

Imported KVM Fiber Optic Receiver Solution



Overview

4K Fiber KVM Extender up to 550m for Remote PC Control With the capability to support up to 16 pairs of transmitter and receiver devices via a single Gigabit.

Key Takeaways

Fiber optic KVM receivers enable long-distance, high-quality video, audio, and USB signal transmission with zero latency, ideal for professional and high-EMI environments. Overview of Fiber Optic KVM Receivers

Fiber optic KVM receivers are designed to extend keyboard, video, mouse (KVM), and peripheral signals over long distances using optical fiber. Unlike standard HDMI or copper extenders, fiber KVM solutions provide EMI immunity, optical isolation, and stable high-bandwidth transmission, making them suitable for data centers, hospitals, broadcast studios, and large campuses .

Key Features

- High-Resolution Video Support: Many receivers support up to 4K UHD video at 30-60Hz, with some models offering multi-monitor support for dual or quad displays .
- Long-Distance Transmission: Depending on the model, fiber KVM receivers can transmit signals from 550 meters up to 20 km over multi-mode or single-mode fiber .
- Peripheral Integration: Receivers typically include USB 2.0/3.0 ports, RS232/485, IR, and audio channels, allowing full remote control of connected PCs or servers .

- Zero Latency: Advanced fiber technology ensures real-time control with negligible delay, critical for mission-critical applications .
- Plug & Play or IP-Based Connectivity: Some solutions, like AV Access 4KIP500F-KVM, allow up to 16 transmitter-receiver pairs over a standard Gigabit Ethernet switch without VLAN configuration, though matrix switching may require specialized models .

Popular Solutions

- AV Access 4KIP500F-KVM: Supports 4K HDMI and USB signals up to 550m over multi-mode fiber, with 3 USB 2.0 ports on the receiver, plug-and-play setup, and zero latency .
- Matrox Extio 2 / Avio 2: Offers point-to-point or IP KVM solutions with multi-monitor support, uncompressed or visually lossless streams, and compatibility with IPMX and SMPTE ST 2110 standards .
- AVCiT 4K KVM Receiver: Capable of receiving UHD video, audio, USB-HID, RS232/485, and IR over fiber up to 20 km, with bi-directional audio and hotkey-controlled secure PC access .
- Rexton Fiber KVM Extenders: Provide HDMI, DisplayPort, USB, IR, and RS232 extension up to 20 km, supporting Windows, Mac, Linux, and Chrome OS, ideal for high-EMI environments .

Applications

- Control Centers: Centralized server management with remote consoles.
- Broadcast and Media Production: Multi-monitor setups with high-resolution video.
- Medical and Research Facilities: Secure, interference-free remote access to critical systems.
- Large Campus or Industrial Environments: Long-distance signal extension without quality loss.

Considerations

- Transmission Medium: Multi-mode fiber is suitable for shorter distances (up to ~550m), while single-mode fiber supports longer distances (up to 20 km or more).
- Matrix Switching: Not all fiber KVM receivers support matrix switching; IP KVM matrix solutions may be required for multi-user control.
- Peripheral Compatibility: Ensure USB, audio, and RS232 devices are supported by the receiver.
- Installation: Some systems require fiber-capable Ethernet switches for multiple transmitter-receiver pairs. Fiber optic KVM receivers provide a robust, high-performance solution for extending KVM signals over long distances with minimal latency and interference, making them ideal for professional, industrial, and high-security environments .

Article Content

Using fiber optics for KVM extension.

With fiber-based KVM extenders, the transmitter converts conventional data signals into a modulated light beam, then transports the

KVM Fiber Optic Extenders over Fiber up to 70 km | Rextron KVM

The Fiber Extender is designed to extend signals over Optical Fiber for long-distance transmission. Rextron is good at providing a

KVM Extenders | Matrox Video

Matrox Extio 3 works as either a point-to-point (fiber optic or copper), or networked KVM extension and switching solution, leveraging

Secure High Performance KVM Extenders and Matrix Switches

Thinklogical provides secure, high-performance, fiber-optic KVM extenders and matrix switches that offer uncompressed, high

Fiber Optic | ATEN Corporate Headquarters

Check our ATEN products: KVM, Professional Audio/Video, Energy Intelligence Rack PDU, Mobility & USB, Data Communication

StarTech DisplayPort KVM Extender Over Multimode Fiber, 4K

The Fiber Optic KVM Extender allows for control of a KVM switch, console, or PC from a distance of up to 984ft (300m). The

Single-Mode Fiber Optic KVM Extender, HDMI 2.0 4K60@500M, 10G

Fiber Optic KVM Extender, FXA1MU-M57, consists of a Transmitter and a Receiver unit that allows you to extend HDMI 2.0 and USB

VIDEOCAST HD 20km hdmi USB kvm Fiber Extender Over IP

Extends USB signals over the same fiber optic connection, allowing peripherals such as keyboards, mice, touchscreens, and USB

Amazon : ORIVISION 4K30 HDMI KVM Extender Over Fiber Optic

Product Description The HDMI KVM Optical Fiber Extender support resolution up to 4K. It consisted of a transmitter and receiver,

4K HDMI® IP KVM Matrix Extender over Cat5/Fiber

Model No.: KFH188S The IP KVM extender support resolutions up to 1920 x 1080@60Hz with ultra-low latency over standard 1 GbE

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

