

# Low-Cost HDMI Extender Over IP via One LC Singlemode/Multimode Fiber Optic Cable

**XTENDEX®**

**Extend a 1080p HDMI display up to 24.8 miles (40 km) away from the source via fiber. Broadcast real-time video to multiple display locations with an 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 OM3 (or better) multimode cable, extend to 984 feet (300 meters).
- Supports HDTV resolutions to 1080p.
- Cascade network switches to extend the length longer distances.
  - Up to three switches can be cascaded.
- HDMI features supported:
  - HDMI 1.3
  - 36-bit Deep Color
  - RGB, YCbCr 4:4:4, and YCbCr 4:2:2
  - LPCM
  - Bandwidth up to 4.46 Gbps
- HDCP 1.4 compliant.
- Full Infrared Remote (IR) control of HDMI source from remote HDTV using existing source remote control.
- For a point-to-many connection, a standalone network with an unmanaged 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 253 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 SFP switch with VLAN support. Standard LAN switches can only support one transmitter.
  - The managed SFP 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.
  - 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.
- Buffered HDMI input loop-through.
- Built-in default EDID table.
- Cables can be installed in conduit prior to extender installation.
- Integrated mounting brackets for easy surface/wall mounting.



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



- **Extend up to 24.8 miles (40 km) via one LC singlemode cable**
- **Extend up to 984 feet (300 m) via one LC multimode cable**
- **Buffered HDMI input loop-through**
- **Use with cascaded network switches to extend the length**
- **Supports Point-to-Point, Point-to-Many, & Many-to-Many connections**

The XTENDEX® HDMI Extender Over IP via Fiber Optic Cable transmits digital video, embedded audio, and IR signals up to 24.8 miles (40 kilometers) away from an HDMI source using a single LC singlemode fiber optic strand or 984 feet (300 meters) using OM3 LC multimode fiber optic cable.

Each HDMI Extender Over IP consists of a local unit that connects to an HDMI source and also supplies video to a local monitor, 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 network switch. Support for multiple transmitters requires a managed network switch.

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## Specifications

### Local Unit

- One female HDMI connector for source connection.
- One female HDMI connector for local monitor.
  - Supports HDTV resolutions to 1080p @60Hz.
- One 3.5mm port for IR emitter (included).
  - IR frequency range: 20 to 60 kHz.
- One simplex LC fiber optic port for sending/receiving video/audio and IR signals.
- Supports HDCP 1.4.

### Remote Unit

- One female HDMI connector for monitor.
  - Supports HDTV resolutions to 1080p @60Hz.
- One 3.5mm port for IR receiver (included).
  - IR frequency range: 20 to 60 kHz.
- One simplex LC fiber optic port for sending/receiving video/audio and IR signals.
- Encoding delay: 100 ms latency
- Supports HDCP 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: 3W each.

### 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): 5.43x3.21x0.94 (138x82x24 mm)

### Max Distance

- 24.8 miles (40 km) over 9µm singlemode LC fiber optic cable.
- 984 feet (300 meters) over 50µm OM3 (or better) multimode LC fiber optic cable.

### Cables

- 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 OM3 (or better) fiber optic cable to extend the receiver from the transmitter up to 984 feet (300 meters).
- Use HD-xx-MM cables to connect an HDMI source or display up to 50 feet.
- Use DP-HD-xx-MM cables to connect a DisplayPort source up to 15 feet.
- Use DVI-HD-xM-MM cables to connect a DVI source up to 5 meters.
- Use USB3C-HD4K-xx-MM to connect a USB-C or Thunderbolt 3 device up to 10 feet.
- Cables not included.

### Regulatory Approvals

- CE, FCC, RoHS

### Warranty

- Two years

### Package Includes

- One transmitter unit
- One receiver unit
- One T1550/R1310nm 1000 Base-T Gigabit SFP module
- One T1310/R1550nm 1000 Base-T Gigabit SFP module
- One IR emitter
- One IR receiver
- Two power supplies

## Low-Cost HDMI Extender Over IP via One LC Singlemode/Multimode Fiber Optic Cable

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

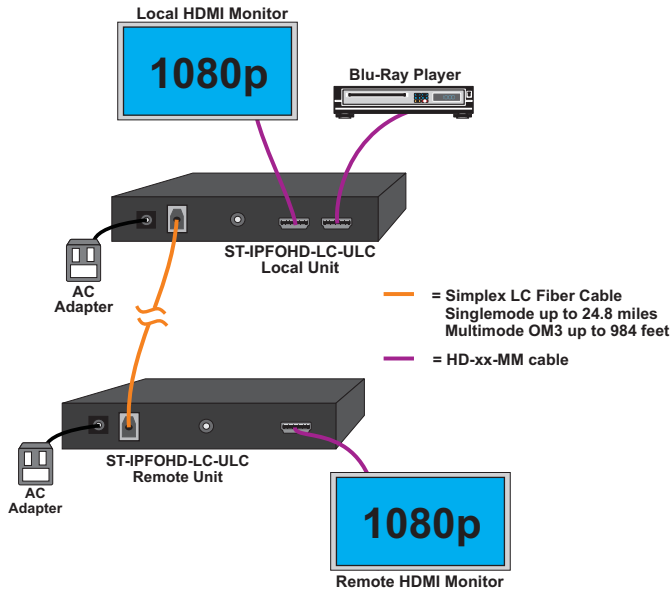
# Low-Cost HDMI Extender Over IP via One LC Singlemode/Multimode Fiber Optic Cable

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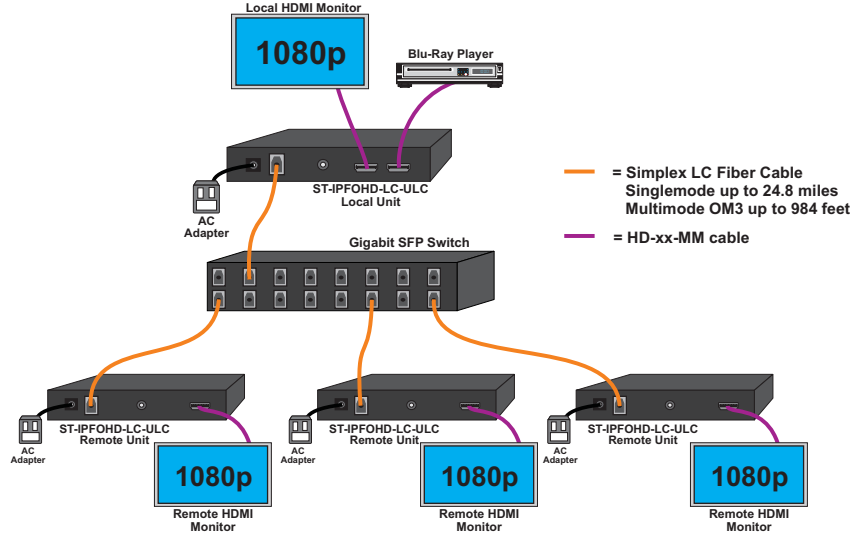
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## Configuration and Cable Illustrations

### Point-to-Point Connection



### Point-to-Many Connections



### Many-to-Many Connections

