ST-C6FOUSB4K-LC

4K 10.2Gbps HDMI USB KVM Extender via CAT6/7 or Fiber

Product Manual

Introduction

The XTENDEX® 4K 10.2Gbps HDMI USB KVM Extender via CAT6/7 or Fiber provides remote KVM (USB keyboard, USB mouse and 4Kx2K 30Hz UHD HDMI monitor) access to a USB computer up to 328 feet (100 meters) away via CAT6/6a/7 cable, 6.21 miles (10 km) via simplex LC single-mode fiber optic cable, or 1640 feet (500 m) via simplex LC multimode (OM2 and above) fiber optic cable.

Each KVM extender consists of a local unit that connects to a computer, and a remote unit that connects to an HDMI monitor, bi-directional 3.5mm stereo audio speakers and microphone, RS232, and up to four USB devices (keyboard, mouse, flash drive, HDD, or touchscreen display).

Features:

- Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @30Hz YUV 4:4:4, HDTV resolutions to 1080p, and up to 1920x1200 (WUXGA).
- Signal transmission via one CAT6/6a/7 cable or one single-strand single-mode/multimode LC fiber optic cable.
  - Using CAT6/6a/7 cable:
    - Extend a 4Kx2K signal up to 328 feet (100 meters).
    - Extend a 1080p or 1920x1200 signal up to 492 feet (150 meters).
    - Use with a Gigabit switch to extend a total distance of 656 feet (200 meters) between the transmitter and receiver – the transmitter and receiver can each be extended 328 feet (100 meters) from the switch.
  - Using single-mode 9-micron cable, extend to 6.21 miles (10 km).
  - Using multimode 50-micron cable (OM2 and above), extend to 1640 feet (500 meters).
- HDMI features supported:
  - HDMI 1.4
  - 36-bit Deep Color
  - RGB, YCbCr 4:4:4, YCbCr 4:2:2
  - Dolby, DTS, Stereo, and LPCM
  - Bandwidth up to 340 MHz (10.2 Gbps)
- HDCP 1.4 compliant.
- Four USB 2.0 ports for keyboard, mouse, flash drive, HDD or touchscreen display.
  - Keyboard and mouse are hot-pluggable.
- Supports Plug-and-Play specification.
- Using an unmanaged Gigabit network switch, extend up to 32 pairs in Point-to-Point connections.
  - Use the DIP switch on the transmitter and receiver to specify the ID for the unit.
    - Transmitter and receiver units with the same ID will connect to each other. (Only Point-to-Point connections are supported.)
- Supports full-duplex RS232 up to 115200 baud.
- EDID pass-through for the support of any HDMI display device.
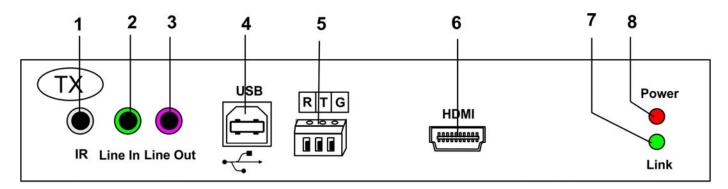- Mounting brackets included for easy surface/wall mounting.

Materials Included
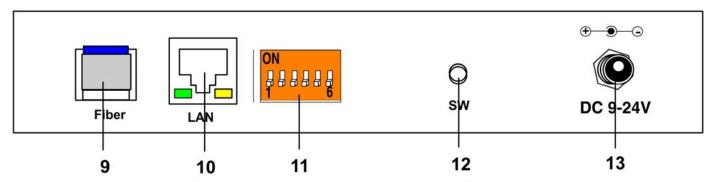
Local Unit Package:

- o 1 x Local Unit
- o 1 x Power Supply
- o 1 x Mounting Rack Metal Parts

Remote Unit Package:

- o 1 x Remote Unit
- o 1 x Power Supply
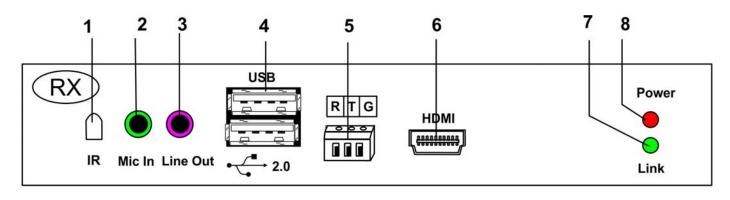- o 1 x Mounting Rack Metal Parts

Features and Functions
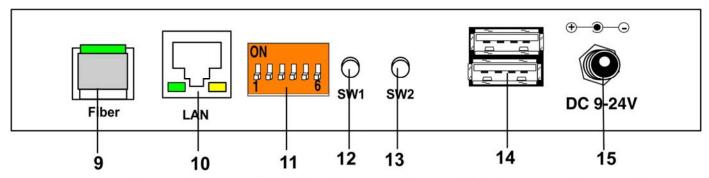

Transmitter (Tx)- Front and Rear Panel

#	LABEL	CONNECTOR/LED	DESCRIPTION
1	IR	3.5mm Jack	Not Used at this time
2	Line In	3.5mm Jack	Audio Input; signal from Line Out of Rx
3	Line Out	3.5mm Jack	Audio Output; signal from Mic In of Rx
4	USB	USB Type B Female	Connect cable to USB port of PC for Hub extension
5	R T G	3-Terminal Block	RS232-over-IP control: Rxd/Txd/Gnd
6	HDMI	HDMI Female	HDMI Input from video source
7	Link	GREEN LED	LED blinks indicating Ethernet packets are being transmitted
8	Power	RED LED	LED Illuminates solid red when power is applied
9	Fiber	SFP Port	SFP module is attached for Fiber cable connection
10	LAN	RJ45 Female	Attach CATx cable here from Rx
11	----	DIP Switches	Used to establish ID of pair
12	SW	Button	Reserved for future use
13	DC 9-24V	Power Jack	System power supply connection

Receiver (Rx)- Front and Rear Panel

#	LABEL	CONNECTOR/LED	DESCRIPTION
1	IR	Sensor	Not Used at this time
2	Mic In	3.5mm Jack	Microphone Input; extended to Line Out of Tx
3	Line Out	3.5mm Jack	Audio Output; extended to Line In of Tx
4	USB	USB Type A Female x2	Connect to USB devices (keyboard, mouse, flashdrive, touchscreen)
5	R T G	3-Terminal Block	RS232-over-IP control: Rxd/Txd/Gnd
6	HDMI	HDMI Female	HDMI out to display; maximum resolution is 4K30Hz
7	Link	GREEN LED	LED blinks indicating Ethernet packets are being transmitted
8	Power	RED LED	LED Illuminates solid red when power is applied
9	Fiber	SFP Port	SFP module is attached for Fiber cable connection
10	LAN	RJ45 Female	Attach CATx cable here from Tx
11	----	DIP Switches	Used to establish ID of pair
12	SW1	Button	After pressing SW1, the Uart Baudrate -> Update EDID will show on the top left of the screen in sequence. The OSD menu will disappear after 10 seconds.
13	SW2	Button	As you press SW1 to show the baudrate on the OSD menu, press SW2 to change the baudrate. The font will change to red. Repeatedly press SW2 to cause the Uart baudrate to be shown sequentially 115200 -> 57600 -> 38400 -> 19200 -> 9600 -> 4800 -> 2400 -> 1200. When the desired baudrate is shown, press SW1 to have it take effect and update. The OSD menu will disappear after 10 seconds.
13	DC 9-24V	Power Jack	System power supply connection

■   System Installation

1. Attach a display, keyboard/mouse, microphone and speaker, as required, to the HDMI-Out, USB, MIC-IN, Line-Out ports of the Receiver respectively.
2. Use a HDMI-HDMI cable to attach the PC HDMI output to the HDMI-IN of the Transmitter.
3. Use a USB-B to USB-A cable to connect Transmitter USB-B to PC USB port.
4. Connect the Transmitter's Line-In/Line-Out to PC Line-Out/Line-In using audio cables.
5. 5.1 For CATx cable installation: Use a CAT6/6a/7 UTP cable (straight EIA 568B, max. 150 meters depending on cable quality) to directly connect Tx to Rx as a pair connection, or 100 meters (each) to a Gigabit Ethernet Switch.
    5.2 For Fiber cable installation: Connect Fiber cable (either SM (up to 10km) or MM (up to 300m)) to the pre-attached 1.25G SFP module of the Tx/Rx SFP Fiber Slot for direct Tx/Rx connection, or connect to Gigabit Ethernet Switch,
6. Adjust the Tx/Rx 5-bit DIP Switch to match as a paired connection.
7. Power ON both the Receiver and the Transmitter.
8. The EDID of Rx screen will be detected by the PC Graphic card. The PC HDMI/Audio outputs will be displayed on the Receiver's monitor and speakers. The EDID info should be available on the PC graphic control panel.
9. The USB keyboard/mouse at the Receiver will now control the PC at the Transmitter.

When multiple Transmitters and Receivers are connected to a network switch, each pair must have a separate ID number, determined by the position of the dipswitches on the front of the Transmitter and Receiver.   A Transmitter an Receiver can only connect to each other (pair) if their ID numbers are the same, and they must be unlike any other ID numbers on other Transmitters and Receivers connected to the network switch. That is, each pair of Transmitter and Receiver must have a unique ID number.

ID 00000

ID 10000

ID 10100

SPECIFICATIONS

Transmitter (Local Unit)	
Host	USB Computer with Ultra-HD HDMI output
Operating System	Multiplatform support: Windows XP/Vista/7/8/10, Windows Server 2003/2008/2012/2016/2019, Linux and MAC OS 10/11
Video Connector	Female HDMI
USB Connector	Female USB Type B
Audio Connectors	2x Female 3.5mm jacks for Audio Out and Mic In
RS232 Connector	3-pin screw terminal block; supports full duplex RS232 up to 115200 baud
CATx connector	Female RJ45 for sending/receiving video, audio, USB and RS232 signals
Fiber connector	One simplex female LC fiber optic port for sending/receiving video, audio, USB and RS232 signals
Identification	DIP switch for specifying Unit ID number
HDMI Compliance	Supports HDMI 1.4
HDCP Compliance	Supports HDCP 1.4
Receiver (Remote Unit)	
Video Connector	Female HDMI
USB Connector	4x Female USB 2.0 Type A
Audio Connectors	2x Female 3.5mm jacks for Audio Out and Mic In
RS232 Connector	3-pin screw terminal block; supports full duplex RS232 up to 115200 baud
CATx connector	Female RJ45 for sending/receiving video, audio, USB and RS232 signals
Fiber connector	One simplex female LC fiber optic port for sending/receiving video, audio, USB and RS232 signals
Identification	DIP switch for specifying Unit ID number
Supported Video Resolutions	- Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @30Hz YUV 4:4:4 - HDTV resolutions to 1080p - Up to 1920x1200 (WUXGA)
Audio Support	Supports embedded digital audio through HDMI compatible TVs or audio receivers.
General	
Power (Local and Remote Units)	Input: 100 to 240 VAC at 50 or 60 Hz via AC adapter (included). Output: 12VDC, 2A
Dimensions WxDxH (in.)	6.32x3.82x1.1 (161x97x28 mm)
Operating Temperature	32 to 131°F (0 to 55°C).
Storage Temperature	-4 to 185°F (-20 to 85°C).
Operating/storage relative humidity	5 to 90% non-condensing RH.
Regulatory Approvals	CE, FCC, RoHS
Maximum Distance With CAT6/6a/7 cable	- Extend a 4Kx2K signal up to 328 feet (100 meters). - Extend a 1080p or 1920x1200 signal up to 492 feet (150 meters).
Maximum Distance With Fiber optic cable	- Using single-mode 9-micron cable, extend to 6.21 miles (10 km). - Using multimode 50-micron cable (OM2 and above), extend to 1640 feet (500 meters).