

## Specification

VEX-(H/D)14F-10KSM	Transmitter Unit	Receiver Unit
Max Resolution	3840 x 2160 @30Hz (4:4:4) 2048 x 2048 @60Hz (4:4:4)	
Video Interface	HDMI / DP In x 1 (Depends on Model)	HDMI / DP Out x 1 (Depends on Model)
Fiber Link Port	1.25Gbps Single-Mode SC Duplex x 1	
Extension Distance	10Km (SC, Single-Mode)	
IR Extension	3.5mm x 1 (Out)	3.5mm x 1 (In)
Serial Extension	DB9 x 1 (DCE)	DB9 x 1 (DTE)
Audio Extension	3.5mm SPK Jack x 1 (In) 3.5mm MIC Jack x 1 (Out)	3.5mm SPK Jack x 1 (Out) 3.5mm MIC Jack x 1 (In)
Push Buttons	Reset x 1	Reset x1, Function x 2
Status LED Indicators	x 1	x 1
HDCP Compliance	HDCP 1.4	
Power Supply	DC 12V	
Operating Environment	0 ~ 40°C, Humidity < 80%	
Storage Temperature	-20 ~ 60°C	
Weight (g)	350	380
H x W x D (mm)	27 x 121 x 140 (DP Receiver = 27 x 130 x 140)	

## Connection Diagram



## Installation

- Prior to installation, ensure that all devices that will be connected to this system are powered off.
- Ensure that all devices you will connect are properly grounded.
- Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

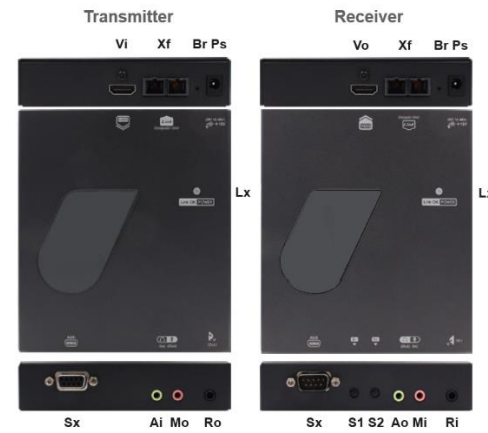
### Before the installation

- Determine where the Receiver and the Transmitter will be located.
- Use SC to SC duplex Single-Mode fiber optics cable (OS2 single-mode fiber optic cable with SC-SC connectors) for the interconnection between Receiver and Transmitter.
- Make sure that the fiber cable length is long enough for the connection between the Receiver and the Transmitter to prevent having to splice fiber. Try to complete the installation in one pull.
- The extenders are HDCP compliant and required the use of HDCP-compliant display when it is connected to HDCP video source.
- Never attempt to disassemble or reassemble the enclosure for any purpose. This may cause personal injury and/or property damage.

### Installation

- Connect the Transmitter to the Source with a proper video cable.
- Connect the Receiver to the Display with a proper video cable.
- If audio extension is required, connects the Transmitter to the Source and the Receiver to Active Speaker and Microphone with audio cables.
- If IR extension is required, connects the IR Blaster to the Transmitter and the IR Receiver to the Receiver unit.
- Connect the Transmitter and Receiver with a Duplex Fiber Cable.
- Apply Power to the Units and Devices.

## Product Description



TX	RX	Function	Description
Br	Br	Reset Button	Reset the Unit by clicking the button
Lx	Lx	Link OK / Power LED	<b>Green</b> = Transmitter Power On <b>Red</b> = Receiver Power On <b>Blue</b> = LINK OK
Xf	Xf	SC-SC Fiber Interface	Connect Fiber Optics Cable to this Port
Vi	Vo	Video Extension	[ Vi ] : Connects to Video Source [ Vo ] : Connects to HDMI/DP Display (Interfaces depend on Model)
Ps	Ps	Power	Apply proper Power (DC 12V)
Ro	Ri	IR Extension	[ Ro ] : Connects to IR Blaster [ Ri ] : Connects to IR Sensor
Mo	Mi	Microphone Extension**	[ Mo ] : Connects to Computer's MIC Port [ Mi ] : Connects to Microphone*
Ai	Ao	Speaker Extension**	[ Ai ] : Connects to Computer's Speaker Port [ Ao ] : Connects to Speaker
Sx	Sx	Serial Extension	[ Sx ] : Connects to Serial Host or Device
	S1 & S2	Baud Rate Buttons	[ S1 ] : Press to Select Baud Rate [ S2 ] : Press to Call and Select OSD

\* Active Microphone Only

\*\* Refer to Manual section: "Smart Audio Extension"

## Operation

The LEDs on the Extender Units display the real-time status, indicating the connection and communication between the Transmitter and Receiver. Users can identify the current status through the LED indicator. The quality of the output signal will largely depend on the quality of video source, cable and display device used. Low-quality cables can degrade the output signal, resulting in increased noise levels. Please use high-quality cables and ensure that the display device can handle the selected resolution and refresh rate.

### NOTE:

The system will disable the video output signal if it detects non-HDCP compliant display when playing HDCP-protected content or HDCP video source.

### Smart Audio Extension

The KVM extender has one smart audio extension channel that can intelligently switch and distribute via either HDMI/DP audio or SPK/MIC extension. The SPK/MIC has higher priority over HDMI/DP audio, and HDMI/DP audio will be disabled whenever the SPK/MIC is inserted.

There are 2 situations:

- < Tx Audio In >** : Whenever SPK input or MIC output is inserted into the Transmitter, the audio input channel will be switched from HDMI/DP audio to SPK input. ( Tx MIC Output also Activated )
- < Rx Audio Out >** : Whenever SPK output or MIC input is inserted into the Receiver, the audio output channel will be switched from HDMI/DP audio to SPK. ( Rx MIC Input also Activated )

## Features

- Allows reliable remote access of a video source via a fiber cable up to 10 km (32,800 feet).
- Supports single-mode duplex OS1 or OS2 (9/125µm) cables with SC Duplex connector. OS2 is recommended for long distance if up to 10Km.
- Available video interfaces include 4K30 HDMI / 4K30 DisplayPort.
- Video supports most popular resolutions up to 4K@30Hz (4:4:4).
- Supports radar display, 2048x2048@60Hz (4:4:4), and 2Kx2K LCD display for air traffic control.
- HDCP 1.4 compliance ensures uninterrupted video playback.
- Smart audio extension allows embedded audio and audio extraction.
- IR extension from Receiver to Transmitter unit facilitates IR control of AV sources.
- RS232 serial extension with selectable baud rate allows for extensive control applications.
- Immunity to high EMI environments via fiber system.
- Plug-and-play, no driver or software required.
- Supports Windows, Mac, Linux, and Chrome OS.
- Interoperability among HDMI and DP model of the same product family.
- KVM Extender model with USB 2.0 extension also available.

## Package Contents

- 1 x Transmitter Unit
  - 1 x Receiver Unit
  - 2 x Power Adapter
  - 1 x User Manual
  - 2 x Foot Pad Set
- Optional
- IR Extension Kit (Blaster + Sensor)

## System Requirements

- Video and audio cables
- SC-SC fiber patch cords / cable
- HDCP compliant display (when connecting to HDCP Source)

# User Manual

## 4K30 Video Extender over Fiber [ 4K30Hz, Audio, IR, RS-232, SM Fiber, 10Km ]



### VEX-H14F-10KSM and VEX-D14F-10KSM User Manual

Product Family					
Model	Video Interface	Max Resolution	AUX Ext.	Fiber Connector / Transceiver Type	Ext. Distance
VEX-H14F-10KSM	HDMI 1.4	4K@30Hz	Audio 1-Way IR Serial	SC / Single-Mode	10Km
VEX-D14F-10KSM	DisplayPort	4K@30Hz			

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The final specification is based on the actual product.  
Features and functions may be added or changed after the manual was written. Please visit our website to download the latest version of manual for reference.

RXN-VEX430-R01.1



## Baud Rate Setting

The serial extension requires the user to configure correct baud rate to function well.

Follow below steps to configure correct baud rate:

- Find out the correct baud rate of your serial device.
- Click S2 to Call OSD Menu
- Keep clicking S2 to Select to Baud Rate Item
- Keep clicking S1 to Select to The Correct Baud Rate



## Fiber Considerations

- OS1 or OS2 9/125µm Single-Mode fiber optic cable terminated with SC duplex connectors is recommended for use in interconnecting the Receiver and Transmitter.
- Users may need to order cables of appropriate lengths based on the application environment. However, the maximum cable length should not exceed the extender's extension distance. Otherwise, signal degradation may occur, especially at maximum video resolutions.
- Do not exceed the cable's bend radius. Fiber optic cables can break if kinked or bent too tightly, especially during installation.
- Do not twist the cable. Twisting the cable can stress the fibers. Tension from pulling ropes can cause twisting.
- Do not look into the ends of any fiber optic cables. Exposure to invisible laser radiation may result in eye damage.
- Follow the cable manufacturer's recommendations. Fiber optic cables are often custom-designed for specific installations, and the manufacturer may have specific instructions for their installation.



### CAUTION

Do not stare into the beam or view the ends of any fiber optic cables directly. Exposure to invisible laser radiation can result in eye injury.

### Limited Warranty

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