



NTI® NETWORK
TECHNOLOGIES
INCORPORATED

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XTENDEX® Series

ST-C64K18GB-230C

4K 18Gbps HDMI Extender via One CAT6/6a/7 with
Cascadable Receivers

Installation and Operation Manual



TRADEMARK

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CHANGES

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INTRODUCTION

The XTENDEX® 4K18Gbps HDMI Extender transmits digital Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI video and audio signals up to 230 feet (70 meters) using one CAT6/6a/7 cable. Each video extender 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. Up to 10 receivers can be cascaded for a Point-to-Many connection via CATx.

Features:

- Transmits an HDMI signal over a single CAT6/6a/7 cable up to 230 feet (70 meters).
 - Cascade receivers to extend up to 2,300 feet and up to 10 remote monitors.
 - Zero latency.
- Supports Ultra-HD 4Kx2K resolutions to 3840x2160 @60Hz and 4096x2160 @24/25Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
- HDMI features supported:
 - HDMI 2.0 compliant.
 - Up to 36-bit Deep Color
 - LPCM, Dolby Digital, and DTS
 - RGB, YCbCr 4:4:4, YCbCr 4:2:2, and YCbCr 4:2:0
 - Bandwidth up to 18 Gbps
 - 3D
 - HDR10
- HDCP 2.2 and 1.4 compliant.
- Supports local and remote HDMI displays.
- Built-in default EDID table.
- Supports HDMI embedded digital audio and SPDIF digital audio output.
- Bi-directional IR control from input and output locations.
- Built-in surge and ESD protection.
- Mounting brackets included for easy surface/wall mounting.

Note: Widescreen resolutions (3440x1440, 2560x1600 and 2560x1440) are only supported to 98 feet (30m) over CAT6/6a/7 cable. Cascade 10 receivers to extend the widescreen resolutions to 984 feet (300m).

MATERIALS

Materials supplied with this kit when purchased as a set:

- ST-C64K18GB-L-230C Local Unit with fiber transmitter module installed
- ST-C64K18GB-R-230C Remote Unit with fiber receiver module installed
- 2 x IR Emitter
- 2 x IR Receiver
- 2 x 110-240VAC, 50 or 60Hz-5VDC/1A AC Adapter
- 2 x Screw terminals for RS232
- 4 x Mounting brackets and hardware

Materials supplied with this kit when only Remote is purchased:

- ST-C64K18GB-R-230C Remote Unit with fiber receiver module installed
- 1 x IR Emitter
- 1 x IR Receiver
- 1 x 110-240VAC, 50 or 60Hz-5VDC/1A AC Adapter
- 1 x Screw terminals for RS232
- 2 x Mounting brackets and hardware

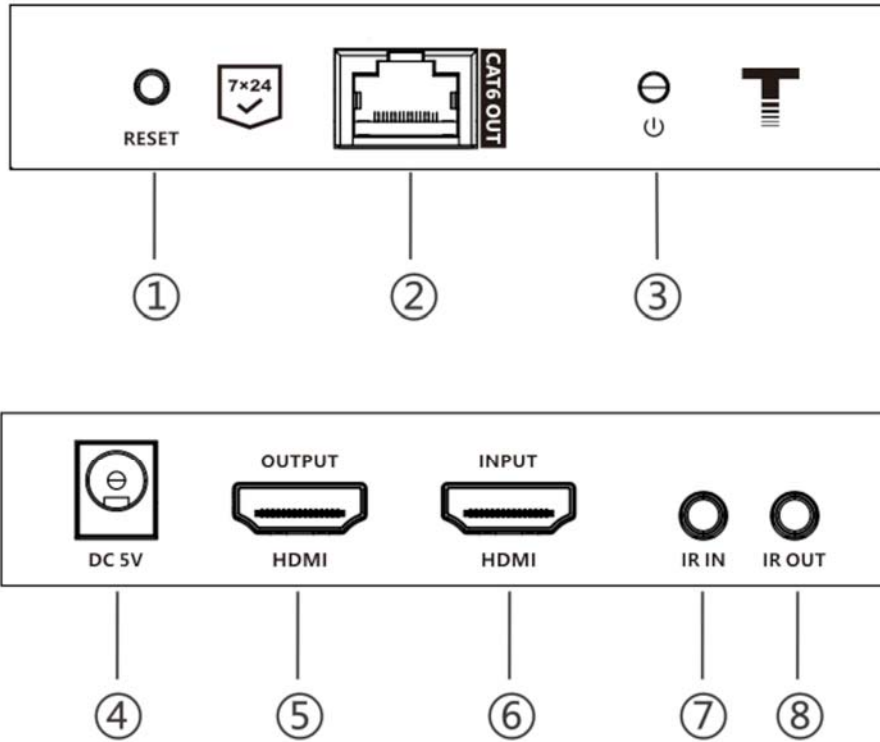
Cables

- Interface cables between the video 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 source up to 100 feet.
 - HD-ACT-20/25/30/40/50-MM supports resolutions to 4K@60Hz (18 Gbps).
 - HD-ACT-60/75/100-MM supports resolutions to 4K@30Hz (10.2 Gbps).
- Use DP-HD-xx-MM cables to connect a DisplayPort computer up to 15 feet.
 - Supports resolutions up to 4k@30hz 4:4:4 and 4K@60Hz 4:2:0.
- Use USB3C-HD4K-xx-MM to connect a 4K@60Hz 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 CAT6/6a/7 solid straight through cable for TIA/EIA-568B wiring terminated with standard RJ45 connectors (not included).
- Cables are not included.

Cables 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).

CONNECTORS AND LEDS

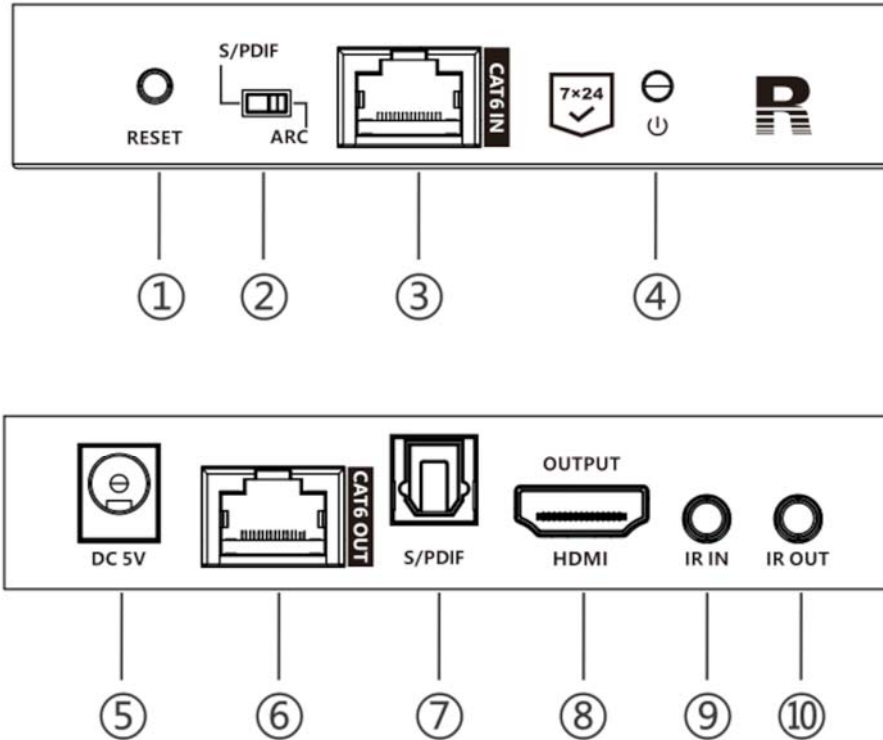
ST-C64K18GB-L-230C
Transmitter (TX)



#	LABEL	CONNECTOR/LED	DESCRIPTION
1	RESET	Button	Press to restart the device
2	CAT6 OUT	RJ45 Female	For connection of CATx cable between the Local and Remote units
3	Power Symbol	Green LED	illuminates to indicate proper power to the unit
4	DC 5V	Power Jack	for connection of power supply
5	HDMI OUTPUT	HDMI Female	For connection of an HDMI display device
6	HDMI INPUT	HDMI Female	For connection of an HDMI video source
7	IR IN	3.5mm Jack	For connection of an IR Receiver
8	IR OUT	3.5mm Jack	For connection of an IR Emitter

ST-C64K18GB-R-230C

Receiver (RX)



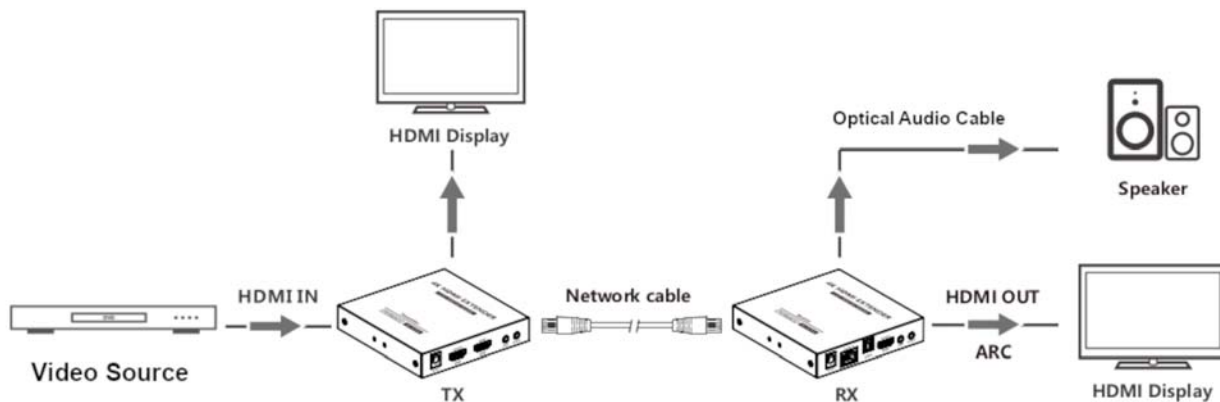
#	LABEL	CONNECTOR/LED	DESCRIPTION
1	RESET	Button	Press to restart the device
2	S/PDIF --- ARC	Slide Switch	Choose to decode audio from HDMI or ARC output from fiber optic cable <ul style="list-style-type: none"> • If the audio switch is set to "S/PDIF" it will output audio over HDMI and optical. • If set to "ARC" position it will only output audio over HDMI
3	CAT6 OUT	RJ45 Female	For connection of CATx cable between the Local and Remote units
4	Power Symbol	Green LED	Illuminates to indicate proper power to the unit
5	DC 5V	Power Jack	For connection of power supply
6	CAT6 OUT	RJ45 Female	For connection of CATx cable between two Remote units
7	S/PDIF	Optical audio port	For connection of speakers to play digital audio Signal
8	HDMI OUTPUT	HDMI Female	For connection of an HDMI display device
9	IR IN	3.5mm Jack	For connection of an IR Receiver
10	IR OUT	3.5mm Jack	For connection of an IR Emitter

INSTALLATION

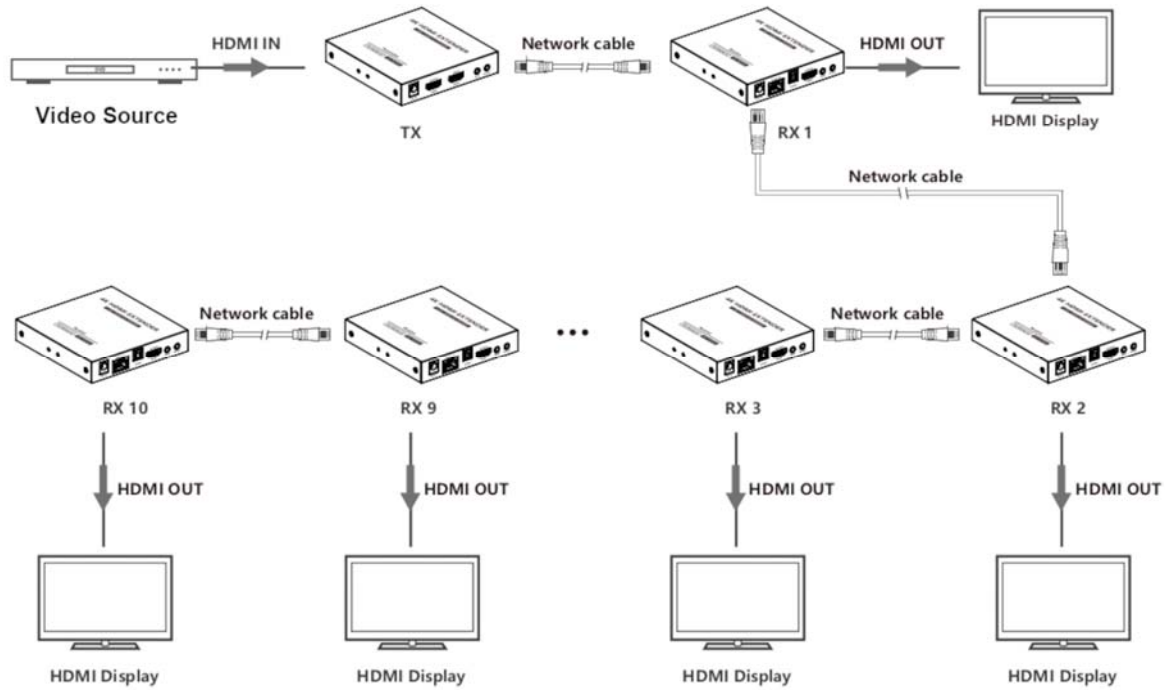
Connection Cables

1. Connect the video source device to the Local Unit (TX) at the "HDMI INPUT" port with an HDMI cable.
2. Connect a CAT6/CAT6a/CAT7 cable between 2 and 70 meters in length between the "CAT6 OUT" on the Local Unit and the "CAT6 IN" on the Remote Unit (RX).
3. Connect a display device to the Remote Unit at the "HDMI OUTPUT" port with an HDMI cable.
4. If using HDMI Loop Out, connect a display device to the Local Unit at the "HDMI OUTPUT" port with an HDMI cable.
5. If cascading Remote Units, connect a CAT6/CAT6a/CAT7 cable between 2 and 70 meters in length between the "CAT6 OUT" on the first Remote Unit to the "CAT6 IN" on the second Remote Unit. Repeat this step for any additional Remote Units, for up to 10 total Remote Units and a total of 700 meters of CATx cable.
6. Plug the power supplies (provided) into the Local Unit and Remote Unit.

One to One



One to Many

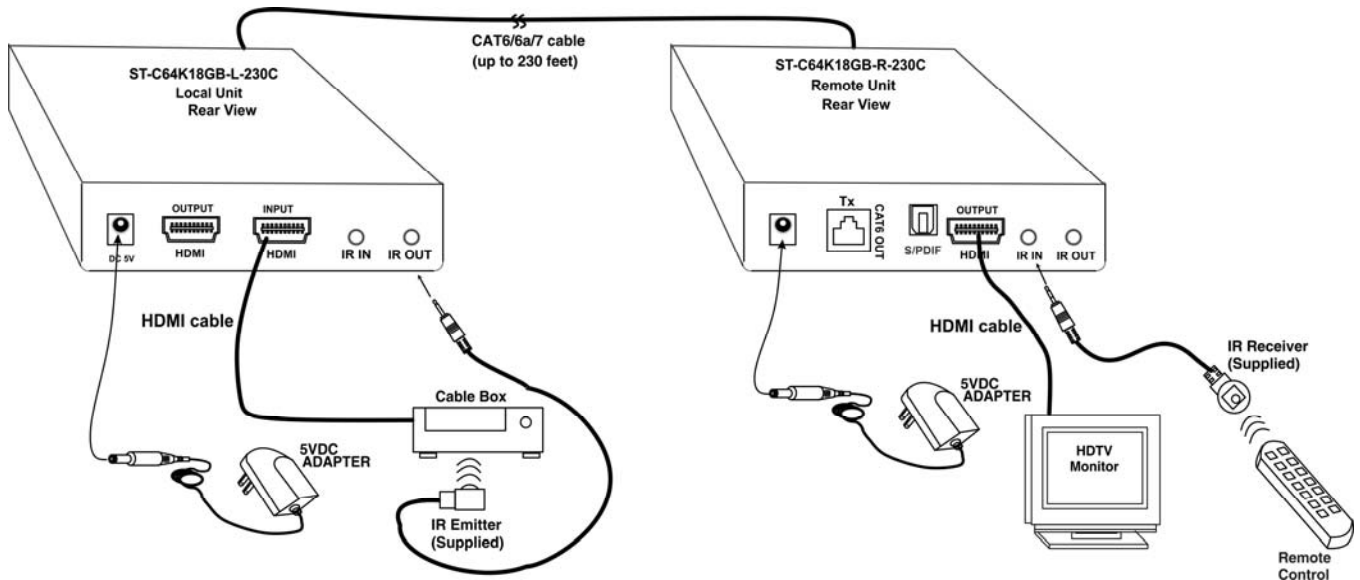


Note: To ensure the quality of the signal transmission, please use a network cable within 70 meters when Remote Units are cascaded.

With 10 Remote Units, you can have a total of up to 700 meters of CATx cable between the Video source and the last HDMI Display. Exception: when resolutions are 3440x1440, 2560x1600 and 2560x1440, the maximum total distance will be 300 meters (30 meters each).

IR Cables

1. Connect an IR Emitter into the "IR OUT" port on the Local Unit, and the other into the same port on the Remote Unit. The emitter should be placed as close as possible to the IR receiving sensor/window on the video source.
2. Connect an IR Receiver into the "IR IN" port on the Local Unit, and the other into the same port on the Remote Unit. The Receiver should be placed where it is convenient to receive control signals from the IR Remote.



TECHNICAL SPECIFICATIONS

Local Unit	
Connections	<ul style="list-style-type: none"> • One female HDMI connector for source. • One female HDMI connector for local display. • Two female 3.5mm ports for connecting an IR emitter and receiver (included). <ul style="list-style-type: none"> ○ IR frequency: 20KHz to 60KHz • One female RJ45 port for sending video/audio and IR signals.
Supported resolutions	Ultra-HD 4Kx2K resolutions to 3840x2160 @60Hz and 4096x2160 @24/25Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Remote Unit	
	<ul style="list-style-type: none"> ○ • One female HDMI connector for display. • Two female 3.5mm ports for connecting an IR emitter and receiver (included). <ul style="list-style-type: none"> ○ IR frequency: 20KHz to 60KHz • One TOSLINK optical port for SPDIF digital audio. • One female RJ45 port for receiving video/audio and IR signals. • One female RJ45 port for cascading receivers. <ul style="list-style-type: none"> ○ Up to 10 receivers can be cascaded.
Supported resolutions	Ultra-HD 4Kx2K (3840x2160 @60Hz 4:4:4)
General	
HDMI Audio Formats	LPCM, DTS, Dolby
Supported Resolutions	Supports Ultra-HD 4Kx2K resolutions to 3840x2160 @60Hz and 4096x2160 @24/25Hz YUV 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 (WUXGA).
Max. Ethernet Cable Length	<p>230 feet (70 meters) over one CAT6/6A/7 cable</p> <p>2300 feet (700 meters) when cascading 10 receivers over CAT6/6a/7 cable</p> <p>Note: Widescreen resolutions (3440x1440, 2560x1600 and 2560x1440) are only supported to 98 feet (30m) over CAT6/6a/7 cable. Cascade 10 receivers to extend the widescreen resolutions to 984 feet (300m).</p>
IR Extension	bidirectional
Operating Temperature	-4 to 140°F (-20 to 60°C)
Storage Temperature	-22 to 158°F (-30 to 70°C).
Operating and storage relative humidity	0 to 90% non-condensing RH.
Power Consumption	2.05W (Local) ; 1.55W (Remote)
Power Adapter (Local and Remote)	In: 100-240, 50/60Hz Out:5V/2A
Dimensions of the local/remote unit (WxDxH)	4.06 x 4.16 x 0.79 in (103 x 106 x 20 mm)
Regulatory approvals	CE, RoHS, FCC

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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