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XTENDEX® Series

ST-IPHD-L/R-2GOPOE

HDMI Over Gigabit IP Extender with Power over Ethernet (POE) Installation and Operation Manual

Front and Rear View of ST-IPHD-R-2GOPOE

TRADEMARK

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CHANGES

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INTRODUCTION

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 (Many-to-Many connection) requires a managed network switch.

Features

- 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. Network switch must support Jumbo Frames.
- 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.
- HDCP compliant.
- Local and remote units must be in the same LAN. The units do not support WAN connections.

MATERIALS

Materials supplied:

- NTI ST-IPHD-L or R-2GOPOE Transmitter or Receiver

Materials *Not* supplied but *REQUIRED:*

Cables

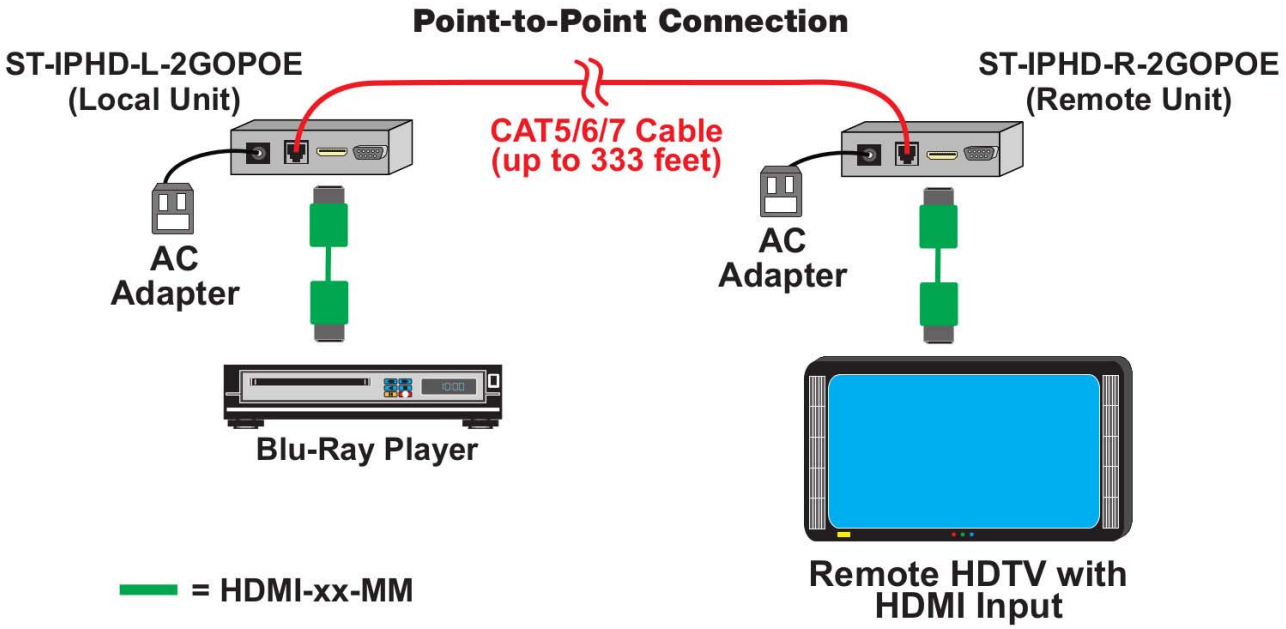
- Use HD-xx-MM cable to connect an HDMI source or display.
- Use DVI-HD-xx-MM cable to connect a DVI source or display.
- Use CAT5e/6/7 UTP straight through cable for TIA/EIA-568B wiring terminated with standard RJ45 connectors.

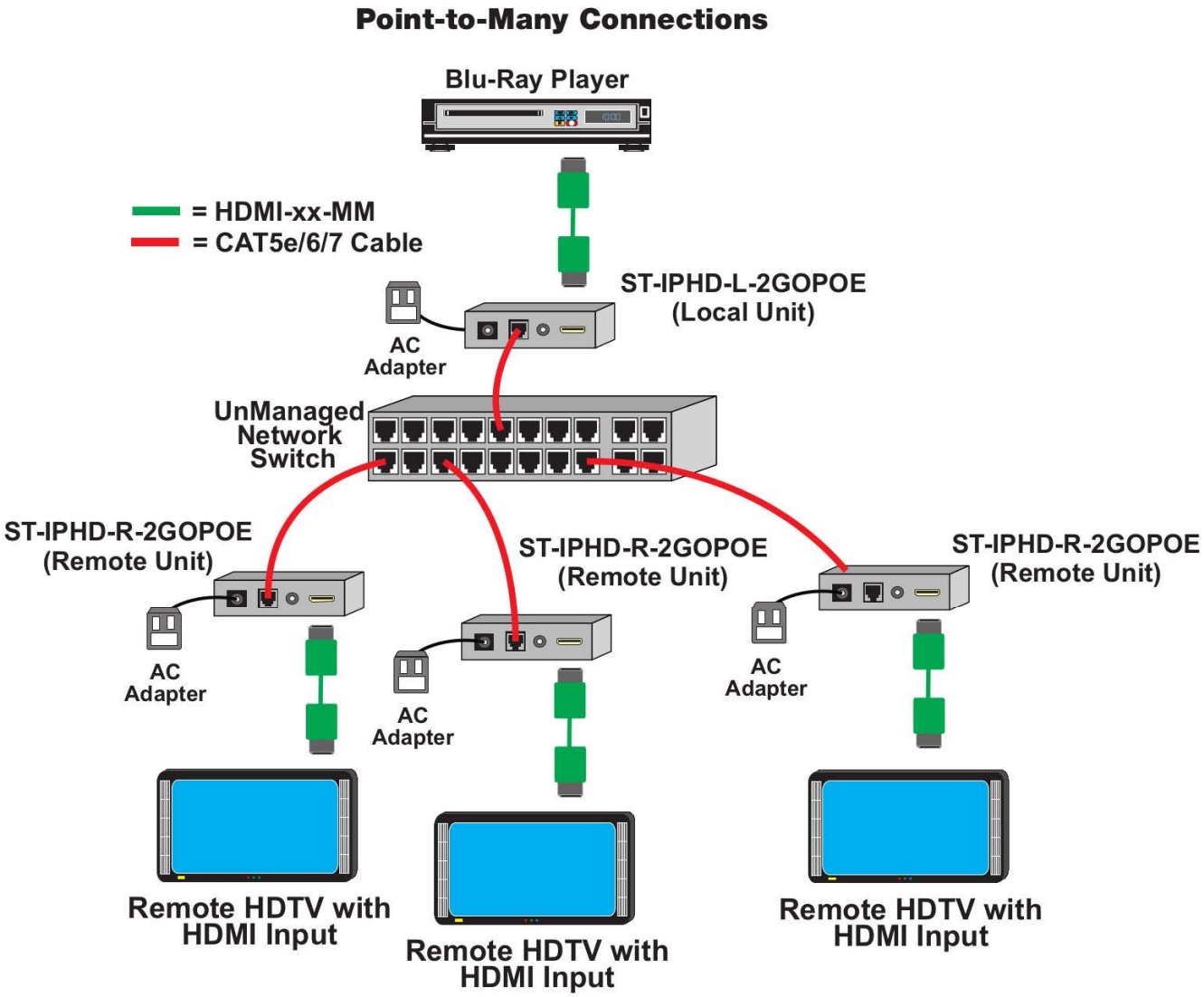
Power

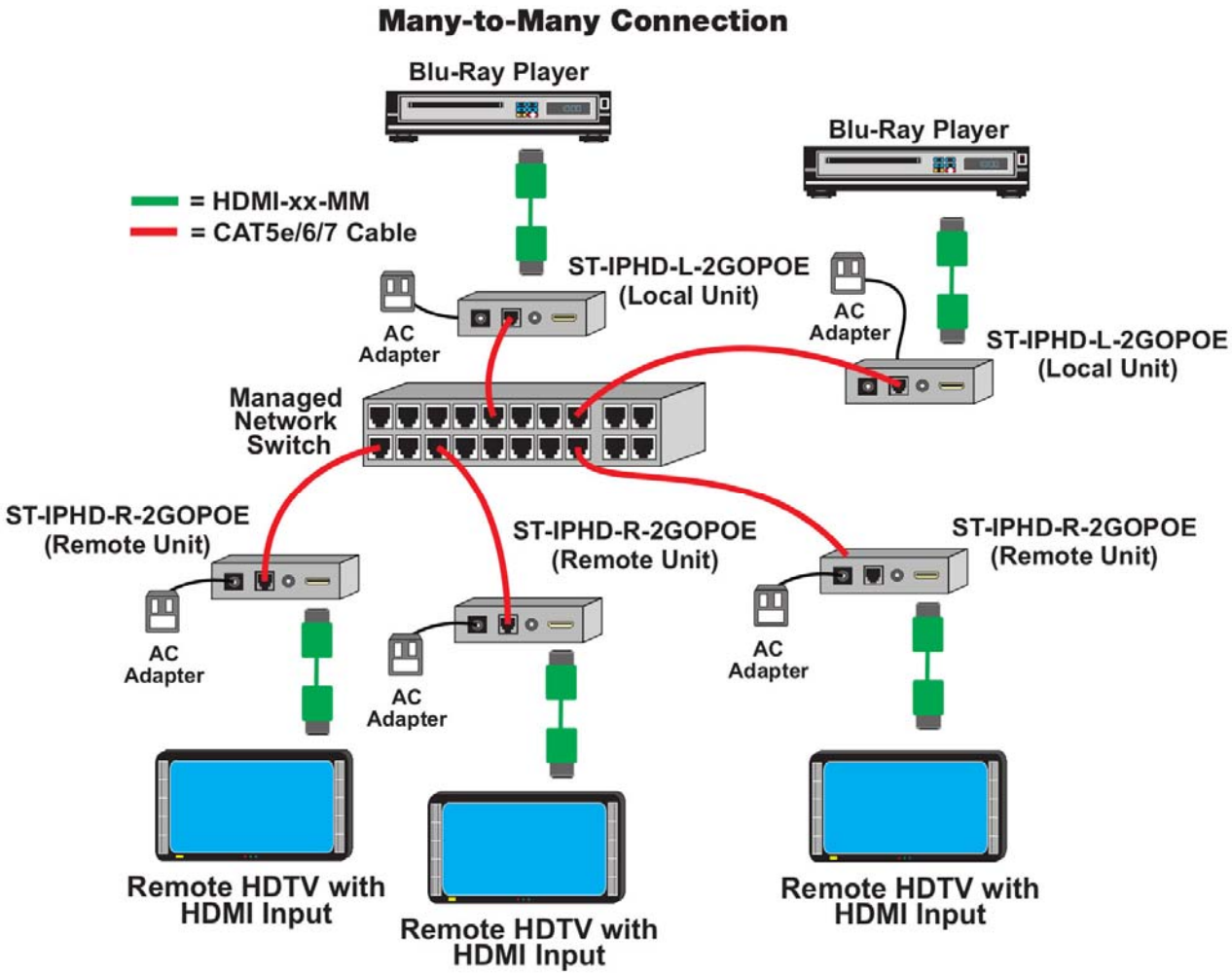
- Power over Ethernet: With a switch that supports Power over Ethernet, a power supply is not required at the local or remote unit.
- Without Power over Ethernet, the Local and remote unit each require a country-specific AC adapter sold separately (PWR-SPLY-IPHD2GO 100 to 240 VAC at 50 or 60 Hz via AC adapter)

Cables and AC adapters can be purchased from Network Technologies Inc by calling ***(800) 742-8324*** *(800-RGB-TECH) in the US and Canada or* ***(330) 562-7070*** *(worldwide).*

APPLICATIONS






Many-to-Many Connection
Blu-Ray Player
Blu-Ray Player
= HDMI-xx-MM
= CAT5e/6/7 Cable
ST-IPHD-L-2GOPOE
(Local Unit)
AC
Adapter
AC
Adapter
ST-IPHD-L-2GOPOE
(Local Unit)
Managed
Network
Switch
ST-IPHD-R-2GOPOE
(Remote Unit)
ST-IPHD-R-2GOPOE
(Remote Unit)
ST-IPHD-R-2GOPOE
(Remote Unit)
AC
Adapter
AC
Adapter
AC
Adapter
Remote HDTV with
HDMI Input
Remote HDTV with
HDMI Input
Remote HDTV with
HDMI Input

Connections- Point-to-Point

1. Connect a CAT5/6/7 cable up to 333 feet in length between the "1000BT LAN" ports of the Transmitter and Receiver.

2. Connect an HDMI-xx-MM cable (cables available in 3/6/10/15/20/30/50/75 foot lengths- sold separately) between the video source and the Transmitter.

3. Connect an HDMI-xx-MM cable between the display and the Receiver.

4. Power ON the video source and display.

5. Connect AC adapters (sold separately) to the Transmitter and Receiver.

Crisp clear video will be displayed on the extended monitor.

Connections- Point-to-Many

1. Connect a CAT5/6/7 cable up to 333 feet in length between the "1000BT LAN" ports of the Transmitter and each Receiver and available ports on a router or managed or unmanaged network switch. Note: The network switch must support Jumbo Frames.

2. If the router or network switch does not support POE, connect AC adapters (sold separately) to the Transmitter and each Receiver.

2. Connect an HDMI-xx-MM cable (cables available in 3/6/10/15/20/30/50/75 foot lengths- sold separately) between the video source and the Transmitter.

3. Connect an HDMI-xx-MM cable between the display and the Receiver.

4. Power ON the video source and displays. Video from the source should be displayed on all monitors.

If the video from the source is desired to be spread over a group of monitors in a video wall configuration, software is included in each Transmitter and Receiver to support a video wall that includes up to 8 rows of monitors with a maximum of 16 monitors in each row. 3.

To configure the video wall software, first Use Bonjour Browser to identify the IP Addresses of the Transmitter and Receivers.

1. Open the browser from a PC connected to the same subnet the transmitters and receivers are on.
2. Click on the "WEB Server HTTP" option under Services.

   In the browser window, the Transmitter will be identified as the "ast-gateway" and Receivers as "ast-clients"
3. Double-click on the "HTTP on ast-gateway0000" to open the web interface of the Transmitter.
4. Click on the video wall tab and follow the instructions under "Video Wall Guide".

Connections- Many-to-Many

Using the ST-IPHD-2GOPOE for a Many-to-Many configuration requires connection of all Transmitters and Receivers to a managed network switch and additional configuration software. For more information on the configuration of a Many-to-Many system, contact us at sales@ntigo.com.

TECHNICAL 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, HDCP 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).

Power

- Power over Ethernet: With a switch that supports Power over Ethernet, a power supply is not required at the local or remote unit.
- Local and remote unit: 100 to 240 VAC at 50 or 60 Hz via AC adapter (not included).
- Country-specific AC adapter sold separately (PWR-SPLY-IPHD2GO).

Cables

- Use HD-xx-MM cable to connect an HDMI source or display (not included).
- Use DVI-HD-xx-MM cable to connect a DVI source or display (not included).
- Use CAT5e/6/7 UTP straight through cable for TIA/EIA-568B wiring terminated with standard RJ45 connectors (not included).

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

WARRANTY INFORMATION

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Network Technologies Inc at **(800) 742-8324** (800-RGB-TECH) or **(330) 562-7070** or visit our website at http://www.networktechinc.com for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.

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