



**NETWORK  
TECHNOLOGIES  
INCORPORATED**

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## **XTENDEX® Series**

# **ST-C6DP4K-131**

**4K 9Gbps DisplayPort HDBase-T Extender  
via One CAT6a/7**

**Installation and Operation Manual**

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**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 DisplayPort HDBase-T Extender transmits uncompressed digital Ultra-HD 4Kx2K 30Hz 4:4:4 DisplayPort video and audio signals up to 131 feet over a single CAT6a/7 solid cable using HDBase-T technology. Each video extender consists of a local unit that connects to a DisplayPort source and a remote unit that connects to a DisplayPort display.

### Features

- Transmits an uncompressed DisplayPort signal over a single CATx cable.
- Supports Ultra-HD 4Kx2K resolutions to 3840x2160 and 4096x2160 @30Hz 4:4:4, and HDTV resolutions to 1080p @60Hz.
  - Refer to the resolution chart in the specifications section for resolutions using different CATx cable types and lengths.
- Compliant with DisplayPort v1.2a specifications.
- Video bandwidth up to 9Gbps.
- HDCP compliant.
- Integrated mounting brackets for easy surface/wall mounting.

## MATERIALS

### Materials supplied with this kit:

- NTI XTENDEX Local and Remote Units
- 2 x 100-240VAC, 50 or 60Hz-5VDC/2A AC Adapter
- Mounting Screws
- URL Slip with path to this manual

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

- CAT5e/6/6a 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).

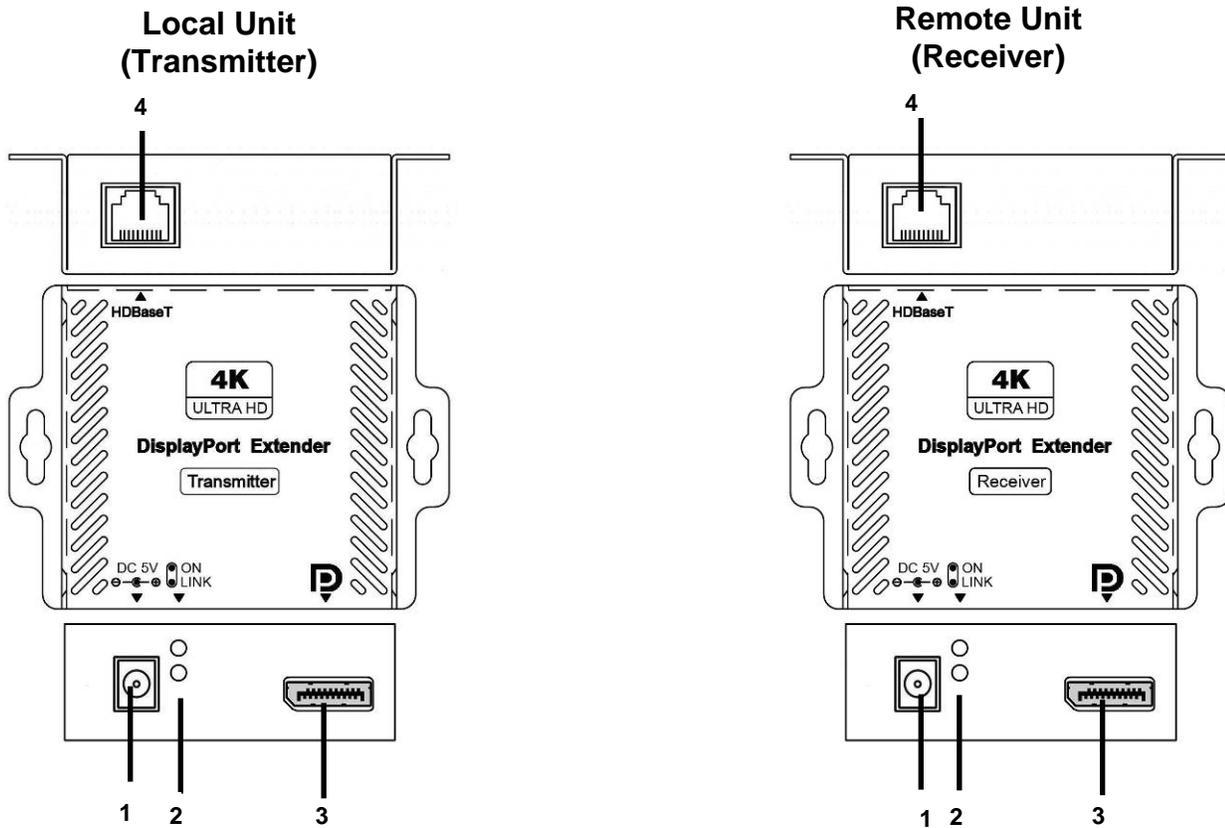
***WARNING: The CATx connection cable used between NTI XTENDEX Series Local and Remote or any XTENDEX Series products must be wired straight through (pin 1 to pin 1, pin 2 to pin 2, etc.) The use of a CROSSOVER CABLE will damage the extender and void your warranty.***

## 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 5V	For connection of power supply
2	On/Link	LEDs illuminate when the powered ON ("ON") and when connection between Local and Remote have been established ("Link")
3	DP (Symbol)	For connection of DisplayPort Cable to a monitor
4	HDBaseT	For connection of a CATx cable between Local and Remote Units

**LED Indication :**

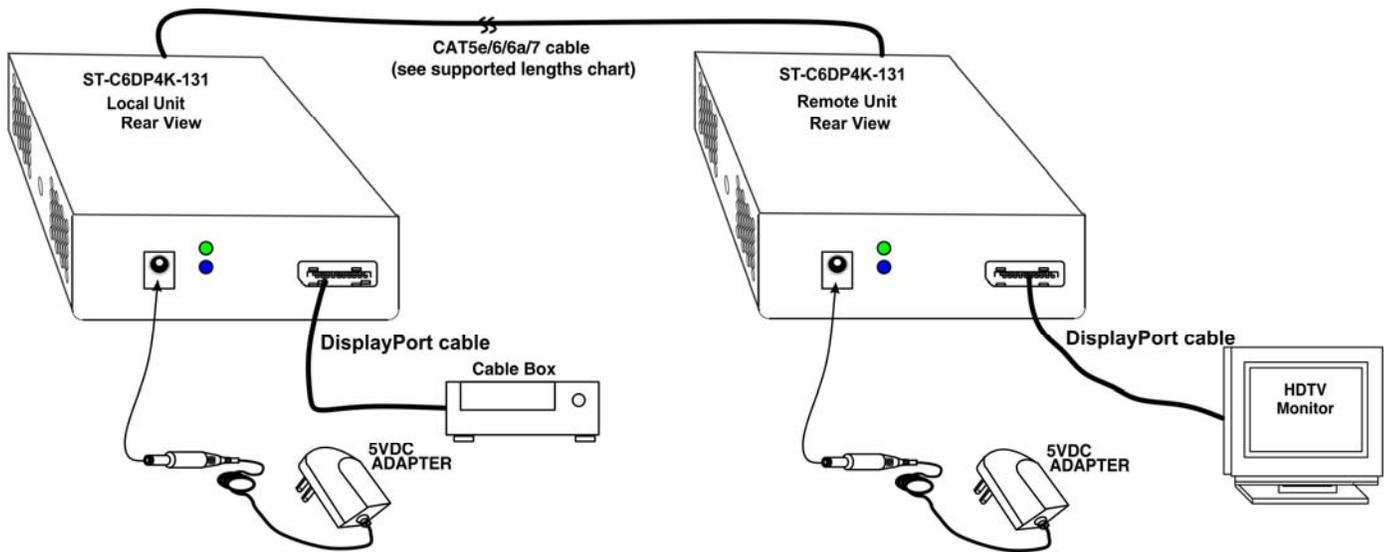
Color	Label	Indication (Same for Local and Remote Unit)
GREEN	ON	On Solid : Power is ON
BLUE	LINK	ON Solid : LINK is Normal, Flashing : Low Power Mode Low Power Mode= either there is no video source (Local Unit) or there is no display connected to the Remote Unit

**Note:** There is a DIP switch on the underside of the Local and Remote Units. This is for future use and as of this publication serves no purpose.

## 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 female DisplayPort connector on the Local Unit using one of the cables recommended in the chart on page 2.
2. Connect a display to the female DisplayPort connector on the Remote Unit using one of the cables recommended in the chart on page 2.
3. Connect a CAT5e/6/6a/7 cable (up to 230 feet in length) between the "HDBaseT" ports on the Local and Remote Units.
4. Connect AC Adapters to the "DC 5V" ports on the Local and Remote Units.



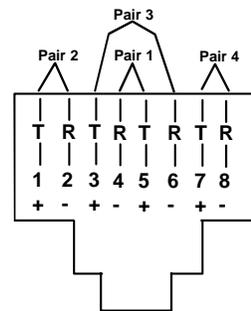
## TROUBLESHOOTING

Problem	Solution
No Output on Display	<ul style="list-style-type: none"> <li>Check power supply connection</li> <li>Make sure all cables are securely connected and fully inserted</li> <li>Make sure the correct input port on the display has been selected</li> <li>Make sure the correct video format is selected on the video source</li> </ul>
LINK indicator is flashing on the Local and Remote Unit	<ul style="list-style-type: none"> <li>Make sure the correct input port on the display has been selected</li> <li>Make sure all cables are securely connected and fully inserted</li> <li>Make sure the correct video format is selected on the video source</li> </ul>
Output image is noisy (snow)	<ul style="list-style-type: none"> <li>Change the DisplayPort 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 2.</li> </ul>

## INTERCONNECTION CABLE WIRING METHOD

The CATx connection cables 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.

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**

Item	Local Unit	Remote Unit
<b>DP Video Support</b>	Up to 4096x2160@30Hz, YCbCr 4:4:4, 8-bit	
<b>DP Audio Support</b>	Embedded Digital Audio	
<b>Input / Output Interface</b>	DisplayPort x 1	DisplayPort x 1
<b>RJ45 Connector</b>	RJ45 x 1	RJ45 x 1
<b>Power Supply</b>	100-240VAC 5/60Hz; 5VDC 2A	100-240VAC 5/60Hz; 5VDC 2A
<b>Power Consumption</b>	Max 5W, Low Power 1.32W	Max 8W, Low Power 1.62W
<b>Environmental</b>	Operation: 14 to 113°F (-10 to 45°C), Storage: -22 to 158°F (-30 to 70°C), Humidity: up to 95%	
<b>Dimensions (WxDxH)</b>	92.00 x 69.00 x 25.00 mm 3.62 x 2.72 x 0.98 in	92.00 x 69.00 x 25.00 mm 3.62 x 2.72 x 0.98 in
<b>Weight</b>	160 (g)	180 (g)

**Supported Cable Lengths:**

**CATx Cables:**

Cable Type	Range	Supported Video
CAT5e / CAT6	115 ft (35m)	3840x2160 and 4096x2160@30Hz, 4:4:4, 8 bit 1080p 60Hz 12 bit
	197 ft (60 m)	1080p 60Hz 16 bit
CAT6a / CAT7	131 ft (40 m)	3840x2160 and 4096x2160@30Hz, 4:4:4, 8 bit 1080p 60Hz 12 bit
	230 ft (70 m)	1080p 60Hz 16 bit

**NTI DisplayPort Cables for Input and Output cables**

Available Cables	Supported Resolution	
	1920x1080p@60Hz	4096x2160@30Hz
DP-xx-MM Where xx= 3,6,10 or 15 feet	Up to 15 ft	Up to 15 ft
DP4K21GB-FO-xxM-MM Where xx= 10,15,20,25,30,50,70 or 100 meters	Up to 100 meters	Up to 100 meters

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).

## 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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