XTENDEX® Series

USB-C5-200
200 Foot USB Extender
Installation and Operation Manual

Front and Rear View of USB-C5-200 Remote Unit

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: CAT5e/6/7 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.

GROUNDING

This product is equipped with grounding hardware to prevent interference from sources of electrical noise that could interfere with the normal operation of the XTENDEX or damage it. **Use either the crimp-on lug or solder terminal** to secure a properly grounded wire to the XTENDEX.
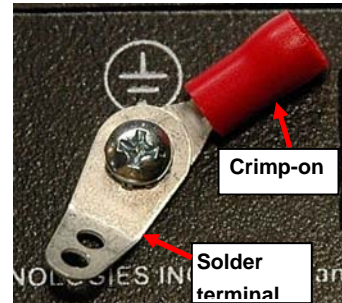

Crimp-on

Solder terminal

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INTRODUCTION

The USB Extender extends four USB devices up to 200 feet. Each USB extender consists of a local unit that connects to a computer and a remote unit that connects to four USB devices.

- Supports fully transparent USB connections – able to support all common hardware platforms including PC, SUN and MAC and their associated peripherals.

- Extend devices such as keyboards, mice, printers, game controllers, USB flash drives, touch screen monitors, whiteboards, etc.

- Compliant with USB 1.1 specifications.

- Supports low speed and full speed USB devices

- Supports Plug-n-Play specification

MATERIALS
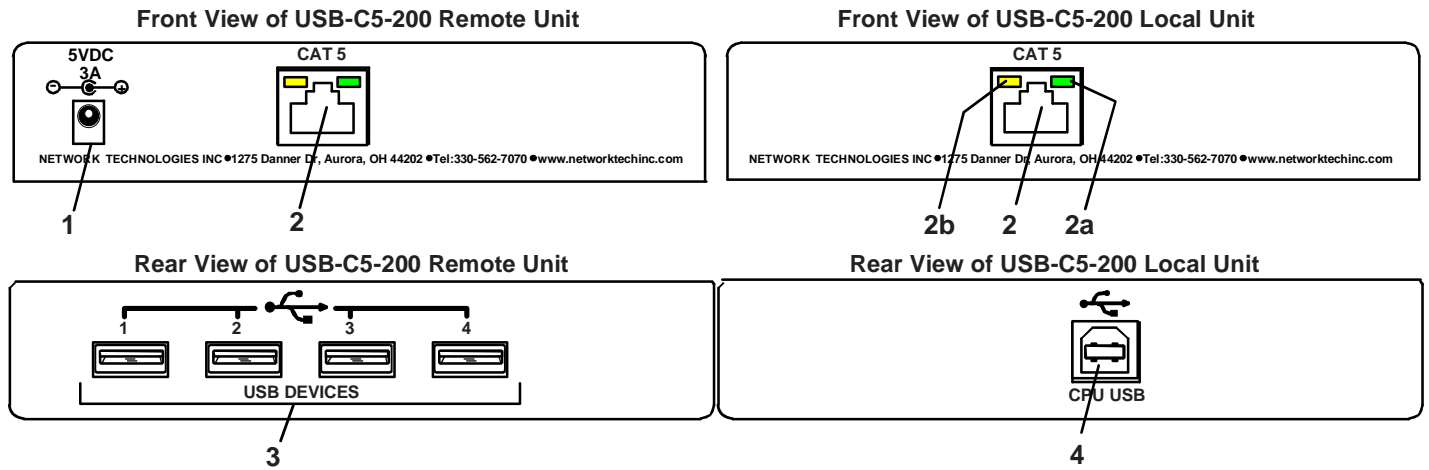
Materials Included with this kit:

- ✓ NTI XTENDEX Local and Remote Unit
- ✓ 1-100VAC to 240VAC at 50 or 60Hz-5VDC/3.0A AC Adapter
- ✓ 1-USB2-AB-1M-5T USB Type A Male-to-USB Type B Male 1 meter cable
- ✓ Mounting bracket kit (2-MP4869 Universal Extender Brackets, 4- #4-40x3/16" Mach. Screws)
- ✓ 2- 3/16" x 1" Wall Anchors and #6x3/4" Phillips Screws
- ✓ CD with this manual

Materials *Not* supplied but *REQUIRED:*

➢ CAT5e Solid/Stranded UTP/STP; CAT6 Solid or Stranded UTP/STP ; CAT6a Solid UTP; CAT7 Solid STP cable(s) terminated with RJ45 connectors wired straight thru- pin 1 to pin 1, etc. (see page 6 for proper EIA/TIA 568 B wiring method)

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).*

FEATURES AND FUNCTIONS

Front View of USB-C5-200 Remote Unit

Front View of USB-C5-200 Local Unit

5VDC
3A

CAT 5

NETWORK TECHNOLOGIES INC ●1275 Danner Dr, Aurora, OH 44202 ●Tel:330-562-7070 ●www.networktechinc.com

CAT 5

NETWORK TECHNOLOGIES INC ●1275 Danner Dr, Aurora, OH 44202 ●Tel:330-562-7070 ●www.networktechinc.com

1   2   2b   2   2a

Rear View of USB-C5-200 Remote Unit

Rear View of USB-C5-200 Local Unit

1   2   3   4

USB DEVICES

CPU USB

3   4

1. **5VDC- 3.0A**- connection jack for the AC adapter

2. **CAT 5**- RJ45 females- for connecting the CAT 5 cables

   2a. Green LED- power indicator- illuminates when power has been supplied to the unit

   2b. Yellow LED-traffic indicator- blinks when there is communication between the local and remote units

3. **USB**- Type A connectors- for connecting extended USB devices

4. **CPU USB**-Type B connector- for connecting to a USB connector on the CPU for USB device support

PREPARATION FOR INSTALLATION

- Locations should be chosen for the mice, keyboards, and any other devices where there is also 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 cable must be run to the locations where the Remote and Local Units will be connected. Be careful to route the cable away from any sources of magnetic fields or electrical interference that might reduce the quality of the extended signals (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 devices 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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MOUNTING BRACKETS

Your XTENDEX has been supplied with mounting brackets and hardware for easy installation should you decide to mount the XTENDEX to any surface. Assemble the bracket(s) to the Local Unit and/or Remote Unit according to the images below as desired.

XTENDEX Mounting Bracket Installation

Sideview

Front →

Mounting holes

MP4559 Universal Mounting Bracket

Install #4-40x3/16" screws (supplied)
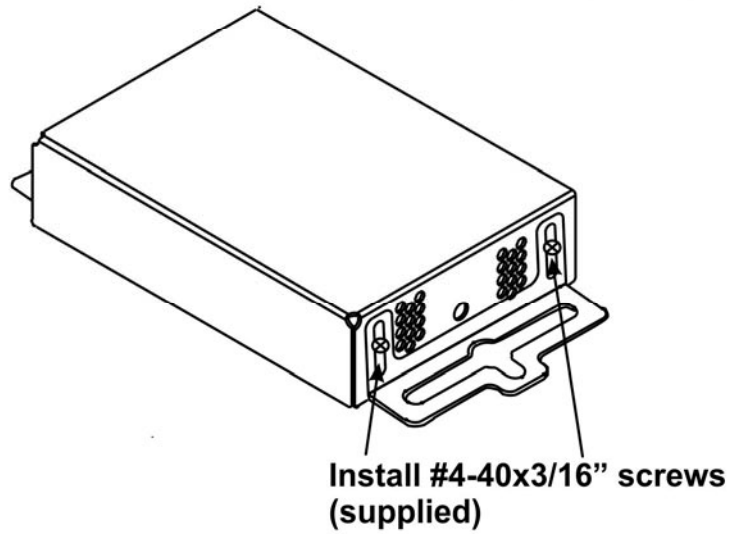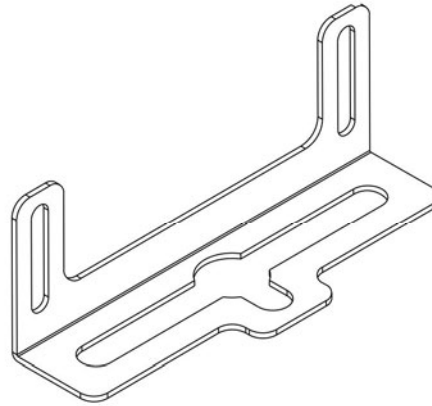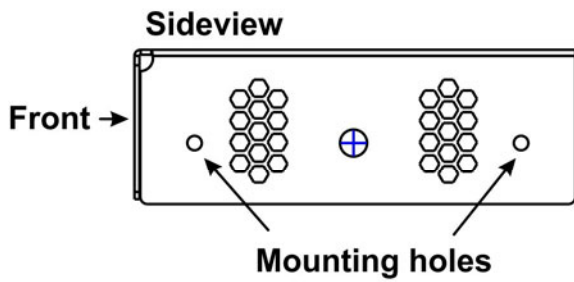
INSTALLATION

Installing The Local Unit

1. Connect the USB2-AB-1M-5T USB cable from the Local Unit to the back of the CPU. (See Figure 1.)

   a) Connect the USB Type A male cable end to a USB Type A female connector on the CPU.

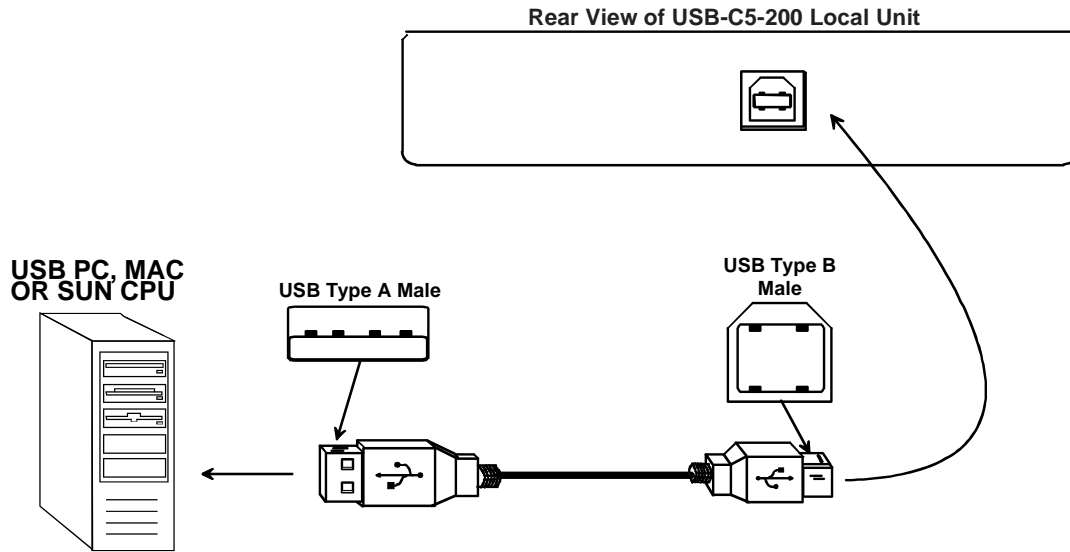   b) Connect the USB Type B male cable end to the USB Type B female connector on the Local Unit.

Rear View of USB-C5-200 Local Unit

USB PC, MAC OR SUN CPU

USB Type A Male

USB Type B Male

Figure 1- Connect device cable to the Local Unit

Installing the Remote Unit

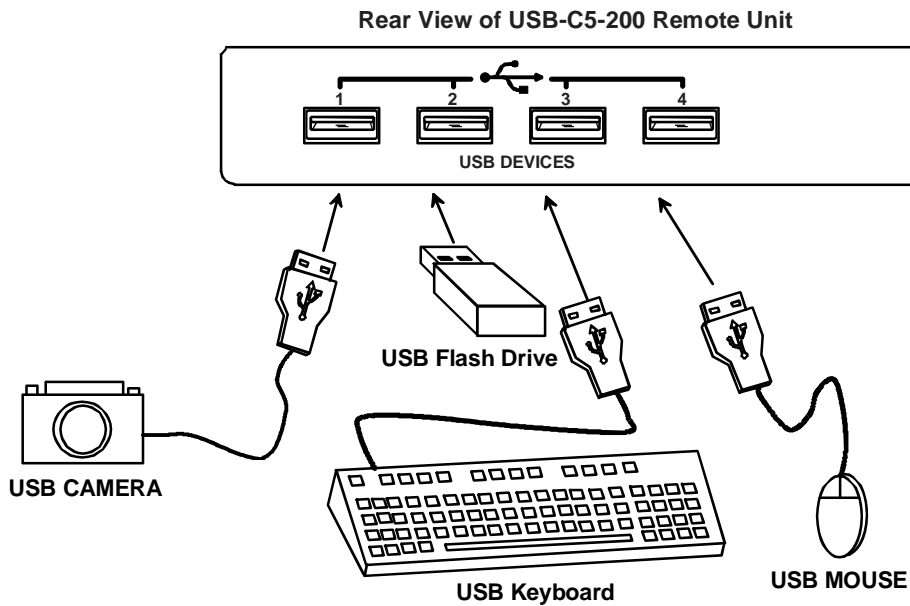Connect cables from the Remote Unit to the extended devices as shown below.

Rear View of USB-C5-200 Remote Unit

USB DEVICES

USB Flash Drive

USB CAMERA

USB Keyboard

USB MOUSE

Figure 2- Connect extended devices to the Remote Unit

Connect The CATx Cable

Connect the CATx cable between the "Cat 5" port on the Local and Remote Units. (See Figure 3.) When properly inserted the cable end should snap into place.
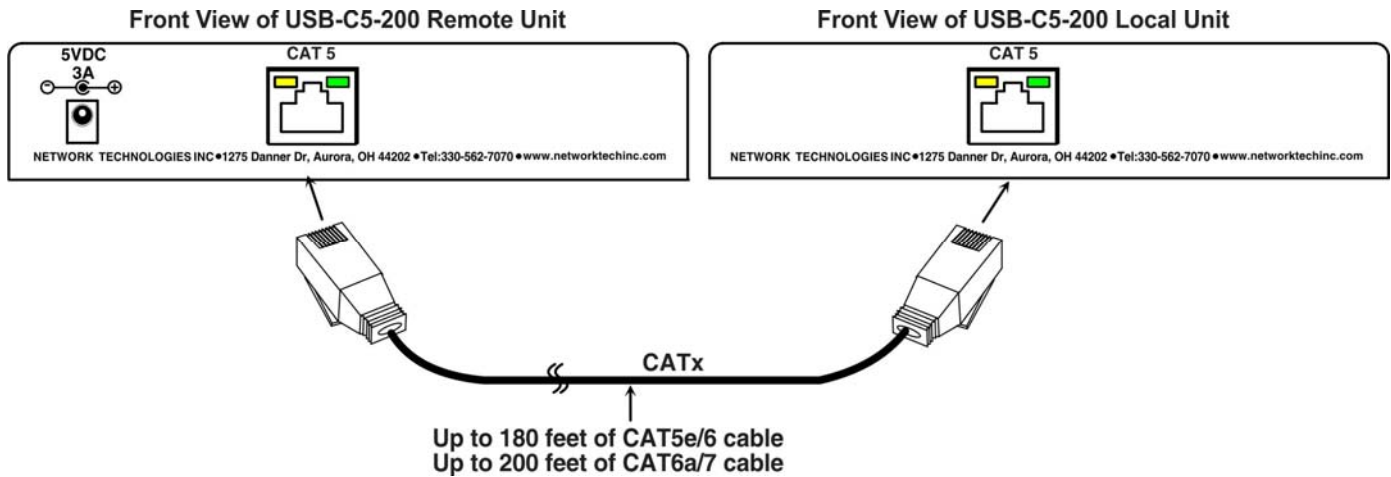

Figure 3- Connect CATx cable

⚠ *WARNING: Never connect the XTENDEX to an Ethernet card, Ethernet router, hub or switch or other Ethernet RJ45 connector of an Ethernet device.   Damage to devices connected to the Ethernet may result.*

Plug-in and Boot Up

1. Connect the AC adapter power connector to the 5VDC port on the Remote Unit. (The Local Unit is powered by the CPU.) Plug the AC adapter into a power outlet.   The green LED on the RJ45 connector of the Remote Unit should illuminate, indicating that a proper power connection has been made to it.   (See Figure 4.)
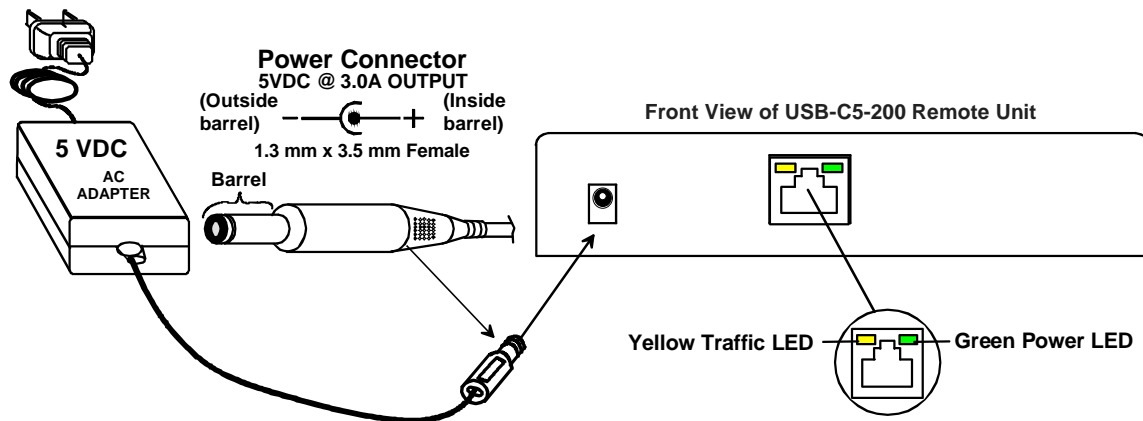

Figure 4- Connect the AC adapter

2. Turn ON the CPU.   The green LED on the RJ45 connector of the Local Unit should illuminate. The CPU and remote devices should each react as if they were directly connected to each other.

Note: The yellow LED on RJ45 connector will blink anytime data traffic is passing between the Local and Remote Units, indicating proper CATx cable connection and communication. (See Figure 4)

INTERCONNECTION CABLE WIRING METHOD

The connection cable between the remote and local is 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
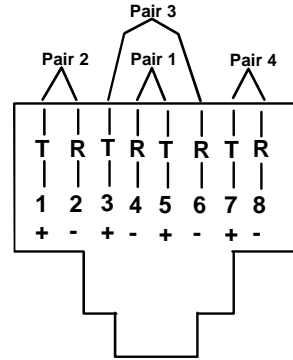
Figure 5- View looking into RJ45 female

TECHNICAL SPECIFICATIONS

USB to host CPU	USB Type B female
USB to device	USB Type A female
USB output power	5V, 1.4A for 4 ports (<500mA per port)
Interconnect Cable	CAT5e Solid/Stranded UTP/STP; CAT6 Solid or Stranded UTP/STP ; CAT6a Solid UTP; CAT7 Solid STP EIA/TIA 568 B wiring
Remote Unit Power	100V to 240V at 50 or 60Hz-5VDC/3.0A via AC adapter
Local Unit Power	Powered by CPU
Operating temperature	32°F to 122°F (0°C to 50°C)
Storage temperature	-20°F to 140°F (-30°C to 60°C)
Operating and Storage Relative Humidity	0 to 90% non-condensing RH
Size (In.) WxDxH	5.1x3.1x1.2
Regulatory Approvals	RoHS, CE

Distances for CAT5e, CAT6(a) and CAT7 Cables

Cable	USB Device Type	Distance (ft)
CAT5e Solid or Stranded, UTP or STP	USB 1.1/1.0	180
	USB 2.0	150
CAT6 Solid or Stranded, UTP or STP	USB 1.1/1.0	180
	USB 2.0	150
CAT6a Solid UTP	USB 1.1/1.0	200
	USB 2.0	180
CAT7 Solid SSTP	USB 1.1/1.0	200
	USB 2.0	180

TROUBLESHOOTING

Each and every piece of every product produced by Network Technologies Inc is 100% tested to exacting specifications.   We make every effort to insure trouble-free installation and operation of our products. If problems are experienced while installing this product, please look over the troubleshooting chart below to see if perhaps we can answer any questions that arise.   If the answer is not found in the chart, a solution may be found in the knowledgebase on our website at **http://information.networktechinc.com/jive/kbindex.jspa** or please call us directly at (**800) 742-8324 (800-RGB-TECH)** or **(330) 562-7070** and we will be happy to assist in any way we can.

Problem	Cause	Solution
Remote or Local Unit green power LED does not illuminate	• Power supply is not connected or plugged-in (Remote Unit). • CPU is not powered ON (Local Unit)	• Make sure outlet is live and AC adapter is plugged-in. • Make sure USB cable is fully inserted on both ends. • Make sure 5VDC jack is fully connected
CPU doesn't detect the keyboard and the mouse	• Keyboard cable or mouse cable are loose • CATx cable is too long	• Check cable connections • CATx cable can be no more than 200 feet in length

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 **1-800-742-8324** (1-800-RGB-TECH) or **1-330-562-7070** 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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