

# 4K 18Gbps HDMI Extender Over IP with IR and RS232

XTENDEX®

## Extend an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display up to 328 feet (100 meters) using 10-Gigabit Ethernet.

- Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160@30/50/60Hz YUV 4:4:4, and HDTV resolutions to 1080p @120Hz.
  - Extend 4K@60Hz up to 328 feet using CAT6a/7 cable.
    - ♦ In a Point-to-Many or Many-to-Many connection, the max length between the switch and the local/remote unit is 164 feet.
  - Extend 1080p@60Hz up to 400 feet using CAT6/6a/7 cable.
    - ♦ In a Point-to-Many or Many-to-Many connection, the max length between the switch and the local/remote unit is 200 feet.
  - Refer to the resolution chart in the specifications section for resolutions using different CATx cable types and lengths.
- HDMI features supported:
  - HDMI 2.0b
  - 10-bit, 12-bit, and 36-bit Deep Color
  - Dolby TrueHD, DTS-HD Master Audio, Dolby Digital+, and LPCM 7.1CH
  - YUV 4:4:4, 4:2:2, and RGB
  - Bandwidth up to 600 MHz (18Gbps)
  - 3D (1080p @60Hz)
  - HDR
- HDCP 2.2 compliant.
- Bi-directional Infrared Remote (IR) control of HDMI source or display. IR transport channel can be forward or backward per the installation.
- Support full-duplex RS232 at 57600 baud.
- Plug-and-Play installation allows receivers to find the transmitter automatically on the same network. (Network configuration may be required for managed network switch.)
  - When extending 1080p@120Hz, it is recommended to turn off the video source before connecting the transmitter and receiver.
- Easily expandable – add receivers as you add control stations.
- Use the optional ST-VC-IP4K18GBRS Video Over IP Controller to easily configure/control matrix configurations.



### XTENDEX® ST-IP4K18GB-RS (Local & Remote Unit)

- Supports Point-to-Point, Point-to-Many, & Many-to-Many connections
- Resolutions to Ultra-HD 4Kx2K 60Hz 4:4:4
- 18Gbps bandwidth
- HDMI 2.0
- IR, RS232 control

The XTENDEX® 4K HDMI 18Gbps Over IP Extender multicasts 4K HDMI 18Gbps digital video and audio signals to one or more receivers up to 328 feet away (100 meters) over a 10-Gigabit Ethernet network using a single CAT6/6a/7 cable.

The extender consists of a local unit that connects to a 4K HDMI source, and a remote unit that connects to a 4K HDMI display. The local and remote units can be connected together for a Point-to-Point connection via CAT6/6a/7 cable, or a Point-to-Many or Many-to-Many connection via a 10-Gigabit network switch. Support for multiple transmitters requires a managed 10GB network switch.

## Specifications

### Local Unit

- Compatible with a computer or Ultra-HD video source with HDMI output.
- One female HDMI connector for source.
- 3-pin screw terminal for audio out.
- Two female 3.5mm ports for connecting an IR emitter and receiver (included).
- 3-pin screw terminal for RS232.
- Support full-duplex RS232 at 57600 baud.
- One female 10G Base-T RJ45 port for sending high definition video/audio signals, IR signal, CEC signal, and DDC signal.
- Supports HDCP 2.2

### Remote Unit

- One female HDMI connector for display.
- 3-pin screw terminal for audio out.
- Two female 3.5mm ports for connecting an IR emitter and receiver (included).
- 3-pin screw terminal for RS232.
  - Support full-duplex RS232 at 57600 baud.
- One female 10G Base-T RJ45 port for receiving high definition video/audio signals, IR signal, CEC signal, and DDC signal.
- Supported video resolutions:
  - Ultra-HD 4Kx2K 4:4:4 resolutions (3840x2160 and 4096x2160 @30/50/60Hz)
  - HDTV resolutions to 1080p (1080p@120Hz, 1080p 3D@60Hz)
- Supports HDCP 2.2
- Max data rate: 18Gbps
- Supports embedded digital audio through HDMI compatible TVs or audio receivers.

# 4K 18Gbps HDMI Extender Over IP with IR and RS232

XTENDEX®

Extend an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display up to 328 feet (100 meters) using 10-Gigabit Ethernet.

## Specifications (continued)

### Environmental

- Operating temperature: 32 to 104°F (0 to 40°C).
- Storage temperature: -4 to 140°F (-20 to 60°C).
- Operating/storage relative humidity: 20 to 90% non-condensing RH

### Power

- Local and remote unit:
  - Input: 100 to 240 VAC at 50 or 60 Hz via AC adapter (included).
  - Output: 12VDC, 2.5A

### Dimensions

- WxDxH (in): 5.91x3.86x1.26 (150x98x32 mm).

### Regular Approvals

- CE, FCC, RoHS

### Warranty

- Two years

### Cables

- Interface cables between the video source/display and the transmitter/receiver are required for proper operation.
  - Supports cable lengths to 20 feet for 4Kx2K resolutions and 50 feet for 1080p.
    - Longer cable lengths can be used provided they have a built-in video equalizer (also known as “active HDMI cables”).
- Use HD-xx-MM cable to connect an HDMI source or display (not included).
- Use DVI-HD-xx-MM cable to connect DVI source or display (not included).
  - Does not support 4Kx2K resolutions.
- Use HD-ACT-xx-MM 4K HDMI Active Cables to connect an HDMI source or display up to 100 feet.
  - HD-ACT-20/25/30/40/50/60-MM supports resolutions to 4K@60Hz (18 Gbps).
  - HD-ACT-75/100-MM supports resolutions to 4K@30Hz (10.2 Gbps).
- Use CAT6/6a/7 cable terminated with standard RJ45 connectors (not included)
- Cables not included.

### Max Distance

- Extend 4K@60Hz up to 328 feet (100 meters) using CAT6a/7 cable.
  - In a Point-to-Many or Many-to-Many connection, the max length between the switch and the local/remote unit is 164 feet (50 meters).
- Extend 1080p@60Hz up to 400 feet (122 meters) using CAT6/6a/7 cable.
  - In a Point-to-Many or Many-to-Many connection, the max length between the switch and the local/remote unit is 200 feet (61 meters).

### Distances & Resolutions for CAT6, CAT6a and CAT7 Cables

Cable	Distance	Maximum Resolutions
CAT6	400 feet (122 meters)	1080p@60Hz
	300 feet (91 meters)	4K@30Hz
	200 feet (61 meters)	1080p 3D
CAT6a	400 feet (122 meters)	1080p@60Hz
	328 feet (100 meters)	4K@60Hz, 1080p@120Hz
	200 feet (61 meters)	1080p 3D
CAT7	400 feet (122 meters)	1080p@60Hz
	328 feet (100 meters)	4K@60Hz, 1080p@120Hz
	200 feet (61 meters)	1080p 3D

### 4K 18Gbps HDMI Extender Over IP with IR and RS232 Models

NTI Part #	Local or Remote Unit
ST-IP4K18GB-L-RS	Local
ST-IP4K18GB-R-RS	Remote

### Video Over IP Controller

NTI Part #	Description
ST-VC-IP4K18GBRS	Video Over IP Controller for use with ST-IP4K18GB-L/R-RS

# 4K 18Gbps HDMI Extender Over IP with IR and RS232

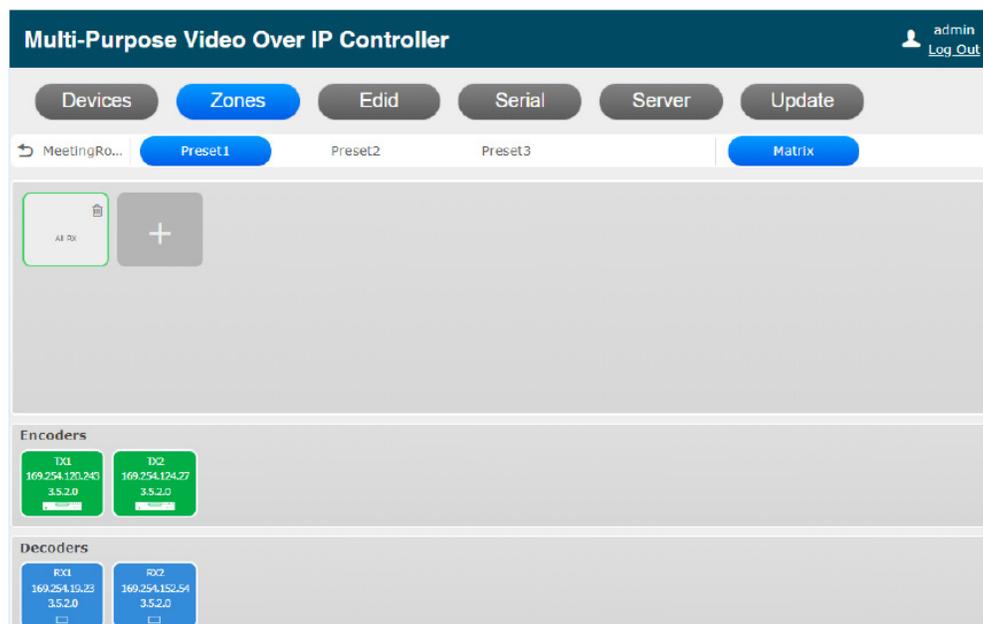
XTENDEX®

Extend an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display up to 328 feet (100 meters) using 10-Gigabit Ethernet.

## Control Methods

### Video Over IP Controller (ST-VC-IP4K18GBRS)

- Optional Video Over IP Controller for use with ST-IP4K18GB-L/R-RS
  - Connect to the same network as the transmitters (encoders) and receivers (decoders).
  - Requires a managed 10GB network switch with IGMP snooping.
- Built-in Web GUI for system setup and control.
- RS232 port for API control.
- Save up to 16 zone configurations.
  - Configure zones for specific locations/installation sites – for instance, a meeting room.
  - Each zone supports up to 3 preset configurations, and up to 50 transmitter and receiver pairs.
  - Transmitters can be assigned to multiple zones. Receivers are assigned to a single fixed location.
- Linux-based OS
- Dimensions WxDxH (in): 3.94x5.11x1.02 (100x130x26 mm)
- Power:
  - Input: 100 to 240 VAC at 50 or 60 Hz via AC adapter (included).
  - Output: 12VDC, 1A
  - Power consumption: 4W
- Environmental
  - Operating temperature: 32 to 104°F (0 to 40°C).
  - Storage temperature: -4 to 140°F (-20 to 60°C).
  - Operating/storage relative humidity: 20 to 90% non-condensing RH.
- Regulatory Approvals: CE, RoHS



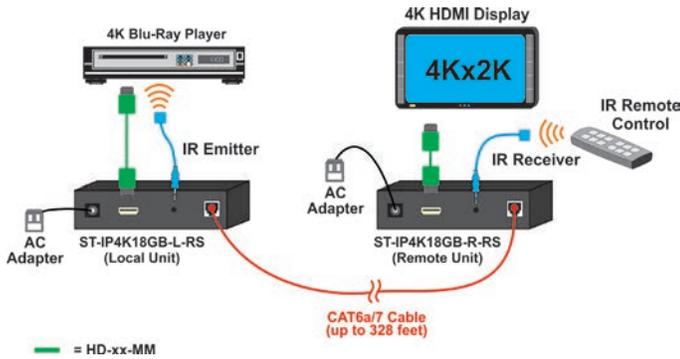
# 4K 18Gbps HDMI Extender Over IP with IR and RS232

XTENDEX®

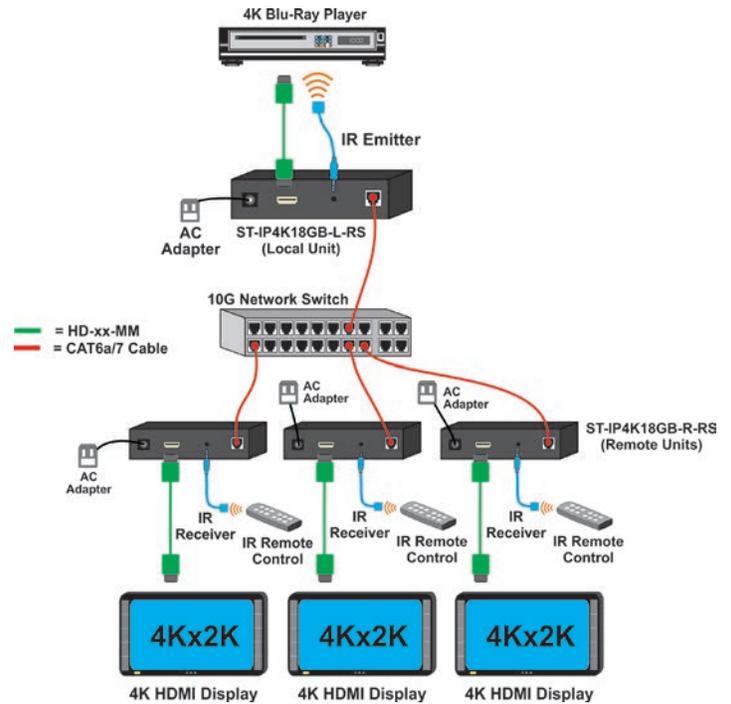
Extend an Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI display up to 328 feet (100 meters) using 10-Gigabit Ethernet.

## Configuration and Cable Illustrations

### Point-to-Point Connection



### Point-to-Many Connections



### Many-to-Many Connections

