

**USB2004EXT**  
**USB2004EXTGB**  
**Instruction Manual**

# USB Extender

**4-Port USB 2.0 Extender over  
Cat5 or Cat6**

**StarTech.com**   
*Making hard-to-find easy!®*

## **FCC Compliance Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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# Introduction

The StarTech.com USB 2.0 extender over Cat5 or Cat6 offers a simple USB extension, allowing you to place four USB 2.0 devices up to 100m/330ft away from the computer, which is more than 20 times longer than the normal USB cable length restrictions. The USB extender is comprised of both the Local and Remote units, which can be connected together using standard UTP Cat5, Cat5e, or Cat6 Ethernet cabling. Supporting full Hi-Speed USB 2.0 data transfer speeds up to 480Mbps, the extender is also backward compatible with USB 1.0/1.1 (1.1Mbps/12Mbps respectively).

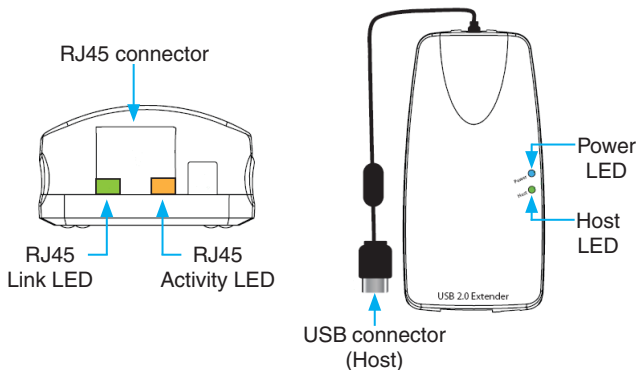
## Packaging Contents

- 1 x USB 2.0 Extender Local Unit
- 1 x USB 2.0 Extender Remote Unit
- 1 x Power Adapter
- 1 x Instruction Manual

## System Requirements

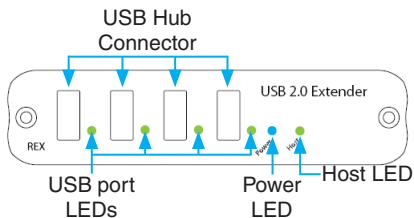
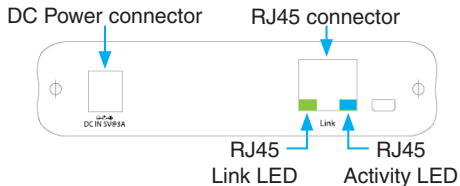
- USB enabled computer system with available port
- USB compliant operating system
- Available power outlet at remote location

## Local Unit



LED	Description
Power	Turns on when power is being supplied via the USB port.
Host	Turns on when the host computer system detects the extender.
RJ45 Link	Indicates connectivity between the Local and Remote unit.
RJ45 Activity	Indicates data transmission between the Local and Remote units.

## Remote Unit



LED	Description
Power	Turns on when power is being supplied via the external power adapter.
Host	Turns on when the host computer system detects the extender.
RJ45 Link	Indicates connectivity between the Local and Remote unit.
RJ45 Activity	Indicates data transmission between the Local and Remote units.
USB Port	Indicates a USB peripheral device is connected and detected on the host computer system.

# Installation

## Hardware Installation

1. The Local Unit can be connected to the host computer system either when it is powered on or off.
2. Connect the Local Unit directly to a USB port on the host computer system via the integrated USB cable. The Power LED should light up if/when the host computer is powered on.
3. Connect the UTP (CAT5e, CAT6, etc.) network cable to the RJ45 connector on the Local Unit.

**NOTE:** Ensure that the total length of cable between the Local and Remote units is 100m or less. The cabling must also not go through any networking equipment (e.g. router/switch/hub/etc.).

4. Setup the Remote Unit near the remote USB peripheral(s).
5. Connect the other end of the UTP cable from the Local Unit to the RJ45 connector on the Remote Unit.
6. Connect the power adapter to the Remote Unit. The Power LED should light up. The Host LED should start flashing if the Local Unit is powered. The host computer system should detect a USB hub as being connected, and the Host LED on both units should light up steady.
7. Plug the remote USB peripheral(s) into the USB Hub connector(s) on the Remote Unit. The corresponding USB port LED should light up. The USB device(s) should be detected as if connected directly to the host computer system.
8. Install the drivers for the connected USB peripheral(s) as necessary.

## Driver Installation

The USB Extender itself does not require a driver installation for any operating system that supports USB. The USB Extender is a pass-through hub, so is only seen as a standard Generic USB hub. Drivers will still be required for any USB peripherals connected to the extenders.

**NOTE:** A additional level of USB hubs can be used on the USB extender (one hub per port), to provide additional USB ports. An externally powered USB hub is recommended.

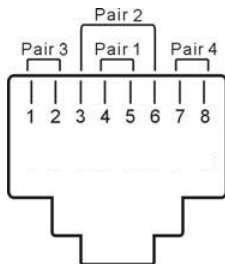


## Wiring Diagram

The USB Extender uses all four pairs of wires in the UTP cable, so either T568A or T568B termination can be used. Both ends of the cable must use the same termination.

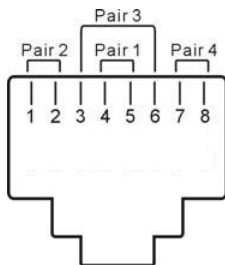
### T568A Termination

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



### T568B Termination

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



# Specifications

	<b>USB2004EXT USB2004EXTGB</b>
<b>Bus Interface</b>	USB 2.0
<b>Connectors (Local Unit)</b>	1 x RJ45 1 x USB type A male
<b>Connectors (Remote Unit)</b>	1 x RJ45 4 x USB type A
<b>LEDs (Local Unit)</b>	1 x Power 1 x Host
<b>LEDs (Remote Unit)</b>	1 x Power 1 x Host 4 x USB Detect
<b>Maximum Data Transfer Rate</b>	USB 2.0: 480Mbps
<b>Maximum Cable Distance</b>	100m / 330ft
<b>USB Power (per port)</b>	<b>Remote Unit:</b> 500mA
<b>Integrated Cable Length</b>	<b>Local Unit:</b> 6"
<b>Power Adapter</b>	5VDC, 3A
<b>Operating Temperature</b>	0°C ~ 50°C (32°F ~ 122°F)
<b>Storage Temperature</b>	-5°C ~ 60°C (23°F ~ 140°F)
<b>Humidity</b>	0 ~ 80% RH
<b>Dimensions (Local Unit)</b>	44.0mm x 87.0mm x 24.0mm
<b>Dimensions (Remote Unit)</b>	110.0mm x 69.0mm x 28.0mm
<b>Weight</b>	<b>Local Unit:</b> 60g <b>Remote Unit:</b> 200g

## Technical Support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit [www.startech.com/support](http://www.startech.com/support) and access our comprehensive selection of online tools, documentation, and downloads.

## Warranty Information

This product is backed by a one year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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