INFINIDISPLAY
宽域视讯 至臻视界

※ No compression

4K
3840x2160 HDMI1.4 DVI1.0

※ No latency

※ 10.2G SerDes

※ Clock Data Recovery

※ EDID Learning

※ Mouse,Keyboard,Touch Screen

KVM

4K DVI KVM Fiber Optic Extender

Model: KDX-2240T/R-X0

Datasheet（Release V1.0）

Features

※ Real-time direct transmission technology，no video compression, no signal delay

※ Supports HDMI v1.4，DVI 1.0，single link, up to 3.4 Gbps/color，10.2 Gbps total

※ Applies duplex fiber or single fiber to connect the transmitter and the receiver

※ Supports lossless 4K video up to 3840x2160/30P,4096x2160/24P,3840x2160/60P(4:2:0),4096*2160/60P(4:2:0), 1920x1080/60P, Compatible with other VESA standard resolutions and user-defined resolutions

※ Support 3840*2160/30P resolution with color depth up to 8 bits/pixe

※ Support HDMI bit-rates up to 3.4 Gbps/color,10.2 Gbps total

※ HDCP/EDID pass-through is not supported，Support 3D TV pass-through

※ Support EDID learning，transmitter includes EDID memory to cache the EDID from any display

※ Support LPCM 7.1, Dolby® TrueHD, and DTS-HD Master Audio™

※ Support USB Mouse,USB Keyboard or USB Touch Screen

※ Receiver built-in Re-time chip, jitter Cleaning for best compliance

※ Supports ultra long distance transmission up to 80 km*(default SFP+ only 1.4km)

※ Low RFI / EMI profile for sensitive applications

※ Plug-and-play，Hot-pluggable，Rack-mountable

Note:
The maximum transmission distance may vary depending on the fiber type, bandwidth, connector splicing, losses, model, chromatic dispersion, environmental factor,
and kinks.

Applications

※ KVM Seat Collaboration Manage System
※ Remote monitor for traffic, industrial, military control
※ Airplane On-board Video System
※ Passenger Information System
※ Factory assembly line
※ TV Broadcast Station
※ LED signboards in streets and in stadiums
※ Large video wall system
※ LCD, Projector, Plasma display connection
※ Medical Imaging Equipment
※ Conference Room Video Equipment
※ Home Theater

Trademarks:

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More products information or services,Please visit website:
http://www.smartopcom.com

Specification

Video	**HDMI v1.4，DVI 1.0**
Max. Pixel Clock	340 MHz
Max. Data Rate	10.2 Gbps (3.4 Gbps Per Lane)
Max. Resolution	3840x2160/60P(YCbCr 420)，4096*2160/60P(YCbCr 420) 3840x2160/30P，4096x2160/24P, 1920x1200/60P，1920x1080/60P， Compatible with other VESA standard resolutions and user-defined resolutions
Digital Audio Support	7.1 channel LPCM, 192 kHz, 24-bit
Connections	
DVI Input / Output	TX：1 x DVI 24+1 Female RX：1 x DVI 24+1 Female
FIBER	1x SFP+
Fiber Optics	
Fiber Cable Type /Max. Length	50/125μ OM3: ≤300m（Default）
	9/125μ Single mode fiber: ≤1.4km（Default） 9/125μ Single mode fiber: ≤80km（Max. Length）
Control	
KVM	USB Mouse x1, USB Keyboard x1 or USB Touch Screen x1
Audio	N/A
IR/RS232/RS485	N/A
CEC	N/A
DDC（Digital Display Channel）/HDCP	
EDID	EDID Quick Copy，User-programmable EDID memory, eliminates the need for DDC connection
HDCP	N/A
Physical Properties	
Housing	Alufer enclosure
Dimensions (W x D x H)	88.8mm x 85mm x 29 mm（without bracket） 131.8mm x 85mm x 29 mm（with bracket）
Weight	KDX-2240T: 260g KDX-2240R: 280g
Environmental	
Operating Temperature	0 to +50° C
Storage Temperature	-40°C to +85°C
Operating Humidity	5% to 80% (non-condensing)
Storage Humidity	5% to 95% (non-condensing)
Power Requirements	
External AC Power Adapter	Input: 100-240VAC / 50-60Hz 0.2A Output: DC 5V, 2.0A 5/2.5mm jack
Power Consumption	KDX-2240T: 5 W KDX-2240R: 5W
Warranty	
Limited Warranty	2 year warranty

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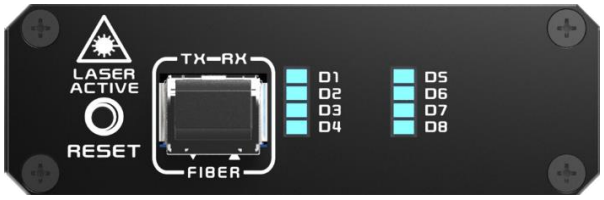
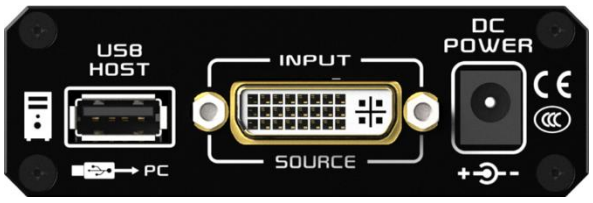
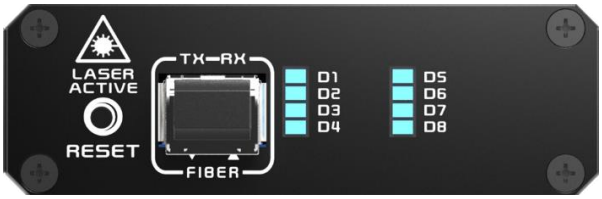
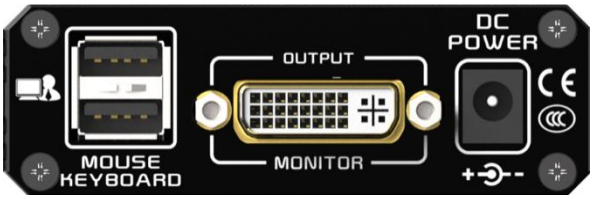
TRANSMITTER





RECEIVER





Port	TRANSMITTER	RECEIVER
DVI Port	DVI INPUT：HDMI signal input	DVI OUTPUT：DVI signal output
RESET	System reset botton /EDID R/W botton	System reset botton
POWER	Power adapter socket	Power adapter socket
FIBER	SFP+ Module Cage	SFP+ Module Cage
USB	Connect to PC USB Host Controller	USB Keyboard x1 and USB Mouse x1 or USB Touch Screen x1
LED indicator		
D1	ON: Power on OFF：Power off	ON: Power on OFF：Power off
D2	ON: Monitor connected OFF: Monitor disconnected EDID Copy： When the monitor is connected to the HDMI input, press the reset button, the LED will flash rapidly for 32 times, and the LED will turn off after the copy is successful	ON: SFP+ TX enable OFF：SFP+ TX disable
D3	OFF:The input optical power is normal ON: Lost of Optical signal	OFF:The input optical power is normal ON: Lost of Optical signal
D4	ON: Source connected Blinking:Output signal	ON: Monitor connected Blinking:Output signal
D5	ON: SFP+ TX is normal OFF：SFP+ TX is Fault	ON: SFP+ TX is normal OFF：SFP+ TX is Fault
D6	ON:USB Device1 Link OK Blinking:Commuinication	ON:USB Device1 Link OK Blinking:Commuinication
D7	ON:USB Device2 Link OK Blinking:Commuinication	ON:USB Device2 Link OK Blinking:Commuinication
D8	ON: Error OFF:Normal	ON: Error OFF:Normal

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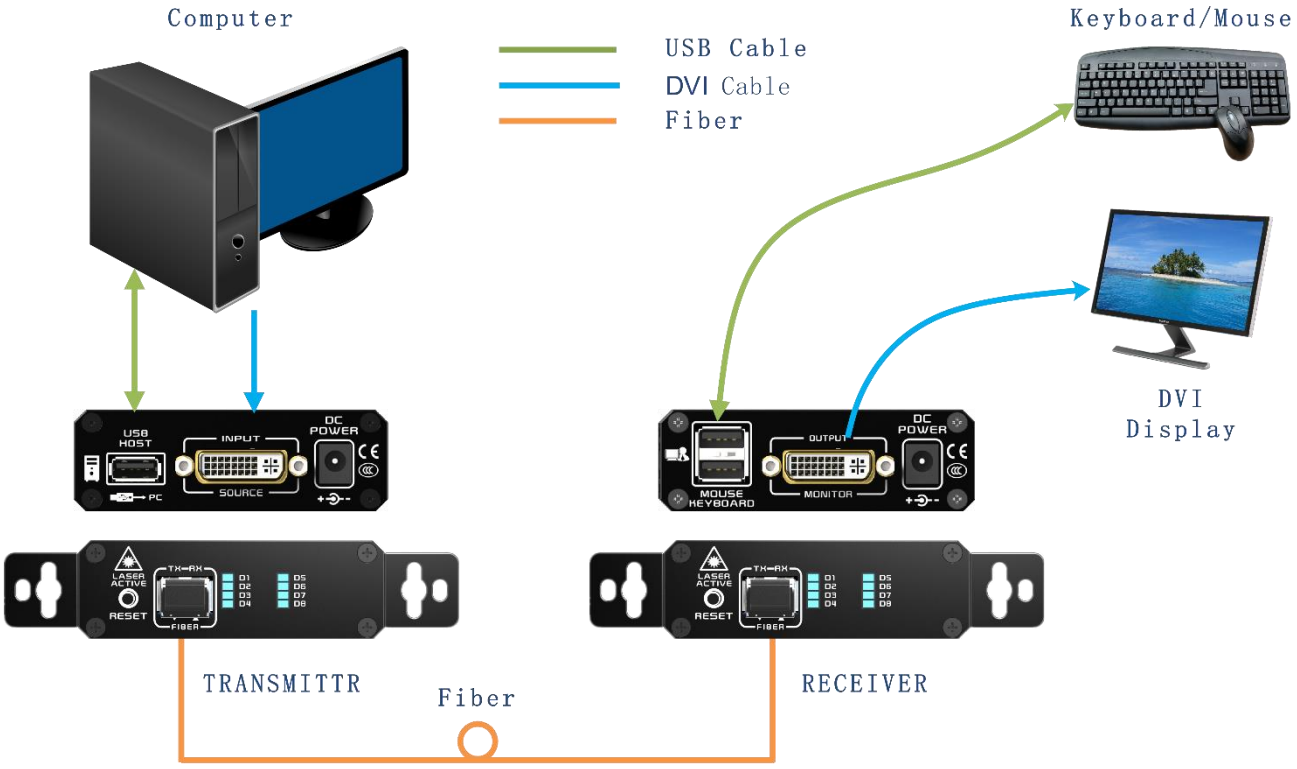
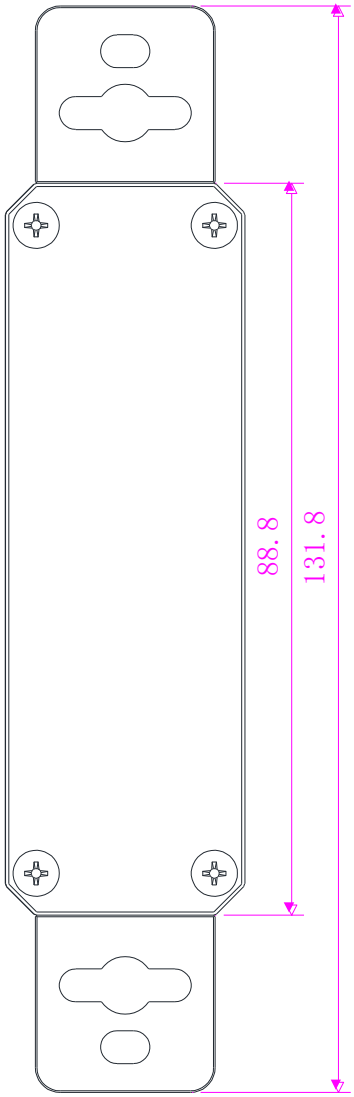
Diagram

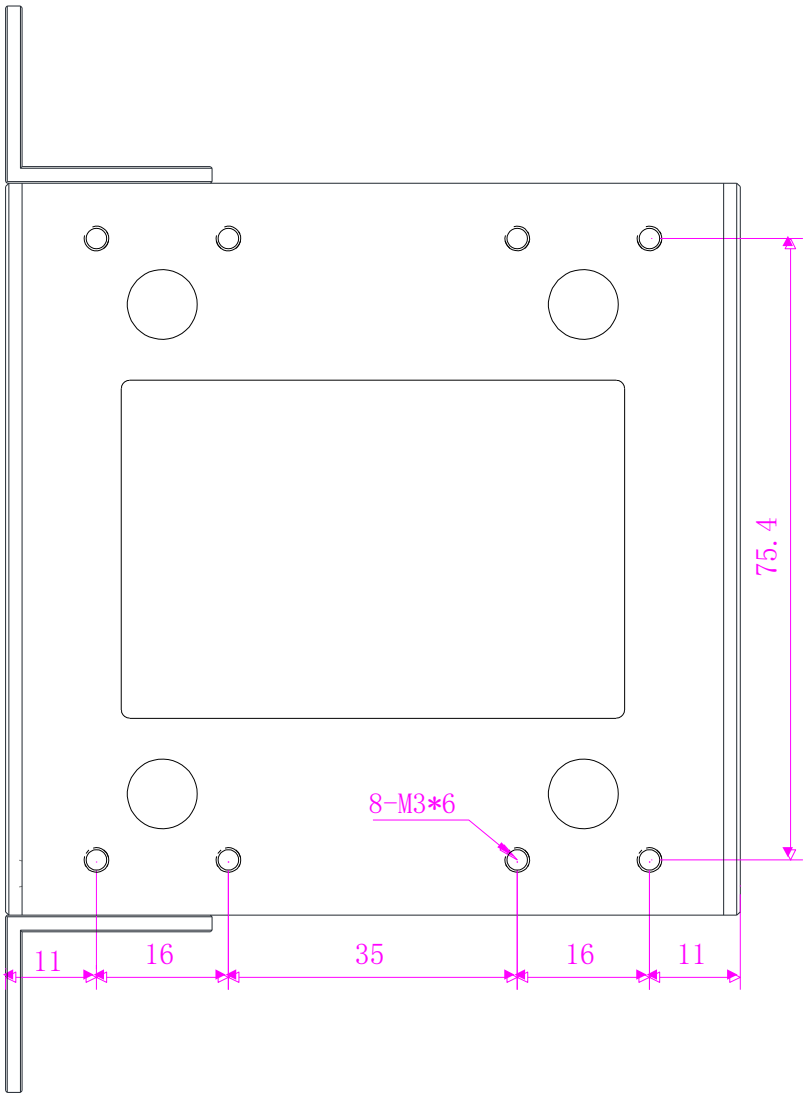


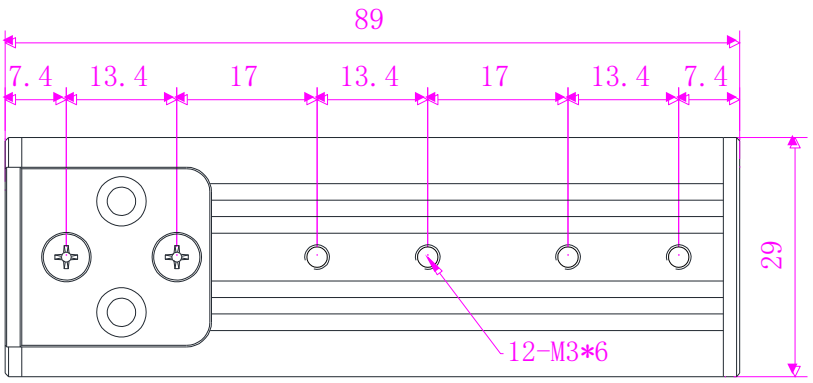
Instructions

Video	
1.	TX：Connect your source device to the TX unit. To transmit DVI video/audio signals, connect the source device's DVI Out port to the TX unit.
2.	RX：Use an DVI cable to connect your video display to the DVI Out port on the RX unit.
Fiber	
3.	Plug the SFP+ Modules to the Optical Ports on your TX unit and RX unit,and then connect the two SFP+ modules using a duplex fiber optic cable.
EDID Copy	
4.	1. Connect your display to the TX unit. Power on the TX unit, display. 2. pressing the reset button, D2 indicator will flash for a few seconds, The D2 turn off indicates that the program is completed. 3. Connect your source device to the TX unit. Connect your display to the RX unit. 4. Power on the TX unit, RX unit, and the connected devices.
Power	
5.	Plug the Power Adapter cable into the Power Jack on the TX unit and RX unit. Power on the TX unit, RX unit, and the connected devices.
Reset	
6.	If the Extender fault during operation, the system can be reset by pressing the reset button, which can solve some Extender faults. If the fault cannot be eliminated by pressing the reset button, please power on the equipment again.

Dimensions (mm)







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Packing list

The 4K DVI KVM Fiber Optic Extender ships with the items listed below. If any of these items are not present in the box when you first open it,immediately contact your dealer or Smartopcom.

※ 1 x KDX-2240T (TX)
※ 1 x KDX-2240R (RX)
※ 2 x 5V/2A DC Power adapter
※ 1 x 0.6m USB2.0 Male A-Male A Cable
※ 1 x Datasheet

Ordering information

P/N	Description
KDX-2240T/R	Duplex Fiber 4K DVI KVM Fiber Optic Extender， 300m
KDX-2240T/R-D1.4	Duplex Fiber 4K DVI KVM Fiber Optic Extender，1.4Km
KDX-2240T/R-D10	Duplex Fiber 4K DVI KVM Fiber Optic Extender，10Km
KDX-2240T/R-D20	Duplex Fiber 4K DVI KVM Fiber Optic Extender，20Km
KDX-2240T/R-D40	Duplex Fiber 4K DVI KVM Fiber Optic Extender，40Km
KDX-2240T/R-D60	Duplex Fiber 4K DVI KVM Fiber Optic Extender，60Km
KDX-2240T/R-D80	Duplex Fiber 4K DVI KVM Fiber Optic Extender，80Km
KDX-2240T/R-S10	Duplex Fiber 4K DVI KVM Fiber Optic Extender，10Km
KDX-2240T/R-S20	Duplex Fiber 4K DVI KVM Fiber Optic Extender，20Km
KDX-2240T/R-S40	Duplex Fiber 4K DVI KVM Fiber Optic Extender，40Km
KDX-2240T/R-S60	Duplex Fiber 4K DVI KVM Fiber Optic Extender，60Km
KDX-2240T/R-S80	Duplex Fiber 4K DVI KVM Fiber Optic Extender，80Km
FSE-01	Bracket

Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs,convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your.
13. hands are wet or damp. Do not expose this product to rain or moisture.
14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus,the apparatus has been exposed to rain or moisture, does not operate normally,or has been dropped.
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

Rack Mounting

1. Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
2. Always load the rack from the bottom up, and load the heaviest item in the rack first.
3. Make sure that the rack is level and stable before extending a device from the rack.
4. Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
5. Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
6. Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
7. Ensure that proper airflow is provided to devices in the rack.
8. Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
9. Do not step on or stand on any device when servicing other devices in a rack.