

VIDEO WALLS VIDEO PROCESSORS VIDEO MATRIX SWITCHES EXTENDERS SPLITTERS WIRELESS CABLES & ACCESSORIES

IP CONTROLLER FOR M SERIES WITH DUAL CAT5e/6 AND IPAD CONTROL









Model #: CTRLPRO-MIP

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Product Application & Market Sectors



Corporate



House Of Worship



Military



Residential



Education



Industrial



Medical



Aviation



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For a full detailed list of API Commands please visit Avenview Product website and Download API Commands for CTRL-MIP Controller



SECTION I: GETTING STARTED

I.I IMPORTANT SAFEGUARDS

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
- Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
- Repair or attempted repair by anyone not authorized by us.
- Any damage of the product due to shipment.
- Removal or installation of the product.
- External causes to the product, such as electric power fluctuation or failure.
- u se of supplies or parts not meeting our specifications.
- Normal wear and tear.
- Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 SAFETY INSTRUCTIONS

The Avenview CTRLPRO-MIP, IP Controller function has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the CTRLPRO-MIP should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- ⚠ Do not dismantle the housing or modify the module.
- ⚠ Dismantling the housing or modifying the module may result in electrical shock or burn.
- A Refer all servicing to qualified service personnel.
- ⚠ Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- keep the module away from liquids.
- ⚠ Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- ⚠ Have the module checked by a qualified service engineer before using it again.
- ⚠ Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



1.3 REGULATORY NOTICES FEDERATION COMMUNICATIONS COMMISSION (FCC)

This equipment has been tested and found to comply with part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

Warning symbols

Description



ONLY USE THE PROVIDED POWER CABLE OR POWER ADAPTER SUPPLIED. DO NOT TAMPER WITH THE EI ECTRICAL PARTS. THIS MAY RESULTS IN ELECTRICAL SHOCK OR BURN.



DO NOT TAMPER WITH THE UNIT. DOING SO WIII VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.



THE VIDEO BOARDS ARE VERY SENSITIVE TO STATIC.
PLEASE ENSURE IF RACK MOUNTED OR INSTALLED ON
A SURFACE, IT SHOULD BE IN A GROUNDED
ENVIROMENT.



AWARNING

Read & understand user guide before using this device.

Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.

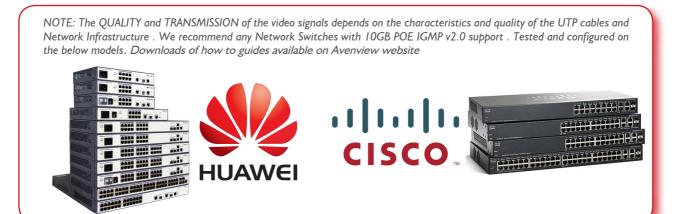
2. INTRODUCTION

The Avenview CTRLPRO-MIP, IP Controller simply provides communication to our M Series and third party controllers to communicate Telnet and RS-232 commands to automate high definition video and high quality audio to multiple screens. This device can be accessed from a WEB Browser and allow control commands to Avenview Video IP solution allowing connection by the following:

- -Point to Multi- Point with CAT5/6 requires a Managed/Unmanaged Network Switch (Cisco SG300 & SG500 series or Huawei S2700) which supports port based IEEE 802.1 VLAN, IGMP v2.0 or above protocol.
- -Matrix Function with CAT 5/6 cable without any signal loss add multiple Sources to multiple RX which links via LAN by cascading Managed Ethernet switches up to 3 levels, to the Rx connected to the HD Monitors at different locations on the Network. Transporting Full HD 1080p video and internally JPEG video compression adapts to available network bandwidth if needed while retaining vivid picture with 5.1 PCM audio.

Videowall Function with CAT 5/6 cable without any signal loss add multiple Sources to multiple TX and RX to the HD displays to achieve a Multi Input videowall configuration. The device ensures flexibility within any videowall design, layout and configuration. Its modular design allows example 1x2 ,2x2 3x3 up to 16x16. Easily controlled via the Control Software to manage and setup the bezel, input and configuration of the Videowall.

The CTRLPRO-MIP controller has the ability to communicate via telnet or RS232 from third party control systems such as Crestron ,Amx, and Control 4 to perform matrix switching and videowall fucntionality with auto detect function of unlimited number of TX/RX devices.





2.1 PACKAGE CONTENTS

Before you start the installation of the IP Controller, please check the package contents.

I	CTRLPRO-MIP	ХΙ	And the state of t
2	POWER ADAPTER (12V DC 1A)+ Detachable Plug	ΧI	
3	Phoenic Connector (Male, 3.5mm, 6 pins)	ΧI	
4	Mounting Ears	X 2	
5	USER MANUAL	ХΙ	Described in the control of the cont

2.2 BEFORE INSTALLATION

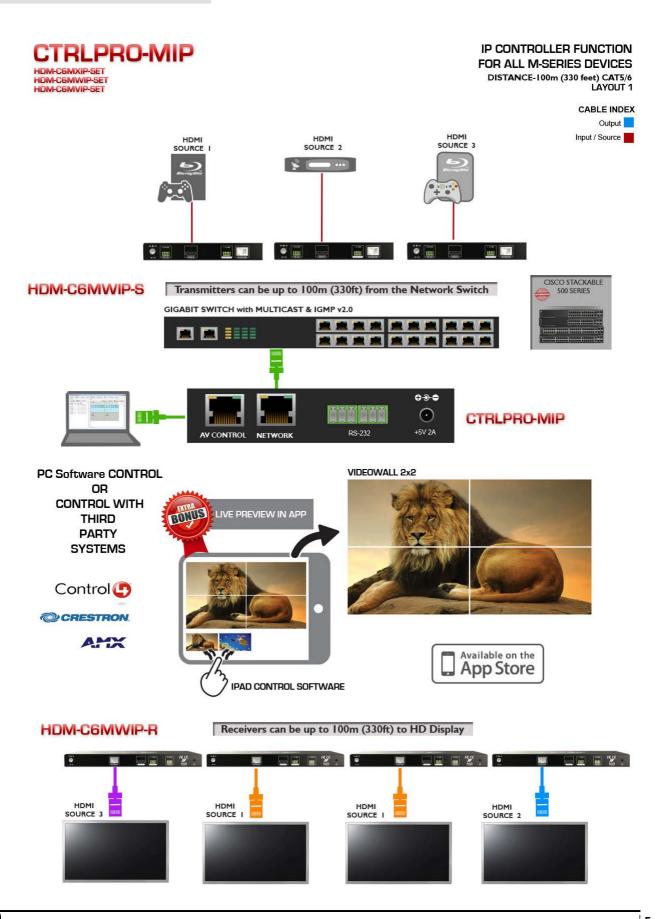
- Put the product in a level and stable location. If the product falls, it may cause damage or malfunction to components within the casing.
- Do not place the product in temperatures under 0°C or over 50°C. High humidity may also cause the unit to malfunction.
- Use the DC power adapter with correct specifications supplied with the unit. If the improper power supply is used, this may result in malfunction of the unit and may cause fire.
- Do not twist or pull by force the ends of the UTP cable. It will cause malfunction.

NOTE

The QUALITY and TRANSMISSION of the video signals depends on the characteristics and quality of the UTP cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/upto 300m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.



2.3 APPLICATION DIAGRAM

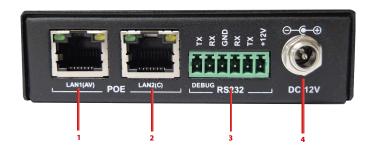


2.4.1 FRONT PANEL (CTRLPRO-MIP)



IP LABEL INSERT: Space reserved for IP Label	2. STATUS LED: BLUE LED: IP Controller is connected OFF: IP Controller is off or rebooting
3. POWER INDICATOR: Red LED Indicates if the unit is ON or OFF	4. RESET: Rest unit to factory default. Use a pin to hold down the reset button for 5 seconds while unit is powered on (all saved custom data will be lost)

2.4.2 REAR PANEL (CTRLPRO-MIP)



VI	V LAN (POE): Connects to the same switch/ LAN as the M-Series Senders and Receivers. reen Link LED: IP Controller is actively communicating with a	2.	CONTROL LAN: Connect to the same Switch/ VLAN as the Control System and configuring PC's
ne A r	etwork. mber Acitivity LED: Blinks while IP controller connected to etwork.		It is recommended to power the IP controller using either a power adapter or a PoE switch. Not using both power sources at the same time.
- 1	RS 232: Connects to RS 232 device (PC) for debugging and upgrading	4.	POWER JACK: Connect to supplied power adapter



3. INSTALLATION (CTRLPRO-MIP)

To setup Avenview CTRLPRO-MIP please follow these steps for connecting to a device:

- 1. Turn off all devices including monitors / TV
- 2. Connect a HDMI source (such as a Blu-Ray Disc player or PC) to the Sender of HDM-C6MXIP-SET or HDM-C6MWIP-SET
- 3. Connect IR Blaster to device if applicable to the source IR Eye and 3.5mm male to TX
- 4. Connect CAT5/6 from TX to RX CAT5/6 port of HDM-C6MXIP-SET or HDM-C6MWIP-SET
- 5. Connect IR Receiver to device if applicable to any visible surface and 3.5mm male to RX
- 6. Ensure all cable connections are secure and not loose
- 7. Plug in 12V DC power adapter (supplied)
- 8. Power on HDMI Source
- 9. Power on the HDMI display

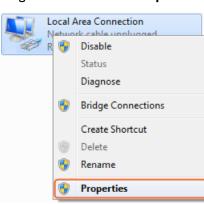


3.1 ACCESSING THE CTRLPRO-MIP WEB INTERFACE

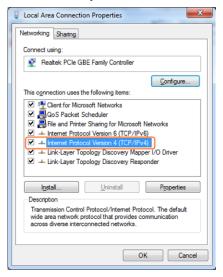
Make sure all devices are connected to the network and powered up.

NOTE If you receive a 'server unavailable' system message after entering this address into your browser, ensure your PC is on the same subnet as the CTRLPRO-MIP box by following these steps:

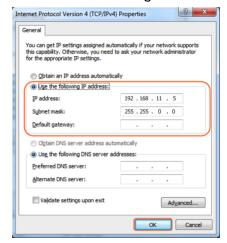
Click Start menu, go to Control
 Panel >
 Network and Sharing center >
 Change Adapter Settings >
 Local Area Connection.
 Right click and choose Properties.



2. Highlight Internet Protocol Version 4 (TCP/IPv4) then click Properties



3. Check Use the following IP address, for the IP address enter 192.168.11.x (if unsure use 192.168.11.5) Enter subnet mask number 255.255.0.0 Click OK, then click OK again.



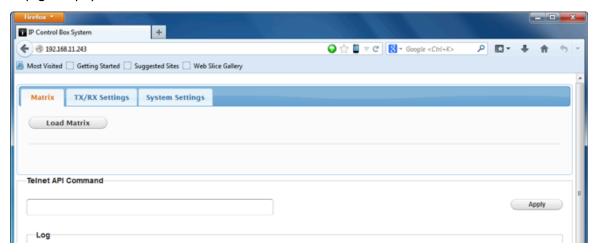
4. Return to your browser and try entering the default IP again (192.168.11.243)

4. BASIC OPERATION

4.1 Matrix Switching Commands

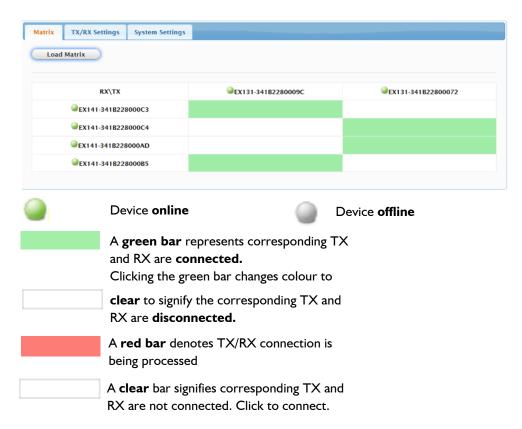
Tabs at the top of the Home Screen page are used to access settings for Matrix, TX/RX Settings and System Settings.

All pages display Telnet API boxes where commands can be entered from the CTRLPRO-MIP API.



Click the Load Matrix button, a table of devices will appear with TX units across the top and the RX down the left side.

Press the "empty box" that links each TX & RX to test switching of the video to each RX. Devices with names starting with EX131 are transmitters where as devices that start with EX141 are receivers.



To remove unwanted offline TX or RX units from the scene use the 'X' icon next to its name in the matrix or use the API command: **config set device remove name** (name is the alias or the device number).



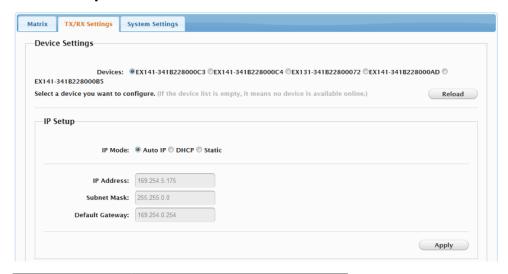
4.2 Setup TX/RX Settings

The TX/RX Settings section enables IP settings and alias of each TX and RX to be configured as well as rebooting the system and factory resetting the devices.

Get started by selecting the device to be configured from the list displayed and configure options as below:



4.3 IP Setup



GUI Element	Description
Auto IP	Obtain IP address automatically
DHCP	IP address assigned by DHCP server
Static	IP address manually configured
IP Address	IP address of TX/RX
Subnet Mask	Subnet mask of TX/RX
Default Gateway	Default gateway of TX/RX.

Encoder Setup

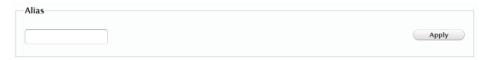




GUI Element		Description	
	CBR	Constant Bit Rate - Best used in systems where bandwidth is limited and must match exactly the calculated amount.	
Rate Control	VBR	Variable Bit Rate - Best used for optimal quality/bandwidth usage trade off	
Trace Control	FixQP	Fixed Quantization Parameter - QP is an index used to derive a scaling matrix. Quantization in an H.264 encoder is controlled by a quantization parameter, QP, that ranges from 0 to 51.	
Avg Bitrate		The bitrate that the encoder will inject into the network	
Profile		The H.264 standard defines a sets of capabilities, which are referred to as profiles, targeting specific classes of applications.	
H.264 Baseline Profile		Primarily for applications that require low latency and additional data loss robustness, this profile is most suited for use in video conferencing applications.	
H.264 Main Profile		This profile is best used where a compromise between latency and quality is required.	
H.264 High Profile		This profile is useful particularly for high-definition/high quality applications where latency is not a concern.	
GOP: Group of Pictures		The GOP is a group of successive pictures within a coded video stream. From the pictures contained in it, the visible frames are generated. The higher the value the higher the image quality.	
FPS: Frames Per Second		The FPS rating is used to set the frequency at which the encode captures the video stream. The higher the value the higher the image motion quality.	
Transport Type		RAW transmits the H.264 bit stream without any container information. TS wraps the bit stream in an MPEG2 container. There is no difference in quality between the two settings.	

4.4 Alias

Alias' can be used in conjunction with API commands to simplify and shorten programming.



GUI Element	Description
Alias	Rename TX/RX alias for easier identification and use from API commands

Note: Alias cannot contain any of the following symbols or combinations of letters/numbers: ',' ';' '_' '@', '*', '&', 'EX131', 'EX363', 'EX373', 'EX383', 'EX393', 'TX', 'EX141', 'EX403', 'RX'



4.5 Commands



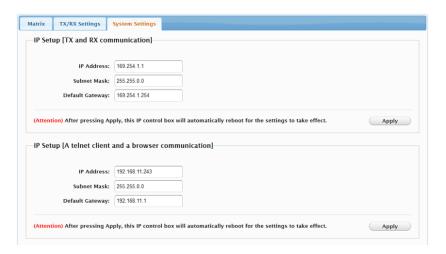
GUI Element	Description
Factory Default	Restore TX/RX to factory default settings
Reboot	Reboot TX/RX

4.6 System Settings

System Settings contains the settings for the IP control box, it features two separate network connections for communication with RX/TX devices and communication with the PC/control system.

Each setting must be on the same subnet as other devices to enable communication between all devices.

The default Auto IP setting is recommended for RX & TX communication - devices will use Bonjour to discover each other.



4.7 IP Setup (TX and RX Communication)



GUI Element	Description
IP Address	IP address for TX and RX communication
Subnet Mask	Subnet mask for TX and RX communication
Default Gateway	Default gateway for TX and RX communication

4.8 IP Setup (Telnet/Browser communication)





GUI Element	Description
IP Address	IP address for Telnet client and web
Subnet Mask	Subnet mask for Telnet client and web
Default Gateway	Default gateway for Telnet client and web

4.9 Web Password



GUI Element	Description	
Web Password	Login password for Web UI management page	
Default password	"admin" can be used to restore to factory settings if the user password is unknown	

4.10 Debug Log



NOTE: Debug files can only be used with the guidance of AVENVIEW support.

5. IP CONTROL GUIDE

This setup guide gives a brief introduction on how to use the CTRLPRO-MIP to configure common settings such as Matrix switching on HDM-C6MXIP and HDM-C6MWIP Set, device upgrade and account management.

5.1 Configuring Scenes

This setup guide gives a brief introduction on how to use the CTRLPRO-MIP to configure common settings such as Matrix switching on HDM-C6MXIP and HDM-C6MWIP Set, device upgrade and account management.



GUI Elements	Description
Scenes	Click Scenes tab opens a table page where you
	can perform matrix switching controlling RX's and TX's.
All Devices	Displays all the TX/RX and home matrix switching page.
	Selects predefined scenes created on the PC configurator
Wall-c_1x2 (or similar	(HDMI over IPConsole) allowing matrix switching, video wall
tabs followed)	layout switching and video wall source switching. Note: We
abs followed)	recommend that you name a scene without "+" in PC
	configurator.
Matrix	Click it to display the matrix switching page.
Scene 1, 2 and 3	Indicates three preset options saved for future scene call.



5.2 Matrix Switching

Using Home Matrix Switching Page

Press the box that links each TX/RX to test switching of the video to each RX. Devices with names starting with IPE are TX's whereas devices that start with IPD are RX's.

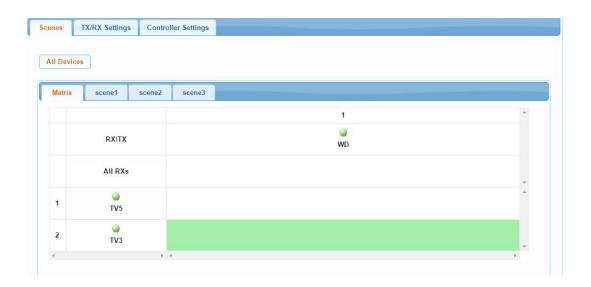
Using External Imported Scenes

- 1. Click a scene tab next to All Devices tab such as wall 1-c 1x2.
- 2. Choose a view mode such as Matrix and Screen.
- 3. Perform matrix switching. To use previous setting, go to step 4.
 - Matrix view mode: Press the box that links each TX/RX to test switching of video to each RX. Devices with names starting with IPE are TX's whereas devices that start with IPD are RXs.

Note:

RX in the left column refers to a combination of all RX's in video wall, it allows switching a source for this specific video wall.

Screen view mode: drag and drop each TX from the Transmitters list to each RX in the screen tiles of the Receivers list to test switching of video to each RX. To remove TX/RX link relationship go to Matrix page under All Devices tab and click on the green tile box to unlink devices.



4. Click Apply.

Internal Preset Scenes

- 1. Click a preset scene tab next to **Matrix** tab such as **scene I**.
- 2. Press the box that links each TX/RX to test switching of the video to each RX. Device with names starting with IPE are TXs where as devices that start with IPD are RXs. To use previous setting, go to step 3.
- 3. Click Apply.

5.3 Managing Accounts

Web configuration page offers administrator and common user accounts. The unique administrator **admin** can perform all tasks in the web configuration page. You can assign a common user role that limits which tasks the user can perform, for example, by allowing them only to perform matrix switching and to control video wall.

Changing Password for Administrator User

- 1. Log in to the web configuration page.
- 2. Click Controller Settings tab.
- 3. Go to User Management area.
- 4. For Administrator User, enter a new password.
- 5. Click Save.

Changing User Name and Password for Common User

- 1. Log in to the web configuration page.
- 2. Click Controller Settings tab.
- 3. Go to **User Management** area.
- 4. For **Common User List**, enter a new username and a new password.
- 5. Click Save.





5.4 Updating IP Controller

- 1. Log in to the web configuration page.
- 2. Click Controller Settings tab.
- 3. Go to **Software Upgrade** area.
- 4. Click Browse for Web Module to choose a local upgrade file such as SC009web v5.0.7.p1.bin.
- 5. Click **Browse** for **Adapter Module** to choose a local upgrade file such as **gbcmd_v5.0.7.p2**.
- 6. Click **Upgrade** to follow the on-screen instructions to complete the upgrade process.



Other functions:

- Configure IP controller, such as IP settings, system restore, reboot, shutdown, reset, version view.
- Configure TX/RX, such as IP settings, reboot and reset.
- Click a TX/RX to change its name in matrix switching page.
- API command input area.
- Log area recording the device operation and communication information.

6. INSTALLATION REFERENCE LOG

I.	HDM-C6MXIP-R	II. HDM-C	C6MXIP-R	III.H	HDM-C6MWIP-R	IV.HDM-C6MWIP-R
TX/RX#	IP ADDRESS		ALIAS		ADDITI	ONAL INFO



I.	HDM-C6MXIP-R II. HD	M-C6MXIP-R	I.HDM-C6MWIP-R IV.HDM-C6MWIP-R		
TX/RX#	IP ADDRESS	ALIAS	ADDITIONAL INFO		

Hvenview Warranty Certificate

AVENVIEW CORP. ("Avenview") warrants Avenview-branded product(s) contained in the original packaging against defects in materials and workmanship when used normally in accordance with Avenview's enclosed manual guidelines for a period of THREE (3) YEARS from the date of original retail purchase - Warranty Period. Avenview's published guidelines include but are not limited to information contained in technical specifications, user manuals and service communications.

LABOR: During the Warranty Period of THREE (3) YEARS, Avenview will repair or replace the product(s) at no cost using new or used parts equivalent to novel performance and reliability if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Labor applicable to product(s) after Warranty Period. For labor costs, please contact support@avenview.com.

PARTS: During the Warranty Period of of THREE (3) YEARS, Avenview will supply new or rebuilt replacements in exchange for defective parts of the product(s) at no cost if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Parts applicable to product(s) after Warranty Period. For part(s) costs, please contact support@avenview.com.

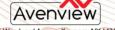
To obtain Warranty: (a) proof of purchase in the form of a bill of sale or receipted invoice reflecting that the registered product(s) is within warranty period must be presented to obtain warranty service; (b) product(s) must be registered at time of purchase. Failure to do so will result in applicable parts and labor charges. Returning product(s) must be shipped in Avenview's original packaging or in packaging pertaining equal degree of protection to Avenview's. Both Avenview and purchaser are responsible for freight charges and brokerages when shipping the product(s) to the receiver.

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