: Tue Feb  3 15:56:32 2015 from 192.168.194.252  
mvip@vue:~$  
mvip@vue:~$ pwd  
/home/mvip  
mvip@vue:~$ ls  
mvip2-rootfs-1.0.0.efp  
mvip@vue:~$  
mvip@vue:~$ sudo efpinstall mvip2-rootfs-1.0.0.efp  
Enumerating RAID devices  
checking /dev/sda  
/dev/sda will be used  
checking /dev/sdb  
/dev/sdb will be used  
Found 2 devices.  
Installing to: /dev/evertz/app2  
Creating filesystem on /dev/evertz/app2  
Installing mvip2 1.0.0  
Configuring bootloader  
Configuring bootloader for /dev/sda  
Configuring bootloader for /dev/sdb  
Installing hardware specific udev rules  
Installing Supermicro SYS-6028UX-TR4 udev rules  
Cleaning up  
umount: /tmp/tmp.EpOOGYzGpG: not mounted  
umount: /tmp/tmp.oIGwTj1lBD: not mounted  
mvip@vue:~$  
mvip@vue:~$  
mvip@vue:~$
```

Figure 10-7 : PuTTY Configuration

End Of Document