

2x8 4K UHD HDCP 2.2 HDBaseT Splitter with PoH & CEC

(4K 35m/115ft | 1080p 70m/230ft)

SP-0208-HDBT-H2



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

- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.
- Install the latest firmware to ensure that all features described in this document are available during and after installation.
- Read through the [Wiring and Connections](#) section for important wiring guidelines before creating or choosing premade cables.
- An HDBaseT receiver is required to use this product.
- See [Recommended Products](#) for guidelines on choosing a receiver.
- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.

Recommended Products

To take full advantage of the features of this splitter, WyreStorm recommends the following products be used to complete the installation.

RX-70-4K HDBaseT Receiver – This class A receiver can be used on HDBT Outs 1~2 to achieve the maximum resolution and distance of 70m/230ft from these ports.

RX-70-POH HDBaseT Receiver – This class B receiver can be used on HDBT Outs 3~6 achieve the maximum resolution and distance of 35m/115ft from these ports.

HDBaseT Receiver Guidelines

- The HDBaseT outputs on this product support different levels of HDBaseT. See [HDBaseT Out Resolution Distances](#) for more information.
- If CEC control of displays is required, the RX-70-4K-ARC cannot be used as it does not support this feature.

In the Box

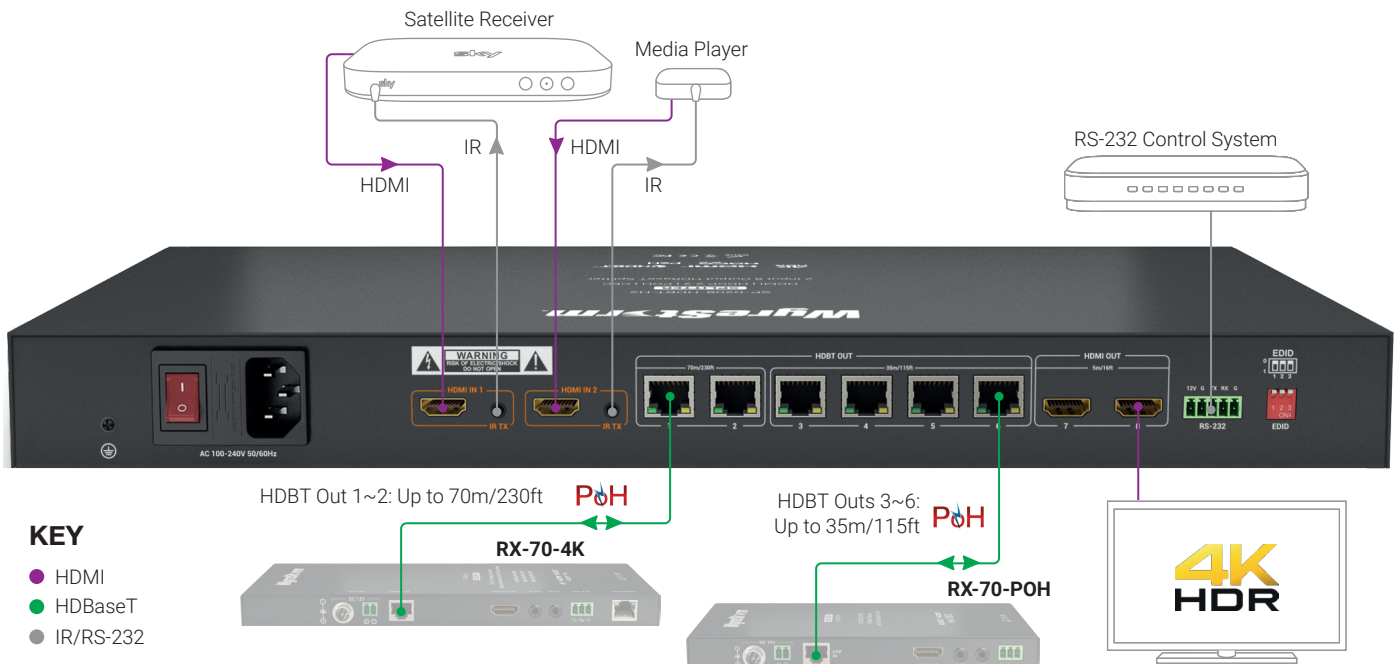
- 1x SP-0208-HDBT-H2 Splitter
- 1 x US AC Power Cord (AC 100 - 240V 50/60Hz)
- 1 x Euro AC Power Cord (AC 100 - 240V 50/60Hz)
- 1 x UK AC Power Cord (AC 100 - 240V 50/60Hz)
- 2 x IR Emitter
- 1x 5-pin Phoenix Connector
- 2x Mounting Brackets (Rack Ears)
- 1x Quickstart Guide (This Document)

Additional Information

Visit the product page on wyrestorm.com for additional content regarding this product.

- Product API for configuring control via a 3rd party control system.
- Firmware updates – We consistently improve our products and may supply firmware updates to improve the operation.

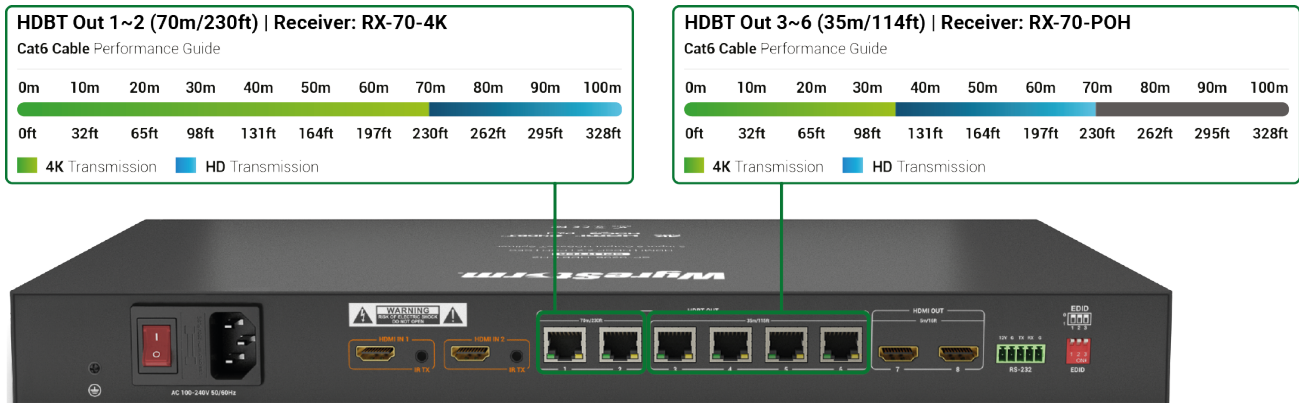
Basic Wiring Diagram



HDBaseT Out Resolution Distances

There are 2 different types of HDBaseT ports on the SP-0208-HDBT-H2 which will transmit at different distances as some are Class A while the others are Class B. The diagram below shows the distances when a Class A receiver is used on either output.

Note that while ports 1~2 are class A and will transmit up to 70m/230ft, this is only when a class A receiver is used. Connecting a class B receiver to these ports will limit the distance to 35m/115ft. This same rule applies to connecting a class A receiver to ports 3~6, output will be limited to 35m/115ft.



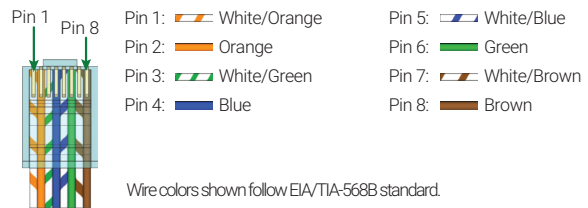
Wiring and Connections

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

HDMI/HDBaseT Wiring

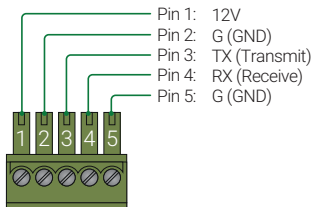
⚠ IMPORTANT! HDMI/HDBaseT Wiring Guidelines

- The use of patch panels, wall plates, cable extenders, kinks in cables, and electrical or environmental interference will have an adverse effect on HDMI and Ethernet transmission limiting performance. Steps should be taken to minimize or remove these factors completely during installation for best results.
- WyreStorm recommends using high quality HDMI cables such as WyreStorm Express to ensure the highest content performance available.
- The type of category cable and length used can restrict the available video resolution. While Cat5e can be used, WyreStorm recommends using Cat6 or higher to ensure the highest content performance available. See **Video Resolutions** in the **Specifications** table before determining cable type and length.



RS-232 Wiring

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 functionality to ensure that the correct connections can be made.



IR TX Wiring

⚠ IMPORTANT! IR TX/RX Guidelines

- WyreStorm IR ports function differently than standard IR ports. For this reason only WyreStorm IR emitters and receivers can be used.
- WyreStorm IR emitter cables cannot be spliced as cutting into the cables will short the shield. While an extension cable may be used, WyreStorm assumes no responsibility for operation using an extension cable.
- When connecting the IR TX to an IR connecting blocks or control system with different plugs, a cable must be made following the **IR TX Port Pinout** diagram.
- When connecting to an IR control system use the WyreStorm CAB-IR-LINK cable. This cable compensates for differences between the WyreStorm RX and the control systems TX connection. Visit the **CAB-IR-LINK** product page for details.

IR TX Port Pinout



EDID Settings

- EDIDs can be configured to resolve issues with video output on displays that may not accept the maximum resolution available from the source.
- Ensure that a display is connected and powered On to the selected output before copying EDIDs or the copy will fail. When this occurs, EDID will be set to 1080p @60Hz 2ch.
- Power to the splitter must be cycled (Off/On) after changing dip switches in order for the setting to take effect.



Copying EDIDs

1. Connect a source and an HDBaseT receiver to output 1.
2. Connect the highest resolution display to the HDBaseT receiver.
3. Power on the source, display, and splitter.
4. After a few moments the EDID from the display will be configured.

Note: If the EDID copy fails, the EDID will be set to 1080p @60Hz 2ch.

EDID Copy from HDBT Out 1	4K UHD	1080p
Copy from HDBT Out1 (default)	4K @30Hz 8bit 2ch	1080p @60Hz 2ch
	4K @30Hz 2ch	1080p @60Hz 5.1ch
	4K @30Hz 5.1ch	1080p @60Hz 7.1ch
	4K @30Hz 7.1ch	

Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to all devices in the system and that they are powered on.
- Verify that all source and HDBaseT connections are not loose and are functioning properly.
- Verify that the HDBaseT cable is properly terminated per the [HDMI/ HDBaseT Wiring](#) section.
- Verify that the splitter, receiving device, and display support the output resolution of the source.
- Refer to Video Resolutions in the [Specifications](#) table before determining cable type and length.
- Verify that the cable length matches the HDBT Out port distances. See [HDBaseT Out Resolution Distances](#).
- If transmitting 3D or 4K, verify that the HDMI cables used are 3D or 4K rated.

No or Intermittent 3rd party Device Control

- Verify that the IR cable(s) is properly terminated.
- See [IR TX Wiring](#).
- Verify that the IR emitter is located near the IR receiver on the device.

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

Specifications

Audio and Video	
Inputs	2x HDMI In: 19-pin type A
Outputs	2x HDMI Out: 19-pin type A 2x HDBT Out (Class A 70m/230ft): 8-pin RJ-45 Female 4x HDBT Out (Class B 35m/115ft): 8-pin RJ-45 Female
Output Video Encoding	HDBaseT Class A/B (Output Dependent)
Encoding Data Rate	10.2Gbps
End to End Latency	<1 frame 10µs (micro seconds)
Audio Formats	2ch PCM Multichannel: LPCM and Up to DTS-X and Dolby Atmos
HDMI In/Outputs 7~8	1920x1080p @60Hz 12bit (15m/50ft) @60Hz 16bit (7m/23ft) 3840x2160p @30Hz 4:4:4 8bit (7m/23ft) @24Hz 4:2:0 HDR 10bit per channel (3m/9.8ft) 4096x2160p @60Hz 8bit 4:2:0 (7m/23ft) @60Hz 8bit 4:4:4 (7m/23ft)
HDBT Outputs 1~2	Using Cat6 1920x1080p @60Hz 12bit (100m/328ft) 16bit (70m/230ft) 3840x2160p @30Hz 4:4:4 8bit (70m/230ft) @24Hz 4:2:0 HDR 10bit (70m/230ft) 4096x2160p @60Hz 4:2:0 8bit (70m/230ft) Using Cat6a/7 1920x1080p @60Hz 12bit (100m/328ft) 16bit (100m/328ft) 3840x2160p @30Hz 4:4:4 8bit (100m/328ft) @24Hz 4:2:0 HDR 10bit (100m/328ft) 4096x2160p @60Hz 4:2:0 8bit (100m/328ft)
Video Resolutions (Max)	HDBT Outputs 3~6 Using Cat6 1920x1080p @60Hz 12bit (70m/230ft) 16bit (70m/230ft) 3840x2160p @30Hz 4:4:4 8bit (35m/115ft) @24Hz 4:2:0 HDR 10bit (35m/115ft) 4096x2160p @60Hz 4:2:0 8bit (35m/115ft) Using Cat6a/7 1920x1080p @60Hz 12bit (70m/230ft) @60Hz 16bit (70m/230ft) 3840x2160p @30Hz 4:4:4 8bit (40m/131ft) @24Hz 4:2:0 HDR 10bit (40m/131ft) 4096x2160p @60Hz 4:2:0 8bit (40m/131ft)
Color Depth	1080p: 16bit 4K UHD: 8bit HDR @24p: 10bit BT.2020
Maximum Pixel Clock	HDMI: 340MHz HDBaseT: 297MHz
Communication and Control	
HDMI	HDMI HDCP 2.2 EDID CEC DVI-D with adapter (not included)
HDBaseT	HDMI HDCP 2.2 EDID CEC 1-way PoH to receiver IR (RX to Splitter)
IR	2x IR TX 3.5mm (1/8in) TS Mono Transmits via HDBaseT from Remote Zone
RS-232	1x RS-232: 5-pin Phoenix Switcher Control Only
Power	
Power Supply	100~240V AC 50/60Hz
PoH	48V 15.4W (each HDBT output)
Max Power Consumption	75.21W
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	256.6 BTU/hr
Dimensions and Weight	
Rack Units/Wall Box	1U
Height With Without Feet	51.3mm/2.02in 43.5mm/1.72in
Width With Without Brackets	482.6mm/19in 440mm/17.33in
Depth With Without Handles	220mm/8.67in 220mm/8.67in
Weight	0.7kg/1.54lbs
Regulatory	
Safety and Emission	CE FCC RoHS

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

Warranty Information

This product is covered by a 3 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.

