4K HDMI & USB/AUDIO/RS232/IR CAT5e Extender
ITEM NO: SE150HX-4K HDMI & USB/ Audio/RS232/IR CAT5e Extender

The **SE150HX-4K** HDMI & USB with Analog audio, RS232, and IR CAT5e extender design for extend all signals over one CAT5e/6 up to 140 meters, transmitter unit with local HDMI monitor output.   It provides superior video quality up to 4K resolutions, and using cost effective CAT5e cable, instead of HDMI, RS232 cables, for an easy, neater and reliable installation. It is optimized for applications at broadcasting system, multimedia display and multi-data sharing, digital signage, home network integration, and industrial control, hospital, education, security and system control over RS232 and equipment control over IR.
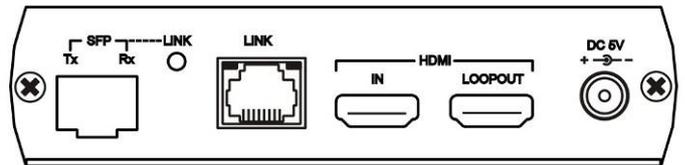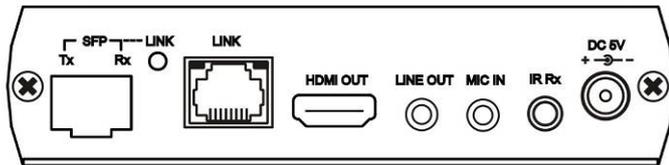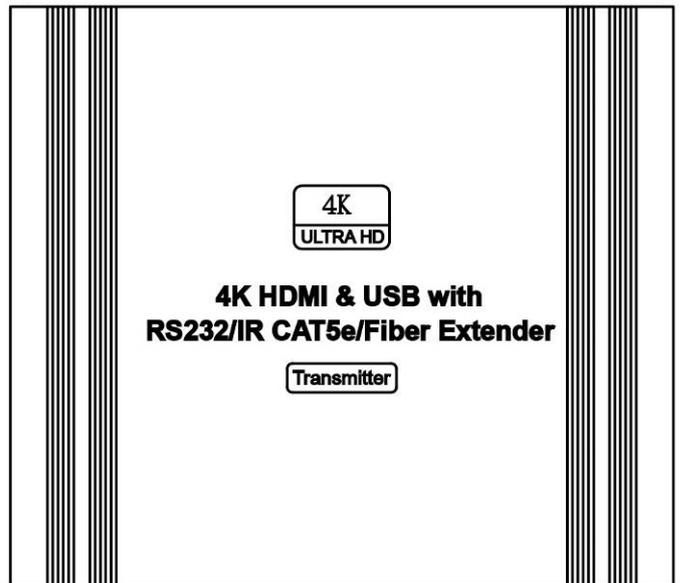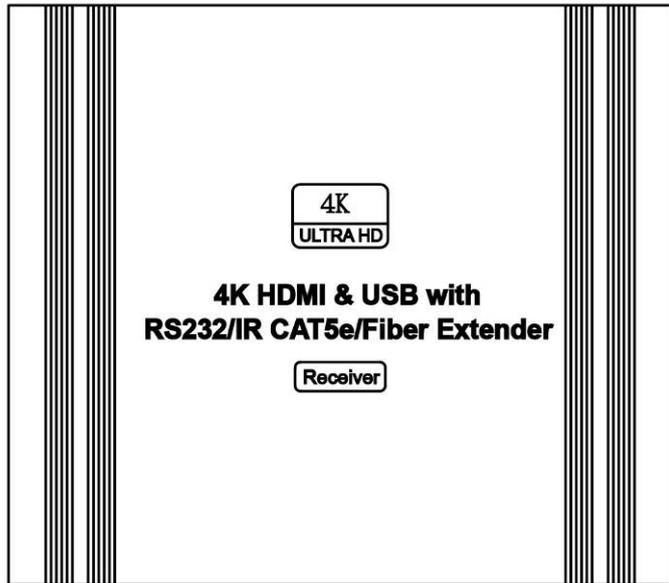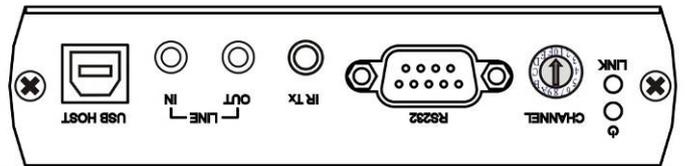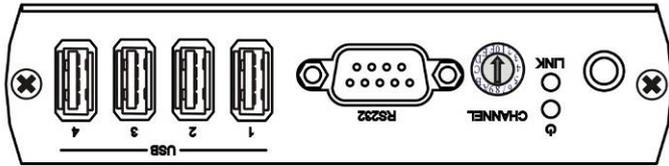
Features:

- Extend 4K UHD HDMI, USB, RS232, IR and Audio signals over one CAT5e/CAT6 cable.
- Transmission range up to 140M over CAT6, 120M over CAT5e.
- HDMI video resolutions up to 4K@30Hz, 1080p Full HD and 1920 x 1200@ 60Hz.
- **SE150HX-4K** transmitter unit with HDMI local loop output.
- HDMI audio support up to LPCM 7.1@192Khz.
- HDMI 1.4 and HDCP 1.4 compliant.
- Built in Bi-directional analog audio extender function.
- Support USB 2.0 and compatible with 1.0, 1.1.
- Support Bi-directional RS232.
- Support one way IR extention, IR carrier 20-60 KHz.
- Built in EDID copy.
- Support external SFP optical transceiver, over Fiber extender.
- Receiver unit with 4 ports USB 2.0 devices, to extend USB 2.0 peripheral devices, such as flash drive, hard drive, mass storage device, keyboard, mouse, etc.
- Perfect for control remote machines and security monitoring systems, digital signage application.

Installation View:

Panel View:

LED Indication Status:

Position	LED Color	Instruction
Power	Green	Power on/off
LINK	Blue	TX and RX Linked
LINK	Green	SFP Fiber linking indication
RJ45	Green	UTP RJ45 linking indication

Bottom Switch & Button:

SE150HX-4K

Switch /Button	Function	↓	↑
1	Group	0	1
2	RS232	Normal	Reserve
3		Normal	Reserve
4	EDID Management	4 5 ↓ ↓ = Select default 1080p LPCM 2CH EDID ↑ ↓ = Select RX monitor EDID ↓ ↑ = Select TX loop out monitor EDID ↑ ↑ = Reserve	
5			
6	Reserve Function	Normal	Reserve
Button	Copy EDID	Based on Switch 4 & 5 setting to do EDID copy	

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Switch /Button	Function	↓	↑
1	Group	0	1
2	RS232	Normal	Reserve
Button 1	Function Switch	MAC, IP, Baud rate, Updated EDID(Reserve)	
Button 2	Baud rate setting	115200, 57600, 38400, 19200, 14400, 9600, 4800, 2400, 1200	

Rotary Switch:

SE150HX-4K built in rotary switch for pairing devices and the rotary switch can be used to switch 0-F channel pairing with group setting of switch 1.   The channel number and group setting of the transmitter and receiver must be same to be connected each other, total up to 32 (16 for each group) pairs could be setup at one switch.

Audio :

Transmitter Analog audio Input Line In	Transmitter Analog audio Output Line Out	Receiver Microphone Input Mic In	Receiver Analog audio output Line Out	Description
O	O	O	O	Transmitter analog audio to receiver analog audio Receiver microphone to Transmitter analog audio (Monitor Mute)
O	X	X	X	Transmitter analog input to Monitor output
X	X	X	O	HDMI audio to Receiver analog audio (support LPCM 2CH, monitor mute)
X	X	X	X	HDMI audio to Monitor audio output

O = connect audio connector , X = disconnect audio connector

※When the receiver's analog output (LINE OUT) connector or microphone input (MIC IN) connector have been   connected, the monitor sound will be turned off. (Mute).

RS232 Baud Rate Setting:

RS232 Default Baud rate is 115200bps. If change date rate, press button1 (switch) at the receiver unit to select Baud rate menu.   Then press button 2 to select the data rate and press button 1 again to confirm and completed the Baud rate setting.

RJ45 Pin Define:
Link Cable (use TIA/EIA-568-B)
1. Orange-white   Data 1 +
2. Orange   Data 1 -
3. Green-white   Data 2 +
4. Blue   Data 3 +
5. Blue-white   Data 3 -
6. Green   Data 2 -
7. Brown-white   Data 4 +
8. Brown   Data 4 –

Cable:

Link cable recommend use high quality CAT5e,CAT6 UTP/STP/FTP cable. The max working distance is 140M (Max) over CAT6.   Poor quality cable or network connection or improper construction will cause unstable connection, video or sound disruptions, picture noise appears.

For longer distance application could be use model no: **SR120** for extend longer distance or add a Gigabit Switch.

The fiber-optic transmission interface uses standard SFP fiber modules, and the transmission distance depends on the specifications and performance of the fiber module and fiber-optic cable.

Trouble Shooting:
1.   **SE150HX-4K** transmission data rate up to 850Mbps Max.
2.   Do not recommend to connect general LAN to avoid large video data transmission slow down other LAN devices. 。
3.   Do not connect UTP and SFP optic fiber at same time to avoid any problem.
4.   Default EDID is 1080p LPCM 7.1 CH., you could copy remote/loop out monitor EDID from TX.
5.   When external IR receiver cable connect to RX, the front panel IR will be disabled.
6.   When analog audio input/output connected, HDMI audio will be disabled.
7.   RX analog audio input (MIC IN) is mono for microphone use only.

Package Include:
SE150HX-4K Transmitter x 1
SE150HX-4K Receiver   x 1
USB A to B cable x 1
IR emitter cable x 1
DC 5V 2Amp power adapter x 2

Specification:

ITEM NO.	SE150HX-4K TX	SE150HX-4K RX
Support Resolution	Up to 4K UHD 4:4:4 @ 30Hz	
Transmission Distance	CAT5e：120M / CAT6：140M (Max)	
HDMI Connector	HDMI Type A x 2	HDMI Type A x 1
USB Connector	USB Type B x 1	USB Type A x 4
RS232 Connector	DB9 (Female) x 1	DB9 (Male) x 1
	RS232 not support hardware handshake	
Link Connector	RJ45 x 1	

Analog Audio connector	Input: Line In, 3.5mm Stereo Phone Jack Output: 3.5mm Stereo Phone Jack (Ext)	Input: Mic In, 3.5mm Mono Phone Jack Output: 3.5mm Stereo Phone Jack (Ext)
IR Connector	3.5 mm Phone Jack x 1	
IR Receiver	x	20-60Khz / ±45° / 5M 3.5mm Stereo Phone Jack (Ext)
IR Emitter	20-60Khz / ±45° / 5M 3.5mm Stereo Phone Jack (Ext)	x
Fiber	SFP	
Power Supply	DC 5V 2A	
Power Consumption	1200mA (Max)	400mA (Max, No USB Device)
Temperature	Operation:-20 to 60℃, Storage: -20 TO 85℃, Humidity: up to 95%	
Dimensions mm	125 x 140 x 30	
Weight g	380	

Rev.B