4-input (12 source) Multi-View Scaler with 4K Output

SW-0402-MV-HDMI

WyreStorm

Quickstart Guide

A dual-output multi-view scaler or 4x2 matrix, this device enables 4 sources to be shown on a single 1080p or in full resolution on a 4K display.

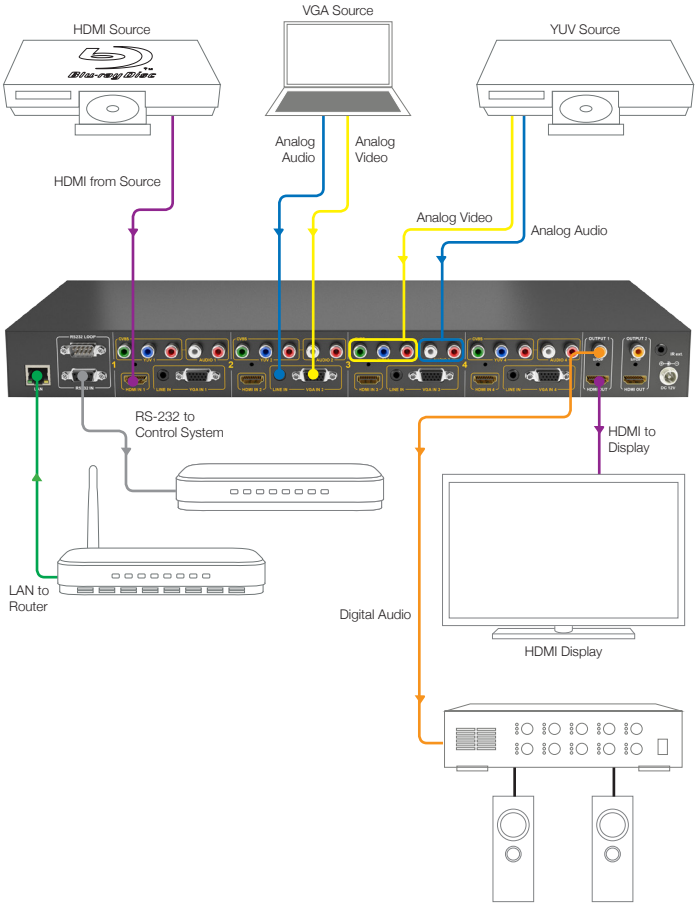
WyreStorm recommends reading through this document in its entirety to become familiar with the product's features prior to starting the installation process.

HDMI HDCP

In the Box

1x SW-0402-MV-HDMI Switcher
1x 12V DC 3A Power Supply (US/UK/EU)
1x Handheld IR Remote
1x IR Receiver Extension Cable
2x Mounting Brackets
1x Quickstart Guide (this document)

Basic Wiring Diagram



Installation

Before Beginning

WyreStorm recommends visiting the product page before installing this product for updates to this Quickstart Guide as well as other information about this product.
Verify that all items are included in the packaging per the In the Box list.

Pre Wire

1. (Optional) If using VGA with Audio, run the wire and terminate per the Line In Wiring section.
2. (Optional) If using YUV (component video), run the wire and terminate per the YUV/CVBS (Component/Composite Video) Wiring section.
3. (Optional) If using Audio for a YUV input, run the wire and terminate per the Audio In Wiring section.
4. (Optional) If using RS-232 to control the switcher, run the wire and terminate per the RS-232 Wiring section.
5. (Optional) If using an external IR Receiver to control the switcher, run the wire and terminate per the IR Wiring section.

Installation

1. Connect an HDMI source to an **HDMI In** on the switcher using an HDMI cable from a high quality brand such as WyreStorm Express. Repeat for other HDMI sources.
2. (Optional) Connect the VGA Out from a VGA source to a **VGA In** on the switcher. Connect the audio out for the VGA source to the shared **Line In** using the cable created in Pre Wire step 1. Repeat for other VGA sources.
3. (Optional) Connect the Component Video Out from a Component Video source to a **YUV In** on the switcher using the cable created in Pre Wire step 2. Connect the audio out for the Component Video source to the shared Audio In using the cable created in Pre Wire step 3. Repeat for other VGA sources.
4. Connect an **HDMI Out** to an HDMI input on a display device. Repeat using the other HDMI out for additional display devices.
5. (Optional) Connect the **Digital Coax Output** to a digital coax input on the display device or amplifier. Repeat for a second display device if present.
6. (Optional) If using RS-232 to control the switcher, connect the DB9 connector to the **RS-232 In** port on the switcher and the opposite end to a port on the control system
7. Connect the LAN connection to a Local Area Network (LAN) router or switch.

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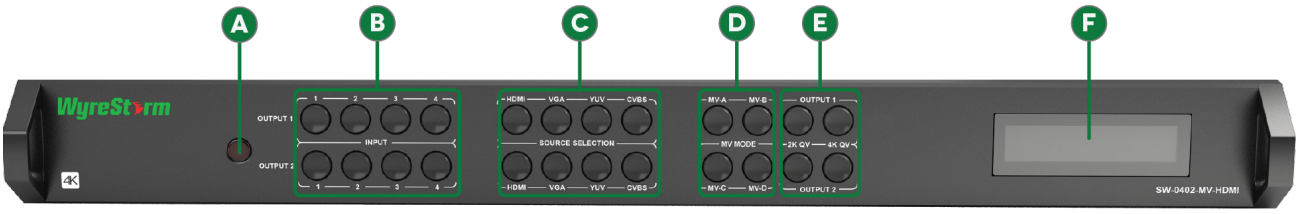
Front Panel

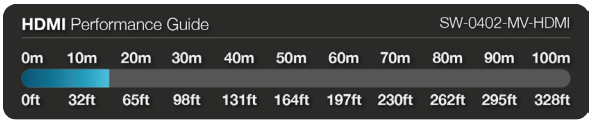


A	**IR Sensor**	38kHz IR Receiver. Receives an IR signal from the included handheld remote or emitter for source selection and other switcher functions.
B	**Input 1-4 Selection**	Selects the numbered input to assign to an output.
C	**Source Selection**	Selects the source for the currently selected input number. Example: HDMI 1, VGA 2, etc.
D	**MV Mode**	Selects the MV mode for the currently selected source.
E	**2K QV/4K QV**	Selected 2K or 4K output for the currently selected source.
F	**LCD Display**	Displays current source selection and source type for each output.

Rear Panel

A	**LAN**	8-pin RJ-45 female | 10/100 Mbps auto-negotiating Connect to a Local Area Network for accessing the built-in Web UI.
B	**RS-232 In/Loop**	**RS-232 Loop:** 9-pin DB9 Male **RS-232 In:** 9-pin DB9 Female Connect to a control system to control the switcher and loop to other switchers. See Installation section.
C	**YUV/ CVBS (Component/Composite Video)**	RCA Female(3x) Connect YUV to the component video output of a source device. Connect CVBS (YUV Green) to the composite video output of a source device.
D	**Audio In (CVBS Audio)**	RCA Female (2x) Connect to the analog audio output of the source connected to the CVBS input.
E	**S/PDIF Out**	RCA Female (Digital Coax) Outputs a digital S/PDIF audio signal to the display or amplifier with a digital coax input..
F	**IR Ext**	3.5mm (1/8in) Stereo Plug Connect to an IR receiver (not included) when the switcher is placed in a cabinet or out of range of the IR remote. See IR Wiring.
G	**HDMI In**	19-pin type A HDMI female digital video/audio: Supports HDMI and DVI/D (requires adapter-not included). Limited to 297MHz pixel clock
H	**Line In (VGA Audio)**	3.5mm (1/8in) Stereo Plug Connect to the analog audio output of the source connected to the VGA input.
I	**VGA In**	15-pin VGA VESA (D-SUB 15): Connect to D-SUB 15 VGA output of a device such as a computer. 15-pin VGA cable is required.
J	**HDMI Out**	19-pin type A HDMI female digital video/audio: Supports HDMI and DVI/D (requires adapter-not included). Limited to 297MHz pixel clock.
K	**Power In**	5.5mm Male Barrel Jack Connect to the included 12V DC 3A power supply.

HDMI Performance

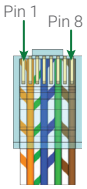


IMPORTANT! HDMI Wiring Guidelines

The use of patch panels, wall plates, cable extenders, kinks in cables, and electrical or environmental interference can have an adverse effect on HDMI transmission limiting performance. Steps should be taken to minimize these factors (or remove completely) during installation for best results.

Local Area Network (LAN) Wiring

LAN wiring follows the EIA T568B standard.

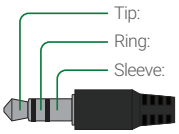


Pin 1: White/Orange
Pin 2: Orange
Pin 3: White/Green
Pin 4: Blue
Pin 5: White/Blue
Pin 6: Green
Pin 7: White/Brown
Pin 8: Brown

Wire colors shown follow EIA/TIA-568B standard.

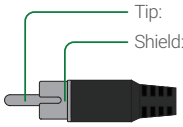
Line In Wiring

Connection for Line In uses a 3.5mm (1/8in) stereo connector.



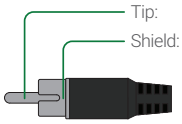
Audio In Wiring

Connection for Audio In uses an RCA Male connector for the left and the right inputs.



YUV/CVBS (Component/Composite Video) Wiring

Connection for CVBS inputs use an RCA Male connector for each of the individual connections.

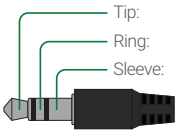


IR Wiring

Connection for IR RX (receive) uses a 3.5mm (1/8in) stereo jack that outputs +5V DC to power the included IR receiver.

IMPORTANT!

3rd party IR receivers may require a different voltage, refer to the documentation provided with the IR receiver before making any connections to avoid damaging the device.

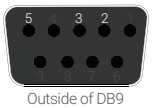


RS-232 Wiring

RS-232 Connection Guidelines

The following wiring diagram shows the pinouts for the switcher. While not shown, connect the TX (transmit) to RX (receive) pins at the control system or PC side of the cable.

Most control systems and computers are DTE where pin 2 is RX, this can vary from device to device. Refer to the documentation for the connected device for pin functionally to ensure that the correct connections can be made.



Outside of DB9 femlae chassis port shown.

Pin 1: ------
Pin 2: TX (Transmit)
Pin 3: RX (Receive)
Pin 4: ------
Pin 5: GND (Ground)
Pin 6: ------
Pin 7: ------
Pin 8: ------
Pin 9: ------

Specifications

Audio and Video	
Audio Formats	2ch analog | 2ch LPCM
Video Resolution	3840x2160p@30Hz
Color Depth	36bit
Maximum Pixel Clock	297 MHz
Communication and Control	
HDMI	HDCP | EDID DVI/D supported with adapter (not included)
Ethernet	10/100 Mbps auto-negotiating
IR	Switcher control with IR Ext for connection to an IR Receiver.
RS-232	Switcher control with loop for additional switchers.
Power	
Power Supply	Input: 100~240V AC 50/50Hz Output: 12V DC 3A
Environmental	
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C) 10% ~ 90%, non-condensing
Storage Temperature	-4°F ~ 140°F (-20°C ~ 70°C) 10% ~ 90%, non-condensing
Dimensions and Weight	
Height	42mm / 1.65in
Width	439mm / 17.3in
Depth	254mm / 10in
Weight	2.85 kg / 6.27 kg
Regulatory	
Safety and Emission	CE | FCC
RoHS	Compliant

Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to the switcher and that it is powered On.
- Verify that the display supports the output resolution of the source.
- Verify that all source and display connections are not loose and are functioning properly.

No or Intermittent Device Control

- Verify that the handheld remote has a clear line of sight to the IR Sensor on the front panel or the IR Receiver if being used.
- Verify that the IR cable(s) is properly terminated if using an external IR Receiver. See IR Wiring.
- Verify that the IR emitter is located near the IR Sensor on the front panel if using an external IR Control System.
- Verify that the RS-232 cable is properly terminated. See RS-232 Wiring.

Troubleshooting Tips:

- WyreStorm recommends using a cable tester or connecting the cable to other devices to verify functionality.
- Use a flashlight to locate the IR receiver behind any tinted panels on the device being control.

Warranty Information

This product is covered by a 2 year limited parts and labor warranty. During this period there will be no charge for unit repair, component replacement or complete product replacement in the event of malfunction. The decision to repair or replace will be made by the manufacturer. This limited warranty only covers defects in materials or workmanship and excludes normal wear and tear or cosmetic damage.

Visit the product page located at **wyrestorm.com** for additional information on this product including important technical information not provided in this document and warranty terms & conditions.