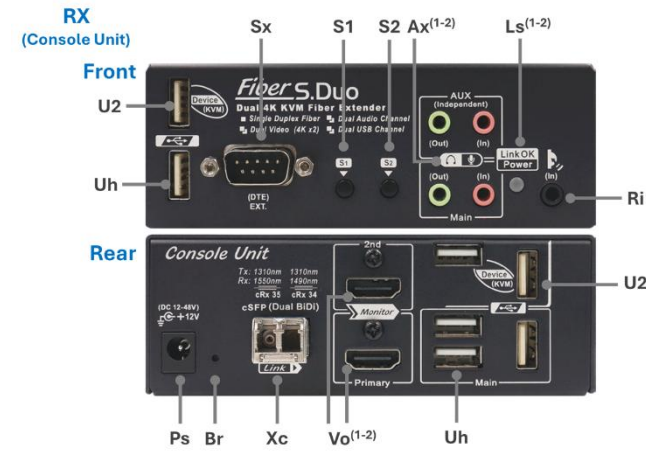
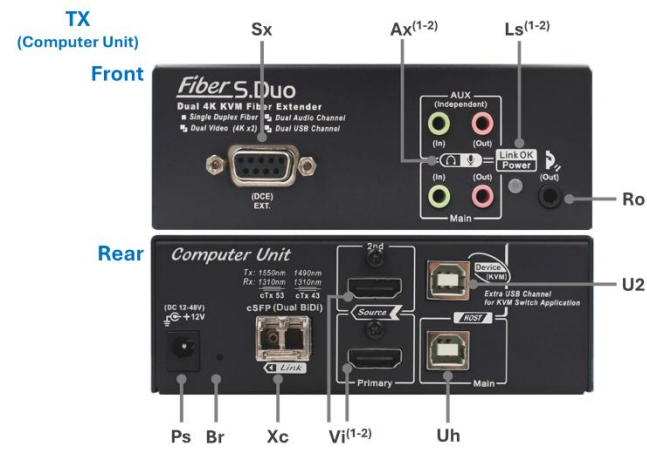


## Product Descriptions



Label	Descriptions
Vj(1-2)	Video EXT. (In) Connect to the Dual Video Outputs of the PC (Primary Video should be set as Main Desktop)
Uh	USB 2.0 EXT. (1) Connect to PC's USB 2.0 or USB 3.2
U2	USB 2.0 EXT. (2) Connect to PC's USB 2.0 or USB 3.2
Ax(1-2)	Audio EXT. (Use the AUX Channel in most cases) <b>Main:</b> Embed / Extract Audio of the Main Video Channel <b>AUX:</b> SPK / MIC Independent Extension (Connect to PC's 3.5mm SPK/MIC Ports)
Sx	Serial EXT. (DCE) Connect to a DCE (Serial Host PC, COM)
Ro	IR EXT. (Out) Connect to an IR Blaster
Xc	Link Ports Connect to the corresponding Link Ports of the Console Unit (RX)
Ls(1-2)	Status LED <b>Green</b> = Computer Unit Power On <b>Blue</b> = LINK OK
Br	Reset Button Click to reset the Unit
Ps	Power Supply Connect to a DC 12 ~ 48V Power

Label	Descriptions
Vo(1-2)	Video EXT. (Out) Connect to the Dual Monitors
Uh	USB 2.0 EXT. (1) Connect to USB Keyboard / Mouse
U2	USB 2.0 EXT. (2) Connect to other USB Devices
Ax(1-2)	Audio EXT. (Use the AUX Channel in most cases) <b>Main:</b> Embed / Extract Audio of the Main Video Channel <b>AUX:</b> SPK / MIC Independent Extension (Connect to SPK / MIC)
Sx	Serial EXT. (DTE) Connect to a DTE (Serial Device)
Ri	IR EXT. (In) Connect to an IR Sensor
Xc	Link Ports Connect to the corresponding Link Ports of the Computer Unit (TX)
Ls(1-2)	Status LED <b>Red</b> = Console Unit Power On <b>Blue</b> = LINK OK
Br	Reset Button Click to reset the Unit
S1	Baud Rate Button 1 Click to select the Baud Rate (in OSD)
S2	Baud Rate Button 2 Click to Call and Select OSD items
Ps	Power Supply Connect to a DC 12 ~ 48V Power

## Fiber Cable

- The OS2 single-mode fiber optic cable terminated with LC duplex connectors is recommended for the interconnection between the Console Unit and the Computer Unit. The table below provides the specifications.

Cable Type Specifications	Details
Diameter	9/125µm
Max. Cable Length	20 KM

- Users should order cable lengths appropriate for their application environment; however, the maximum cable length should not exceed the specified limit (refer to the table above). Exceeding this limit may cause signal degradation, 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 or pulling.
- Do not twist the cable. Twisting can stress the fibers, and excessive tension or pulling forces may cause twisting.
- Do not look directly 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 manufacturers may provide specific handling and installation instructions.

## Fiber Module

- The Extender uses a cSFP module (operating with two signals at different wavelengths). Do not connect a regular SFP module!

## Installation

### Before Installation

- Determine the locations of the console unit and the computer unit.
- Use an LC-to-LC duplex fiber optic cable for the connection between the console unit and the computer unit.
- Ensure that the fiber cable is long enough to avoid the need for splicing. Try to complete the installation in a single pull.
- The extenders are HDCP-compliant. When connected to an HDCP-protected video source, an HDCP-compliant display must be used.
- Never attempt to disassemble or reassemble the enclosure for any reason, as this may cause personal injury and/or property damage.
- Before installation, connect the PC directly to the monitor and KB/MS to ensure they are working properly.

- ✓ Prior to Installation, power off all devices that will be connected to the system.
- ✓ Ensure that all connected devices are properly grounded.
- ✓ Keep cables away from fluorescent lights, air conditioners, and other machines that may generate electrical noise.

### Installation

- Connect the computer unit to the computer using USB and video cables.
- Connect the console unit to the keyboard, mouse, and monitor using USB and video cables.
- If the analogue audio extension function is being used, connect the computer unit to the computer using 3.5mm audio jack cables, and connect the console unit to an active speaker and microphone.
- If the IR extension function is being used, connect the IR blaster to the computer unit and the IR receiver to the console unit.  
**Note:** The IR Extension Kit is not included in standard package. It needs to be ordered separately.
- Connect the computer unit and console unit using a duplex fiber optic cable.
- Power on the units and all connected devices.

## Features

- Single connectivity solution enables reliable remote access to a dual-monitor computer up to 20 km, over a duplex fiber cable
- Dual-monitor support for popular resolutions up to 4K@30Hz (4:4:4)
- Dual USB extension provides two USB channels: one for keyboard/mouse control and the other for USB 2.0 devices
- Dual audio extension offers two audio channels: one for audio embedding/extraction and the other for independent audio extension
- Unique design supporting 2 single head computers extension, allowing 2 operators to control 2 single head computers simultaneously with independent audio and USB peripheral sharing.
- IR extension from the console unit to the computer unit
- Serial extension supports selectable baud rate via OSD and Push Buttons
- EDID pass-through ensures accurate monitor detection
- HDCP 1.4 compliance guarantees uninterrupted HDCP-protected video playback
- cSFP fiber link port provides isolation from EMI and electrical noise
- Plug-and-play operation with no driver or software required
- Supports Windows, macOS, Linux, and Chrome OS

## Package Contents

- 1 x Transmitter Unit with Fiber Module
- 1 x Receiver Unit with Fiber Module
- 2 x Power Adapter
- 1 x User Manual
- 2 x Foot Pad Set
- (Optional, not included) IR Extension Kit (Blaster + Sensor)

## System Requirements

- HDCP Compliant Monitors if transmitting HDCP-Protected Source
- 3.5mm Active Speakers and Microphone
- USB Keyboard and Mouse
- Video Cables and 3.5mm Audio Cables
- USB Type A – Type B Cables
- DB9 Serial Cables
- Duplex LC Fiber Cabling (Single-Mode)

# User Manual

## 4K30 Dual Head HDMI KVM Extender with Dual Audio, Dual USB 2.0, IR, RS-232 Extension, Single-Mode 20Km



### IPXF-H430-DH20KF

### User Manual

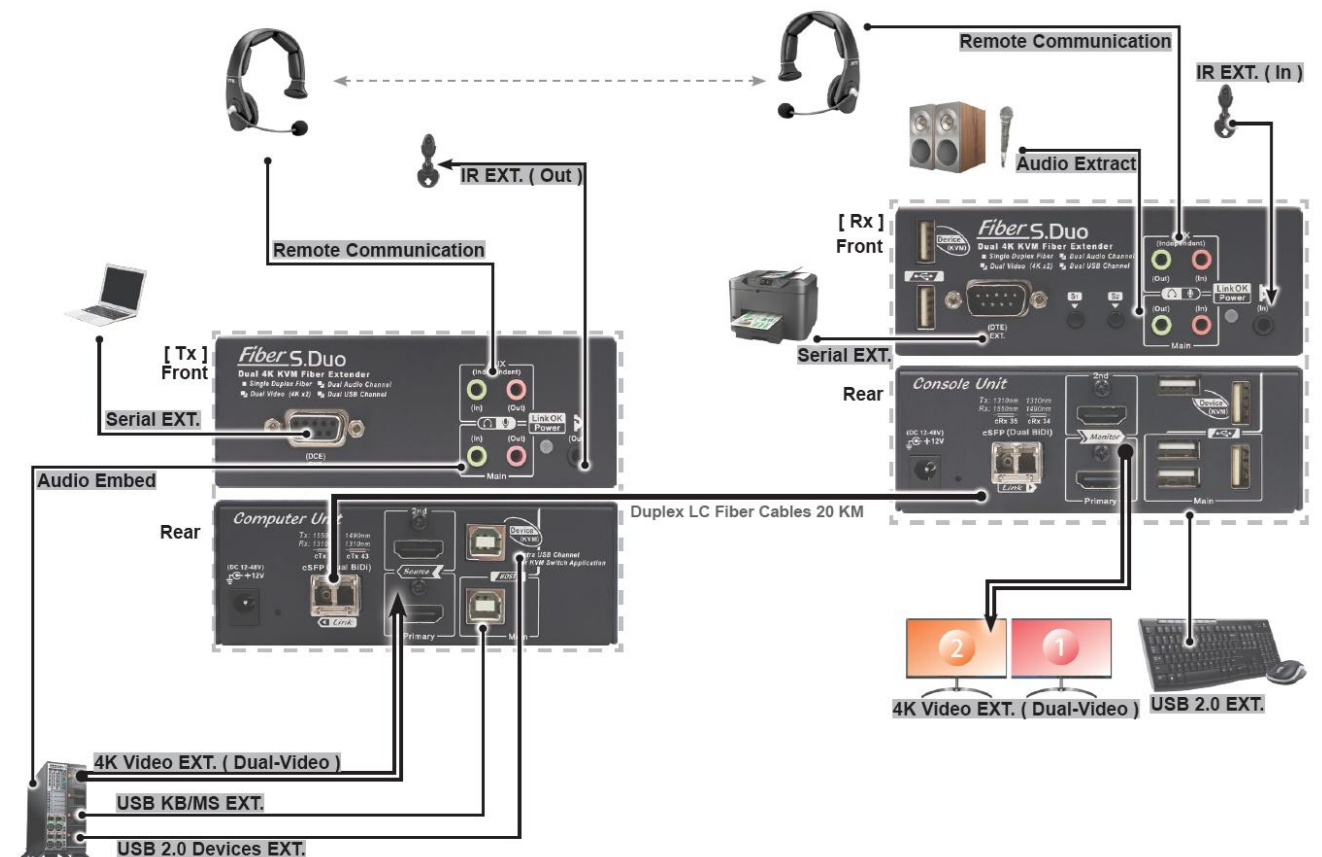
**DSGIO**  
 DSGIO Global Pte Ltd.  
 3 Lorong Bakar Batu #07-05  
 Singapore 348741

☐ 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-IPXF-R0.1.1



## Connection Diagram



## Operation

The LEDs on the extender units display the real-time status of the link and communication between the console unit and the computer unit. Users can determine the current status through the LED indicators.

The quality of the output signal depends largely on the video source, cable, and display device used. Low-quality cables can degrade the output signal and cause increased noise levels. To ensure optimal performance, use high-quality cables and verify that the display device supports the selected resolution and refresh rate.

### NOTE:

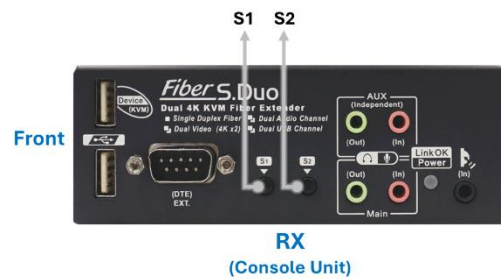
The system will disable video output if it detects a non-HDCP-compliant display when playing HDCP-protected content.

## Baud Rate Setting (Serial EXT.)

The serial extension requires the user to configure the correct baud rate for proper functionality.

Follow the steps below to configure the correct baud rate:

1. Find the correct baud rate of your serial device. (Refer to its manual.)
2. Press S2 to open the OSD menu.
3. Press S2 repeatedly to navigate to the 'Baud Rate' field.
4. Press S1 repeatedly to select the correct baud rate for the device.



## Audio Embed / Extract (to Main Video)

The main audio extension channel can be intelligently distributed to either HDMI audio or the speaker/microphone (SPK/MIC) extension. The SPK/MIC extension has a higher priority than HDMI audio, and HDMI audio will be disabled whenever a SPK/MIC connection is detected.

There are 2 situations:

### < TX Audio In > Auto Embed

Whenever SPK input or MIC output is inserted into the computer unit (TX), the SPK input will be embedded into the digital audio stream of Video Input 1.

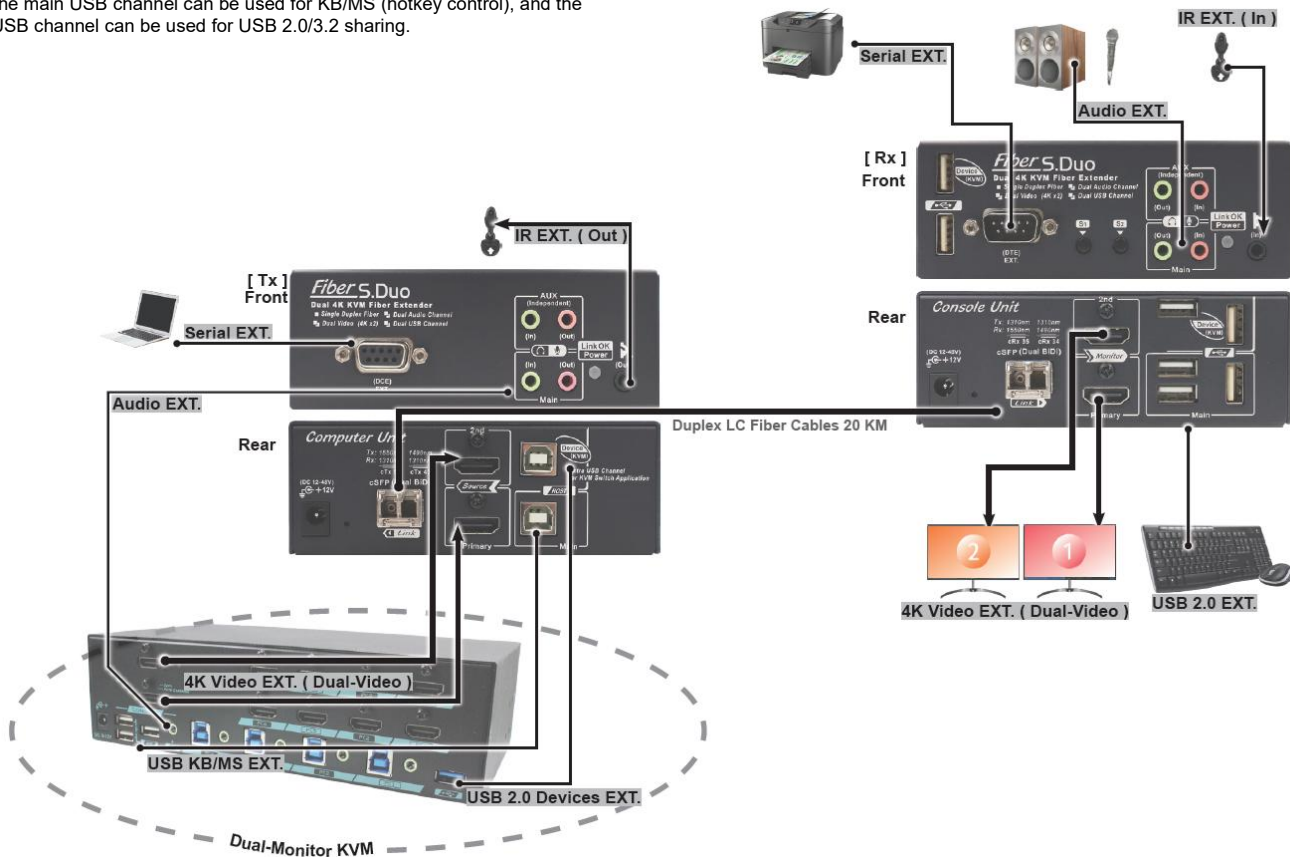
### < RX Audio Out > Auto Extract

Whenever SPK output or MIC input is inserted into the console unit (RX), the SPK output channel will extract the digital audio stream of Video Input 1.



## KVM Switch Application

The user may connect the extender to the console of a dual-monitor KVM switch so that the main USB channel can be used for KB/MS (hotkey control), and the device USB channel can be used for USB 2.0/3.2 sharing.



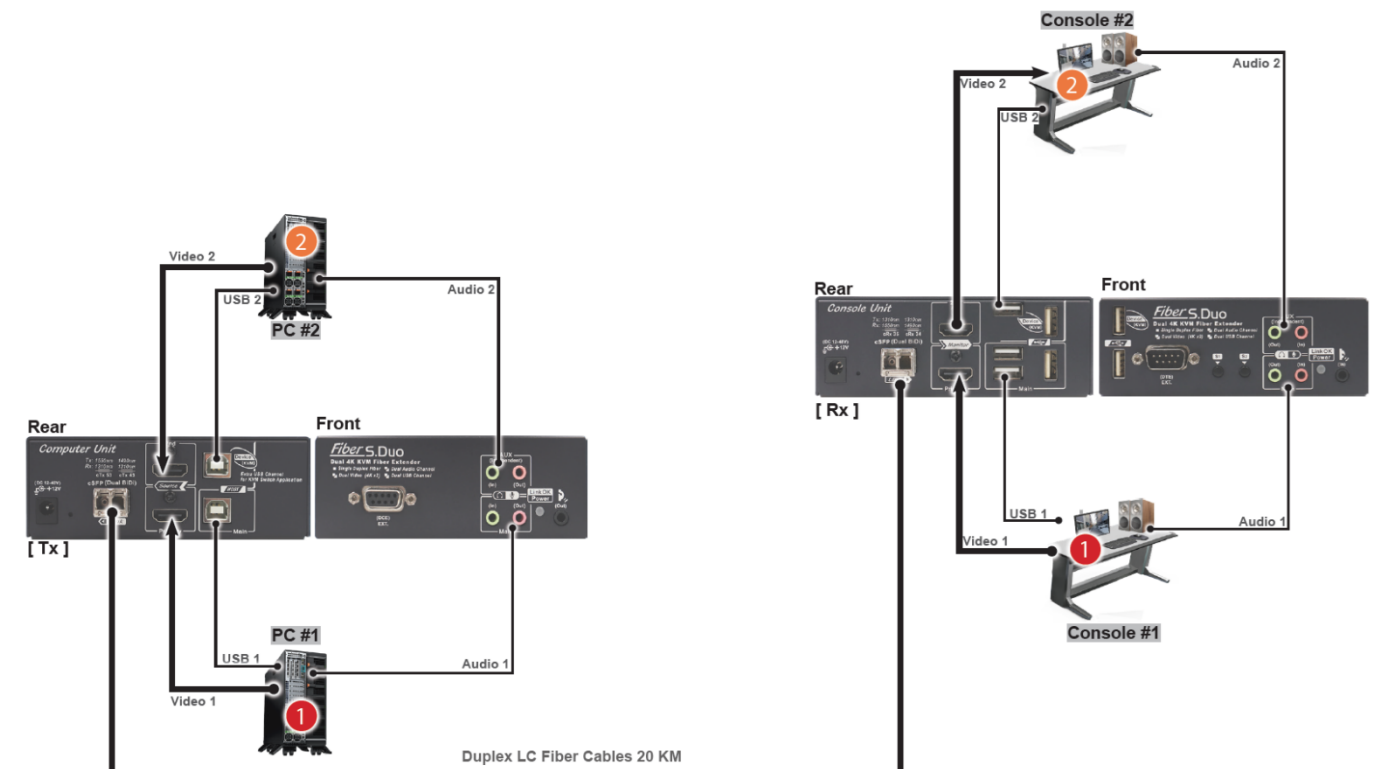
## Specifications

IPXF-H430-DH20KF	Transmitter	Receiver
<b>Max Resolution</b>	3840x2160@30Hz (4:4:4) x 2	
<b>Video Interface</b>	HDMI 1.4 x 1 (In 1) HDMI 1.4 x 1 (In 2)	HDMI 1.4 x 1 (Out 1) HDMI 1.4 x 1 (Out 2)
<b>USB 2.0 Extension</b>	USB 2.0 Type B x 1 (CH. 1) USB 2.0 Type B x 1 (CH. 2)	USB 2.0 Type A x 4 (CH. 1) USB 2.0 Type A x 3 (CH. 2)
<b>Audio Extension (AUX) (Independent)</b>	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)
<b>Audio Extension (Main) (Embed/Extract of Main Video)</b>	3.5mm SPK Jack x 1 3.5mm MIC Jack x 1	3.5mm SPK Jack x 1 3.5mm MIC Jack x 1
<b>Serial Extension (9600 – 115200bps)</b>	DB9 x 1 (RS-232 DCE)	DB9 x 1 (RS-232 DTE)
<b>IR Extension</b>	3.5mm x 1 (Out)	3.5mm x 1 (In)
<b>Push Buttons</b>	Reset x 1	Reset x 1 Function x 2
<b>LED Indicators</b>	Status x 1	Status x 1
<b>HDCP Compliance</b>	HDCP 1.4	
<b>Fiber Link Port (cSFP Module)</b>	cSFP x 1 (2 Channels) Tx: 1550/1490nm Rx: 1310nm	cSFP x 1 (2 Channels) Tx: 1310nm Rx: 1550/1490nm
<b>LC Fiber Cable</b>	Single-Mode Duplex LC Fiber x 1 (OS2 is recommended)	
<b>Extension Range</b>	Max 20Km	
<b>Power Supply</b>	DC 12V ~ 48V	
<b>Operating Environment*</b>	Temperature 0 ~ 40°C, Humidity < 80%	
<b>Storage Temperature</b>	-20 ~ 60°C	
<b>Material</b>	Aluminium	
<b>H x W x D (mm)</b>	44 x 120 x 140	
<b>Weight (g)</b>	445	478

\* When installed in an enclosed space, proper airflow must be provided.

## Dual PC Application

The extender supports the extension of 2 single head computers. The user connects the primary video, main USB, and main audio to one PC, and the second video, device USB, and AUX audio to the other PC. This way, the system cost is lower than using two independent extenders.



### Limited Warranty

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