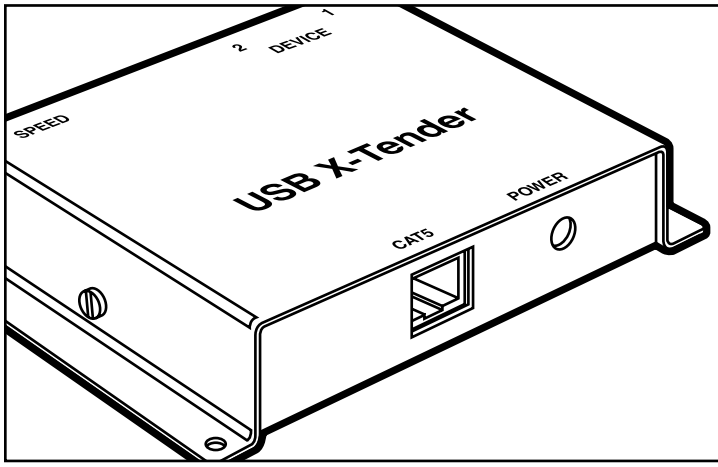
BLACK BOX®
NETWORK SERVICES

Black Box Corporation • 1000 Park Drive • Lawrence, PA 15055-1018 • Tech Support: 724-746-5500 • **www.blackbox.com** • **e-mail: info@blackbox.com**

USB X-TENDER



Put your computers and USB peripherals where they need to be, and use inexpensive Category 5 cable to connect them to each other.

Key Features

- ***Extends the distance that can be run between one or two computer USB ports and USB peripherals.***
- ***Uses inexpensive CAT5 twisted-pair extension cable.***
- ***Can transmit across 150 ft. (45.7 m) to full-speed devices or 1000 ft. (304.8 m) to low-speed devices.***
- ***Speed/distance is independently selectable for each of the two channels.***
- ***Comes with two USB cables.***
- ***Often compatible with existing site wiring.***

Universal Serial Bus (USB) is a fast, versatile interface for which a large number of peripheral devices are available. There's just one problem: USB's distance limit of 15 ft. (4.6 m).

What if you want to keep your USB printer in a public area but secure your host computer in a locked data center? Or what if you want to put your PC in the back office but put your USB security camera up in the ceiling? You could "solve" this problem by daisychaining through a series of USB hubs, but that would be wasteful and expensive. There is a better way.

Our USB X-Tender can take two USB channels and transmit their data across economical Category 5 cable, making it possible for widely separated USB host computers and peripherals to communicate with each other. Peripherals that are full-speed (12-Mbps) USB devices, such as cameras and scanners, can be as far as 150 ft. (45.7 m) away. Low-speed (1.2-Mbps) USB devices such as keyboards, mice, and joysticks can be as much as 1000 ft. (304.8 m) away. (If the host computer has all USB control ports, you can use the USB X-Tender with a video extender to create a long-distance keyboard/video/mouse extension system.)

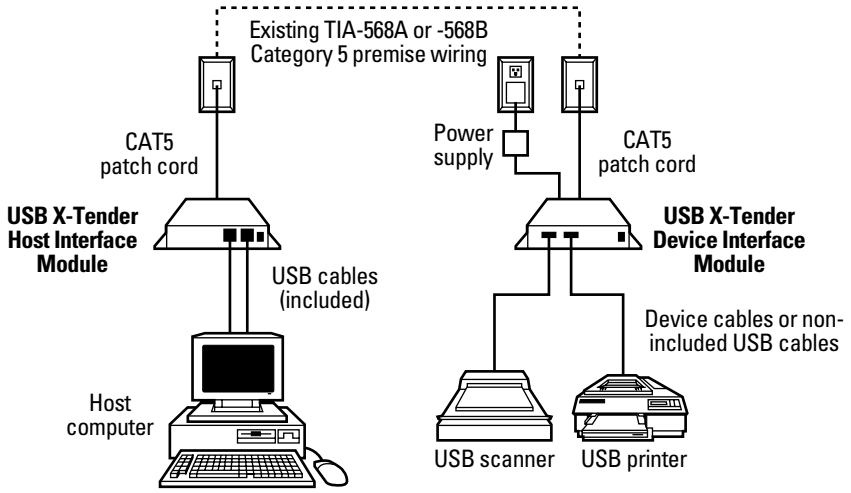
The X-Tender consists of a Host-Interface Module to which you'll attach the computer and a Device-Interface Module to which you'll attach your peripherals. Each of these modules has two USB ports, designated "channel 1" and "channel 2." If you're only extending a single USB bus, you'll use channel 1 only; if you're extending two buses, use both channels. You can independently configure each channel's speed (for attaching low-speed devices versus full-speed devices) and therefore its maximum distance.

Keep in mind that the X-Tender isn't limited to extending distance from a computer to just two peripherals. One or both of the peripherals attached to the X-Tender can be USB hubs, to which several additional devices can be connected. (USB hubs are always full-speed devices.)

The X-Tender comes with a pair of USB cables. These can be used to attach a host computer's USB ports to the Host Interface Module or to attach USB devices that don't have their own cables to the Device-Interface Module. If you need more than two USB cables for your equipment, we carry them in several lengths.

Strictly speaking, the X-Tender's CAT5 cable should be shielded to comply with FCC Class B regulations. But unshielded cable will work in commercial environments where interference is less of a problem, so the X-Tender can often be attached to your existing premise wiring. Normally you'll want to use straight-pinned 4-pair solid-core cable, either TIA-568A or (preferably) -568B. If you'll only be needing channel 1, however, you can use 2-pair cable.

You don't need to run dedicated CAT5 cable for the USB X-Tender—it can be patched into the CAT5 cabling system already installed at your site.



Specifications

Compliance: CE; FCC Class B, IC Class/classe B

Standard: USB 1.1

Interfaces:
- Both modules: Proprietary dual-channel USB composite;
- Host-Interface Module: USB Type B;
- Device-Interface Module: USB Type A

Data Rate: Up to 12 Mbps on each channel that's set for full speed; up to 1.2 Mbps on each channel set for low speed

Distance (Maximum):
- USB cable from either module to attached equipment:
  - 6 ft. (1.8 m) to a computer's USB port;
  - 10 ft. (3 m) to a low-speed device;
  - 16.4 ft. (5 m) to a full-speed device;
- Total USB cable and CAT5 cable, end to end (from computer to farthest peripheral):
  - 150 ft. (45.7 m) if a USB hub or other full-speed device is attached to the Device-Interface Module;
  - 1000 ft. (304.8 m) if only low-speed devices are attached to the Device-Interface Module

User Controls: (2) rear-mounted DIP switches on each module for channel speed

Connectors:
- Both modules: (1) front-mounted RJ-45 F for CAT5 link;
- Host-Interface Module: (2) rear-mounted USB Type B F for computer/host connection;
- Device-Interface Module:
  - (2) rear-mounted USB Type A F for peripheral/hub connection;
  - (1) Front-mounted 5.5-mm barrel jack for power

Indicators: None

Temperature Tolerance:
Operating: 5 to 95°F (-15 to +35°C);
Storage: -4 to +140°F (-20 to +60°C)

Humidity Tolerance:
20% to 90% noncondensing

Maximum Altitude: 10,000 ft. (3048 m)

Power:
- Through desktop power supply:
  - Input:
    - IC169A: 120 VAC, 60 Hz;
    - IC169AE: 100–240 VAC, 47–63 Hz (autosensing);
  - Output:
    - IC169A: 6 VDC at up to 1.2 amps;
    - IC169AE: 7.5 VDC at up to 1.07 amps;
  - Consumption: 7.2 watts maximum

Size: 1.1"H x 3.9"W x 3.4"D (2.8 x 9.9 x 8.6 cm); width does not include bottom flanges

Weight: 1 lb. (0.5 kg)

Ordering Information

ITEM	CODE
USB X-Tender	
115-VAC	IC169A
100–240-VAC	IC169AE
You might also need…	
Solid-core straight-pinned 4-pair Category 5 twisted-pair cable	
Shielded, 1000-ft. (304.8-m), necessary for strict FCC Class B compliance	EVNSL70A-1000
Unshielded, 1000-ft. (304.8-m), acceptable in non-residential environments	
Spool	EYN840A-1000
Box	EYN840A-B
Standard USB Cable	
3-ft. (0.9-m)	USB01-0003
6-ft. (1.8-m)	USB01-0006
10-ft. (3-m)	USB01-0010
15-ft. (4.6-m)	USB01-0015
USB 2.0 (4-Port) Hub	IC147A

Call Black Box Tech Support for help determining your best options for AC-power backup and protection.