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1x4 HDBaseT Extender/ Splitter with Loopout - 1080p User's Guide

P/N:HDBaseT4P

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/download.

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 adapter only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The 1x4 HDBaseT Extender/Splitter with Loopout - 1080p splits HDMI signals from a source device into 4 HDBaseT outputs plus one HDMI output.

Features

• Transmits HDMI signals in 1080p up to 150 meters over CAT cabling via HDBaseT protocol

• Supports Power over Cable (PoC) technology, allowing the HDBaseT receivers to be powered by the splitter over CAT cables

• Supports bidirectional IR remote control to control the source device or display device from long distances

• Smart EDID management allows you to select the output resolution to match the connected displays

• Compliant with HDMI 1.4 and HDCP 2.2 specifications

Installation Requirements

• HDMI source device (DVD player, set top box, PC, etc.)

• HDMI display device (SDTV/Monitor, HDTV/Monitor, projector, etc.)

• HDMI cables (not included)

• CAT cables (not included)

Package Contents

HDMI HDBaseT Extender/Splitter

- • 1x HDMI HDBaseT 1080p Extender/Splitter
- • 2x Mounting ears with 4 screws
- • 2x Long mounting ears
- • 4x Plastic cushions
- • 1x IR receiver
- • 4x IR emitters
- • 1x RS232 cable (3-pin to DB9)
- • 1x Power adapter (24VDC/2.71A)
- • 1x User manual

HDBaseT Receiver

- • 4x HDBaseT Receivers (RX)
- • 8x Mounting ears with 8 screws
- • 16x Plastic cushions
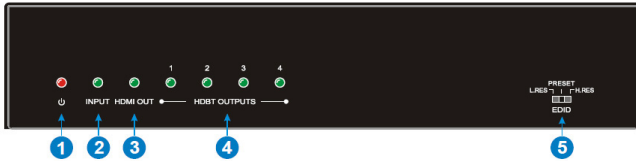- • 4x 3-pin Phoenix connectors

Product Layout

Figure 1: HDBaseT Splitter Front Panel Layout

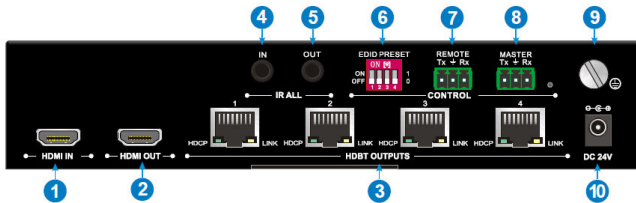| No.	Name	Description
①	Power LED	The LED illuminates red when power is applied.
②	Input LED	The LED illuminates green when there is HDMI source input.
③	HDMI output LED	The LED illuminates green when there is HDMI output.
④	HDBT output LEDs	Four LEDs, one of which illuminates green to indicate the display device outputting HDBaseT signal.
⑤	EDID	3-pin DIP switch for setting the Extended Display Identification Data (EDID) value.

Figure 2: HDBaseT Splitter Rear Panel Layout

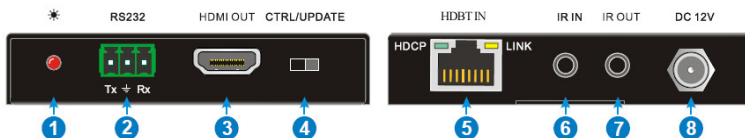| No.	Name	Description
①	HDMI IN	HDMI port for connecting the HDMI source device (Blu-ray Disc™, DVD player, gaming console, etc.).
②	HDMI OUT	Local HDMI port for connecting a local display.
③	HDBT OUTPUTs	Four HDBaseT RJ45 outputs for connecting the four HDBaseT receivers.
④	IR ALL IN	3.5mm jack for connecting the IR receiver.
⑤	IR ALL OUT	3.5mm jack for connecting the IR emitter.
⑥	EDID PRESET	4-pin DIP switch for setting manual EDID management.
⑦	REMOTE	3-pin phoenix connector for connecting to a computer for RS232 pass through control.
⑧	MASTER	3-pin phoenix connector for connecting to a computer for controlling this splitter via RS232 commands.
⑨	GROUND	Ground connection.
⑩	DC 24V	DC barrel connector for the AC power adapter.

Figure 3: HDBaseT Receiver Layout

No.	Name	Description
①	Power LED	Illuminates red when power is applied.
②	RS232	Euroblock/Phoenix connector for connecting to a computer for RS232 pass through control.
③	HDMI OUT	HDMI port for connecting the video display.
④	CTRL/UPDATE	Switch to in the **CTRL** position, it serves as an RS232 serial extender. Switch to in the **UPDATE** position, it allows to update the Valens IC program by connecting to a PC and running the batch file.
⑤	HDBT IN	HDBaseT RJ45 input for connecting the HDBaseT Extender/Splitter
⑥	IR IN	3.5mm jack for connecting the IR receiver.
⑦	IR OUT	3.5mm jack for connecting the IR emitter.
⑧	DC12V	When the splitter is powered on, the DC barrel connector doesn't need to connect to the power adapter.

Hardware Installation

1. Power off all devices including your HDMI source and HDMI display(s).

2. Connect your HDMI source device to the HDBaseT Splitter's HDMI Input connector with an HDMI cable (HDMI cable not included).

3. Connect your CAT cable between the HDBaseT Splitter and HDBaseT Receiver.

4. Optional: Connect an HDMI display to the HDMI output of the HDBaseT Splitter using an HDMI cable (HDMI cable not included).

5. Connect your HDMI display to the HDBaseT Receiver's HDMI Output connector with an HDMI cable (HDMI cable not included).

6. Optional: Connect the IR Receiver Extension Cable and the IR Blaster Extension Cable to the IR interface port. This connection is needed only if you need to control your HDMI devices from the remote location. See IR Control, on page 11 and 12, for proper IR connection.

7. Plug the included power adapter into the HDBaseT Splitter's Power Jack, then plug the power adapter into a reliable power outlet.

8. Power on your HDMI source device and HDMI display. The extender is ready for use.

Application Diagram

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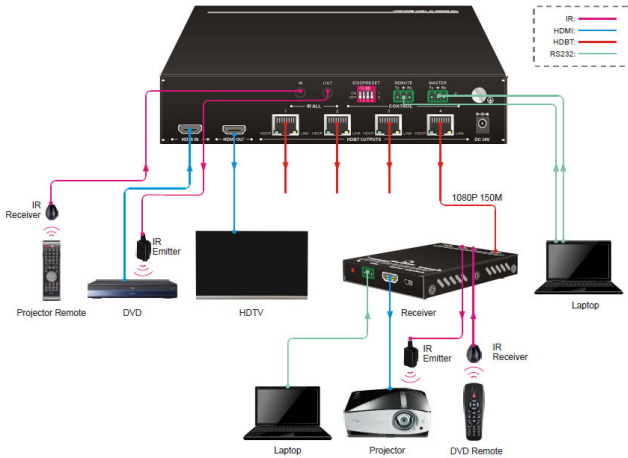

Figure 4: Application Diagram

RS232 Control

- Splitter Control: Connect the control PC to the Splitter's Master RS232 port and install the software
- Receiver Control: Connect the control PC to the Remote RS232 port and install the software

RS232 Control Software

Works with most serial command and monitoring software such as CommWatch.

- Download CommWatch or any similar serial command software
- Installation: Copy the control software files and paste them to the hard drive of your PC
- Uninstallation: Delete all control software files from the PC

Basic Settings

1. Connect all input and output devices as needed, then connect the PC to the desired unit.
2. Double click the software icon to run the serial control software. The icon is shown below.

CommWatch.exe

The examples shown on this page and the following page are from CommWatch serial command software.

Control Software Interface

Set the COM port, Baud rate, data bit, stop bit, and parity.
Enter commands into the Command Sending Area.
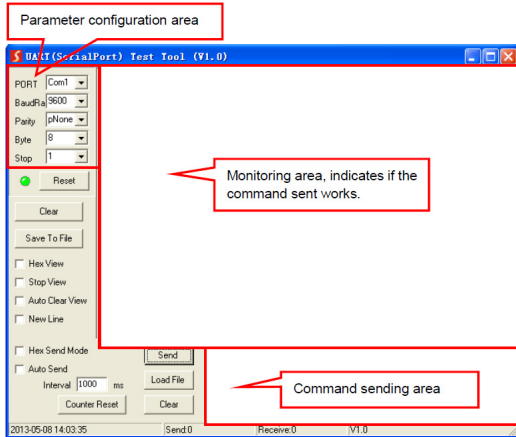
RS232 Commands

Default settings: Baud rate: 9600, Data bit: 8, Stop bit: 1, Parity bit: none.

HDBaseT Splitter Commands

Command	Description	Command Example and Response
OFF0.	Turn off all outputs.	OFF0. OFF All
OFF1.	Turn off the local HDMI output.	OFF1. OFF 1
OFF2.	Turn off the HDBT output 1.	OFF2. OFF 2
OFF3.	Turn off the HDBT output 2.	OFF3. OFF 3
OFF4.	Turn off the HDBT output 3.	OFF4. OFF 4
OFF5.	Turn off the HDBT output 4.	OFF5. OFF 5
ON0.	Turn on all outputs (default).	ON0. ON All
ON1.	Turn on the local HDMI output.	ON1. ON 1
ON2.	Turn on the HDBT output 1.	ON2. ON 2
ON3.	Turn on the HDBT output 2.	ON3. ON 3
ON4.	Turn on the HDBT output 3.	ON4. ON 4
ON5.	Turn on the HDBT output 4.	ON5. ON 5

IR Control

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

Controlling the Display Device(s)

1. Connect an IR Receiver Extension Cable to the IR In port of the HDBaseT Splitter.

2. Connect an IR Blaster Extension Cable to the IR Out port on each HDBaseT Receiver.

3. Point the IR Blaster Extension Cable's IR eye in line with the IR receiver on the display device.
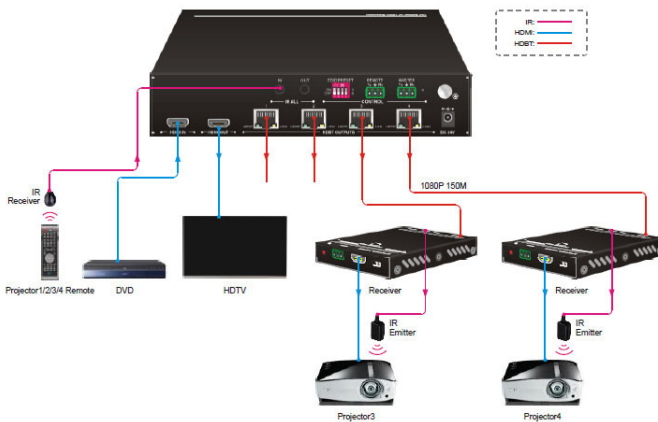

Figure 5: Display Device IR Control Connection Diagram

Controlling the Source Device

1. Connect an IR Blaster Extension Cable to the IR Out port of the HDBaseT Splitter.

2. Point the IR Blaster Extension Cable's IR eye in line with the IR receiver on the source device.

3. Connect an IR Receiver Extension Cable to the IR In port on each HDBaseT Receiver.
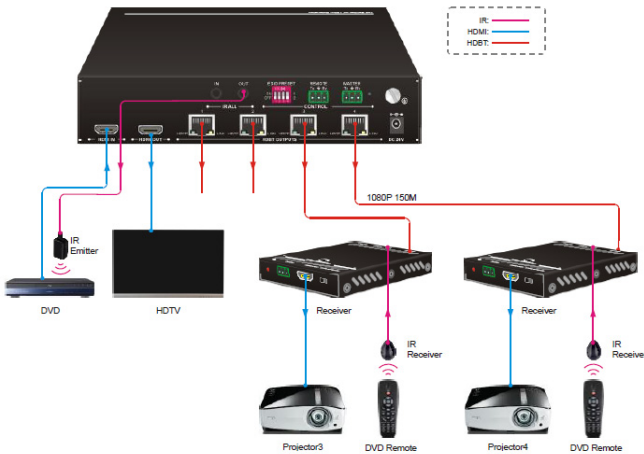

Figure 5: Source Device IR Control Connection Diagram

EDID Management

EDID is used by the source device to match the video resolution to the connected display(s). The source device obtains its EDID from the 1st connected display as default setting. However, since displays with different capabilities are often connected to the splitter, the EDID DIP switch can be used to set the EDID to a fixed value to offer the best compatiblity accross all connected displays.

Front Panel EDID Switch

Switch Status	Description
L.RES	The splitter reads EDID from all connected displays, and then the source device will automatically obtain the EDID which contain the lowest resolution.
PRESET	Switch to the preset EDID, and the preset EDID can be set via the 4-pin EDID switch on rear panel. The factory default is 720p.
H.RES	The splitter reads EDID from all connected displays, and then the source device will automatically obtain the EDID which contain the highest resolution.

Rear Panel 4-pin EDID Switch

The 4-pin EDID switch allows you to set the EDID information that is passed to the source device. The down position represents a "0", the up position represent a "1". The image below represents status "0000".

EDID PRESET
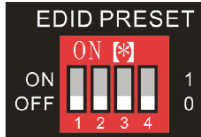
ID	Switch	Video	Audio
0	0000	The source device will automatically obtain the EDID of the display that connected the port HDBT OUT 1.	
1	0001	The source device will automatically obtain the EDID of the display that connected the port HDBT OUT 2.	
2	0010	The source device will automatically obtain the EDID of the display that connected the port HDBT OUT 3.	
3	0011	The source device will automatically obtain the EDID of the display that connected the port HDBT OUT 4.	
4	0100	The source device will automatically obtain the EDID of the display that connected the port HDMI OUT.	
5	0101	720p 2D	2-channel
6	0110	720p 3D	2-channel
7	0111	720p 2D	Multichannel
8	1000	720p 3D	Multichannel
9	1001	1080p 2D	2-channel
10	1010	1080p 2D	Multichannel
11	1011	User-define	
12	1100		

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 HDBaseT 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.

Q: Splash screen on the displays:

A1: Cause by damaged or low quality HDMI cables. Change to a higher quality HDMI cable.

Specifications

HDBaseT Splitter

Video Input	
Input	(1) HDMI
Input Connector	(1) Female type A HDMI
Input Video Signal	HDMI
HDMI Input Resolution	Up to 4Kx2K@30Hz
Video Output	
Output	(1) HDMI; (4) HDBT
Output Connector	(1) Female type A HDMI; (4) RJ45
Output Video Signal	HDMI, HDBaseT
HDMI Output Resolution	Up to 4Kx2K@30Hz
HDBT Output Resolution	Up to 1080p@60Hz
Control	
Control port	(1) EDID; (1) EDID PRESET; (1) IR ALL IN; (1) IR ALL OUT; (1) REMOTE; (1) MASTER
Control Connector	(1) 3-pin DIP switch; (1) 4-pin DIP switch; (2) 3.5mm mini jacks; (2) 3-pin phoenix connectors
General	
Transmission Mode	HDBaseT
Transmission Distance	1080p ≤492 feet (150 meters)
Operation Temperature	0 ~ +40℃
Storage Temperature	-10 ~ +55℃
Relative Humidity	10% ~ 90%
AC Adapter Input Power	100V~240V AC, 50/60Hz
Input Power	24VDC 2.71A
Power Consumption	35W (Max)
Dimension (W*H*D)	219mm x 44mm x 157.5mm
Net Weight	1.24kg

HDBaseT Receiver

Input	
Input Signal	(1) HDBT
Input Connector	(1) RJ45
Output	
Output	(1) HDMI
Output Connector	(1) Female type A HDMI
Control	
Control port	(1) IR IN; (1) IR OUT; (1) RS232
Control Connector	(2) 3.5mm mini jacks; (1) 3-pin phoenix connector
General	
Resolution Range	Up to 1080p@60Hz
Transmission Mode	HDBaseT
Transmission Distance	1080p ≤ 492 feet (150 meters)
Bandwidth	10.2Gbps
HDMI Standard	Support HDMI1.4 and HDCP2.2
Impedance	75Ω
Operation Temperature	0 ~ +40℃
Storage Temperature	-10 ~ +55℃
Relative Humidity	10% ~ 90%
AC Adapter Input Power	100V~240V AC, 50/60Hz
Input Power	12VDC 1A
Power Consumption	9.5W (Max)
Dimension (W*H*D)	84mm x 16mm x 104mm
Net Weight	140g

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