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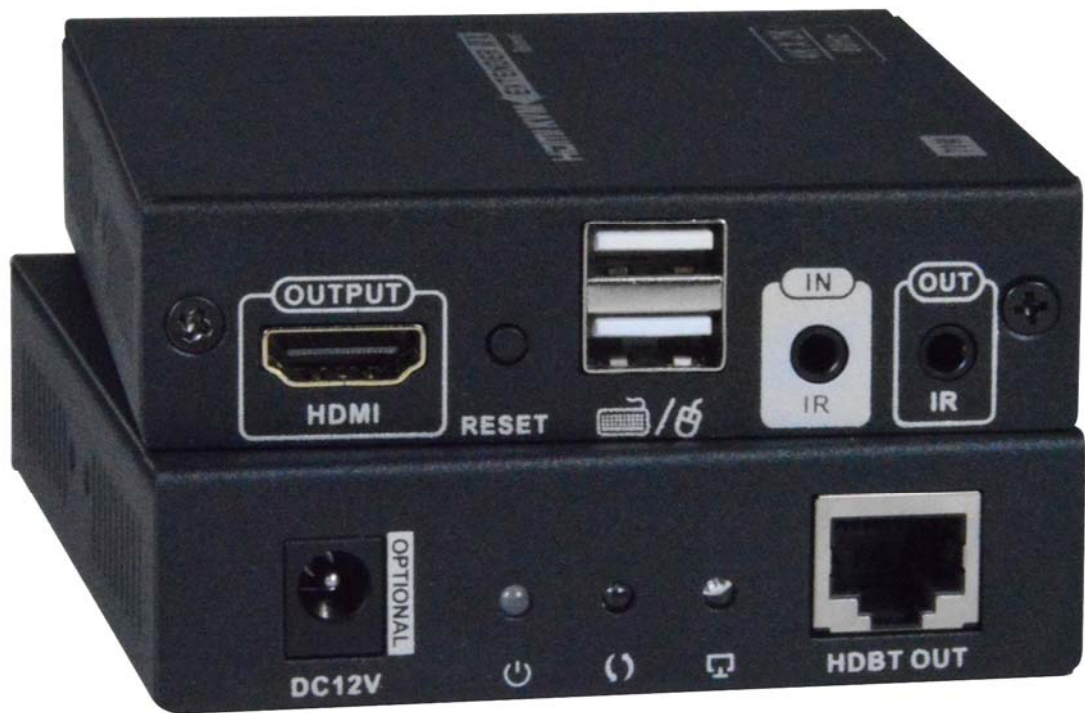
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XTENDEX® Series

ST-C6USB4K18GB-HDBT230

4K 18Gbps HDMI USB KVM Extender over HDBaseT

Installation and Operation Manual



TRADEMARK

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CHANGES

The material in this guide is for information only and is subject to change without notice. Network Technologies Inc reserves the right to make changes in the product design without reservation and without notification to its users.

Note: CATx connection cable used between NTI XTENDEX Series Local and Remote 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.

WARNING: The CATx connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products must be wired straight through (pin 1 to pin 1, pin 2 to pin 2, etc.) The use of a Crossover Cable will damage the extender and void your warranty.

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INTRODUCTION

The XTENDEX® 4K 18Gbps HDMI USB KVM Extender over HDBase-T transmits uncompressed digital Ultra-HD 4Kx2K 60Hz 4:4:4 HDMI signal, USB, and IR up to 230 feet over a single CAT6/6a/7 cable using HDBase-T technology. Each extender consists of a Local Unit (Sender) that connects to a computer, and a Remote Unit (Receiver) that connects to a keyboard, monitor and mouse.

Features

- Transmits an uncompressed high speed HDMI signal over one CAT6/6a/7 cable.
- Supports Ultra-HD 4Kx2K resolutions to 3840x2160@60Hz YUV 4:4:4, and HDTV resolutions to 1080p.
- HDMI features supported:
 - HDMI 2.0
 - 24-bit Deep Color
 - RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
 - LPCM, Dolby Digital, and DTS Digital
 - Bandwidth up to 600 MHz (18 Gbps).
 - Support for CEC (consumer electronic control) compatible devices.
 - 3D
 - High Dynamic Range
- 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.
- USB ports for keyboard and mouse.
 - Keyboard and mouse are hot-pluggable.
- Only one power supply is necessary to power both the Local and Remote units.

MATERIALS

Materials supplied with this kit:

- NTI XTENDEX Local and Remote Units
- 1 x 100-240VAC, 50 or 60Hz-12VDC/2A AC Adapter
- 2 x IR Emitter
- 2 x IR Receiver
- 1 Meter USB Type A Male to USB Type A Male cable
- URL Slip with path to this manual

Materials *Not* supplied but **REQUIRED**:

- CAT6/6a solid/stranded UTP; CAT7 solid/stranded STP (**referred to as "CATx" throughout this manual**) twisted-pair cables terminated with RJ45 connectors wired straight thru- pin 1 to pin 1, etc. (see page 7 for proper EIA/TIA 568 B wiring method). **CAT5/5e cable is NOT recommended for use with this product.**

WARNING: The CATx connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products must be wired straight through (pin 1 to pin 1, pin 2 to pin 2, etc.) The use of a CROSSOVER CABLE will damage the extender and void your warranty.

Use NTI HDMI Cables for Input and Output cables

Available Cables	Supported Resolution	
	1080p@60Hz	3840x2160
HD-xx-MM Where x=3,6,10,15,20, 30 and 50 ft	Yes	Max. 10 ft (@ 30/60Hz)
HD-ACT-xx-MM Where xx= 20,25,30,40,50 and 60 ft	Yes	Yes (@ 60Hz)
HD-ACT-xx-MM Where xx= 75 and 100 ft	Yes	Yes (@ 30Hz)
DVI-HD-xM-MM Where x= 1,2,3 and 5 meters	Yes	No

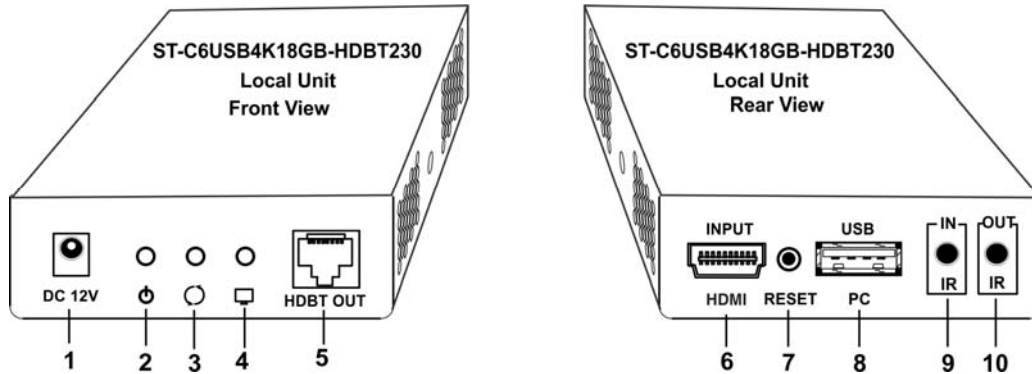
Cables can be purchased from Network Technologies Inc by calling **(800) 742-8324** (800-RGB-TECH) in the US and Canada or **(330) 562-7070** (worldwide).

PREPARATION FOR INSTALLATION

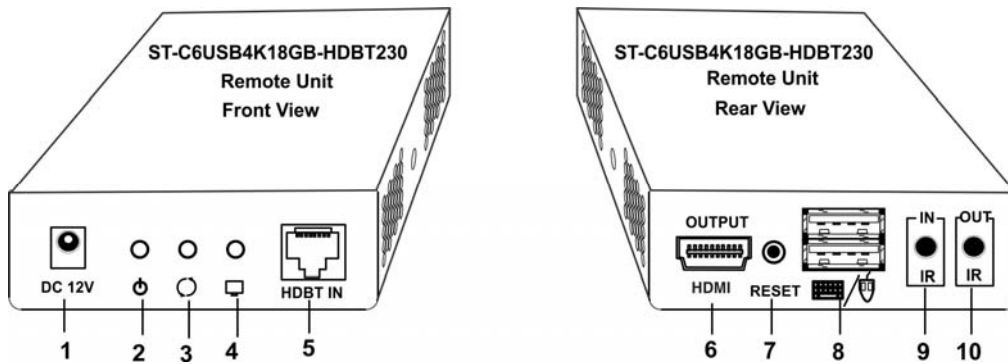
- Locations should be chosen for the monitor and video source that also have space to connect the Remote Unit and Local Unit units within the distance provided by the CATx cables.
- All cables should be installed in such a way that they do not cause stress on their connections to the equipment. Extended 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 video source and monitor 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.

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FEATURES AND FUNCTIONS



No.	Label	Description
1	DC 12V	For optional connection of power supply
2	Power	Illuminates when the Local Unit is powered ON
3	Arrow	Illuminates when there is data transmission from the Receiver; Flashes when there is no communication
4	Display	Flashes when the display device connected to the Remote Unit is communicating
5	HDBT OUT	For connection of a CATx cable to the Remote Unit
6	HDMI INPUT	For connection of a video cable from the video source
7	RESET	Press this button to reboot the Local Unit
8	USB PC	For connection of a USB cable from a PC
9	IR IN	For connection of an IR Receiver
10	IR OUT	For connection of an IR Emitter

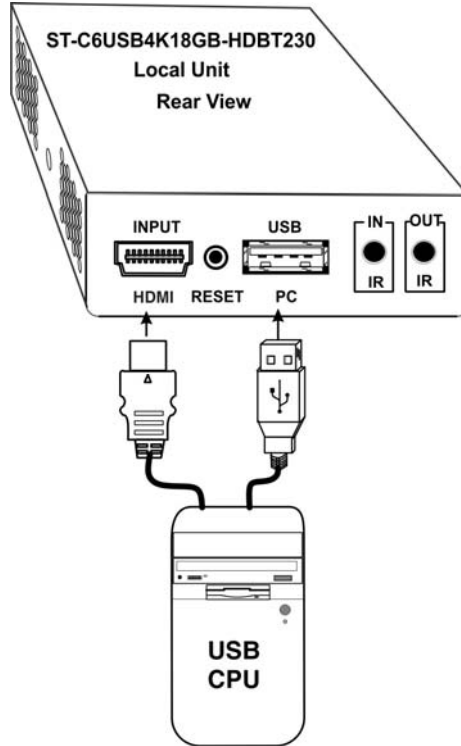


No.	Label	Description
1	DC 12V	For connection of power supply
2	Power	Illuminates when the Remote Unit is powered ON
3	Arrow	Illuminates when there is data transmission from the Local Unit; Flashes when there is no communication
4	Display	Flashes when the display device connected to the Remote Unit is communicating
5	HDBT OUT	For connection of a CATx cable to the Local Unit
6	HDMI INPUT	For connection of a video cable from the display
7	RESET	Press this button to reboot the Remote Unit
8	USB PC	For connection of a USB cable from a keyboard/mouse
9	IR IN	For connection of an IR Receiver
10	IR OUT	For connection of an IR Emitter

INSTALLATION

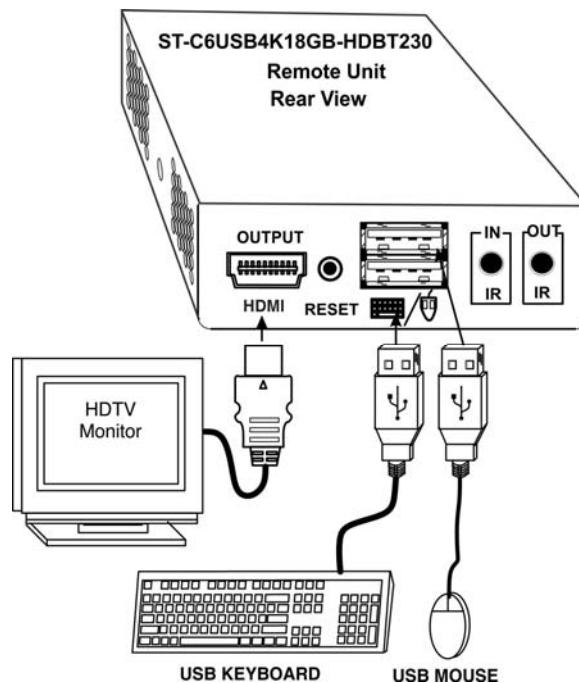
Note: The video source and display device can be powered-ON at any point during this installation.

1. Connect a video source to the HDMI port on the Local Unit using one of the cables recommended in the chart on page 1. If a PC is being extended, also connect a USB cable between the PC and the Local Unit.

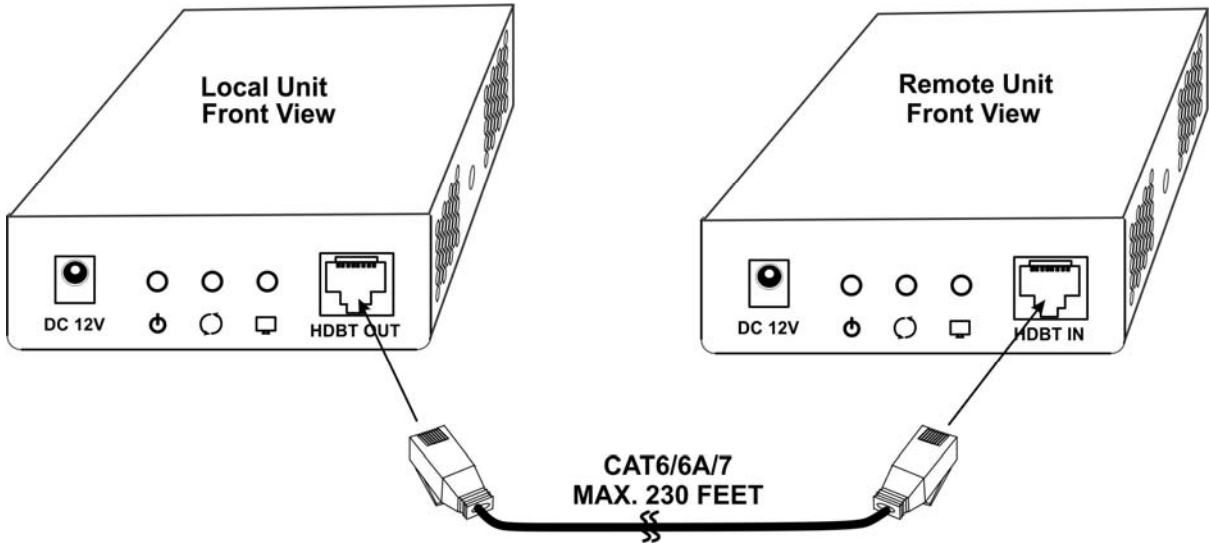


2. Connect a display to the HDMI port on the Remote Unit using one of the cables recommended in the chart on page 1. If applicable, connect a keyboard or mouse to the USB ports.

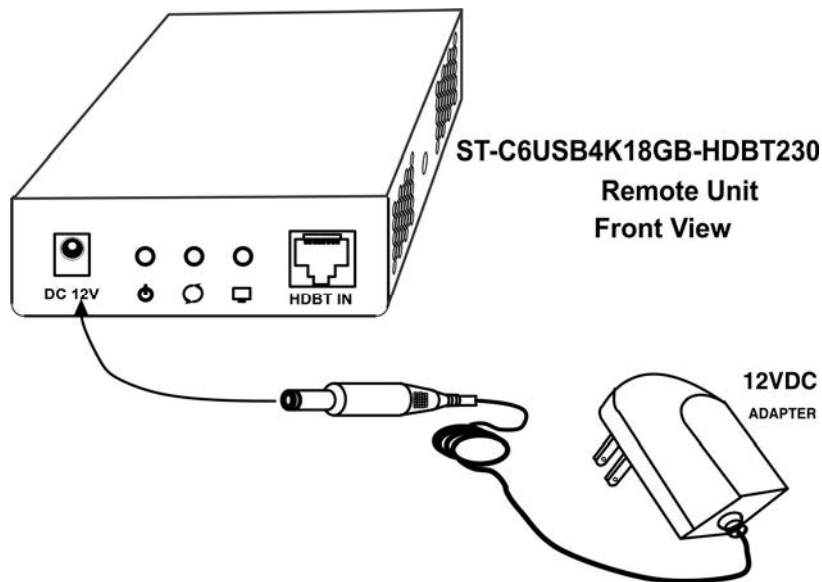
Note: If the video source is DVI, then the display must also be a DVI-compatible model.



3. Connect a CAT6/6a/7 cable (up to 230 feet in length) between the "HDBT In" port on the Remote Unit and the "HDBT Out" port on the Local Unit.



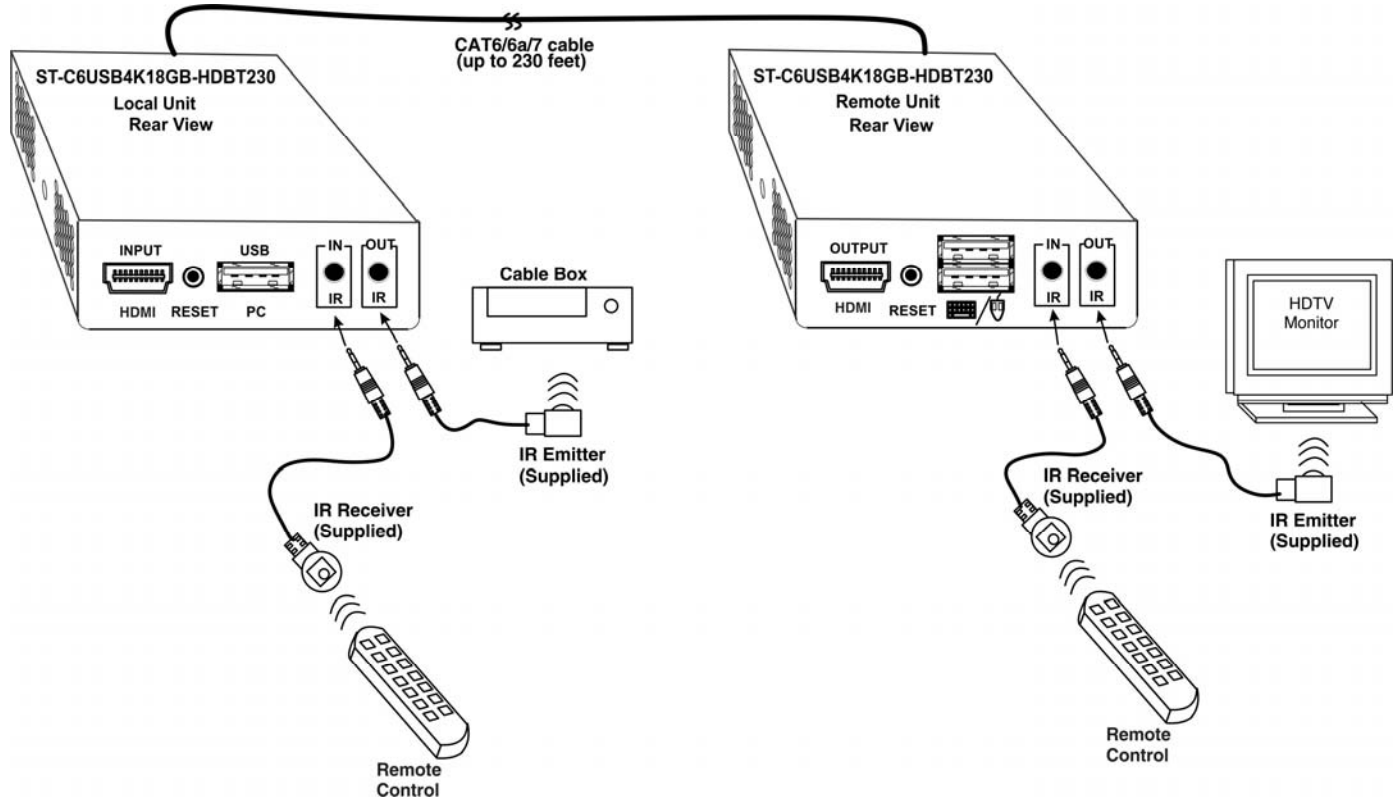
4. Connect AC Adapter to the "DC 12V" port on the Remote Unit. With the CATx cable connected, the Local Unit will also be powered.



IR Connection

The ST-C6USB4K18GB-HDBT230 supports Bi-directional IR pass back. A user can control devices at each end of the installation. With an IR Emitter and IR Receiver connected at each end, a user can control a TV connected at the Remote Unit and the DVD player connected to the Local Unit.

Place the IR Emitter close to the device it controls to best transmit the IR signal coming from the remote control. The remote control at the Local Unit will control the display device on the Remote Unit, and the remote control at the Remote Unit will control the video source at the Local Unit.



TROUBLESHOOTING

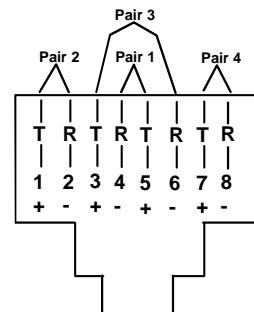
Problem	Solution
No Output on Display	<ul style="list-style-type: none"> Check power supply connection Make sure all cables are securely connected and fully inserted Make sure the correct input port on the display has been selected Make sure the correct video format is selected on the video source
Data transmission indicator is flashing but no output	<ul style="list-style-type: none"> Make sure the correct input port on the display has been selected
Connection indicator remains OFF	<ul style="list-style-type: none"> Verify that the video source has a signal and is properly connected to the Local Unit Verify that the display device is well connected to the Remote Unit and that the correct input port is selected
Output image is noisy (snow)	<ul style="list-style-type: none"> Change the HDMI cable between the Local Unit and video source. Always use a short cable when testing and for best results use a cable from the chart on page 1.

INTERCONNECTION CABLE WIRING METHOD

The CATx connection cables (CAT6/6a/7 only) between the Local Unit and Remote Unit are terminated with RJ45 connectors and must be wired according to the EIA/TIA 568 B industry standard. Wiring is per the table and drawing below.

Note: *CAT5/5e cable is not recommended for use with this product.*

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



WARNING: *The CATx connection cable used between the NTI XTENDEX Series Local Unit and Remote Unit or any XTENDEX Series products must be wired straight through (pin 1 to pin 1, pin 2 to pin 2, etc.) The use of a CROSSOVER CABLE will damage the extender and void your warranty.*

TECHNICAL SPECIFICATIONS

Items	Specifications
Local Unit	
Compatibility	USB Computer or HDTV Video Source with HDMI output
Platforms supported	Multiplatform support: Windows 2000/XP/Vista/7/8/10, Windows Server 2000/2003/2008/2012/2016, Solaris, Linux, FreeBSD, and MAC OS 9/10.
Local Unit Connections	1- HDMI Female, 1-USB Type A Female, 2-3.5mm Jacks, 1-RJ45 Female
Remote Unit	
Resolutions Supported	Ultra-HD 4Kx2K 60Hz 4:4:4 resolutions (3840x2160@30/50/60Hz); HDTV resolutions to 1080p
Max. Data Rate	18Gbps
HDCP Supported	HDCP 2.2
Remote Unit Connections	1- HDMI Female, 1-USB Type A Female, 2-3.5mm Jacks, 1-RJ45 Female
General	
Maximum Transmission Distance	230 ft (70 meters) over CAT6/6a/7 cable
Power Supply	100-240VAC 5/60Hz; 12VDC2A AC Adapter for Remote Unit, Local Unit power by CAT cable connected to Remote Unit
Operating Temperature	32 to 131 °F (0 to 55°C)
Operating Humidity	0 to 90% RH (no condensation)
Dimensions (WxDxH)	3.43x4.31x0.92 in (87x109.5x23.4 mm)
HDMI Signal	Supports HDMI2.0 and HDCP2.2
Approvals	CE, FCC, RoHS

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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