**HDMI Over Gigabit IP Extender with Power over Ethernet (POE): Extend up to 333 Feet**

**XTENDEX®**

Extend an HDMI display monitor up to 333 feet away from the source using gigabit Ethernet. Use with cascaded network switches to extend up to 1,000 feet.

- Supports HDTV resolutions to 1080p.
- Ideal solution for digital signage applications.
- Power over Ethernet (PoE) - power supply not required at the local or remote unit.
- Broadcast real-time HDMI video and audio signals to multiple display locations with a managed or unmanaged (also known as non-managed) network switch.
- Transmits an HDMI signal over one CAT5e/6/7 cable.
- Supports video wall installations from 1x2 to 16x16 screens.
- Plug-and-Play installation allows receivers to find the transmitter automatically on the same network. (Network configuration may be required for Managed network switch.)
- Easily expandable. Add remote units as you add monitors.
- Built-in scaler - watch compatible sources at 1080p.
- Supports 2-way RS232 commands (control software on a PC, or other automated control system hardware such as Control4 or Crestron) to control any devices attached to the matrix using RS232.
- Integrated mounting brackets for easy surface/wall mounting.
- Inexpensive CAT5e/6/7 cable replaces bulky video cables.
- Support for multiple transmitters requires a Managed network switch with VLAN/IGMP support. Standard LAN switches can only support one transmitter.
  - Each VLAN acts as a separate HDMI Over IP Channel on the network.
  - One transmitter can connect up to 200 receivers using cascaded managed network switches.
- Cascade managed network switches up to 3 levels, allowing the farthest display to be located up to 1,000 feet away from the source device. Each receiver can be located up to 333 feet from the managed switch.
- For a point-to-many connection, a standalone network with an unmanaged network switch, hub, or router can be used instead of a managed network switch.
  - It is not recommended to use any other network devices on this standalone network as it may cause a degradation in performance.
- Use a PC to access the built-in HTTP Interface of the managed network switch to control what signal is being watched at each location.
- Use a Telnet client to access any receiver on the VLAN or network.
- Customizable EDID table on local unit.
- HDCC compliant.
- Local and remote units must be in the same LAN. The units do not support WAN connections.

The XTENDEX® HDMI Over Gigabit IP Extender multicasts digital video and audio signals to one or more receivers up to 333 feet away over a 1000BASE-T Gigabit Network connected with CAT5e/6/7 cable.

Each HDMI Over Gigabit IP Extender consists of a local unit that connects to an HDMI source, 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 CATx cable or a Point-to-Many connection via a network switch. Support for multiple transmitters requires a managed network switch.

**Specifications**

- **LAN Bandwidth:** 180 to 500 Mbps
- **Protocol:** IP, UDP, TCP, ICMP, and IGMP
- **Supports video wall installations from 1x2 to 16x16 screens.** (See Control Methods for details.)

**Local Unit**

- One female HDMI-A port for source connection.
- One female 1000Mbps RJ45 port for sending high definition video/audio signals and DDC signal.
- One female 3.5mm jack for RS232.
- Class 3 PoE compatible (10 watts maximum).

**Remote Unit**

- One female HDMI-A port for HDTV or computer display.
- One female 1000Mbps RJ45 port for receiving high definition video/audio signals and DDC signal.
- Signal type: HDMI, HDCC compliant.
- Supports HDTV resolutions to 1080p and computer resolutions to 1920x1200.
- Supports multichannel compressed audio (Dolby Digital, DTS, THX) through HDMI compatible TVs or audio receivers.
- One female 3.5mm jack for RS232.
- Class 3 PoE compatible (10 watts maximum).

**ST-IPHD-R-2GPOPE (Front & Back)**

- **Visually Lossless 1080p**
- **Use with cascaded network switches to extend to 1,000 feet**
- **Supports 2-way RS232 Commands**
- **No Duplicate IP Addresses on 1000BASE-T Network**
- **LAN Bandwidth:** 180 to 500 Mbps
- **Supports video wall installations from 1x2 to 16x16 screens.**
- **Supports Point-to-Point, Point-to-Many, & Many-to-Many connections.**
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Specifications (continued)

<table>
<thead>
<tr>
<th>Power</th>
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<tbody>
<tr>
<td>• Power over Ethernet: With a switch that supports Power over Ethernet, a power supply is not required at the local or remote unit.</td>
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<tr>
<td>• Local and remote unit: 100 to 240 VAC at 50 or 60 Hz via AC adapter (not included).</td>
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<tr>
<td>• Country-specific AC adapter sold separately (PWR-SPLY-IPH2GD).</td>
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<table>
<thead>
<tr>
<th>Cables</th>
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<tr>
<td>• Use HD-xx-MM cable to connect an HDMI source or display (not included).</td>
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<tr>
<td>• Use DVI-HD-xx-MM cable to connect a DVI source or display (not included).</td>
</tr>
<tr>
<td>• Use CAT5e/6/7 UTP straight through cable for TIA/EIA-568B wiring terminated with standard RJ45 connectors (not included).</td>
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Max Distance

- 330 feet (100 meters) over CAT5e/6/7 cable.

Dimensions

- WxDxH (in): 4.76x4.92x1.18 (121x125x30 mm).

Regulatory Approvals

- CE, RoHS

Warranty

- Two years

Control Methods

Video Wall App

- Firmware provides video wall applications in sizes ranging from 1x2 to 16x16.
  - Any combination is possible within those limitations (e.g. 2x4, 1x8, 5x5, 6x2).
- The video wall set-up software is built into the units and can be programmed through any web browser by entering the IP address of the transmitter.
- With IP-based control systems, the screens can change modes dynamically from video wall modes to standard modes.
- Works best with progressive video signals such as 480p, 720p and 1080p.
- Dual mode capability enables higher display quality.
  - Use one transmitter for each row of the video wall to boost picture quality.
- Ideal digital signage solution for sports bars, emergency response centers, etc.

Managed Ethernet Switch

- Compatible Managed Ethernet Switches (requires Gigabit for best results)
  - Cisco SG300 Gigabit Series (no stacking)
  - Cisco Catalyst 2960 Gigabit
  - Dell PowerConnect 5400 Series (5424, 5448)
  - Dell PowerConnect 5500 Series (5524, 5524P, 5548, 5548P)
  - Dell PowerConnect 6200 Series (6224, 6224P, 6248, 6248P)
  - Netgear 7000 Series V2 (GSM7224, GSM7228PS, GSM7248, GSM7252PS)
  - Pakedge SW24-GBM, S24P

HDMI Over Gigabit IP Extender with POE via CAT5e/6/7

<table>
<thead>
<tr>
<th>NTI Part #</th>
<th>Description</th>
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<tbody>
<tr>
<td>ST-IPHDL-2GOPOE</td>
<td>Local Unit with Power over Ethernet</td>
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<tr>
<td>ST-IPHRD-2GOPOE</td>
<td>Remote Unit with Power over Ethernet</td>
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Configuration and Cable Illustrations

Point-to-Point Connection

Point-to-Many Connections

- Configuration and cable illustrations for HDMI Over Gigabit IP Extender with Power over Ethernet (POE) by XTENDEX®.
- Illustrations show how to extend an HDMI display monitor up to 333 feet away from the source using gigabit Ethernet.
- The configuration includes using cascaded network switches to extend up to 1,000 feet.
- Diagrams show the connection between Blu-Ray Player, AC Adapter, and Remote HDTV with HDMI Input.
- Color codes for HDMI-xx-MM and CAT5e/6/7 cables are provided.

ST-IPHD-L-2GOPOE (Local Unit)
ST-IPHD-R-2GOPOE (Remote Unit)
ST-IPHD-L-2GOPOE (Remote Unit)
ST-IPHD-R-2GOPOE (Remote Unit)
UnManaged Network Switch
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Configuration and Cable Illustrations

Many-to-Many Connection

Blu-Ray Player

ST-IPHD-L-2GOPOE (Local Unit)

ST-IPHD-R-2GOPOE (Remote Unit)

Managed Network Switch

Remote HDTV with HDMI Input

Remote HDTV with HDMI Input

Remote HDTV with HDMI Input

AC Adapter

AC Adapter

AC Adapter

AC Adapter

= HDMI-xx-MM

= CAT5e/6/7 Cable

= CAT5e/6/7 Cable

= CAT5e/6/7 Cable

= CAT5e/6/7 Cable

= CAT5e/6/7 Cable