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# **ST-FOUSB4K-LC**

## **DVI/HDMI USB KVM Extender**

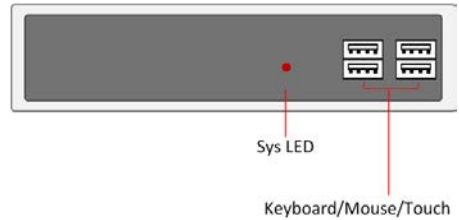
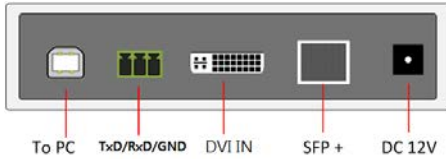
### **Over Optical Fiber**

### **User's Guide**

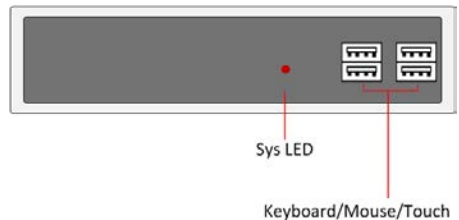
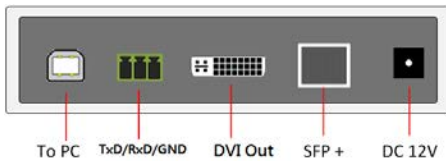
MAN276 REV 10/25/18

## ■ Front/Rear Panel and Connectors

### Transmitter



### Receiver



## ■ System Installation

1. Attach RX [DVI Out] to monitor by DVI-to-DVI or DVI-to-HDMI cable.
2. Attach keyboard/mouse/Touch screen to the RX USB-A for remote console.
3. Attach PC's USB to the RX's USB-B port if there is a local RX PC.
4. Attach TX's [DVI In] to PC DVI/HDMI by a DVI-to-DVI/HDMI cable.
5. Use a USB B-to-A cable to attach TX's USB-B to PC.
6. Attach keyboard/mouse to the TX's USB-A if you need TX local console.
7. Use a Dual Core LC connector SM Fiber cable to directly connect [SFP+] port of TX to RX. **This requires a continuous fiber cable run- no couplers.**
8. Power ON TX and RX. The TX's PC DVI/HDMI will be displayed on the RX's monitor. The RX's monitor EDID will be available on the TX's PC.
9. The USB keyboard/mouse/Touch at the remote console should be able to control the TX's PC.

**Note: This product can support HDMI source and monitor by using DVI-to-HDMI cable for HDMI resolution up to 3840 x 2160 @ 30Hz.**

## ■ TX Hot-key Operation

- a. <Scroll Lock><Scroll Lock>L <Enter> ---> Lock/Unlock remote access (toggle)
- b. <Scroll Lock><Scroll Lock>U <Enter> ---> enter Firmware Upgrade Mode

## ■ RX Hot-key Operation

- a. <Scroll Lock><Scroll Lock>R ---> switch to RX PC.
- b. <Scroll Lock><Scroll Lock>T ---> switch to TX PC.
- c. <Scroll Lock><Scroll Lock>U <Enter> ---> enter Firmware Upgrade Mode

## ■ <Scroll Lock> LED

- a. Press <Scroll Lock><Scroll Lock> ---> <Scroll Lock> LED will blink (<Caps Lock> and <Num Lock> turn off) to indicate the Extender is in Hotkey Mode.
- b. The <Scroll Lock> LED will blink when TX pressed <Scroll Lock><Scroll Lock>L to lock RX access (<Caps Lock> and <Num Lock> LED not changed).

## ■ Setup TX/RX RS-232 Baud rate

### Method 1:

1. Connect PC COM port to TX.
2. Run TeraTerm on PC, set PC COM port baud rate to 115200 bps
3. Power On TX, press <Ctrl-C> in 3 seconds until “#” prompted (in COMMAND mode)
4. # baud 9600 <Enter> ---> set baud rate 9600 bps

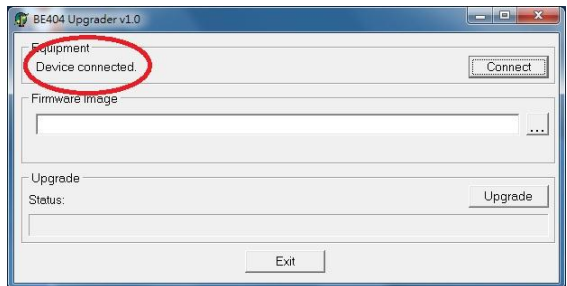
## Method 2:

1. Connect PC COM port to TX.
2. Run TeraTerm on PC, set PC COM port baud rate to 115200 bps
3. Attach a keyboard to TX's USB downstream, then enter:  
<Scroll><Scroll>C <Enter>
4. This will force TX in COMMAND mode, press <Enter> to get prompt #.
5. # baud 9600 <Enter> ---> set baud rate 9600 bps
6. # exit <Enter> ---> get back to DATA mode for TX/RX bi-direction communication

**Note:** Baud rate setup is necessary only for TX, the RX baud rate will be set by TX after TX/RX inter-connected.

## ■ Firmware Upgrade

1. Use a USB B-to-A cable to attach the TX/RX USB-B port to PC.
2. Attach a USB keyboard to the TX/RX unit.
3. Press hotkey: <Scroll Lock><Scroll Lock> U <Enter>
4. The TX/RX unit will enter Firmware Upgrade mode.
5. Run the UPGRADE.exe program, then click "Connect" button.
6. The program will display "Device connected" if the connection is succeeded.
7. Click [...] button to navigate to the firmware file (.BIN) for upgrade:
8. Press the "Upgrade" button to start firmware upgrade.



## ■ Specification

		TRANSMITTER	RECEIVER
DVI IN		1	N/A
DVI OUT		N/A	1
USB Upstream		1	1
USB Downstream		4	4
RS-232 Baud Rate Support		1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps	
Max RS-232 throughput		4KB/sec. delay 50 ms.	
Power		DC 12V 1A	
DVI Resolution		Up to 1920 x 1200 @ 60Hz	
HDMI Resolution		Up to 3840 x 2160 @ 30Hz	
Inter-Connect Cable		Duplex LC Single-Mode Fiber Cable (1.4 KM)	
SFP+ Transceiver		Multi Rate 4.9152Gbps to 10.3125Gbps	
Environment	Operating Temp.	0 to 70°C	
	Storage Temp.	-40 to 100°C	
	Humidity	0 ~ 80% Non-condensing	
Physical Properties	Material	aluminum	
	Weight	407g	
	Dimension	150(W) x 110(L) x 28(H) mm	

It is important that the inter-connect cable be a continuous run of fiber cable to provide maximum performance. The use of couplers will reduce performance.