1 In 4 Out HDMI CAT5e Distribution Extender Transmitter

VOPEX-C5HD-4LC

Low Cost 4-Port HDMI Splitter/Extender via CAT5e

Installation and Operation Manual

VOPEX-C5HD-4LC Local Unit and Four Remote Units (Included)

VOPEX-C5HD-4LC extends and distributes HDMI signal to 4 remote HDMI displays over CAT5e cable.
The transmission distance is up to 40M at 1080p, 70M at 720p.
It is expandable by connecting to another VOPEX-C5HD-4LC to get a 1 in multiple out application.
(1 in 5 out, 1 in 6 out, 1 in 7 out, 1 in 8 out.)
It's suitable for many one in-multiple out applications such as a bar, business, church, conference room, school, CCTV, surveillance...etc.

Features

- Extends and distributes HDMI signal to 4 remote HDMI displays over CAT5e cable.

- Remote units require no external power (4 included).

- Supports resolutions up to 1080p 60Hz.

- Transmission distance up to 40M at 1080p, 70M at 720p.

- Built-in HDMI loop out supports CEC.

- The transmitter can be connected to another transmitter for up to 1 in-8 out application.

- HDMI 1.4 compliant.

- Supports AC3, DTS, Dolby TrueHD, DTS-HD

- Supports RS232 control.

- Supports EDID management

Materials Included with this kit:

1 x Local Unit (Transmitter)
4 x Remote Units (Receivers)
1 x DC12V 1A power supply
4 x Rubber feet
2 x Screws/ Screw hole plugs

Applications

(1) Extend and distribute 1 HDMI source to 4 remote HDMI displays.

DVR OR SET-TOP BOX

HDMI

Local Unit

RS232

Loop Out — HDMI
Stack — OR

Monitor

Second Local Unit

(Either attach a display to the "Loop Out" port or a second Local Unit)

Remote Unit — Monitor

CAT5e Cable
1080p (Max. 40M)
720p (Max. 70M)
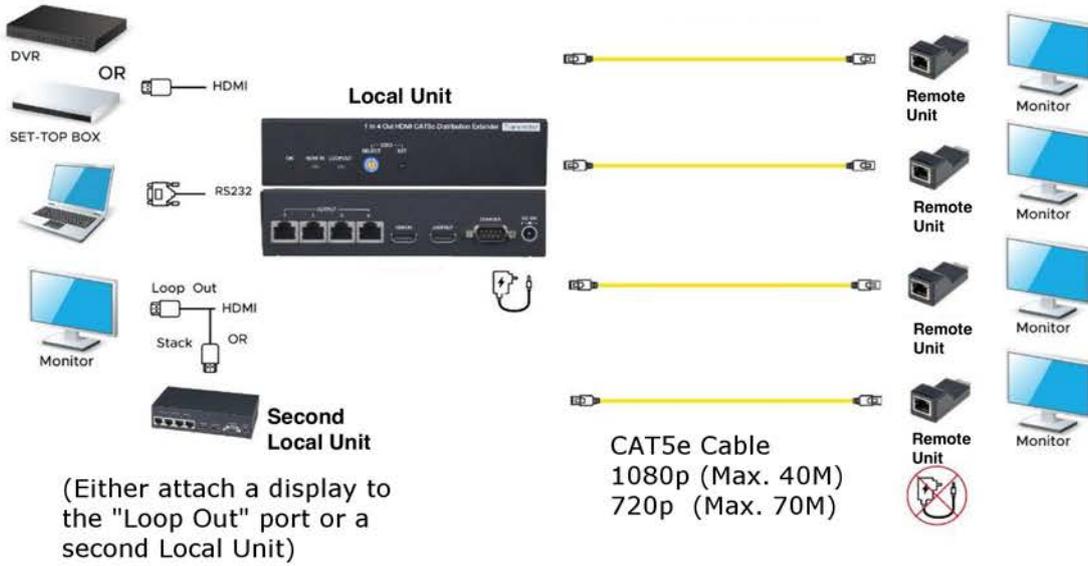
(2) Stack to another VOPEX-C5HD-4LC through HDMI loop out port to get configuration of 1 in 8 out.

CAT5e Cable
1080p (Max. 40M)
720p (Max. 70M)

DVR
SET-TOP BOX
NOTEBOOK

HDMI IN

Local Unit

HDMI LOOPOUT

HDMI IN

Local Unit

Remote Unit — Monitor
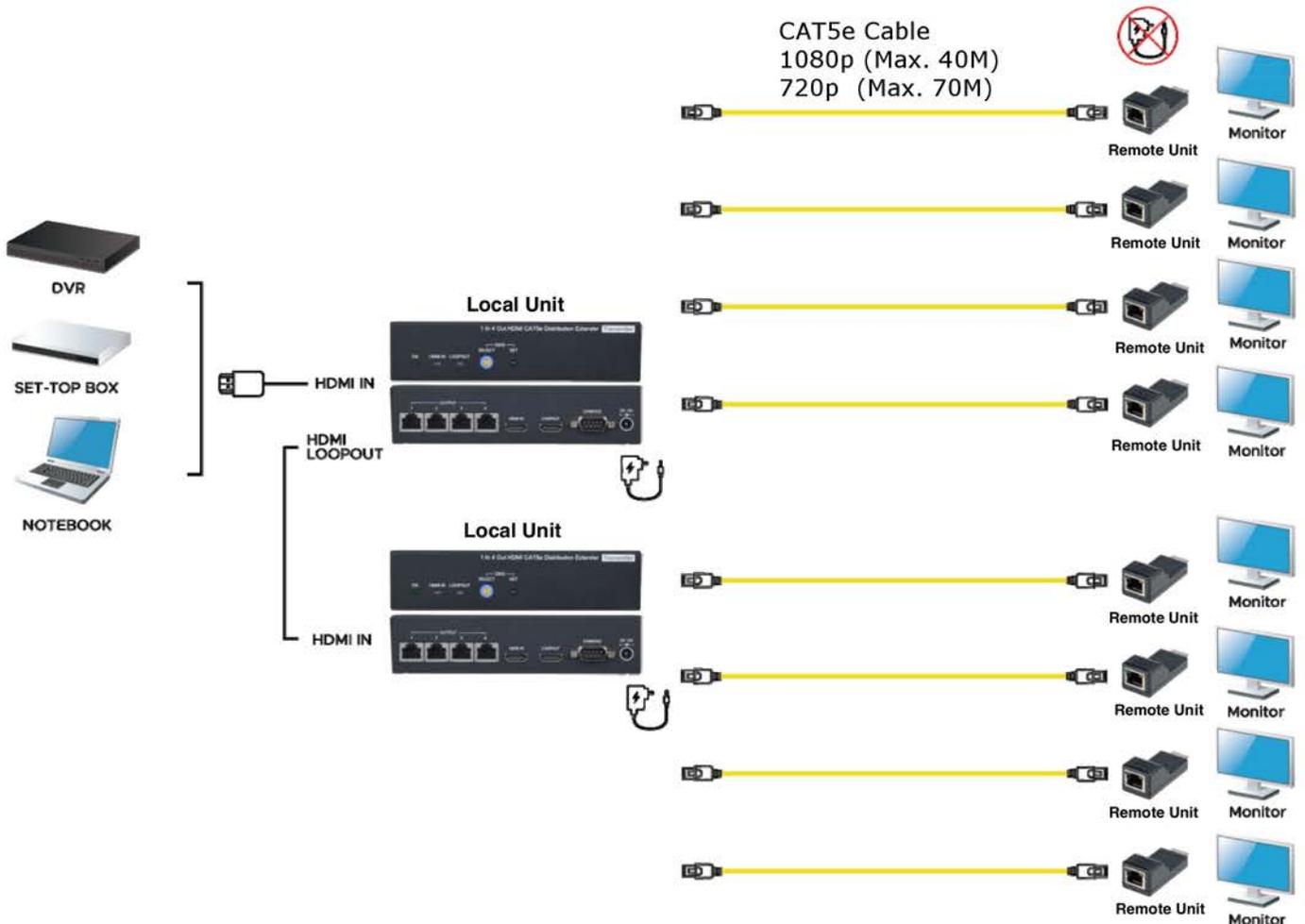
Panel View:

Local Unit (Transmitter)
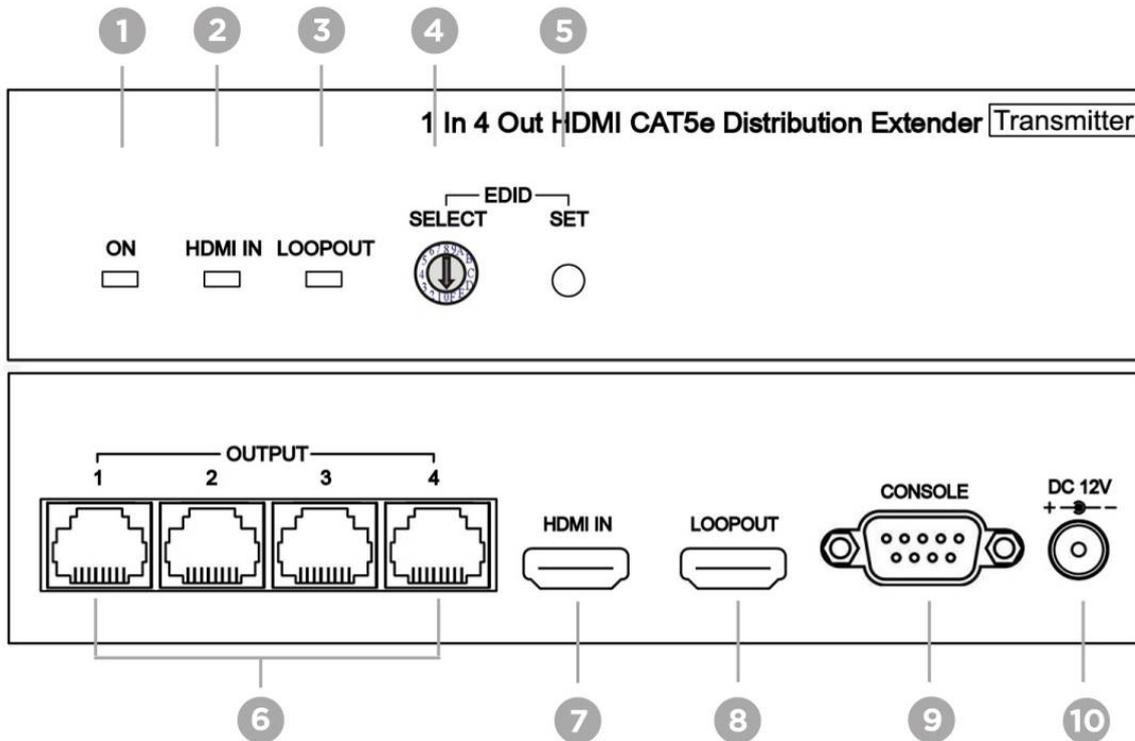
No.	Interface	Description
1	Green LED	Green LED indicates "ON" status.
2	Blue LED	Blue LED indicates "HDMI IN" is connected to an HDMI source.
3	Blue LED	Blue LED indicates "LOOPOUT" is connected to an HDMI display.
4	Rotary Switch	Select EDID by rotating the switch from 0 to F. (please refer to EDID settings)
5	SET Button	Press for 1 second to copy the selected EDID.
6	Output 1~4	Connects to Remote Units with CAT5e cables. (please refer to Notes 2-4)
7	HDMI Input	Connects to an HDMI source with an HDMI cable.
8	Loop Out	Connects to an HDMI display or another Local Unit with an HDMI cable. (please refer to Note 1)
9	Console	Connects to RS232 control device with DB9(F) cable for controlling the Local Unit or updating firmware. (please refer to RS232 settings)
10	Power Input	Connects to DC12V 1A adapter.

Remote Unit (Receiver) (End Views)
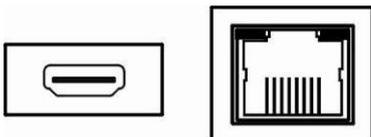
No.	Interface	Description
1	Green LED	Green LED indicates receiving power and video signals.
2	Yellow LED	Yellow LED indicates no signal input or receiving an unsupported format.

Notes:

1. When connecting an HDMI display to the Loop Out port, make sure the HDMI cable connects to "Input 1" of the HDMI display.
2. It is recommended to use unshielded CATx cable.
3. When using shielded cable, the transmission distance might be shorter. (i.e. CAT6a: 25-30M, CAT7:25- 40M)
4. The cable must be straight, avoid rolling the cable to avoid crosstalk interference.

RJ45 Pinout

(Wiring to TIA/EIA-568B)
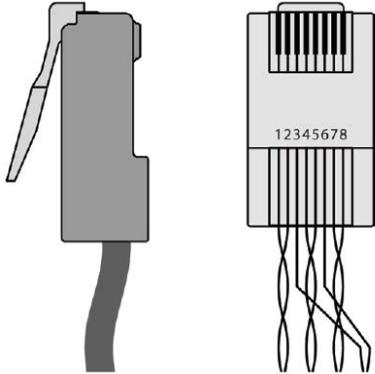
TIA/EIA-568B Pinout	
PIN	**Wire Color**
1	Orange-white
2	Orange
3	Green-white
4	Blue
5	Blue-white
6	Green
7	Brown-white
8	Brown

RS232 Wiring

HyperTerminal settings:〔**57600bps (8-N-1)**〕

RS232	
Pin	**Signal**
2	TX
3	RX
5	GND

Note: Pins not shown in table have no connection

RS232 Command Table

Command	Description
OFF 1(Enter)	OUTPUT 1 OFF
OFF 2(Enter)	OUTPUT 2 OFF
OFF 3(Enter)	OUTPUT 3 OFF
OFF 4(Enter)	OUTPUT 4 OFF
OFF 5(Enter)	HDMI LOOPOUT OFF
ON 1(Enter)	OUTPUT 1 ON
ON 2(Enter)	OUTPUT 2 ON
ON 3(Enter)	OUTPUT 3 ON
ON 4(Enter)	OUTPUT 4 ON
ON 5(Enter)	HDMI LOOPOUT ON

Note: After a reboot/power cycle, the VOPEX-C5HD-4LC will return to default settings.

By default, all Outputs and the HDMI Loopout are ON.

EDID Table

Number	EDID	Number	EDID
0	Customized EDID #1	8	1920x1080
1	Customized EDID #2	9	1920x1200
2	1024x768	A	720p 50Hz LPCM 2CH
3	1280x720	B	720p 60Hz LPCM 2CH
4	1280x1024	C	1080p 50Hz LPCM 2CH
5	1366x768	D	1080p 60Hz LPCM 2CH
6	1600x900	E	1080p 50Hz MULTI
7	1680x1050	F	1080p 60Hz MULTI

EDID Settings

Step1:   Refer to EDID list above and find the number of which EDID is needed. (0~F)

Step2:   Rotate the rotary dip switch arrow Ⓜ to the selected number.

Step3:   Press the "SET" button for 1 second and the two blue LEDs will flash quickly.

Step4:   Wait for the Local Unit to restart. Upon restart the process of EDID setting is complete.

Customize EDID Settings

Step1:   Connect the display and "Loop Out" port through an HDMI cable.

Step2:   Press and Hold the "SET" button for approximately 3 seconds, and the two blue LEDs will flash, first slowly, then quickly.

Step3:   Wait for the Local Unit to restart. Upon restart the process of copying EDID is complete.

Caution:

1. The wiring must be away from any equipment with electromagnetic waves, i.e.: microwave, radio equipment, fluorescent lamps, high voltage power lines.

2. The VOPEX-C5HD-4LC is not a networking device. Do not connect it to an Ethernet device (i.e. router, hub or switch)

Specifications

ITEM NO.	Local Unit
Input Interface	HDMI Type A x 1
Loopout Interface	HDMI Type A x 1
Video Output Interface	RJ45x4
Resolution	Up to 1080p @ 60Hz
Transmission distance	Up to 40M at 1080p, 70M at 720p
RS232 Interface	DB9(F)
RS232 Baud Rate	57600 bps
Power Supply	DC 12V 1A
Temperature	Operation: 0 to 70℃, Storage: -20 to 125℃, Humidity: up to 95%
Dimension (mm) (WxDxH)	167 x 101 x 40
Weight (g)	447

ITEM NO.	Remote Unit
Resolution	Up to 1080p @ 60Hz
Distance	Up to 40M at 1080p, 70M at 720p
HDMI Connector	Type A
Temperature	Operation: 0 to 55℃, Storage: -20 to 85℃, Humidity: up to 95%
Dimension (mm)	24 × 57.5 × 20.2
Weight (g) (WxDxH)	17

Max. Ttl. Power Consumption (1 Local + 4 Remotes)	9.6W

RoHS CE