4K Multi-Camera Video Bridge with HDMI, USB and NDI Inputs and Outputs

CAM-0402-NDI-BRG

WyreStorm

Quickstart Guide

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

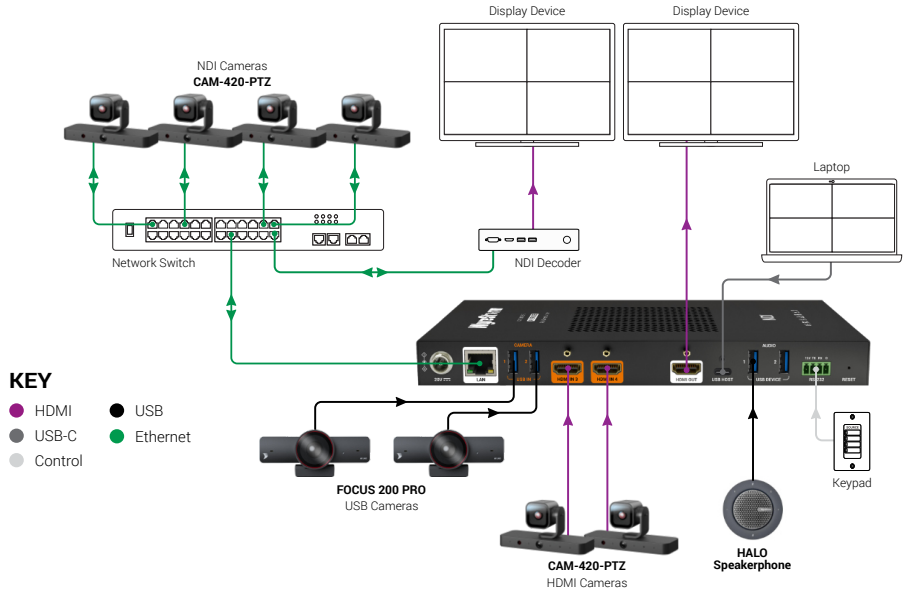
IMPORTANT! Installation Requirements

- Read through the Wiring and Connections section for important wiring guidelines before creating or choosing premade cables.
- While these products support CEC for the HDMI outputs, WyreStorm cannot guarantee compatibility with all forms of CEC communication.
- Visit the product pages to download the latest firmware, document version, additional documentation, and configuration tools.

In the Box

1x CAM-0402-NDI-BRG Switcher
1x 4-Pin Phoenix Connector for RS-232
1x 20V DC 3A Power Adapter (US/EU/UK/AU)
4x Mounting Brackets (with Screws)
1x Quickstart Guide (This Document)

Basic Wiring Diagram



Wiring and Connections

WyreStorm recommends that all wiring for the installation is run and terminated prior to making connections to the switcher. Read through this section in its entirety before running or terminating any wires to ensure proper operation and to avoid damaging the equipment.

IMPORTANT! Before Installation

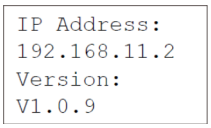
Before installation, ensure the device is disconnected from the power source.
Steps to install the device on a flat surface:

1. Attach two brackets to each side of the device using the screws provided in the package (two screws per side).
2. Secure the brackets to a flat surface using appropriate screws (not included).

Device Control via Front Panel

Users can easily view the device information on the OLED screen and perform layout and source switching using the buttons on the front panel. By default, the device automatically obtains a valid IP address from the DHCP server.

To check the assigned IP address, refer to the OLED screen on the front panel.



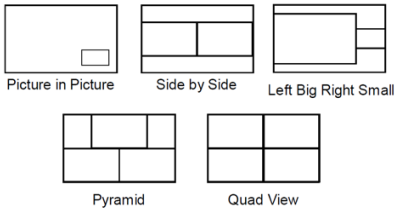
OLED Screen

Note: You can also acquire the IP address by connecting the device to a display, and the IP address will appear in the bottom-right corner of the display.

Switching Layouts with the MULTIVIEW

By default, the HDMI OUT supports up to quad-view output. You can cycle through the following layouts by pressing the MULTIVIEW button on the front panel:

Picture in Picture ➡ Side by Side ➡ Left Big Right Small ➡ Pyramid ➡ Quad View



Communication Connections

RS-232 Wiring

The CAM-0402-NDI-BRG uses a 4-pin RS-232 with no hardware flow control. 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.

4-Pin Phoenix Terminal



WyreStorm Connector			3rd Party Device
Pin 1	12V DC Out	No Connection	Reserved
Pin 2	TX (Transmit)	---> To --->	RX (Receive)
Pin 3	RX (Receive)	---> To --->	TX (Transmit)
Pin 4	G (Ground)	---> To --->	G (Ground)

Setup and Configuration

Access the CAM-0402-NDI-BRG settings through its Web User Interface by entering the unit's IP address into your preferred web browser. By default, the unit is configured to use DHCP for network connection. You can use SmartSet GUI to discover the unit on the network.

RS-232 and IP Settings	
Baud Rate:	115200
Data Bits:	8bits
Parity:	None
Stop Bits:	1bit
Flow Control:	None
Default IP Address:	DHCP
Default IP Port:	23

Troubleshooting

Issue	Possible Cause	Solution
No video output on HDMI OUT	Input not selected or cable not connected properly	Confirm source selection and reconnect HDMI cable. Try a different HDMI cable.
No image on USB HOST output	No active video source or PC has not selected the correct USB device	Verify that at least one input source is active and outputting video. On the PC, open your video conferencing or recording application and manually select the correct USB video device in the camera settings.
NDI stream not detected	Network issue or NDI not enabled	Ensure device is on the same subnet. Check that NDI is enabled and firewall is not blocking NDI traffic.
Web UI not accessible	IP conflict or wrong address	Check device IP on the OLED screen. Ensure your PC is on the same network segment. Try accessing via different browser.
USB camera not recognized	Camera not UVC compliant or exceeds power limits	Use only UVC-compliant USB cameras. Ensure camera does not exceed 1A per port.
No audio via HDMI or USB	Source does not output audio or NDI is selected (video-only)	Check that your selected source includes audio. NDI input/output does not support audio.
Device not responding to RS-232 commands	Wrong baud rate or wiring	Ensure the peripheral and the CAM-0402-NDI-BRG use the same RS-232 configurations.
Factory reset not working	Button not held long enough	Press and hold RESET for at least 5 seconds. OLED will confirm reset.
Firmware update failed	Interrupted connection	Ensure stable LAN connection. Retry via Web UI. Do not power off during upgrade.
Multiview shows “No Signal” window(s)	Source not active or unsupported format	Ensure the source is powered on and outputting supported resolution and format.

Specifications

Audio and Video	
Inputs	2 x USB 3.0 Type-A (up to 3840x2160@30Hz MJPEG) 2 x HDMI (up to 3840x2160@30Hz) 4 x NDI over LAN (up to 3840x2160@30Hz, video only)
Outputs	1 x USB Type-C (up to 3840x2160@30Hz, MJPEG) 1 x HDMI (up to 3840x2160@30Hz) 1 x NDI (LAN, up to 3840x2160@30Hz, video only)
Multiview Support	HDMI out, USB HOST and NDI share the same signal and support multiview display (up to quad-view)
Control Options	RS-232, Web GUI, LAN
OS Compatibility	Windows 10 or above macOS 10.15 or above
USB Protocols	UVC & UAC
HDCP Compliance	HDCP 2.2
CEC Support	HDMI outputs support CEC one-touch play and standby (customizable via Web UI)
EDID Configuration	Web UI and API adjustable Default: 3840x2160@30Hz stereo audio
Video Formats	HDMI: up to 3840x2160@30Hz USB: MJPEG up to 3840x2160@30Hz NDI: up to 3840x2160@30Hz (H.264/H.265, 8-bit, YUV 4:2:0) HDMI OUT: up to 3840x2160@30Hz USB HOST and NDI: up to 3840x2160@30Hz
Audio Formats	HDMI IN:RAW PCM, 16-bit, 2-channel, 32/44.1/48KHz USB IN:RAW PCM, 16-bit, 2-channel, 16/32/48KHz HDMI OUT:RAW PCM, 16-bit, 2-channel, 48KHz USB HOST: RAW PCM, 16-bit, 2-channel, 48KHz
NDI Bitrate	Up to 16 Mbps
Supported Standards	DCI | RGB
Maximum Pixel Clock (HDMI)	300MHz
Power	
Power Supply	DC 20V/3A via 5.5/2.1mm barrel connector
Power Consumption	36W
Environmental	
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing
Maximum BTU	1228 BTU/Hr
Dimensions and Weight	
Length x Width x Height	140mm x 250mm x 25mm
Weight	0.92Kg
Regulatory	
Safety and Emission	CE | FCC | RoHS | RCM | EAC | UKCA

Note: WyreStorm reserves the right to change product specification, appearance or dimensions of this product at any time without prior notice.

Warranty Information

WyreStorm Technologies ProAV Corporation warrants that its products to be free from defects in material and workmanship under normal use for a period of five (5) years from the date of purchase. Refer to the Product Warranty page on wyrestorm.com for more details on our limited product warranty.