FREE 24-hour Tech Support: 724-746-5500
blackbox.com

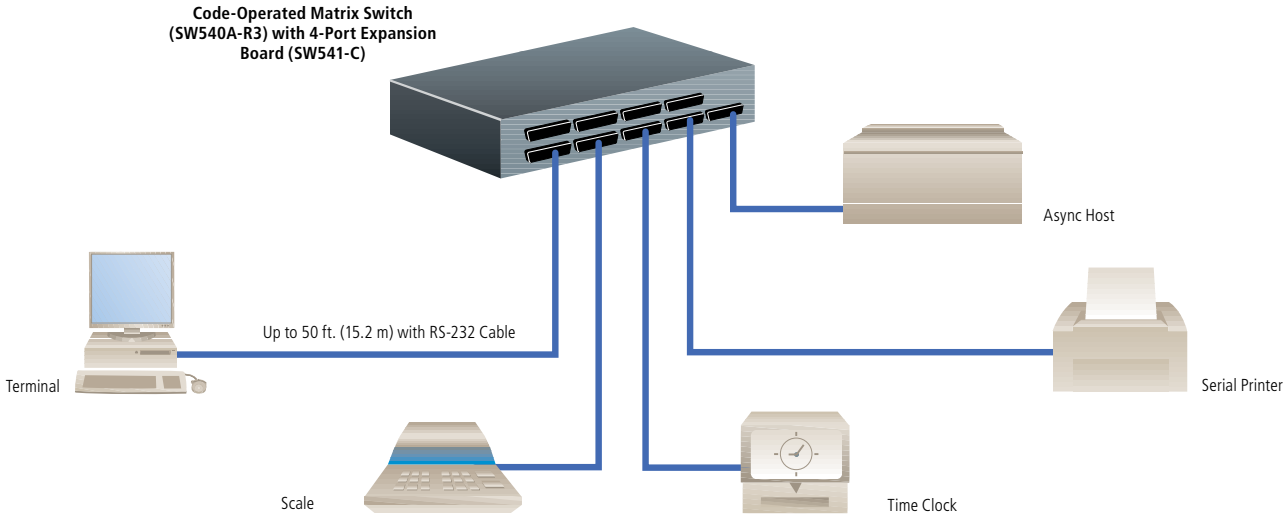
CODE-Operated Matrix Switch

Centralize your switching with this flexible, any-port-to-any-port switch.

FEATURES

- Any-port-to-any-port serial communication. No "master port" is needed.
- Shows the current status of all ports to any PC user running terminal emulation.
- Port-independent selection of speed, flow control, and data format.
- Configure each port independently, including the DTE or DCE setting.
- Supports up to two (base unit) or four (expanded) simultaneous connections.
- Can be reset or restored to default settings remotely.
- Switch is controlled by arming characters.
- Rackmountable with optional brackets.

Extend distances in your local RS-232 network.



OVERVIEW

With the BLACK BOX® Code-Operated Matrix Switch, any port can select any other port. Mix and match PCs and peripherals in any combination for maximum flexibility. This flexible switching eliminates the need for a master port. Any of the switch's ports can communicate with any other port. Also, any two ports can communicate simultaneously. For example, you can use the switch to connect two PCs to either a serial printer, a modem, or a host. As one PC sends data to the serial printer, the other PC can send data to either the modem or the host.

Create transparent links between any two ports. In a transparent link, the Code-Operated Matrix Switch treats the attention character the same as any other data. Therefore, a transparent link is useful if you have an application (such as a graphics application) in which the data mimics the attention character.

You can consolidate multiple devices that have RS-232 diagnostic ports by using a PC or by using remote access via modem.

You also get full status information. Automatic notification tells you when your connection is made or, if the port you select is busy, that a connection can't be made. Any PC user can get the current status of all ports—instantly find out which ports are linked together, the location of transparent links, system activity, and attention characters.

Shunt jumpers simplify cabling. Use the shunt jumpers to configure each port for either data-terminal or data-communications equipment. No crossover cable is necessary—you only need standard straight-through cabling.

The optional expansion board almost doubles the capacity of the switch from five to nine ports. And all ports are independent. You can set speed, flow control, and data format for each port.

In addition to disconnecting active links, COMS commands enable you to save link states to NVRAM, see help and status screens, set port names, and perform remote resets and reloads.

NOTE: If the standard COMS settings don't meet the needs of your application, we might be able to custom-program it for you. For details, call Black Box Pre-sales Consultants at 724-746-5500.

SW541-C

TECH SPECS

Compliance — FCC Part 15 Class A, DOC Class/MDC classe A
Code Set — ASCII
Data Format — 7 or 8 data bits with even, odd, or no parity (user-selectable); 1 stop bit (fixed)
Data Rates — 19,200, 9600, 4800, 2400, 1200, 600, 300, or 110 bps
Distance (Maximum) — 50 ft. (15.2 m) to any attached device using standard cables, or 500 ft. (152.4 m) using Extended-Distance Data Cables
Flow Control — Hardware (DTR/ CTS) or software (X-ON/ X-OFF), user-selectable
Interface — EIA RS-232/ITU-TSS V.24; each port can be set independently as DTE or DCE
Internal Memory — 32-KB RAM including 31-KB buffer; NVRAM for link-state storage
Leads Supported — 1 through 8, 20, and 22
MTBF — 20,000 hours (16,000 hours with Expansion Board)
Operation — Full-duplex
Protocol — Asynchronous
User Controls — ASCII characters.; (7) internal DIP switches: (2) for system options, (5 or 9*) for port options; (5 or 9*) internal jumpers for DTE/DCE
Diagnostics — Various self-tests
Connectors — (5) or (9*) rear-mounted DB25 female
Indicators — (10) front-mounted LEDs: (1) Power and (9) Status
Temperature Tolerance — Operating: 32 to 113°F (0 to 45°C); Storage: -4 to +158°F(-20 to +70°C)
Humidity Tolerance — Up to 95% noncondensing
Enclosure — Steel
Power — Nondetachable desktop power supply: SW590A-R2: 115 VAC, 60 Hz; SW590AE-R2: 230 VAC, 50 Hz
Size — 2.3"H x 12"W x 11.1"D (5.8 x 30.5 x 28.2 cm)
Weight — Base unit with power supply: 9.6 lb. (4.4 kg); Expansion Board: 0.6 lb. (0.3 kg)

** (1) for each basic or expanded port*

Typical applications

- ✦ During the day, one PC can receive orders through your modem while another directs an RS-232 industrial controller to fill the orders. At closing, the first PC can send reports to the printer while the second uses the modem to relay info to HQ.
- ✦ Depending on the requirements of the job, each of your four PCs can print to any of your five serial printers.

What's included

- Code-Operated Matrix Switch, with 31 KB of buffer memory and 5 ports
- Desktop power supply
- 5.25" diskette containing LinkUp software
- Users' manual

You might also need

- A snap-in 4-Port Expansion Board (SW541-C) for adding four additional devices to your switched network. You can install this circuit board in only minutes with just a screwdriver.
- An asynchronous RS-232 modem or line driver for long-distance control of your devices
- RS-232 cable
- AC and data-line surge protectors
- Communications software

Item	Code
Code-Operated Matrix Switch	
115-VAC	**SW540A-R3**
230-VAC	**SW540AE-R3**
You may also need…	
4-Port Expansion Board	**SW541-C**
Extended-Distance Data Cable (NEC® CL2), 12 Conductors (6 Pairs)–Pins 1–8, 15, 17, 20, 22 (NOTE: Specify gender and length)	**EDN12C**