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HT-AIM-100

4K@60Hz 4:2:0 HDBT Extender

USER MANUAL

May 24, 2023



Important Safety Instructions



1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



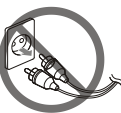
4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



5. Do not place sources of naked flames, such as lighted candles, on the unit.



6. Clean this apparatus only with dry cloth.



7. Unplug this apparatus during lightning storms or when unused for long periods of time.



8. Protect the power cord from being walked on or pinched particularly at plugs.



9. Only use attachments / accessories specified by the manufacturer

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Introduction

OVERVIEW

The AIM-100 is a slimline HDBaseT extender pair that can transmit HDMI signals of up to 4K 60Hz (4:2:0 8-bit) along 100m of category cabling. CAT6 cable supports 4K 60Hz (4:2:0 8-Bit) up to 70m and 1080p 60Hz HDMI signals can also be extended up to 100m. CAT6A / 7 cabling offers increased distances of 100m for 4K 60Hz (4:2:0 8-Bit) resolutions. The AIM-100 also features bi-directional PoC, two-way IR and RS232 pass-through.

With the built-in control pass-through, users can control the source from the display's location or can control the display from the source's location. And, with their small form factor, the extenders are easy to install in many locations.

FEATURES

- Up to 4K@60Hz 4:2:0 8-bit and HDCP2.2 over a single category cable.
- Using a Cat6a/7 cable, extends 4K@60Hz 4:2:0 8-bit up to 70m/230ft and 1080P up to 100m/328ft.
- Over a Cat5e/6 cable, extends 4K@60Hz 4:2:0 8-bit up to 35m/115ft and 1080P up to 70m/230ft.
- Bi-directional PoC (Power over Cable) with one power adapter at either end.
- Supports bi-directional IR and RS232 pass-through.

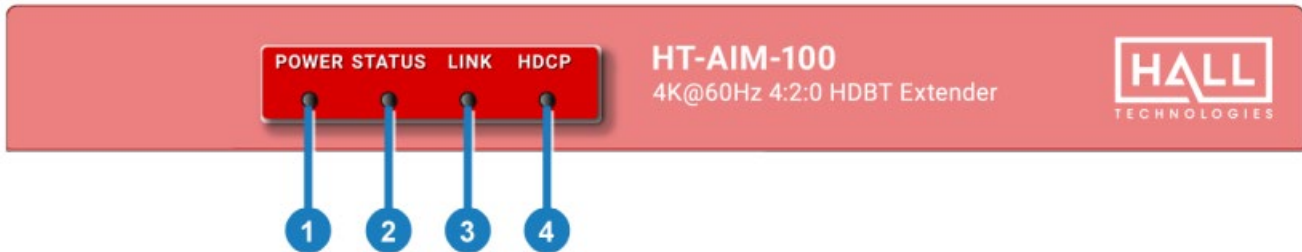
Package Contents

HT-AIM-100

- 1x Transmitter Unit
- 1x Receiver Unit
- 1x Power Adapter (DC 18V 2A)
- 2x IR Emitter Cable
- 2x IR Receiver Cable
- 4x Mounting Brackets (with screws)

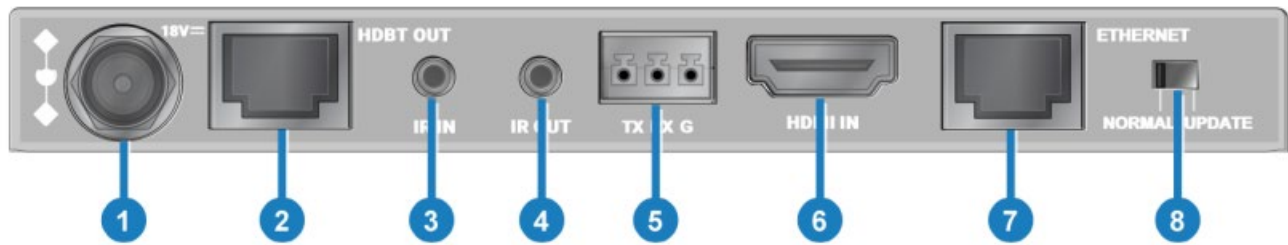
Connectors & Indicators

HT-AIM-100 FRONT PANEL



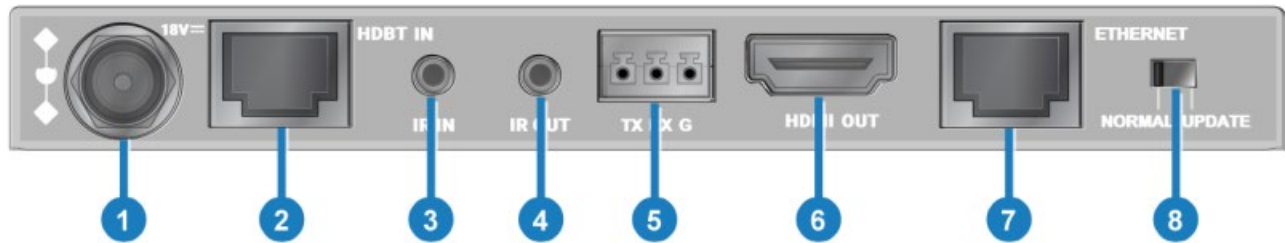
No.	Name	Description
1	POWER	<ul style="list-style-type: none">• On: The device is powered on.• Off: The device is powered off.
2	STATUS	<ul style="list-style-type: none">• On: The device is working properly.• Off: The device is not working properly.
3	LINK	<ul style="list-style-type: none">• On: HTBaseT link is normal.• Blinking/Off: No HDBaseT link or link error.
4	HDCP	<ul style="list-style-type: none">• On: HDCP protected content is being transmitted.• Blinking: Non-HDCP protected content is being transmitted.• Off: No content is being transmitted.

HT-AIM-100-TX REAR PANEL



No.	Name	Description
1	POWER	DC 18V power supply. (Only one side needs to be powered.)
2	HDBT OUT	HDBaseT output, connected to the receiver input via Cat5e/6/7 cable.
3	IR IN	Connect to the IR Receiver Cable (Signal is sent to the AIM-100-RX IR OUT).
4	IR OUT	Connect to the IR Emitter Cable (Signal is received from the AIM-100-RX IN).
5	RS232	For RS-232 pass-through.
6	HDMI IN	Connect to an HDMI source.
7	ETHERNET	Connect to a LAN network.
8	MODE	<p>Normal:</p> <ul style="list-style-type: none"> RS-232 signals can be transmitted as pass-through signals. Transmitter cannot be updated. <p>Update:</p> <ul style="list-style-type: none"> RS-232 signals cannot be transmitted. Transmitter can be updated.

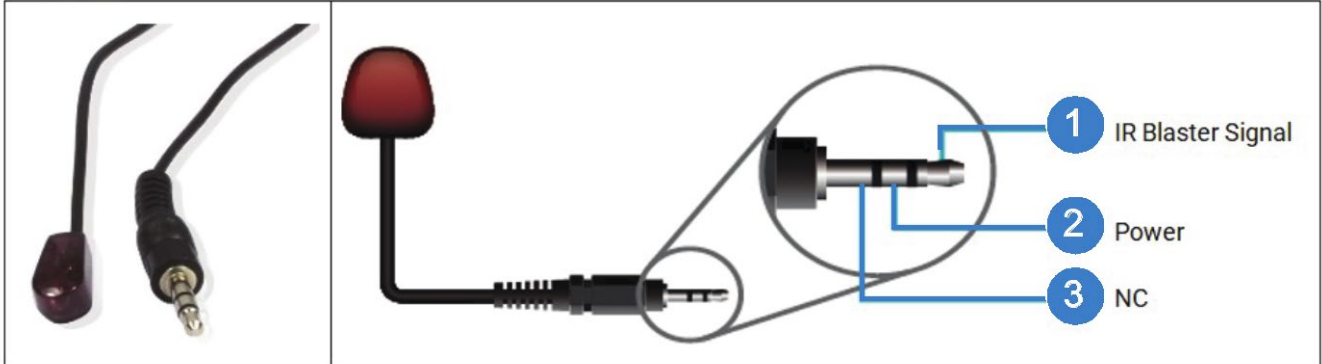
HT-AIM-100-RX REAR PANEL



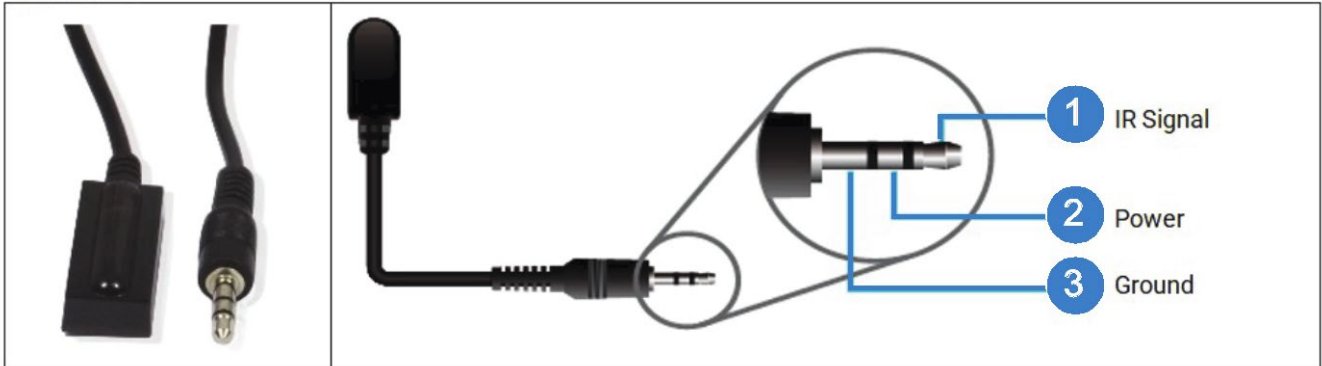
No.	Name	Description
1	POWER	DC 18V power supply. (Only one side needs to be powered.)
2	HDBT IN	HDBaseT input, connected to the transmitter output via Cat5e/6/7 cable.
3	IR IN	Connect to the IR Receiver Cable (Signal is sent to the AIM-100-TX IR OUT).
4	IR OUT	Connect to the IR Emitter Cable (Signal is sent to the AIM-100-TX-IR IN).
5	RS232	For RS-232 pass-through.
6	HDMI OUT	Connect to an HDMI display device.
7	ETHERNET	Connect to a LAN network.
8	MODE	<p>Normal:</p> <ul style="list-style-type: none"> RS-232 signals can be transmitted as pass-through signals. Transmitter cannot be updated. <p>Update:</p> <ul style="list-style-type: none"> RS-232 signals cannot be transmitted. Transmitter can be updated.

Product Wiring and Connection Diagram

IR Blaster



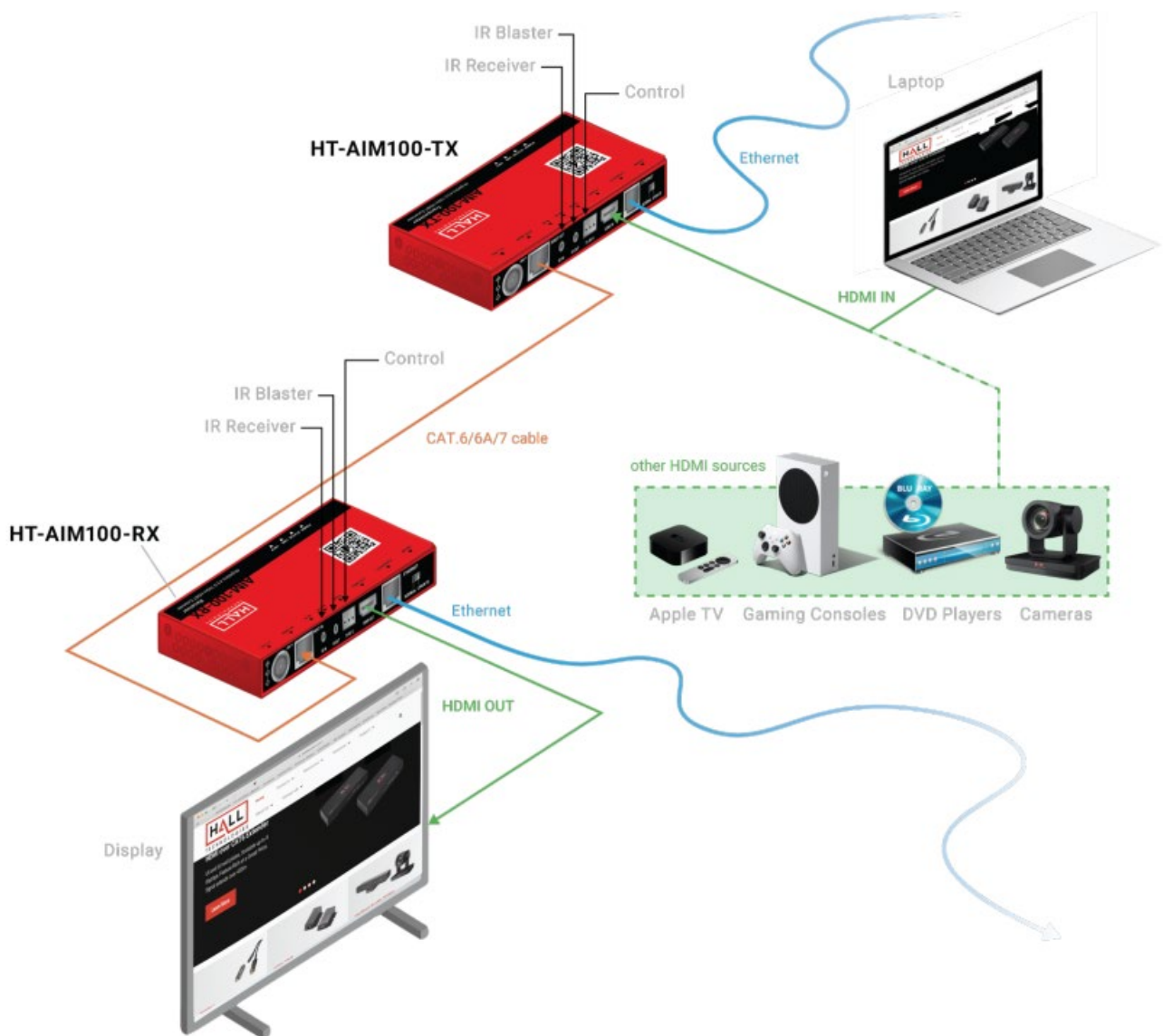
IR Receiver



Applications

A laptop, or other HDMI source, is connected to the HDMI input on the HT-AIM-100-TX and then transmitted over the category cable to the HT-AIM-100-RX, where a display, connected to the HDMI output, shows the HDMI source. Control via RS232 or IR is also passed through the category cable for display control.

Note: In this application the HT-AIM-100-RX is locally powered and providing power via PoC (Power over Cable) to the HT-AIM-100-TX. Only one side needs to be powered, meaning the local power supply could be moved to the HT-AIM-100-TX if that is more convenient for installation.



Setup

INSTALLATION

Note: Before installation, please ensure the devices are disconnected from the power source.

To install the device on a surface:

1. Secure the included L-bracket mounts to each side of the transmitter/receiver using the included screws.



2. The bottom part of the L-bracket will slightly raise the transmitter/receiver and will create a small gap between the device and the mounting surface.
3. Using the appropriate hardware (not included), mount the bottom of the L-brackets to the desired surface.

Troubleshooting

Problem Type	Problem	Options
Video	No video on display	Confirm the connectors are properly seated on each device
		Confirm at least one side (typically the receiver) has local power connected
		Test the category cable to confirm proper pinout and no shorts in the cable
		Confirm the distance between the transmitter and receiver does not exceed specifications (depending on the desired resolution)
		Confirm the HDMI input of the display is correctly selected
		Confirm the connected source is sending video to the HT-AIM (i.e. verify laptop is in duplicate or extend mode)

Specifications

Technical	
HDMI Compliance	HDMI 1.4
HDCP Compliance	HDCP 2.2
Video Bandwidth	10.2 Gbps
Video Resolution	4K@60Hz (8-bit 4:2:0), 4K2K@30Hz, 1080p, 1080i, 720p
Color Depth	8/10/12-bit (4K@60Hz) 16-bit (1080p@60Hz)
HDMI Audio Formats	PCM 2.0/2.1/5.1/6.1/7.1, Dolby Atmos, Dolby TrueHD, DTS-ES, DTS HD Master, DTS-X
Resolution / Distance	4K60: <ul style="list-style-type: none">• Cat6a/7: 328ft (100m) 1080p: <ul style="list-style-type: none">• Cat5e/6: 220ft (70m)• Cat6a/7: 328ft (100m) NOTE: Premium High Speed HDMI cable is highly recommended.

General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 140°F)
Humidity	10% to 90%, non-condensing
Power Consumption	13W (Pair, PoC)
Power	1x DC 18V/2A (included)
Dimensions	135mm W x 14mm H x 77mm D (5.3" W x 0.6" H x 3" D)
Weight	220g (0.485 lbs.)



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