

4K 18Gbps HDMI Extender Over IP via One LC Singlemode/Multimode Fiber Optic Cable

XTENDEX®

Extend an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display up to 24.8 miles (40 km) away from the source via fiber. Broadcast real-time HDMI signals to multiple display locations with a 10G SFP network switch.

- Signal transmission via single-strand LC fiber optic cable.
 - Using singlemode 9-micron cable, extend to 24.8 miles (40 km).
 - Using 50-micron OM2 (or better) multimode cable, extend to 1,640 feet (500 meters).
 - Zero latency.
- Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @60Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
- Cascade network switches to extend the length longer distances.
 - Up to 12 switches can be cascaded.
- HDMI features supported:
 - HDMI 2.0
 - 8-bit, 10-bit, and 12-bit Deep Color
 - Dolby TrueHD, DTS-HD Master Audio, Dolby Digital, Dolby Digital+, Dolby Atmos, LPCM 7.1CH, DTS 5.1, and DTS:X
 - RGB, YCbCr 4:4:4, YCbCr 4:2:2, and YCbCr 4:2:0
 - Bandwidth up to 600 Mhz (18Gbps)
 - 3D (1080p @60Hz)
 - Support for CEC (consumer electronic control) compatible devices.
 - HDR10
 - ARC
- HDCP 2.2 and 1.4 compliant.
- Supports local and remote HDMI displays.
- For a point-to-many connection, a standalone network with an unmanaged 10G SFP network switch, hub, or router can be used instead of a managed SFP network switch.
 - Easily expandable. Add remote units as you add monitors.
 - ♦ Up to 255 receivers supported.
 - It is not recommended to use any other network devices on this standalone network as it may cause degradation in performance.
- Support for multiple transmitters (many-to-many connection) requires a managed 10G SFP network switch with IGMP support and Jumbo frame support. Standard LAN switches can only support one transmitter.
 - The managed 10G SFP network switch must support port-based IEEE 802.1Q VLAN.
 - Each VLAN acts as a separate HDMI Over IP Channel on the network.
 - ♦ Each VLAN channel supports one transmitter.
 - The number of local and remote units that can be used is dependent on the backplane bandwidth of the switch.
- Plug-and-Play installation allows receivers to find the transmitters automatically on the same subnet.
- Local and remote units must be in the same LAN. The units do not support WAN connections.
- Built-in default EDID table.
- Supports full-duplex RS232 up to 115200 baud.
- Bi-directional IR control from input and output locations.
- Supports HDMI embedded digital audio and ARC audio extraction via Toslink connection.
- Built-in surge and ESD protection.
- Mounting brackets included for easy surface/wall mounting.



**XTENDEX® ST-IPFOHD-LC-ULC
(Local & Remote Unit)**



- **Extend up to 24.8 mi (40 km) via one LC Singlemode Cable**
- **Extend up to 1,640 ft (500 m) via One LC Multimode Cable**
- **Buffered HDMI Input Loop-Through**
- **Use with Cascaded Network Switches to Extend the Length**
- **Zero Latency**
- **Supports Point-to-Point, Point-to-Many, & Many-to-Many connections**

The XTENDEX® 4K 18Gbps HDMI Extender Over IP via Fiber Optic Cable locates an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display, audio, IR, and RS232 up to 24.8 miles (40 kilometers) away from an HDMI source using a single LC singlemode fiber optic strand or 1,640 feet (500 meters) using LC multimode fiber optic cable.

Each 4K 18Gbps HDMI Extender Over IP consists of a local unit that connects to an HDMI source and a local display via the HDMI loop output, and a remote unit that connects to an HDMI display. The local and remote units can be connected together for a Point-to-Point connection via Fiber Optic Cable or a Point-to-Many connection via a 10G SFP network switch. Support for multiple transmitters requires a managed 10G SFP network switch.

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Specifications

Local Unit

- One female HDMI connector for source connection.
- One female HDMI connector for local display.
 - Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @60Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
 - Supports embedded digital audio.
- Two 3.5mm ports connecting an IR emitter and receiver (included).
 - IR frequency range: 20 to 60 kHz.
- 3-pin screw terminal for RS232.
 - Supports full-duplex RS232 up to 115200 baud.
- One TOSLINK optical port for HDMI ARC audio extraction.
- One simplex LC fiber optic port for sending/receiving video/audio, IR, and RS232 signals.
- One female USB Micro Type B connector for firmware updates.
- Supports HDCP 2.2 and 1.4.

Remote Unit

- One female HDMI connector for display.
 - Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @60Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
 - Supports embedded digital audio.
- Two 3.5mm ports connecting an IR emitter and receiver (included).
 - IR frequency range: 20 to 60 kHz.
- 3-pin screw terminal for RS232.
 - Supports full-duplex RS232 up to 115200 baud.
- One TOSLINK optical port for SPDIF digital audio.
- One simplex LC fiber optic port for sending/receiving video/audio, IR, and RS232 signals.
- One female USB Micro Type B connector for firmware updates.
- Supports HDCP 2.2 and 1.4.

Power

- Local and remote unit:
 - Input: 100 to 240 VAC at 50 or 60Hz via AC adapter. (Country-specific power supplies included.)
 - Output:
 - ◆ US power supply: 5VDC, 2A
 - ◆ UK, EU, AUS power supplies: 5VDC, 3A
 - Power consumption:
 - ◆ Local unit: 4.6W
 - ◆ Remote unit: 4.1W

Environmental

- Operating temperature: -4 to 140°F (-20 to 60°C).
- Storage temperature: -22 to 158°F (-30 to 70°C).
- Operating relative humidity: 0 to 90% non-condensing RH.

Dimensions

- WxDxH (in): 4.88x4.54x1.18 (124x115x30 mm)

Max Distance

- 24.8 miles (40 km) over 9µm singlemode LC fiber optic cable.
- 1,640 feet (500 meters) over 50µm OM2 (or better) multimode LC fiber optic cable.

Cables

- Interface cables between the source/display and the transmitter/receiver are required for proper operation.
 - Supports cable lengths to 20 feet for 4K resolutions and lengths to 50 feet for 1080p@60Hz using passive HDMI cables.
- Use HD-xx-MM cable to connect an HDMI source or display.
- Use HD-ACT-xx-MM 4K HDMI Active Cables to connect an HDMI computer up to 50 feet.
- Use USB3C-HD4K-xx-MM to connect a 4K computer with USB Type C connector up to 10 feet.
- Use DVI-HD-xM-MM to connect a DVI computer up to 5 meters.
 - Supports resolutions to 1080p.
- Use a simplex LC singlemode 9-micron fiber optic cable to extend the receiver from the transmitter up to 24.8 miles (40 km).
 - Use FIBER-AD-SS-SCFLCM to convert a male simplex SC singlemode connector to a male simplex LC singlemode connector.
- Use a simplex LC multimode 50-micron OM2 (or better) fiber optic cable to extend the receiver from the transmitter up to 1,640 feet (300 meters).
- Cables not included.

Regulatory Approvals

- CE, FCC, RoHS

Warranty

- Two years

Package Includes

- One transmitter unit
- One receiver unit
- One T1270/R1330nm 10G Base-T SFP module
- One T1330/R1270nm 10G Base-T SFP module
- One IR emitter
- One IR receiver
- Two power supplies
- Mounting brackets

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NTI Part #	Local or Remote Unit
ST-IPFO4K18GB-LC	Local and Remote
ST-IPFO4K18GB-R-LC	Remote

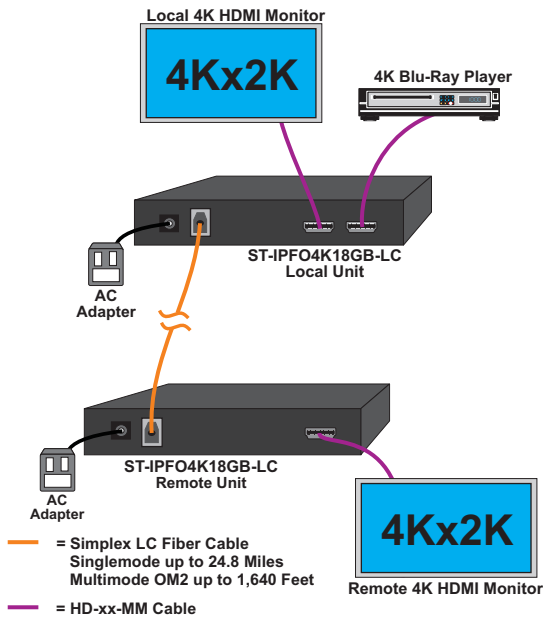
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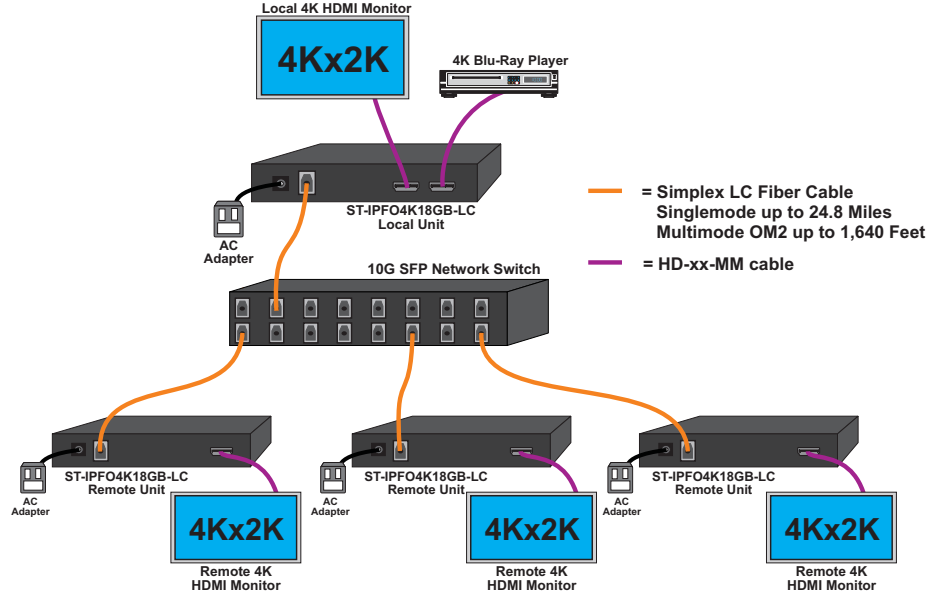
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Configuration and Cable Illustrations

Point-to-Point Connection



Point-to-Many Connection



Many-to-Many Connection

