

Video Flux User Manual

AC-MXMV122-UHD

Video Flux features 16 available (12 at a time) input options including composite, component, VGA, and HDMI. It also has the ability to do 4K Quad View or completely customize-able Multi-view.



Introduction

The AC-MXMV122-UHD is a sophisticated HD/ UHD Quad Multi-view Video Processor controller, designed to handle and control multiple video signals exceeding 1920 × 1080 HD. The video sources to be displayed in

1. Full-screen,
2. Dual-view,
3. Tri-view,
4. Quad-view

Each of these modes can be viewed on High Definition (HD) and Ultra High Definition UHD (4K) video screens. The most common analogue and digital video / audio inputs are supported as signal sources, these include: AV (CVBS), YPbPr, VGA, and HDMI from 480i up to full-HD (on Consumer CEA) and WUXGA (VESA).

The AC-MXMV122-UHD is a single unit that is ideal for applications requiring up to 4 separate video sources on a single display in applications such as Digital Signage, Teleconferencing, Highway checkpoint Control Rooms, Multi-View outdoor advertising display management, indoor public advertisement for almost all public places such as airports, ferry stations, banks, government halls, hotel lobbies, railway station, hospitals and wherever fast switching with multiple content on single screen is required.

Product Overview

Each video input channel supports all consumer HD/SD Digital and HD/SD Analog video standards. The AC-MXMV122-UHD is can be easily cascaded and its control signal can be daisy-chained to allow the creation of a large and easy to control seamless switching or a Multi-View system environment of almost any size (for example, Multi-View of 8 x 4 (32) windows (video inputs) to a single TV screen or 16 x 8 semi-seamless Matrix switcher by cascading and daisy-chaining AC-MXMV122-UHD units.

The AC-MXMV122-UHD has two HDMI output ports for showing the multi-view image on two independently controllable HD/UHD A/V channels simultaneously.

The AC-MXMV122-UHD is a 3 in 1 HD/UHD Video Processing Device that can work in one of three different modes depending on the application requirement and system configuration:

1) UHD 4K Multi-View Video Processor

This mode displays the four inputs as a quad view or from a single input to the HDMI outputs independently and in any combination as 4K UHD video output signals. Each output can have a different display setting.

2) Full HD Multi-View Video Processor

This mode displays all four either inputs as a quad view or from a single input to the HDMI outputs independently as high quality HD video output signals. Both outputs show the same image display.

3) Seamless 4:2 Matrix mode

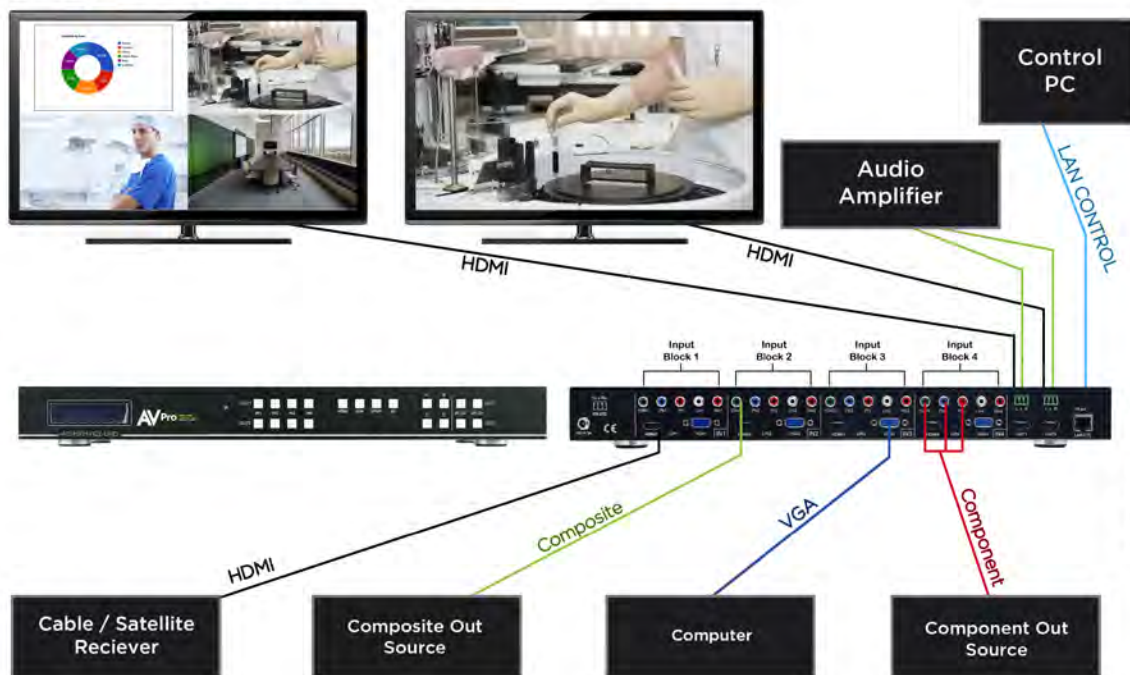
Each input can be switched and routed to any of the two HDMI output ports without any blanking or picture freezing. Each output can display any of the input signals as a single image.

Features

- The AC-MXMV122-UHD is a powerful Video Processing device in a 1U rack-mount chassis, with low power consumption (less than 20W).
- Four video inputs, widely compatible to any SD/HD Digital (HDMI/DVI) and SD/HD Analog in AV (CVBS) /YPbPr and VGA input.
- Each viewer window parameter is completely customizable including layer priority; window positions, window size, background transparency, Border colour including Border pixel width and much more.
- Three operating modes
 1. UHD 4K Multi-View Video Processor
 2. Full HD Multi-View Video Processor
 3. Seamless 4:2 Matrix
- Two independent HDMI output ports. When quad mode is selected, user can choose the HDMI output to be 4K or Full HD.
- UHD 4K quad Multi-View mode, the HDMI output will present 4 x Full HD signals that will only be visible on a 4K display and each section of 4 x Full HD signal is pixel by pixel displayed on a large 4K UHD panel without any down scaling degradation.
- The switching time in the Seamless Matrix mode is one of the fastest in industry due to the very unique switching algorithm used.

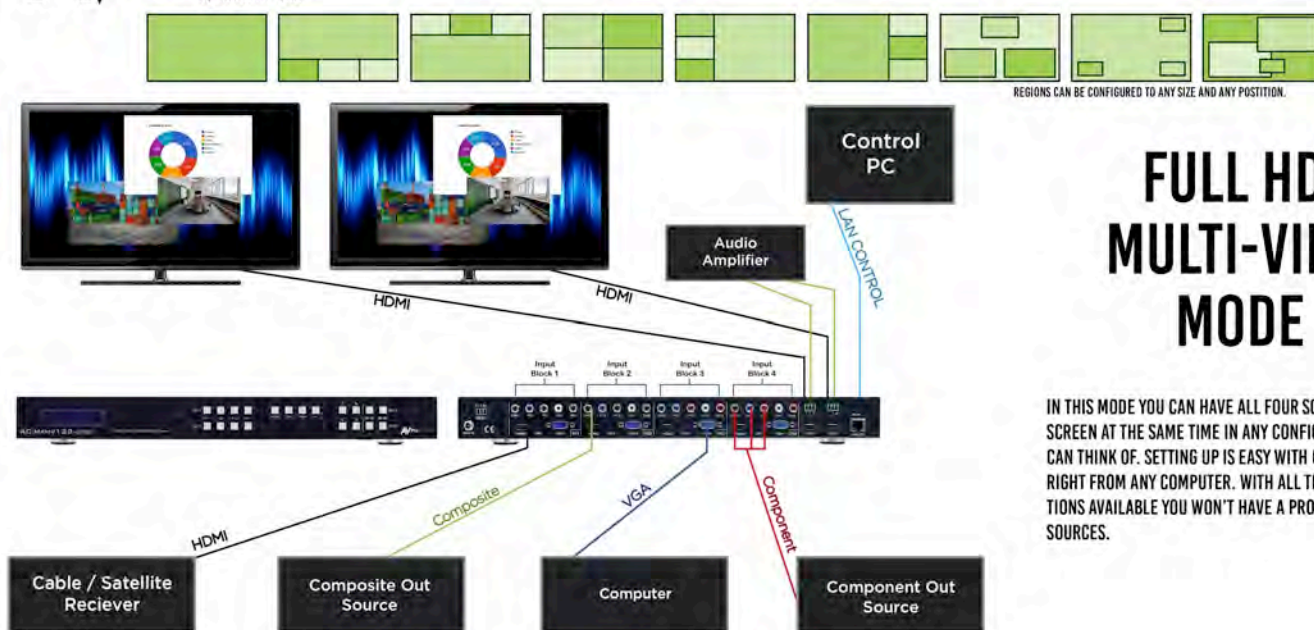
| AC-MXMV122-UHD SPECIFICATIONS | |
|---|------------------------------------|
| PARAMETER | DESCRIPTION |
| HDMI VERSION | 1.4/DVI |
| HDCP | 1.4 |
| VIDEO INPUTS: | |
| HDMI | 4 |
| VGA | 4 |
| COMPONENT | 4 |
| COMPOSITE | 4 |
| INPUT RESOLUTIONS SUPPORTED | ANY |
| AUDIO INPUTS: | |
| 2CH (RCA) | 4 |
| 2CH (3.5MM TIP/RING/SLEAVE JACK W/ VGA) | 4 |
| VIDEO OUTPUTS: | |
| HDMI | 2 |
| RESOLUTIONS SUPPORTED | 4K60 IN 4K QUADVIEW, 1080P |
| AUDIO OUTPUTS: | |
| 2CH (UBALANCED) | 2 |
| AUDIO SUPPORTED | 2 CHANNEL PCM |
| CONTROL | FRONT PANEL, IR REMOTE, IR, RS-232 |
| POWER CONSUMPTION | 20 WATTS |
| DIMENSIONS | (17.3IN) X (10.07) X (1.65) |
| WEIGHT | 6.28LBS |

Application Examples

4K UHD QUAD VIDEO PROCESSOR

YOU ARE ABLE TO HAVE QUAD VIEW ON ONE DISPLAYS AND THE OTHER DISPLAY IN FULL VIEW. YOU ARE ALSO ABLE TO SEAMLESSLY SWITCH BETWEEN QUADVIEW OR FULL VIEW ON EITHER OF THE DISPLAYS. MAKING THIS PERFECT FOR GAME DAYS, CORPORATE OFFICE'S, AND FOR USE AS A CONFIDENCE MONITOR.

FULL HD MULTI-VIEW MODE

IN THIS MODE YOU CAN HAVE ALL FOUR SOURCES ON SCREEN AT THE SAME TIME IN ANY CONFIGURATION YOU CAN THINK OF. SETTING UP IS EASY WITH CONTROLS RIGHT FROM ANY COMPUTER. WITH ALL THE INPUT OPTIONS AVAILABLE YOU WON'T HAVE A PROBLEM FINDING SOURCES.

Multi-View Mode

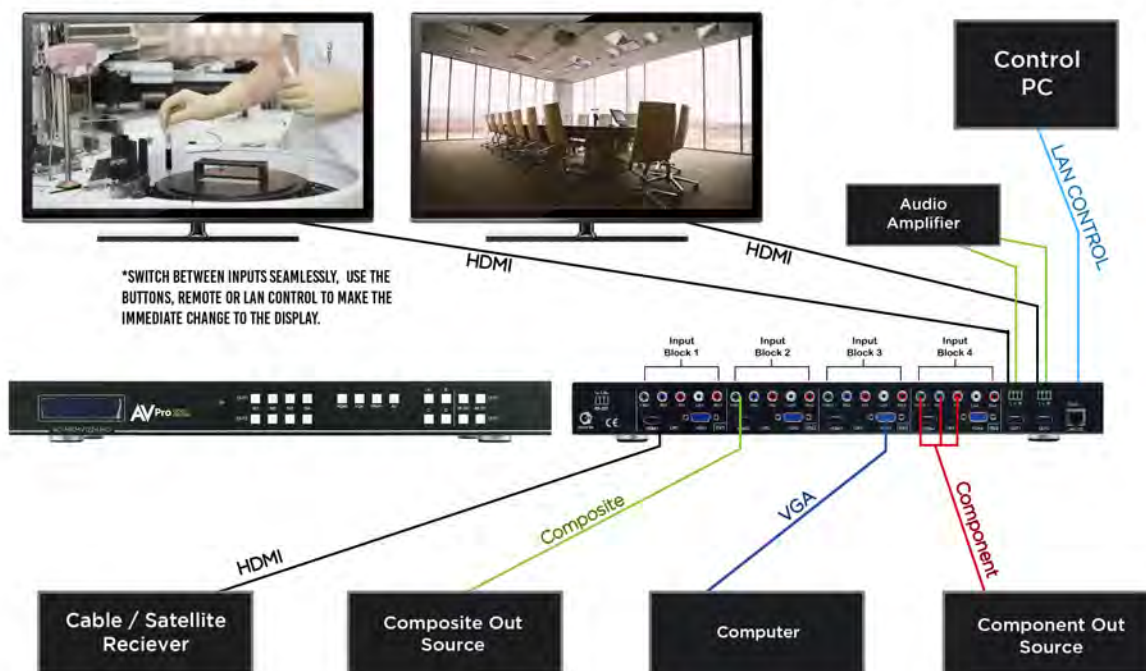


Display input images on the Multi-View screen to both of the HDMI outputs using 4 window regions that can be configured, via the PC based control software, to any size and any position, including borders and prioritized visibility selection of any overlapped layer for the 4 inputs in the screen windows when using the Multi-View configuration.

Seamless Matrix Mode



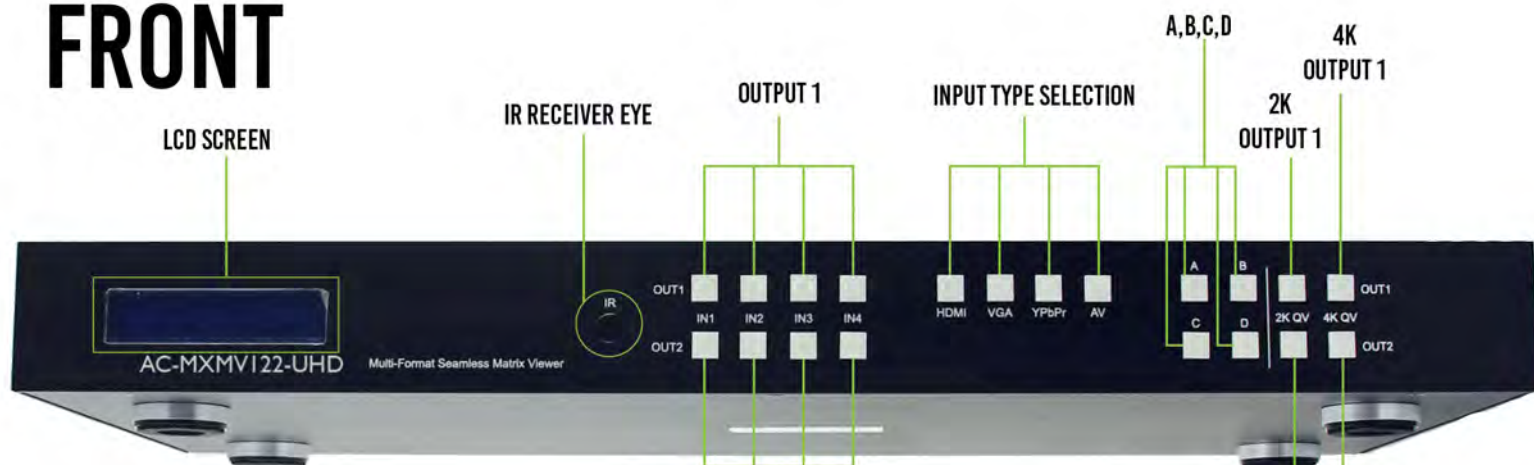
SEAMLESS MODE



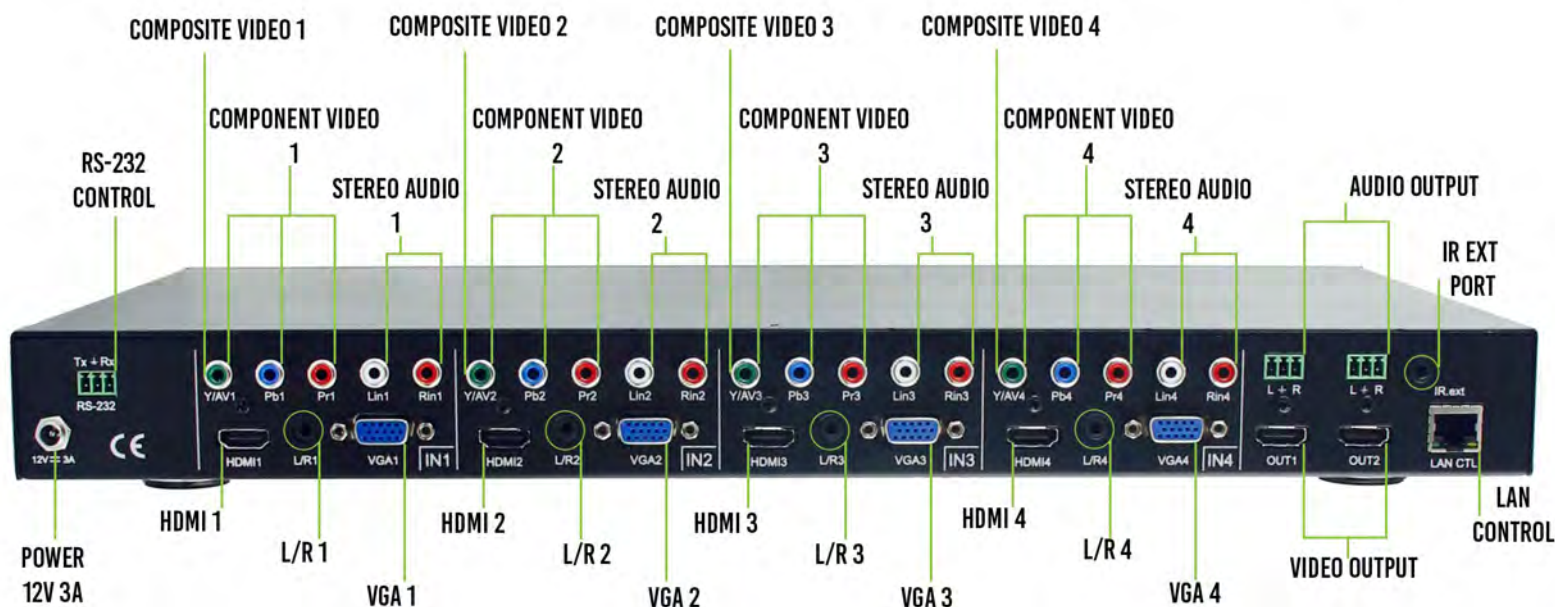
SEAMLESS 4x2 MATRIX SWITCHER

IN THIS MODE YOU CAN HAVE ALL FOUR SOURCES RUNNING THROUGH A SEAMLESS MATRIX. AT BOTH OUTPUTS YOU ARE ABLE TO SWITCH BETWEEN SOURCES WITH ZERO DELAY. NEVER WAIT FOR YOUR MATRIX SWITCHER TO FIND IT'S SOURCE AGAIN.

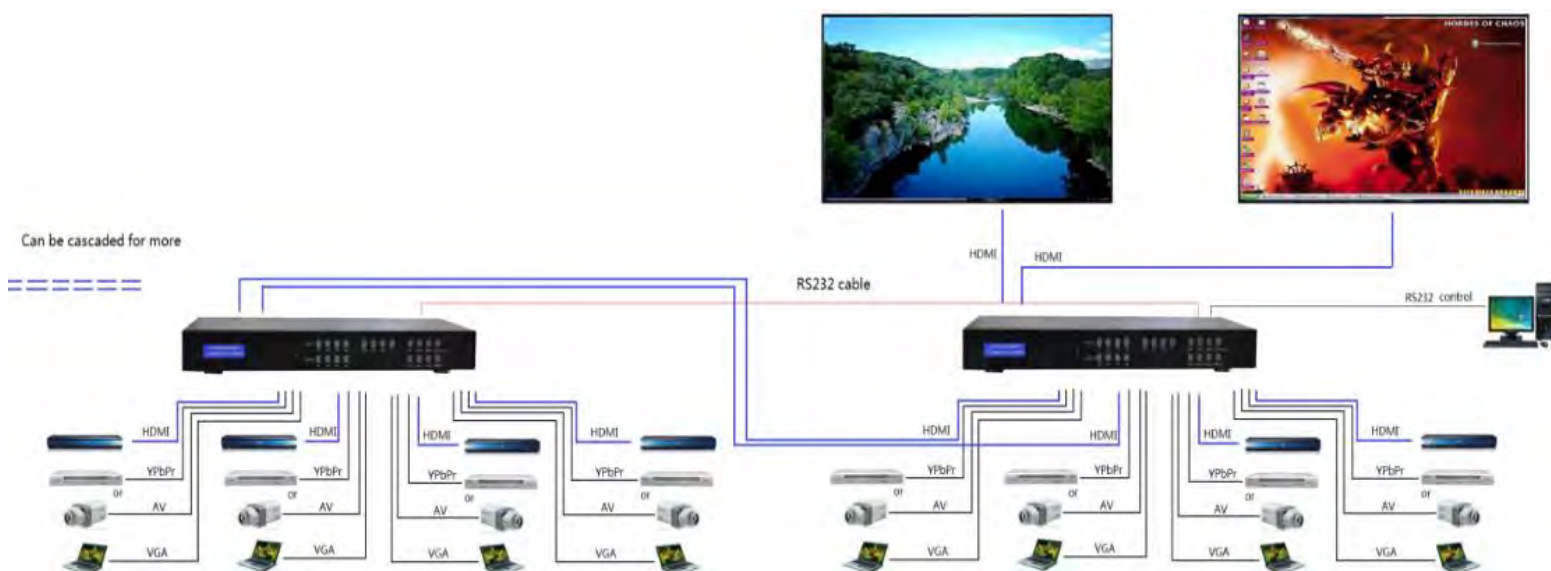
FRONT



BACK



Cascaded for 6x2 Full HD Multi-View mode



1. Connect source devices to input ports of AC-MXMV122-UHD.
2. If needed, connect RS232 cable from PC RS232 port or USB-RS232 converter to AC-MXMV122-UHD.
3. Connect HDMI output port to TV or any other 4Kx2K HDMI sink devices.
4. Connect 12V/3A power supply to DC power socket.
5. Power on the AC-MXMV122-UHD, TV and other devices.

This mode allows the creation of matrix systems with more video inputs that can be routed to either of the two output screens. Note that in this mode, the first two HDMI inputs of the right-hand AC-MXMV122-UHD are used to cascade the outputs from the left-hand AC-MXMV122-UHD. For this mode to operate correctly, each AC-MXMV122-UHD devices must be assigned a unique RS232 ID value prior to being connect to the installation.

Operation, Controls and Functions

AC-MXMV122-UHD CONFIGURATION EXAMPLES

| | OUTPUT 1 | OUTPUT 2 |
|-----------------|------------------------|------------------------|
| CONFIGURATION 1 | 4K QUAD SPLIT | 4K QUAD SPLIT |
| CONFIGURATION 2 | 2K QUAD SPLIT | 4K QUAD SPLIT |
| CONFIGURATION 3 | 4K QUAD SPLIT | SINGLE SWITCHED SOURCE |
| CONFIGURATION 4 | 2K QUAD SPLIT | 2K QUAD SPLIT |
| CONFIGURATION 5 | 2K QUAD SPLIT | SINGLE SWITCHED SOURCE |
| CONFIGURATION 6 | SINGLE SWITCHED SOURCE | 4K QUAD SPLIT |
| CONFIGURATION 7 | SINGLE SWITCHED SOURCE | SINGLE SWITCHED SOURCE |
| CONFIGURATION 8 | MULTI-VIEW (CUSTOM) | MULTI-VIEW (CUSTOM) |

Controlling the AC-MXMV122-UHD



Front:



1. To select the input for the desired output port:
Press any IN1, IN2, IN3 or IN4 button will seamlessly change the source of Output 1 or Output 2 to the selected input.
2. To select source type for the input groups:
Press HDMI or VGA or YPbPr or AV and then press the input button IN1, IN2, IN3 or IN4, and the input group will change the input to the selected HDMI or VGA or YPbPr or AV (CVBS) input.
3. Use the 2K QV button to set the desired output port to output 1080P quad-view, or use the 4K QV button to set both outputs to 4K quad-view on a 4K screen.
4. The 4 buttons (A, B, C, D) set both outputs to multi-viewer mode, with both displays showing the same image. These 4 buttons set the AC-MXMV122-UHD to output one main picture with the other three inputs shown in PIP mode. Repeated presses of the same button cycles the main and PIP images through the four inputs.



The AC-MXMV122-UHD can be cascaded to create a larger system such as an N input seamless switcher, Nx2 seamless matrix or MxN Multiviewer. The RS232 control signals can also be cascaded by using an RS232 cable from the pass through RS232 port to the RS232 input port of the next AC-MXMV122-UHD. When more than one AC-MXMV122-UHD connected in a cascaded RS232 control chain, each AC-MXMV122-UHD must have unique (different) Serial Communication address. Each address can have a binding note, which has at most 10 characters. After the address table is saved, they can be selected using the address selection on main menu for control and management.

AC-MXMV122-UHD UART COMMANDS

UART SETTING

115200 bps, 8 data bits, no parity, 1 stop bit, no flow control.

Command format

| | Header | | Length | Group address | Device address | Key word | Parameter | Check sum |
|------------|--------|---------------|--|---------------|----------------|---------------|------------------------|---------------------------|
| Value | AA/AB | Device ID | Number of all bytes after this parameter, including the checksum | See note(1) | See note(1) | See note(2) | Based on the keyword | Check sum See note (3) |
| Byte Count | 1 | 2 (LSB first) | 2 (LSB first) | 1 | 1 | 2 (LSB first) | Based on the parameter | 1 |

Table 1 - Command Format

- Note:**
- (1) Each AC-MXMV122-UHD in a cascaded system must be assigned a unique two byte address. The first byte is the Group Address, the second byte is the Device Address. The two values 0x00 and 0xff are invalid for both the Group Address and the Device Address respectively.
 - (2) The default Device ID is 0002H.
 - (3) All data values are transmitted in HEX mode.
 - (4) The checksum value is the negated sum of all values before the Checksum field.

The first byte of the header denotes the type of data: AAH for a command to the AC-MXMV122-UHD, or ABH for a reply from the AC-MXMV122-UHD.

The next two header bytes are the device ID where:

XX: is in the range 01H~FEH, and YY: is in the range 01H~FEH

The following table lists the ID values that should only be used for the described purpose:

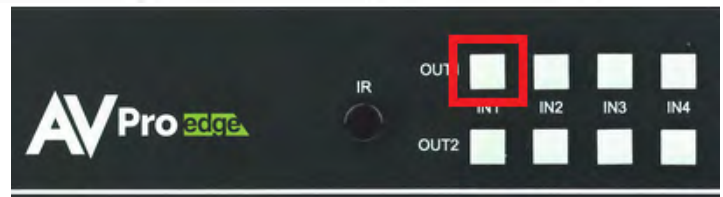
| Group Addr | Device addr | Description | Reply From |
|------------|-------------|--|--------------|
| 00H | FFH | Invalid | No reply |
| XXH | FFH | Broadcast to all the devices with the group address of XXH | No reply |
| FFH | FFH | Broadcast to all devices | No reply |
| 00H | 00H | Broadcast to all devices | All devices |
| XXH | 00H | Broadcast to all the devices with the group address of XXH | All in group |
| FFH | 00H | Invalid | No reply |
| 00H | XXH | Invalid | No reply |
| FFH | XXH | Invalid | No reply |
| XXH | YYH | Send data to the device with the address XXYH | One device |

Table 2 - Addressing the AC-MXMX122-UHD

| Keyword | Description of Keyword | Length of Parameter | Description of Parameter | Note |
|---|---|---------------------|--|--|
| WRITE SETTINGS COMMANDS | | | | |
| The following commands can only be used while in MODE1 (HD MV) | | | | |
| 0000H | Set display parameter (top-left and bottom-right coordinates and display priority) for all 4 inputs | 36 BYTES | Refer to Table 4 | Not recommended, use the next 5 commands to set the parameters individually |
| 0001H | Set display priority of the 4 input images. | 4 BYTES | Refer to the data from 1 to 4 in Table 4 | |
| 0002H | Set the coordinate of the image with the highest priority | 8 BYTES | Refer to the data from 5 to 12 in Table 4 | |
| 0003H | Set the coordinate of the image with the second priority | 8 BYTES | Refer to the data from 12 to 20 in Table 4 | |
| 0004H | Set the coordinate of the image with the third priority | 8 BYTES | Refer to the data from 21 to 28 in Table 4 | |
| 0005H | Set the coordinate of the image with the lowest priority | 8 BYTES | Refer to the data from 29 to 36 in Table 4 | |
| 0050H | Set the transparency | 1 BYTE | Refer to Table 5 | |
| 0051H | Background colour | 3 BYTES | Refer to Table 6 | |
| The following commands can only be used while in MODE2 (4:2 MX) | | | | |
| 1000H | Set the source for the two output ports | 2 BYTES | Refer to Table 7 | |
| The following commands can only be used while in MODE3 (4K) | | | | |
| 2000H | 4K MV or the source of single 1080P output | 2 BYTES | Refer to Table 8 | |
| The following commands can only be used while in MODE1 & MODE3 | | | | |
| 2820H | Set audio route when in MV mode | 2 BYTES | Refer to Table 9 | |
| 2852H | Color of the image border | 3 BYTES | Refer to Table 6 | |
| 2853H | Width of the image border | 1 BYTE | Refer to Table 10 | |
| The following commands can only be used while in MODE1 & MODE2 & MODE3 | | | | |
| 3800H | Select input video source for the four inputs | 4 BYTES | Refer to Table 11 | |

| keyword | Description of keyword | Length of parameter | Description of parameter | Note |
|--|---|---------------------|--------------------------|------|
| 3810H | Select input audio source for the four inputs | 4 BYTES | Refer to Table 12 | |
| 3838H | Program EDID for HDMI Input or VGA Input | 256 BYTES | Refer to Table 13 | |
| 3840H | Select internal EDID for input HDMI or VGA | 3 BYTES | Refer to Table 14 | |
| 3852H | Recall Demo Mode | 1 BYTE | Refer to Table 21 | |
| 3857H | Save User screen mode (Type 2) | 1 BYTE | Refer to Table 19 | |
| 3858H | Recall User screen mode (Type 2) | 1 BYTE | Refer to Table 19 | |
| 3859H | Set Demo Mode list | 22 BYTES | Refer to Table 20 | |
| The following commands can be used in ALL MODES | | | | |
| 7800H | Set the system operating mode | 1 BYTE | Refer to Table 15 | |
| 7801H | Set the device address | 2 BYTES | Refer to Table 16 | |
| 7820H | HDCP DEBUG | 1 BYTE | Refer to Table 18 | |
| 7802H | Factory reset settings | 0 BYTES | | |

Note: Factory reset can also be done by pressing and holding OUT1>IN1 for about 6-7 seconds.



READ STATUS COMMANDS

| | | | | |
|---|--|---------|--|--------------------------------|
| The following commands can only be used while in MODE1 | | | | |
| 8000H | Read coordinate and display priority of 4 images | 0 BYTES | | MCU will reply base on Table 4 |
| 8050H | Read transparency | 0 BYTES | | MCU will reply base on Table 5 |
| 8051H | Read background | 0 BYTES | | MCU will reply base on Table 6 |
| The following commands can only be used while in MODE2 | | | | |
| 9000H | Read source of the two output ports | 0 BYTES | | MCU will reply base on Table 7 |
| The following commands can only be used while in MODE3 | | | | |
| A000H | Read 4K/single 1080P source | 0 BYTES | | MCU will reply base on Table 8 |
| The following commands can only be used while in MODE1 & MODE3 | | | | |
| A820H | Read audio route when in MV mode | 0 BYTES | | MCU will reply base on Table 9 |
| A852H | Read colour of image border line | 0 BYTES | | MCU will reply base on Table 6 |

Table 3 - AC-MXMV122-UHD Command Summary

| keyword | Description of keyword | Length of parameter | Description of parameter | Note |
|--|---|---|--------------------------|---------------------------------|
| A853H | Read width of image border line | 0 BYTES | | MCU will reply base on Table 10 |
| The following commands can only be used while in MODE1 & MODE2 & MODE3 | | | | |
| B800H | Read the source of the 4 input groups | 0 BYTES | | MCU will reply base on Table 11 |
| B810H | Read the HDMI audio source | 0 BYTES | | MCU will reply base on Table 12 |
| B820H | Bypass the data from video processors to PC | Based on the data from video processors | | MCU will reply base on table-23 |
| B838H | Read SINK EDID | 1 BYTE | Refer to Table 17 | Refer to Note(2) |

| The following commands can be used in ALL MODES | | | | |
|---|-----------------------------|---------|--|---------------------------------|
| F800H | Read the working mode | 0 BYTES | | MCU will reply base on Table 15 |
| F801H | Read address of the machine | 0 BYTES | | MCU will reply base on Table 16 |
| F820H | Read HDCP mode(on or off) | 0 BYTES | | MCU will reply base on Table 18 |

- Note: 1.** To write or set data to AC-MXMV122-UHD, the keyword must be less than 8000H.
 To read data from AC-MXMV122-UHD, the keyword must be greater than or equal to 8000H
 PC->AC-MXMV122-UHD: PC- AA + ID + 06 00 00 00 38 B8 01 + checksum
 >AC-MXMV122-UHD: AA + ID + 06 00 00 00 38 38 ~~~~~ (256 BYTES) + checksum
- 2.** If the AC-MXMV122-UHD fails to read the EDID data from the sink device, the reply to the PC is:
 AC-MXMV122-UHD ->PC: AB + ID + 06 00 00 00 38 B8 00 + checksum
- 3.** If the AC-MXMV122-UHD successfully reads the EDID, the reply to the PC is:
 AC-MXMV122-UHD ->PC: AB + ID + 05 01 00 00 38 B8 ~~~~~ (256 BYTES) + checksum

| Byte number | Description of the parameter | Note |
|-------------|---|--|
| 1 | The source of the image with the highest priority | 0-CH1, 1-CH2, 2-CH3, 3-CH4 The 4 data values must be different from each other, each in the range 0~3 |
| 2 | The source of the image with the second priority | |
| 3 | The source of the image with the third priority | |
| 4 | The source of the image with the lowest priority | |
| 5 | Low byte of the left-top corner X coordinate of the highest priority image | X coordinate data:0~1919 Y coordinate data:0~1079 |
| 6 | High byte of the left-top corner X coordinate of the highest priority image | |

| Byte number | Description of the parameter | Note |
|-------------|---|------|
| 7 | Low byte of the left-top corner Y coordinate of the highest priority image | |
| 8 | High byte of the left-top corner Y coordinate of the highest priority image | |
| 9 | Low byte of the right-bottom corner X coordinate of the highest priority image | |
| 10 | High byte of the right-bottom corner X coordinate of the highest priority image | |
| 11 | Low byte of the right-bottom corner Y coordinate of the highest priority image | |
| 12 | High byte of the right-bottom corner Y coordinate of the highest priority image | |
| 13 | Low byte of the left-top corner X coordinate of the second priority image | |
| 14 | High byte of the left-top corner X coordinate of the second priority image | |
| 15 | Low byte of the left-top corner Y coordinate of the second priority image | |
| 16 | High byte of the left-top corner Y coordinate of the second priority image | |
| 17 | Low byte of the right-bottom corner X coordinate of the second priority image | |
| 18 | High byte of the right-bottom corner X coordinate of the second priority image | |
| 19 | Low byte of the right-bottom corner Y coordinate of the second priority image | |
| 20 | High byte of the right-bottom corner Y coordinate of the second priority image | |
| 21 | Low byte of the left-top corner X coordinate of the third priority image | |
| 22 | High byte of the left-top corner X coordinate of the third priority image | |
| 23 | Low byte of the left-top corner Y coordinate of the third priority image | |
| 24 | High byte of the left-top corner Y coordinate of the third priority image | |
| 25 | Low byte of the right-bottom corner X coordinate of the third priority image | |
| 26 | High byte of the right-bottom corner X coordinate of the third priority image | |
| 27 | Low byte of the right-bottom corner Y coordinate of the third priority image | |
| 28 | High byte of the right-bottom corner Y coordinate of the third priority image | |
| 29 | Low byte of the left-top corner X coordinate of the lowest priority image | |

Table 4 - Write Settings Command Details

| Byte number | Description of the parameter | Note |
|-------------|--|------|
| 30 | High byte of the left-top corner X coordinate of the lowest priority image | |
| 31 | Low byte of the left-top corner Y coordinate of the lowest priority image | |
| 32 | High byte of the left-top corner Y coordinate of the lowest priority image | |
| 33 | Low byte of the right-bottom corner X coordinate of the lowest priority image | |
| 34 | High byte of the right-bottom corner X coordinate of the lowest priority image | |
| 35 | Low byte of the right-bottom corner Y coordinate of the lowest priority image | |
| 36 | High byte of the right-bottom corner Y coordinate of the lowest priority image | |

Table 5 - Set Transparency Command

| Byte number | Description | Note |
|-------------|--------------|-----------------------------------|
| 1 | Transparency | 0 = 0%, 1 = 25%, 2 = 50%, 3 = 75% |

Table 6 - Set Colour for Background or Border

| Byte number | Description | Note |
|-------------|-------------|-------|
| 1 | R value | 0-255 |
| 2 | G value | 0-255 |
| 3 | B value | 0-255 |

Table 7 - Set Input Source for Both Outputs

| Byte number | Description | Note |
|-------------|-----------------------------------|--|
| 1 | The source INDEX of output port 1 | 1- No change 2- IN1 3- IN2 4- IN3 5- IN4 |
| 2 | The source INDEX of output port 2 | |
| | | |
| | | |
| | | |

Table 8 - Set Quad-View or Single Input View

| Byte number | Description | Note |
|-------------|--------------------|---|
| 1 | Output port 1 mode | 1- No change 2- 4K Multi-View Mode 3- IN1 in Single Input Mode at 1080p 4- IN2 in Single Input Mode at 1080p 5- IN3 in Single Input Mode at 1080p 6- IN4 in Single Input Mode at 1080p |
| 2 | Output port 2 mode | |
| | | |
| | | |
| | | |
| | | |

Table 9 - Set Audio Source for Multi-View Mode

| Byte number | Description | Note |
|-------------|--------------------------------|--|
| 1 | Audio source for output port 1 | 1- No change 2- IN1 3- IN2 4- IN3 5- IN4 |
| 2 | Audio source for output port 2 | |
| | | |
| | | |
| | | |

Table 10 - Set Image Border Width

| Byte number | Description | Note |
|-------------|----------------------|-------------------------------|
| 1 | Width of border line | Value: 0~15. 0-no border line |

Table 11 – Input Video Source Select

| Byte number | Description | Note |
|-------------|---------------------|---|
| 1 | Video source of IN1 | 1- No change 2- HDMI, 3- VGA, 4- YPBPR, 5- AV |
| 2 | Video source of IN2 | |
| 3 | Video source of IN3 | |
| 4 | Video source of IN4 | |

Table 12 - Input Audio Source Select

| Byte number | Description | Note |
|-------------|-------------------|---|
| 1 | IN 1 audio source | 1-No change 2-HDMI audio 3-From VGA audio 4-From YPbPr audio |
| 2 | IN 2 audio source | |
| 3 | IN 3 audio source | |
| 4 | IN 4 audio source | |

Table 13 - Program EDID Data

| Byte number | Description | Note |
|-------------|-------------|-------------------------------------|
| 1 | Input group | 1-IN1,2-IN2,3-IN3,4-IN4 |
| 2 | EDID port | 1-HDMI,2-VGA |
| 2~257 | EDID data | A Valid EDID Data Block (256 bytes) |

Table 14 - Select Internal EDID Data

| Byte number | Description | Note |
|-------------|-------------|--------------------------------|
| 1 | Input group | 0-ALL, 1-IN1,2-IN2,3-IN3,4-IN4 |
| 2 | EDID port | 1-HDMI,2-VGA |
| 3 | EDID number | Numbers start from 0 |

Table 15 - Set System Operating Mode

| Byte number | Description | Note |
|-------------|-------------|---|
| 1 | Mode Index | 1-HD MV 2-3:2 seamless matrix 3-4K MV |

Table 16 - Set Device Address

| Byte number | Description | Note |
|-------------|----------------|---------|
| 1 | Group address | 01H~FEH |
| 2 | Device address | 01H~FEH |

Table 17 - Read Sink EDID

| Byte number | Description | Note |
|-------------|----------------|---------------|
| 1 | Output channel | 1-OUT1,2-OUT2 |

Table 18 - Set HDCP Mode

| Byte number | Description | Note |
|-------------|-------------|---|
| 1 | HDCP mode | <p>Each bit represents one output port. Bit 0 = output 1, Bit 1 = output 2</p> <p>When the bit is:</p> <p>0 Set Debug Mode (HDCP OFF) 1 Set Normal Mode (HDCP ON)</p> |

Table 19 - User Screen Mode Index

| Byte number | Description | Note |
|-------------|-------------------|-------------------------------|
| 1 | User screen index | 1 to 20 for User 1 to User 20 |

Table 20 - Demo Mode List Setting

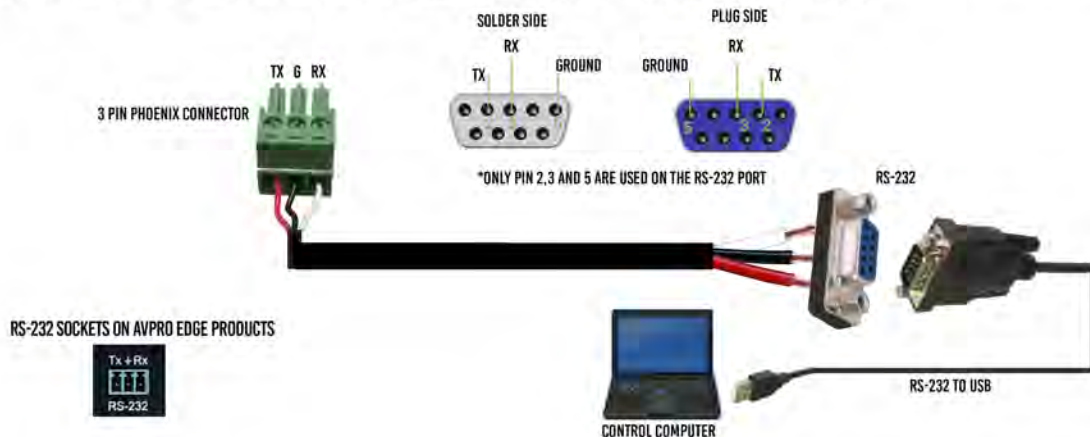
| Byte number | Description | Note |
|-------------|---------------------------------|---|
| 1 | Demo Mode Index | <p>0 = Demo Mode A 1 = Demo Mode B 2 = Demo Mode C 3 = Demo Mode D</p> |
| 2 | Max. number of User Modes | 0 = No changes will be made 1 to 20 |
| 3 - 22 | User screen mode (Type 2) index | <p>0 = No changes will be made 1 = User Mode 1 2 = User Mode 2 ... 20 = User Mode 20 21 = Fix Mode 1 ... 40 = Fix Mode 20 (for Fix Mode 1 to Fix Mode 20 the remaining values are Q1, Q2, Q3, Q4, L1 ~ L3, R1 ~ R4, T1 ~ T4, B1 ~ B4 Q = Quadrant input number 01 ~ 04 L = Left starting pixel position R = Right ending pixel position T = Top starting line position B = Bottom starting line position)</p> |

Table 21 - Recall Demo Mode

| Byte number | Description | Note |
|-------------|-----------------|--|
| 1 | Demo Mode Index | 0 = Demo Mode A 1 = Demo Mode B 2 = Demo Mode C 3 = Demo Mode D |

RS-232 CABLE FOR AVPRO EDGE

IN ORDER TO CONNECT YOUR COMPTER TO THE SWITCH BY RS-232 YOU NEED TO MAKE YOUR OWN CABLE WITH ONE END A PHOENIX CONNECTOR AND THE OTHER END A RS-232 PORT. YOUR COMPUTER DOESN'T HAVE A RS-232 INPUT, GET A USB CONVERTER (AS SHOWN BELOW), AND PLUG THE USB END TO ANY COMPUTER

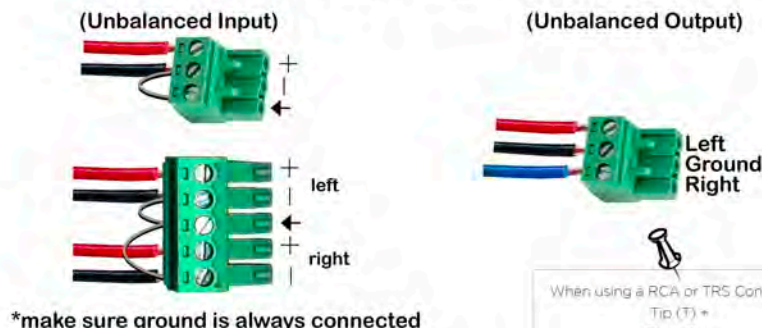


Cable Preparation for Audio Connecitons

To get the job done correctly the first time here are some things to remember; The ideal length when stripping your exposed wires is 3/16" (5mm). If it's shorter you risk having it easily pulled out, if longer you can cause a short circuit between them. Don't tin wires, it won't hold it's shape and can become loose over time if you do.



Unbalanced Audio Wiring



When using a RCA or TRS Connection:
 Tip (T) +
 Ring (R) -
 Sleeve (S) G

Safety Instructions

To ensure reliable operation of this product as well as protecting the safety of any person using or handling these devices while powered, please observe the following instructions.

1. Use the power supplies provided. If an alternate supply is required, check Voltage, polarity and that it has sufficient power to supply the device it is connected to.
2. Do not operate either of this product outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation to allow this product to operate efficiently.
4. Repair of this equipment should only be carried out by qualified professionals as this product contains sensitive devices that may be damaged by any mistreatment.
5. Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with this product.

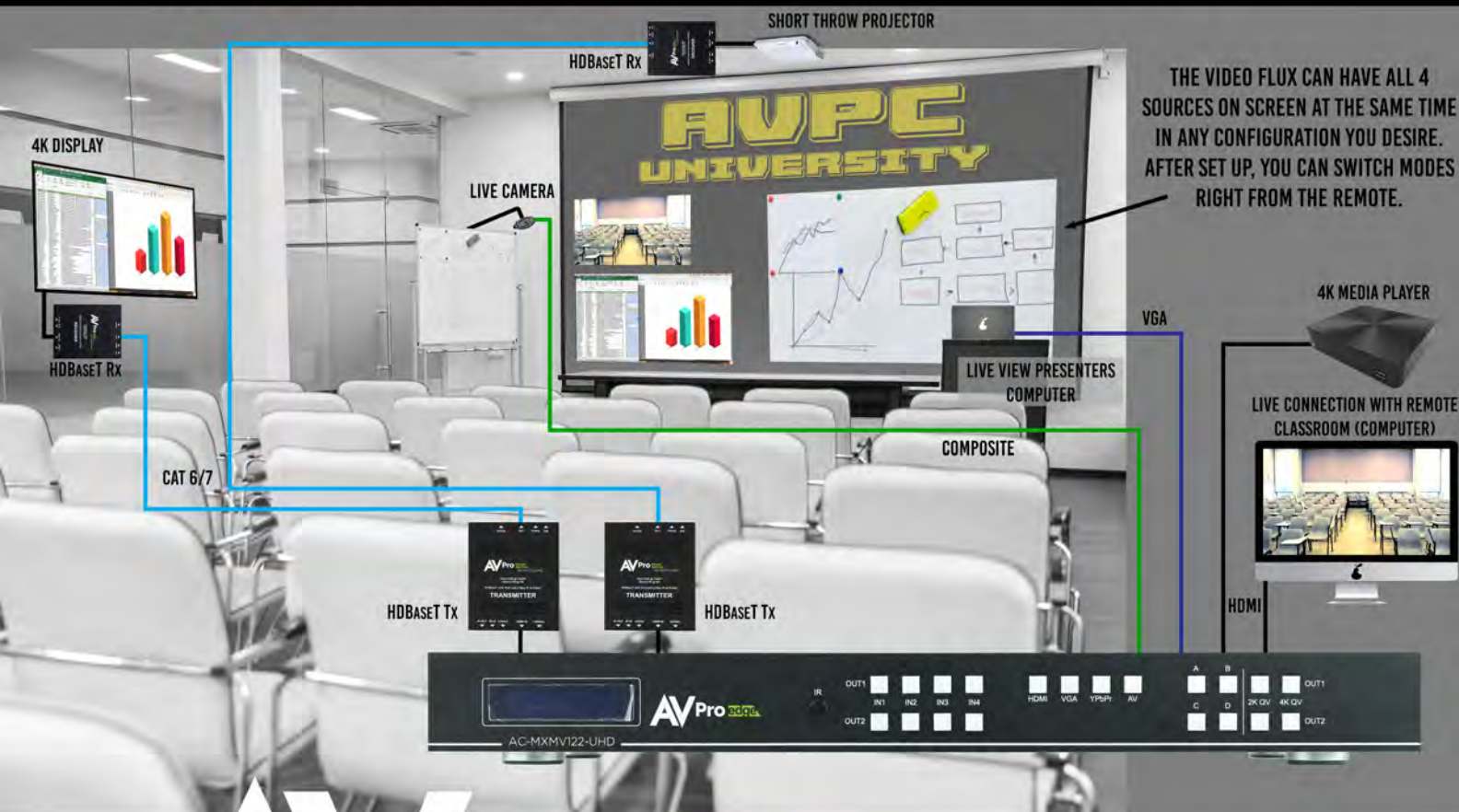
After Sales Service

1. Should you experience any problems while using this product, firstly refer to the Troubleshooting section in this manual before contacting AVProConnect Technical Support.
2. When calling AVProConnect Technical Support, the following information should be provided:
 - Product name and model number
 - Product serial number
 - Details of the fault and any conditions under which the fault occurs.
3. This product has a two year standard warranty, beginning from the date of purchase as stated on the sales invoice. Online registration of this product is required to activate the full three year extended warranty. For full details please refer to our Terms and Conditions.
4. AVProConnect Product warranty is automatically void under any of the following conditions:
 - The product is already outside of its warranty period
 - Damage to the product due to incorrect usage or storage
 - Damage caused by unauthorized repairs
 - Damage caused by mistreatment of the product
5. Please direct any questions or problems you may have to your local dealer before contacting AVProConnect.

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AC-MXMV122-UHD

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Please contact us with any questions, we are
happily at your service!



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