



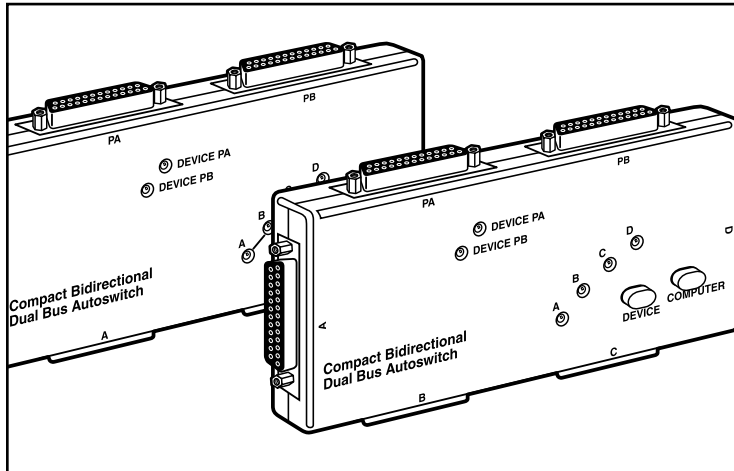
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Black Box Corporation.

# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

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## COMPACT BIDIRECTIONAL AUTOSWITCHES



*Use these sharers with laser printers or other devices requiring a bidirectional IEEE 1284 interface.*

### Key Features

- ▶ **Fully compatible with IEEE 1284, ECP/EPP, Centronics, Byte, and nibble modes.**
- ▶ **Data transfer rate of up to 2 MBps.**
- ▶ **Provides PC-to-PC high-speed data transfer via the parallel port.**
- ▶ **Built-in microprocessor provides real-time communication.**
- ▶ **Operates in auto-link or manual mode.**
- ▶ **Just plug and play! Includes software.**

Many of today's printers use the bidirectional IEEE 1284 interface, which enables the printer to communicate with your PC.

Compact Bidirectional AutoSwitches are fully IEEE 1284 compatible and enable you to share printers, scanners, Zip drives, CD-ROM drives, digital cameras, and more. You can even use the switches for PC-to-PC high-speed data transfer via the parallel port.

All three models support speeds up to 2 MB per second (MBps) and are fully compatible with the IEEE 1284 standard as well as ECP/EPP, Centronics<sup>®</sup>, Byte, and nibble modes. A built-in microprocessor provides real-time communication between devices.

The switches automatically sense BiTronics or Centronics printers. And they work with DeskJet<sup>®</sup> printers without disabling the bidirectional communications.

You can set the timeout period between print jobs from 5 seconds up to 40 seconds. Adjusting the switch's timeout value higher is particularly useful if you want to print long document files with graphics or use a printer's spooler. This can be done by setting the four DIP switches on the side of the switch.

Bidirectional AutoSwitches install easily—just plug and play. In Auto-Link Mode, the switch constantly scans its input ports and sends the job to the attached parallel device. The AutoSwitch also has a Select button for manual port selection.

Easy-to-read LEDs indicate which channel is in use.

The Reversible Compact Bidirectional AutoSwitch connects two computers to one IEEE 1284 BiTronics printer or other parallel device. Or use two parallel devices with one computer. It supports a Windows<sup>®</sup> 95 direct cable connection.

Order the Dual Bus Compact Bidirectional AutoSwitches to connect two or four computers to two IEEE 1284 BiTronics printers or other parallel devices. With a dual-bus architecture, you have two independent channels for simultaneous access to parallel devices and file transfer.

The switches are compatible with Windows 3.1/95/98 and Windows NT<sup>®</sup>.

### Typical Application

Reduce printer costs and increase user options by having four PCs share two laser printers.

## Specifications

**Maximum Distance:** 16.4 ft. (5 m)

**Maximum Transfer Rate:** 2 MB per second (MBps)

**Connectors:** (3), (4), or (6) DB25 F

**Indicators:** LEDs: SW177A: None;  
SW178A: (2) channel in use;  
SW179A: (4) channel in use

**Temperature Tolerance:** Operating: 41 to 104°F (5 to 40°C)

**Power:** Interface-powered or optional power supply

**Size:** SW177A: 1"H x 3.2"W x 3.6"D  
(2.5 x 8.1 x 9.1 cm);  
SW178A: 1"H x 7"W x 3.6"D  
(2.5 x 17.8 x 9.1 cm);  
SW179A: 1"H x 7.5"W x 3.6"D  
(2.5 x 19.1 x 9.1 cm)

**Weight:** SW177A: 0.3 lb. (0.1 kg);  
SW178A: 0.4 lb. (0.2 kg);  
SW179A: 0.5 lb. (0.2 kg)

## Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

### Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p. m. and you need help, but your vendor's tech support line is closed.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a

vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

## Technically Speaking

The 1284 standard is an IEEE standard called "Signalling Method for a Bidirectional Parallel Peripheral Interface for Personal Computers" used for bidirectional parallel-printer-bus support.

While standard parallel interfaces can support speeds of up to 150 kbps at distances of up to 6 feet (1.8 m), IEEE 1284 parallel interfaces can send your data over six times faster and more than five times the distance.

The standard specifies:

- All signals are twisted with a signal line twisted to its ground return.
- Each signal and ground return must have a characteristic impedance of  $62 \pm 6$  ohms over the frequency band of 4 to 16 MHz.
- The wire-to-wire crosstalk shall be no greater than 10%.
- The cable will have shielding with a minimum of 85% optical braid coverage over foil.

- The cable shield shall be connected to the connector back shell using a 360° concentric method. A pigtail connection is not acceptable.

- Compliant cable assemblies shall be marked: "IEEE Std 1284-1994 Compliant."

The standard defines two interface levels and specifies a physical and electrical interface.

The Level I Interface is for devices that need reverse-mode capabilities but do not operate at high speeds. The Level II interface is for both bidirectional and high-speed communications.

The 1284 standard also defines connectors for use in the parallel interface. The 25-pin DB25 connector is defined as the Type "A" connector. The Telco 36, 36-conductor, 0.085" centerline Champ connector with bale locks is defined as the Type "B" connector. The Type "C" connector is a 36-contact, 0.050" centerline mini connector with clip latches.

## Ordering Information

### ITEM

### CODE

Compact Bidirectional AutoSwitches

Reversible 1-to-2, 2-to-1 .....SW177A

Dual Bus 2-to-2 .....SW178A

4-to-2 .....SW179A

*To send data farther than 15 feet (4.6 m), order...*

Optional Power Supply .....PS121-R2

*You may also want to order...*

Enhanced Parallel Port Cable, 6-ft. (1.8-m)

DB25 Male/DB25 Male .....EQN200-0006

DB25 Male/DB25 Female .....EQN201-0006

DB25 Male/Centronics 36 Male .....EQN202-0006