Desktop KVM OVER IP Optical Network Extender (Ultra HD HDMI)

A. Introduction:

Lossless KVM OVER IP HDMI optical network extender uses CAT6/7 cable or optical fiber to transmit video, audio and KVM signals among multi- computer rooms/data centers. Video quality can be in desktop-class applications, and break through the limitation of transmission distance based TCP/IP protocol, Ensure lossless on vision, hear and control; Delay free experience, ensure the quality and efficiency of control.

B. Features:

- I. Audio/video, serial port, Infared RS232, USB keyboard&mouse, USB flash are extend through network or Optical fiber;
- II. CAT6 / 7 network cable can be used to transmit more than 100 meters, and can be extended infinitely through the switch;
- III. With routing switching function, it can pass through the network switch and support 32 groups of pairing through the dial switch;
- IV. Support unicast mode (one to one);
- V. Supports maximum UHD UHD resolution: 4kx2k@30Hz;
- VI. SupportsHDMI1.4&HDCP2.2;

VII. Automatic detection of display mode and DDC synchronization function, automatic display of the best resolution of the back-end display;

VIII. Lossless video compression algorithm based on patent authorization;

- IX. Support USB2.0 full rate transmission function;
- X. Transmission delay < 80us;

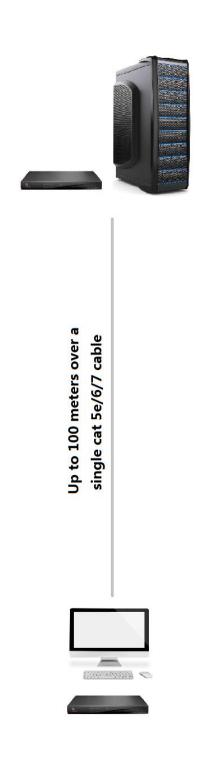
C. Technical advantages

Lossless display without delay

The lossless KVM over IP HDMI optical network extender optimizes the image quality and transmission delay respectively based on the patented video compression algorithm, which can ensure the lossless display of the image and transmit with a delay less than 80us 1080p@60hz / 4kx2k@30Hz HD Ultra HD real-time image, as if in the local direct connection viewing experience

Application topology:

Unicast Mode (one to one)



Specification:

LBX-1600T(Transmitter)

Video		
Signal Protocol	HDMI1.4b、TMDS Signal	
Physical interface	HDMI TYPE A	
Max Resolution	4096x2160@30Hz (RGB444 format), 4096x2160@60Hz (YUV420),	
	2560x1080@120Hz (RGB444),	
HDCP	HDCP1.4 & HDCP2.2	
Pixel bandwidth	300MHz,all-digital	
Interface bandwidth	12Gbps	
signal intensity	TMDS +/-0.4Vpp	
Minimum maximum level	TMDS 2.9V/3.3V	
Impedance	Differential 100 ohm	
HDMI wire input distance	Less than10m, Certified HDMI wire is recommended	
Audio Interface		
Audio Input	3.5mm audio jack	
Audio output	3.5mm audio jack	
Gain	0dB	
frequency response	20hz-20khz	
Signal type	stereo	
impedance	Input >10kohm; output 50 ohm	
Maximum input level	ЗУрр	
USB Interface		
Туре	Type B seat	
Signal Type	USB Signal	
Agreement	USB2.0	
transmission speed	480Mbps	
	RS232 Interface	
Connector	3.5mm phoenix jack	
Baud rate	115200bps	
Signal Type	Digital TTL	
Level type	RS-232 level	
Signal direction	Two way communication	
network interface		
Connector	High speedRJ45	
Protocol	TCP/IP	
Transmission Distance	use of CAT6/7 shielded wire can be more than 100 meters, Access switch	
	without distance limit	
Transmission delay	<80us	

Fiber Interface		
Connector	SFP fiber connector, LC fiber	
Туре	Multimode or single mode	
Wavelength	Multimode:850nm Singlemode: 1310nm	
Protocol	TCP/IP	
Rate	1.25Gbps	
Specifications	Multimode: 50/125um Singlemode: 9/125um	
Transmission Distance	Multimode less than 300m, Single mode:2km~80km	
Specifications		
Power	12V/2A	
Power waste	<=10W	
Temperature	Working temp: 0~50 degree, Storage temp: 20~70 degree	
Humidity	10%~90%	
Size	13.5cm X 11cm X 3cm (L x W x H)	
Mean time between failures	30000 hours	

LBX-1600R Receiver

	Video Interface	
Signal protocol	HDMI1.4b、TMDS Signal	
Physical interface	HDMI TYPE A	
Max Resolution	4kx2k@30Hz	
HDCP	HDCP1.4 & HDCP2.2	
Pixel bandwidth	300MHz, all-digital	
Interface bandwidth	12Gbps	
signal intensity	TMDS +/-0.4Vpp	
Min max level	TMDS 2.9V/3.3V	
Impedance	Difference 100 ohm	
HDMI wore input distance	Less than 10m, Certified HDMI wire is recommended	
Audio Interface		
MIC Input	3.5mm Audio Jack	
Audio Output	3.5mm Audio Jack	
Gain	0dB	
frequency response	20hz-20khz	
Signal Type	Stereo	
Impedance	Input >10k ohm; Output: 50 ohm	
Maximum Input Level	3Vpp	
USB Interface		
Connector	4 type a double deck seats	
Signal Type	USB Signal	
Protocol	USB2.0	
Transmission Speed	480Mbps	
Transmission Delay	<80us	
	RS232 Interface	
Connector	3.5mm Phoenix Jack	
Baud Rate	115200bps	
Signal Type	Digital	
Level Type	RS-232 Level	
Signal Direction	Two way communication	
Network Interface		
Connector	High speed RJ45	
Protocol	TCP/IP	
Transmission Distance	Up to 100 meters with CAT6 shielded wire, Access switch without	
	distance limit	

Fiber Interface		
Connector	SFP fiber connector, LC fiber	
Туре	Multimode or Singlemode	
Wavelength	Multimode: 850nm Singlemode: 1310nm	
Protocol	TCP/IP	
Rate	> 1.25Gbps	
Specification:	Multimode: 50/125um Singlemode: 9/125um	
Transmission Distance	Multimode: less than 300m; Singlemode: 2km~20km	
Specification		
Power	12V/2A	
Power waste	<=10W	
Temperature	Working temp: 0~50 Degree, Storage temp: -20~70 degree	
Humidity	10%~90%	
Size	13.5cm X 11cm X 3cm (L x W x H)	
Mean time between failures	30000 hours	



