gofanco®

1x8 HDMI CAT Splitter/ Extender 4K30 - 70M

User's Guide

P/N:HD14Ext-8P

G4-0145A

Thank you for purchasing from gofanco. Our products aim to meet all your connectivity needs wherever you go. For optimum performance and safety, please read the instructions carefully and keep this User's Guide for future reference. If you need more information about our products, please visit www.gofanco.com. For technical support, email us at support@gofanco.com. For drivers or manual download, please go to www.gofanco.com/downloads.

Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not put any items into the device or attempt to modify its operation
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables and IR cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included power adapters only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The 1x8 HDMI CAT Splitter/Extender distributes HDMI signals from one source device to up to eight CAT6/7 outputs and one HDMI output (loopout).

Features

- Extends HDMI transmissions up to 70m (230ft) @1080p & 131ft (40m) @4K30Hz
- HDCP 1.4 compliant
- Supports up to 4K @30Hz YUV 4:4:4
- Built-in EDID, bi-directional IR, and RS232 control
- Supports up to 2ch PCM audio and Stereo audio extraction
- Near zero latency
- Lightning/Surge/ESD protection

Installation Requirements

- HDMI source devices (DVD player, set top box, PC, etc.)
- HDMI displays (SDTV/Monitor, HDTV/Monitor, projector, etc.)
- HDMI cables (not included)
- CAT cables (not included)

Package Contents

- 1x 1x8 HDMI CAT Transmitter
- 8x CAT6/7 Receivers
- 1x IR Emitter cable
- 8x IR Receiver cables
- 1x TX power adapter (12V/2A)
- 8x RX power adapters (5V/500mA)
- Surface mount accessories
- 1x Terminal block (RS232)
- User guide

Product Layout

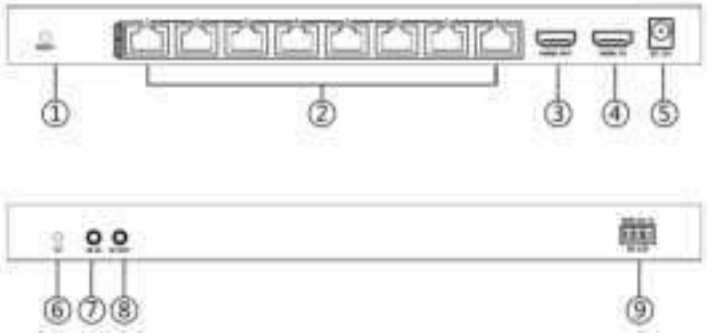


Figure 1: Transmitter Layout

1. **Reset Button**: Press to restart the Transmitter
2. **CAT6/7 Out (x8)**: Connects to the CAT6/7 In of the Receivers using CAT6/7 cables (CAT cables not included)
3. **HDMI Out**: Connects to your HDMI display
4. **HDMI In**: Connects to your HDMI source device
5. **Power Jack**: Connects to the included 12V/2A power adapter
6. **Power/Signal LED**: When the Transmitter is powered on:
   - LED is on when HDMI signal is transmitting
   - LED flashes when no HDMI signal is transmitting
7. **IR In**: Connects to the IR Receiver cable
8. **IR Out**: Connects to the IR Emitter cable
9. **RS232**: Connects to your control PC's RS232 port

Product Layout Continued

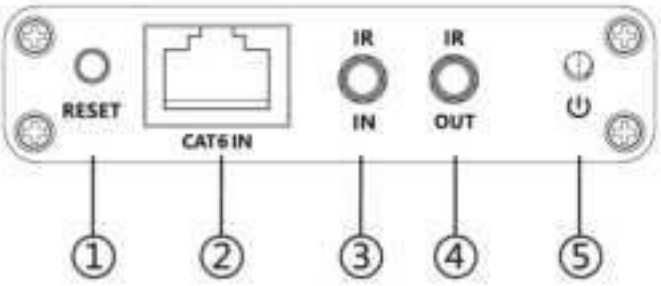


Figure 2: Receiver Front Panel Layout

1. **Reset Button**: Press to restart the Receiver
2. **CAT6/7 In**: Connects to the CAT6/7 Out of the Transmitter using CAT6/7 cables (CAT cables not included)
3. **IR In**: Connect to the IR Receiver cable
4. **IR Out**: Connect to the IR Emitter cable
5. **Power/Signal LED**: When the Receiver is powered on:
   - LED is on when HDMI signal is transmitting
   - LED flashes when no HDMI signal is transmitting

Product Layout Continued

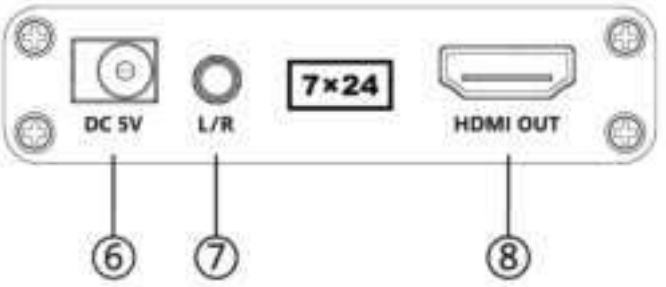


Figure 3: Receiver Back Panel Layout

6. **Power Jack**: Connects to the included 5V/500mA power adapter
7. **3.5mm Out**: Connects to headphones or speakers
8. **HDMI Out**: Connects to your HDMI display

Hardware Installation

1. Power off all devices including your HDMI source and HDMI display(s).
2. Connect your HDMI source device to the Transmitter's HDMI In connector with an HDMI cable (HDMI cable is not included).
3. Connect your CAT cables between the Transmitter and CAT6/7 Receivers.
4. Optional: Connect an HDMI display to the HDMI Out connector of the Transmitter using an HDMI cable (HDMI cable not included). This connection is needed only if you require local monitoring of the HDMI signal.
5. Connect an HDMI display to each CAT6/7 Receiver's HDMI Out connector with an HDMI cable (HDMI cables not included).
6. Optional: Connect the IR Receiver cables and the IR Emitter cable to the IR interface ports. This connection is needed only if you need to control your HDMI devices from the remote location. See IR Control, starting on page 11, for proper IR connection.
7. Plug the included 12V/2A power adapter into the Transmitter's Power Jack and 5V/500mA power adapter into the Receiver's Power Jack, then plug the power adapters into a reliable power outlet.
8. Power on your HDMI source device and HDMI display(s). The Splitter/Extender is ready for use.

Application Diagram

The application diagram shows the most typical input and output devices used with the Splitter/Extender.

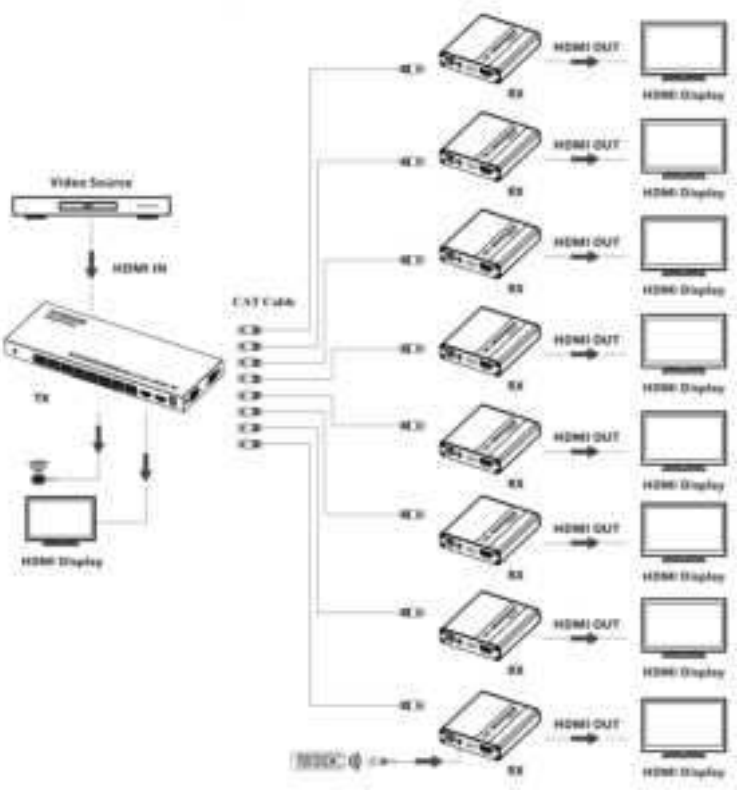
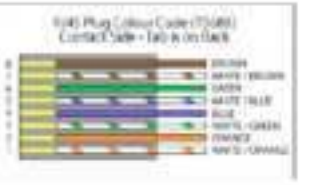


Figure 4: Application Diagram

CAT Cable Wiring

We suggest both RJ-45 connectors be wired identically using T568B wiring standard for the best performance and compatibility.

Both connectors must be wired identically, to T568B standard.



Note: You may use CAT5e, CAT6 wiring, however, for best performance CAT6a or CAT7 (particularly in electrically noisy environments) is recommended. The maximum transmission distance and video quality may be compromised by cable quality, patch cables, poor termination, wall plates, cable kinks, and electrical interference. We recommend using 100% copper 23AWG (avoid CCA type) CAT cable, in one straight run (avoid/minimize patches) and avoid close proximity to electrical sources.

IR Control

Provides IR control of the connected devices. The IR feature is bi-directional so either the source device or the display device(s) can be remotely controlled.

Controlling the Source Device

1. Connect an IR Emitter Cable to the IR Out port of the Transmitter.
2. Point the IR Emitter Cable's IR eye in line with the source device's IR window.
3. Connect an IR Receiver Cable to the IR In port on each CAT6/7 Receiver.

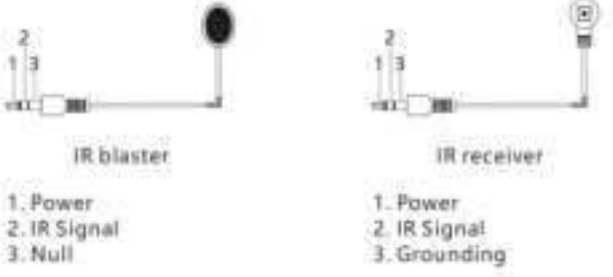
Note: The Transmitter's IR Out connector will output the IR signals received from any of the CAT 6/7 Receivers, so as to allow control of a source from any of the remote CAT 6/7 Receivers.

Controlling the Display Device(s) using IR In

Allows you to remotely control each display individually.

1. Connect an IR Receiver Cable to the IR In port of the Transmitter.
2. Connect an IR Emitter Cable to the IR Out port on each CAT6/7 Receiver.
3. Point the IR Emitter Cable's IR eye in line with the display's IR window.

IR Pin Definition



RS232 Control

Connect the Transmitter's RS232 port to your control PC's serial port using an RS232 cable.

COM Port Setting

- Baud Rate: 9600
- Data Bits: 8
- Stop Bits: 1
- Parity Bits: None

RS232 Commands

Control Commands	Function Descriptions	
ES XX On [Enter]	1) Turn on the network signal output port(s), choose from "01" to "08" (the network ports from left to right are: 01, 02, 03, 04, 05, 06, 07, 08) 2) "All" means all 8 ports	
ES XX Off [Enter]	1) Turn off the network signal output port(s), choose from "01" to "08" (the network ports from left to right are: 01, 02, 03, 04, 05, 06, 07, 08) 2) "All" means all 8 ports	
Reset [Enter]	Restart the device	
Recover [Enter]	Restore device factory settings	
Baud XX [Enter]	Set the baud rate value: 9600 (default), 19200, 38400, 57600, 115200	
Examples of control commands are shown below:		
Control Command1	ES 04 On [Enter]	
Function Description	Turn on network signal output port 04	
Return Values	Received successfully	ES 04 On OK
	Receive failed	ES 04 On FAIL
Control Command2	ES All Off [Enter]	
Function Description	Turn off all the network signal output ports	
Return Values	Received successfully	ES All Off OK
	Receive failed	ES All Off FAIL
Control Command3	Reset [Enter]	
Function Description	Restart the device	
Return Values	Received successfully	Reset OK
	Receive failed	Reset FAIL
Control Command4	Baud 19200 [Enter]	
Function Description	Set the baud rate value: 19200	
Return Values	Received successfully	Baud 19200 OK
	Receive failed	Baud 19200 FAIL

Note that you need to press the 'Enter' key to send the control command.

FAQ & Troubleshooting

Q: Poor video quality or no video signal on display:

A1: Check whether the HDMI cables are connected properly and are in good working condition.

A2: Make sure the resolution of the display is compatible with the splitter's resolution

Q: No HDMI signal output from the CAT6/7 connectors while the local HDMI out port is working normally:

A1: Check whether the HDMI cables are connected properly and are in good working condition.

A2: Press the reset button on both TX and RX and reconnect.

Q: Snowy or fuzzy screen on the displays:

A1: Cause by damaged or low quality HDMI cables. Change to a higher quality HDMI cable. Make sure the cable length is less than or equal to 5 meters.

A2: Try another CAT cable and make sure the cable length is within the specified range.

Specifications

Item		Specification
Mode		1 input, 8 output
HDMI Performance	Compatibility	HDMI, HDCP 1.4
	Resolution	800x600、1024x768、1280x720、1280x960、1366x768、1440x900、1680x1050、1920x1080、480i@60Hz、480p@60Hz、576i@50Hz、576p@50Hz、720p@50/60Hz、1080i@50/60Hz、1080p@24/25/30/50/60Hz、4K@24/25/30Hz
	Audio Formats	PCM、LPCM、DTS-HD、DTS-Audio、Dolby Digital 5.1CH、Dolby TrueHD 5.1CH
Transmission distance	CAT6/6A/7	1080p@60Hz≤70 meters 4K@30Hz≤40 meters
IR Passback	Bi-directional IR passback (20-60khz)	
RS-232	3Pin：GND-RxD-TxD，follows RS-232 levels Default baud rate：9600	
Operating Environment	Working temperature	-20~60℃
	Storage temperature	-30~70℃
	Humidity	0~90% RH
Protection	ESD protection 1a Contact discharge level 2 (±4KV) 1b Air discharge level 3 (±8KV) Implementation of the standard: IEC61000-4-2	
	Lightning protection	
	Surge protection	
Power	Supply	TX: DC12V/2A RX: DC5V/500mA
	Consumption	TX＜15W RX＜2.5W
Physical Properties	Housing	Iron
	Color	Black
	Weight	TX：615g RX：160g ×8
	Dimensions	TX: 272.0(L) x 96.5(W) x 23.0(H) mm RX: 75.0(L) x 80.0(W) x 18.0(H)mm

Disclaimer

The product name and brand name may be registered trademarks of related manufacturers. TM and ® may be omitted on the user's guide. The pictures on the user's guide are just for reference, and there may be some slight differences with the actual products.
We reserve the right to make changes without prior notice to a product or system described herein to improve reliability, function, or design.

gofanco®

Thank you for choosing gofanco

www.gofanco.com