XTENDEX® Series

ST-C64K18GB-197

HDMI 18Gbps Extender with one-way IR

Installation Manual

TRADEMARK

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CHANGES

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Note: CATx connection cable used between NTI XTENDEX Series Transmitter and Receiver or any XTENDEX Series products should not be run underground, outdoors or between buildings.

WARNING: Outdoor or underground runs of CATx cable could be dangerous and will void the warranty.

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Table of Contents

Introduction

The ST-C64K18GB-197 HDMI 18Gbps Extender can extend high definition video / audio signal and one-way IR up to 197ft / 60 meters over a single Cat6/6a/7 cable (up to 164 feet (50m) with CAT5e). It supports resolutions up to 4K2K(3840x2160)@60Hz 4:4:4, 18Gbps and HDCP 2.2. In addition, the extender is equipped with one-way IR pass-through which allows for source control and one HDMI loop output.

The XTENDEX includes two units: Transmitter unit and Receiver unit. The Transmitter unit carries an HDMI input signal to the Receiver via one cost effective Cat5e/6/6a/7 cable.   The Receiver will also sends an IR control signal from a video source remote to the Transmitter, enabling extended control of the video source.

Features

☆HDMI 2.0, HDCP 2.2 / HDCP 1.4 and DVI 1.0 compliant
☆Supports 18Gbps bandwidth
☆Supports input and output video resolution up to 4k2k@60Hz 4:4:4, extends distance up to 197ft (60 meters)
☆Supports one HDMI loop output
☆Supports one-way IR pass-through
☆Supports HDR function
☆Supports PoC (Power over Cable) function, meaning that if either the Transmitter or Receiver is powered by the 12V/1A power adapter, the other does not need a power supply.
☆Supports automatic copy EDID function
☆Compact design for easy and flexible installation.

Materials Supplied

1× HDMI 18Gbps XTENDEX Transmitter
1× HDMI 18Gbps XTENDEX Receiver
1× IR Blaster cable (1.5 meters)
1× 20~60KHz IR Receiver cable (1.5 meters)
1× 100-240VAC 50/60Hz ; 12VDC/1A Locking Power adapter
4× Mounting Ears
1× URL slip with path to this manual

Additional materials may need to be ordered, depending upon the configuration:
CAT5e/6/6A/7 unshielded twisted-pair cable(s) terminated with RJ45 connectors wired straight thru- pin 1 to pin 1, etc. (see pg. 8 for proper EIA/TIA 568 B wiring method)

Contact your nearest NTI distributor or NTI directly for all of your KVM needs at 800-RGB-TECH (800-742-8324) in US & Canada or 330-562-7070 (Worldwide) or at our website at http://www.networktechinc.com and we will be happy to be of assistance.
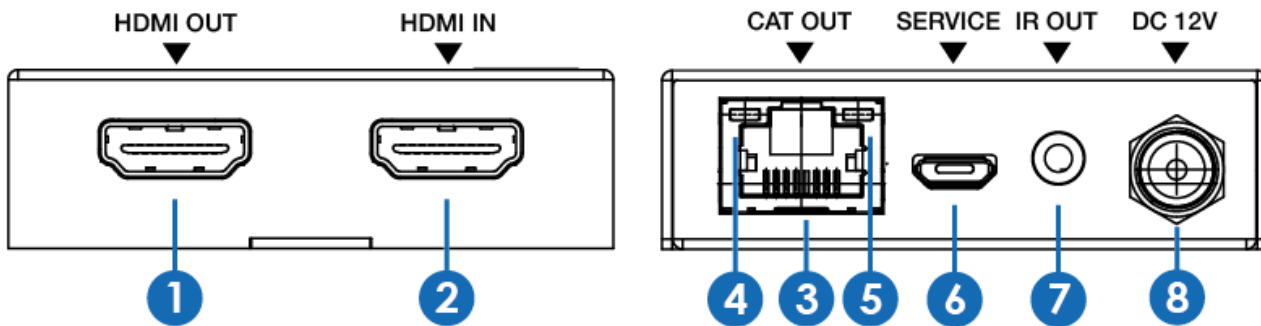
Preparation for Installation

- Locations should be chosen for the monitors, mice, and keyboards that also have space to connect the Remote and Local Units within the distance provided by the cables.   If extension cables are needed, contact NTI for the cables required.

- The CATX cables must be run to the locations where the Remote and Local Units will be connected.   Be careful to route the cables away from any sources of magnetic fields or electrical interference that might reduce the quality of the video signal (i.e. AC motors, welding equipment, etc.).

- All cables should be installed in such a way that they do not cause stress on their connections to the equipment. Extended lengths of cable hanging from a connection may interfere with the quality of that connection.   Secure cables as needed to minimize this.

- Properly shut down and disconnect the power from the CPU and monitors to be separated.   If other equipment is involved whose connections are being interrupted, be sure to refer to the instruction manuals for that equipment for proper disconnection and re-connection procedures before proceeding.

- Local and Remote Units should be grounded through either a display or source that uses a 3-prong power cord. If only one unit is grounded, shielded CAT5 cable should be used.

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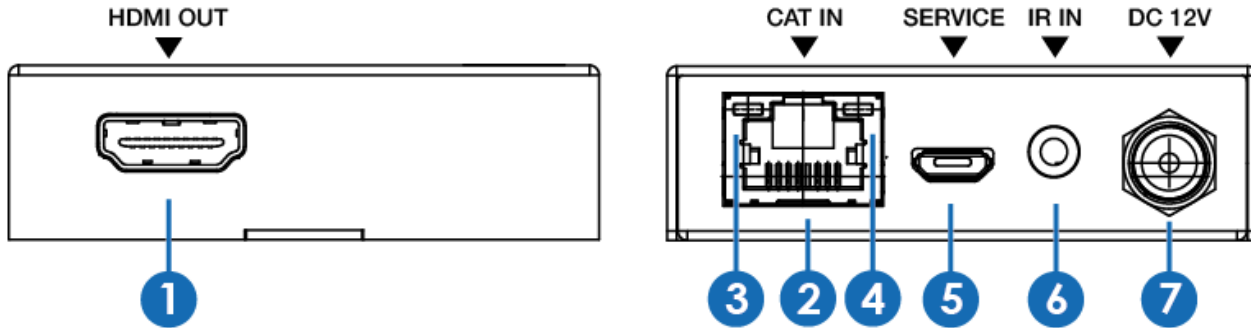
Features and Functions

Transmitter Panel

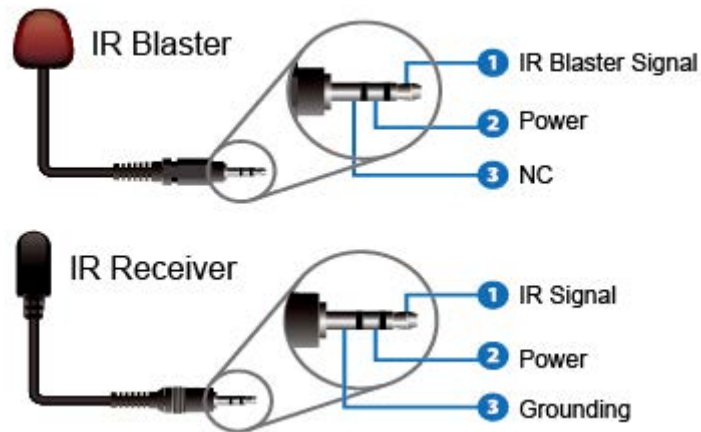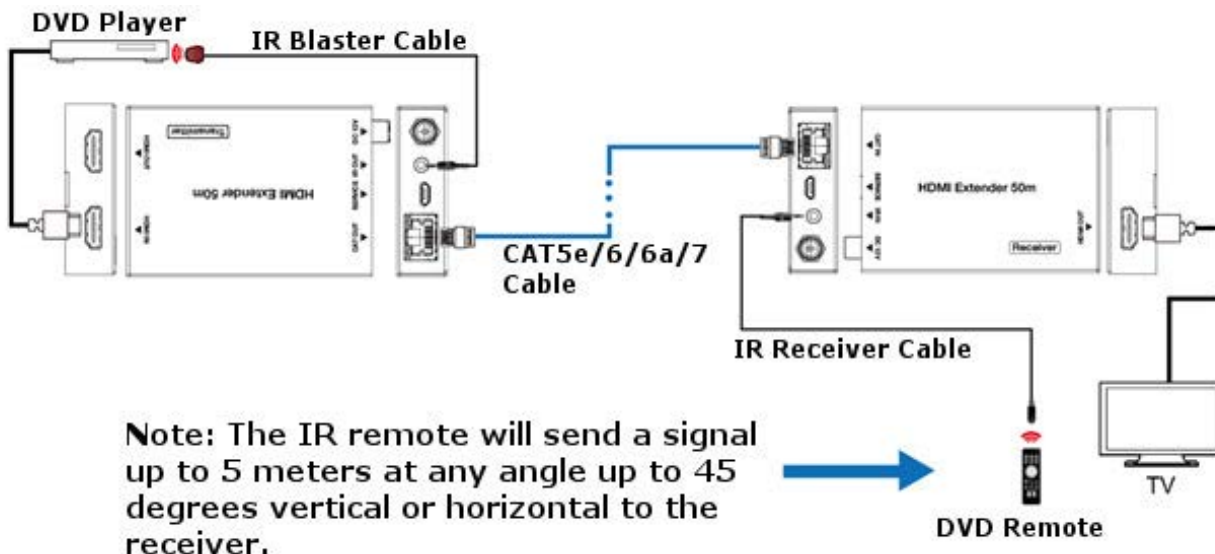| Number	Name	Function description
1	HDMI OUT	Connect to HDMI display device such as TV or Projector with an HDMI cable.
2	HDMI IN	Connect to HDMI source device such as DVD or PS4 player with an HDMI cable.
3	CAT OUT	Connect CAT6 cable between this and "CAT IN" port on the Receiver
4	Power Indicator Lamp (Green)	The lamp will illuminate when the Transmitter is powered ON.
5	Data signal Indicator Lamp (Orange)	The lamp will illuminate when the Transmitter and the Receiver have signal transmission.
6	SERVICE port	For firmware update use.
7	IR OUT	Connect wideband IR Blaster cable here. The IR signal is from the IR IN port of the Receiver.
8	DC 12V	Plug 12VDC/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The extender supports PoC function; If the power supply is used for the Transmitter, the Receiver does not require one)

Receiver Panel

Number	Name	Function description
1	HDMI OUT	Connect to HDMI display device such as TV or Projector with an HDMI cable.
2	CAT IN	Connect CAT6 cable from "CAT OUT" port on the Transmitter.
3	Power Indicator Lamp (Green)	The lamp will illuminate when the Receiver is powered ON.
4	Data signal Indicator Lamp (Orange)	The lamp will illuminate when the Transmitter and the Receiver have signal transmission.
5	SERVICE port	For firmware update use.
6	IR IN	Connect wideband IR Receiver cable here. The IR signal will be sent to the IR OUT port of the Transmitter.
7	DC 12V	Plug 12VDC/1A power supply into the unit and connect the adapter to an AC outlet. (Note: The extender supports PoC function; If the power supply is used for the Receiver, the Transmitter does not require one)

IR Pin Definition

The IR Receiver and IR Blaster cables have pinout definition as shown below:

IR RECEIVER   IR BLASTER

IR Blaster
1. IR Blaster Signal
2. Power
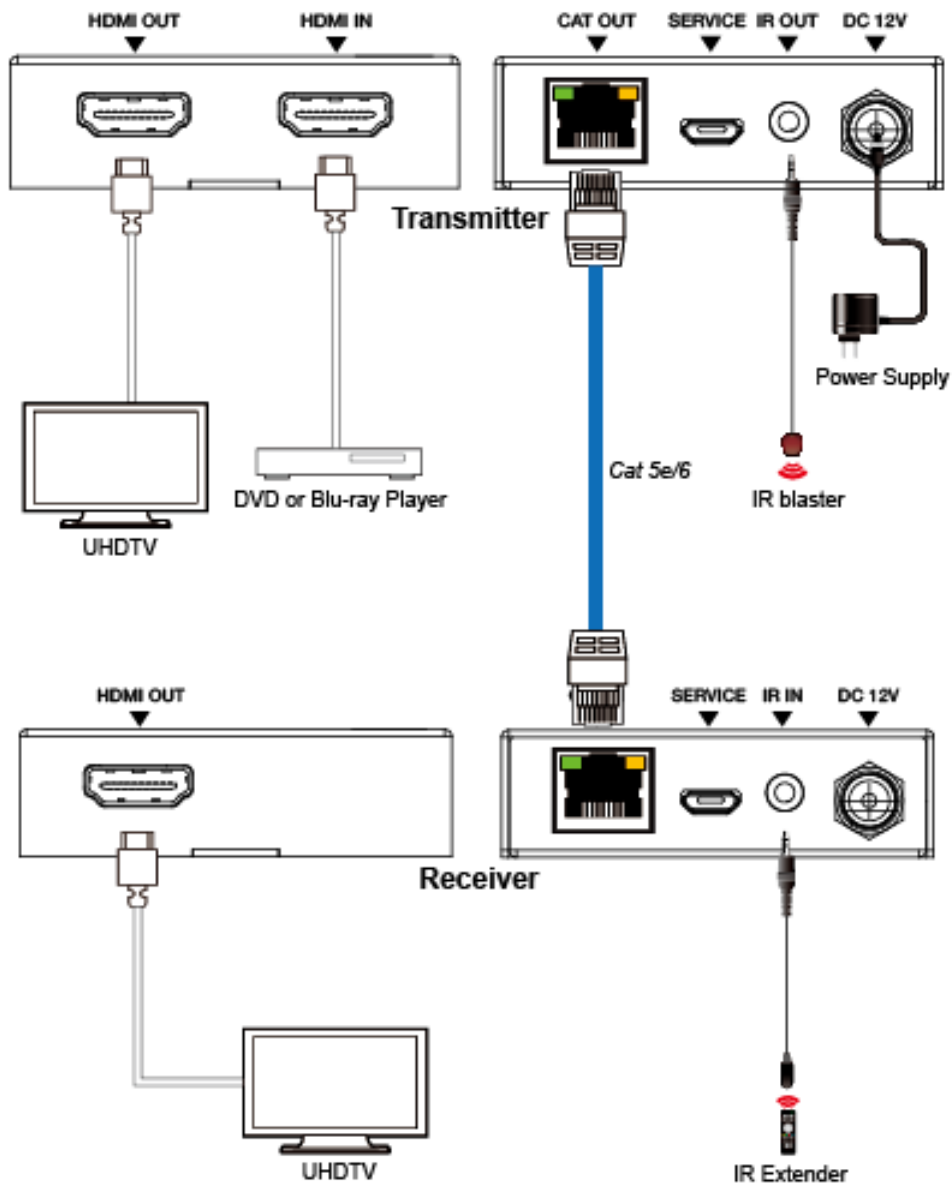3. NC

IR Receiver
1. IR Signal
2. Power
3. Grounding

The following illustrates the IR system and how the IR cables are used.

Note: The IR remote will send a signal up to 5 meters at any angle up to 45 degrees vertical or horizontal to the receiver.
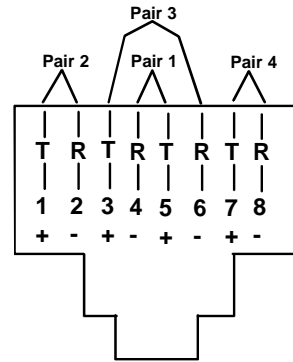
Application Example

Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2 / HDCP 1.4
Video Bandwidth	18Gbps
Video Resolution	Up to 4K60Hz 4:4:4 (3840X2160@60Hz)
Color Space	RGB / YCbCr 4:4:4, YCbCr 4:2:2/4:2:0, YUV 4:4:4
Color Depth	8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0) 8-bit (4K60Hz 4:4:4)
HDMI Audio Formats	LPCM 2.0/2.1/5.1/6.1/7.1, Dolby Digital, Dolby TrueHD, Dolby Digital Plus(DD+), DTS-ES, DTS HD Master, DTS HD-HRA, DTS-X
ESD Protection	Human body model — ±8kV (Air-gap discharge) &±4kV (Contact discharge)
Connections	
Transmitter	Inputs: 1x HDMI Type A [19-pin female] 　　　　1x SERVICE [Micro USB, Firmware Update port] Outputs: 1x HDMI Type A [19-pin female] 　　　　　1x IR OUT [3.5mm Stereo Mini-jack] 　　　　　1x CAT OUT [RJ45, 8-pin female]
Receiver	Inputs:　1x IR IN [3.5mm Stereo Mini-jack] 　　　　　1x CAT IN [RJ45, 8-pin female] 　　　　　1x SERVICE [Micro USB, Firmware Update port] Outputs: 1x HDMI Type A [19-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions　WxDxH (In.)	Transmitter / Receiver: 2.40x3.46x0.71　(61x88x18 mm)
Weight	Transmitter: 160g, Receiver: 155g
Power Supply	Input: 100-240VAC 50/60Hz Output: 12VDC/1A
Power Consumption	4.44 W
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

Resolution / Distance	4K60 (3840x2160) Feet / Meters	4K30 (3840x2160)/ 1080P - Feet / Meters
CAT5e	100ft / 30M	164ft / 50M
CAT6/6a/7	197ft / 60M	230ft / 70M
HDMI IN/OUT	See chart on next page	
The use of "Premium High Speed HDMI" cable is highly recommended.		

Interconnection Cable

The connection cable between the Transmitter and Receiver is terminated with RJ45 connectors and must be wired according to the EIA/TIA 568 B industry standard.   Wiring is as per the table and drawing below.

Pin	Wire Color	Pair	Function
1	White/Orange	2	T
2	Orange	2	R
3	White/Green	3	T
4	Blue	1	R
5	White/Blue	1	T
6	Green	3	R
7	White/Brown	4	T
8	Brown	4	R

```
                        Pair 3

           Pair 2    Pair 1       Pair 4
          | | | |  | | | |     | | | |
           T  R  T  R  T  R   T  R
          |  |  |  |  |  |   |  |
          1  2  3  4  5  6   7  8
          +  -  +  -  +  -   +  -
```

View looking into RJ45 female

NTI HDMI Cables Compatible with the Extender

Cables can be used on the Input (video source) or Output (display) unless otherwise indicated.

NTI #	Resolution supported	
	1080p@60Hz	3840x2160
HD-xx-MM (Standard) Where xx = 3,6,10,15,20,30 or 50ft	Up to 50 ft	30 ft (@30Hz) 20 ft (@60Hz)
HD-xx-MM (Active) Where xx = 75,100ft	Input Only	No
HD-ACT-50-MM	50 ft	50 ft (@30/60Hz)
HD-ACT-100-MM	100 ft	100 ft (@30Hz)
HD4K18GB-FO-100M-MM	Input Only	100 m (@30/60Hz) Input Only
DVI-HD-xM-MM Where x = 1,2,3 or 5 meters	Up to 5 meters	No

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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