BLACK BOX®
NETWORK SERVICES

Automatic Switching System

Specify a system for full local and remote switching control for up to 2048 ports!

BLACK BOX®
724-746-5500

Automatic Switching System
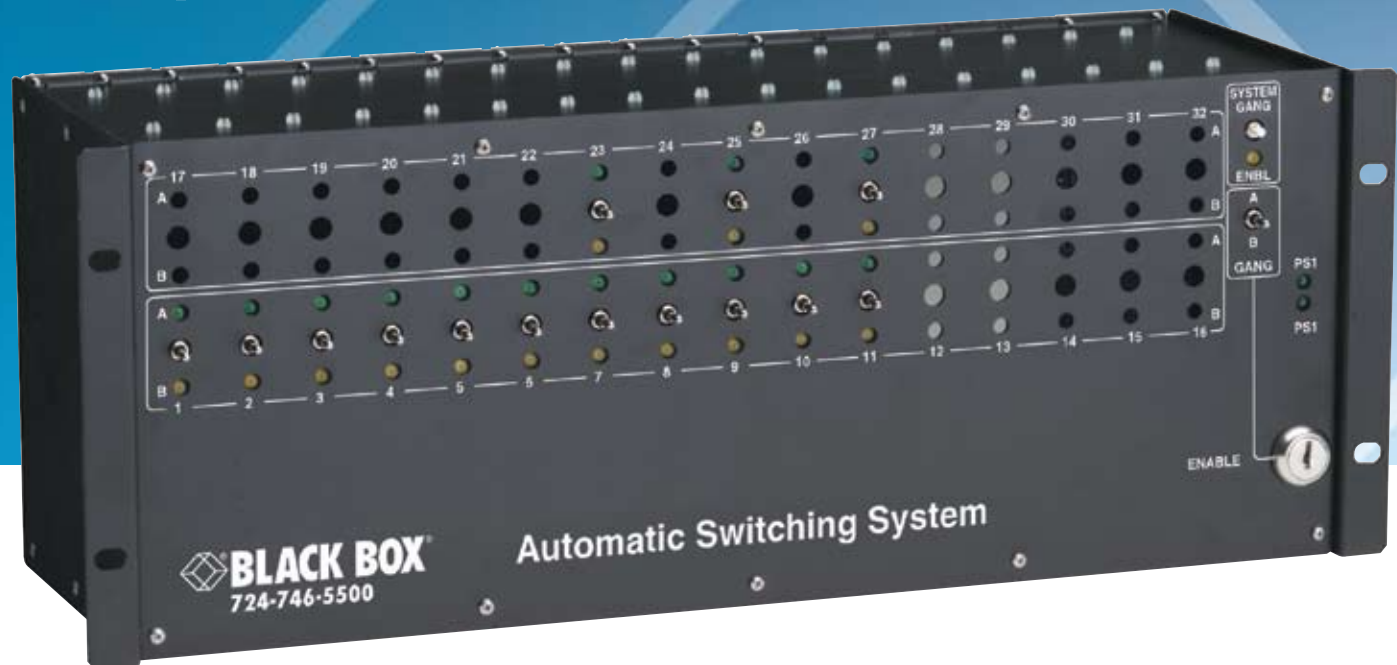
FEATURES

» Daisychain up to 64 chassis and control up to 2048 switching channels with a master switch!

» Great for maintenance! When your primary system's ports need attention, simply switch to alternate lines.

» Holds up to 16 optional interface cards.

» Optional Application Configuration Software works with the SM533-C and SM534-C cards (sold separately) to give you switching control of one or more systems remotely via a Web connection.

» Use the software's GUI to name all chassis and ports, view all connections, and check their status in real time while performing basic and user-defined switch operations.

» Redundant power supply options available for mission critical applications.

OVERVIEW

The BLACK BOX® Automatic Switching System provides highly reliable gang switching control between primary and backup circuits.

A wide range of applications

The Automatic Switching System is ideal for disaster recovery, enabling you to switch to a backup system when the primary system goes down.

The system is also great for maintenance. When your primary system's ports need attention, simply switch to alternate lines.

The Automatic Switching System has countless applications in commercial, industrial, and government—anywhere system availability is crucial. And redundant power supplies increase reliability for mission-critical applications.

Modular construction

The modular construction of the system enables you to install a wide range of interfaces in a compact rackmount chassis, providing maximum flexibility for you as your system grows or changes.

A typical Automatic Switching System includes a rackmount chassis, a control card, one or two power supplies, and up to 16 switching interface cards.

You can daisychain up to 64 chassis and control up to 2048 switching channels with a master switch! The optional Dual Redundant Power Supply provides power to up to eight daisychained chassis.

Interface cards are hot swappable—simply pop in a different card. There are no wires to disconnect, and you don't have to power down to make changes to the system.

Many interface options

The wide range of interface cards include: RS-232/V.24, RS-449, RS-530, BNC, V.35, T1, RJ-11, and RJ-45 (CAT5). All interface cards are fully transparent to communications speeds, protocols, and formats.

Some interfaces are available as dual cards, doubling interface density per chassis. For maximum versatility, you can mix different kinds of interface cards within the chassis.

Switch one or switch many

The system enables you to switch individual interface cards, a group of interface cards, an entire chassis, even an entire rack of chassis! You're in control.

Each chassis has a security key switch to prevent accidental switching, and all cards feature latching relays to maintain the last switched position during power loss.

Local or remote operation

Control the Automatic Switching System locally or via a Web browser, Telnet™, SNMP, or for some control cards, through Configuration Software (SM540A).

Local control is through manual toggle switches. LEDs show each current switch position, so you can quickly see the status of the entire chassis.

Remote control cards enable you to control the system via a Web browser through your 10-/100-Mbps Ethernet network or across the Internet. The Web browser interface features an intuitive graphic interface that enables you to switch and monitor multiple chassis.

You can also control the system with a standard Telnet command-line interface through a terminal connected to the RS-232 port. Plus, SNMP provides indus-try standard SNMP management compatible with a wide range of management software such as HP® OpenView®.

For the SM533-C and SM534-C control cards, Configuration Software runs on a local area network and gives you customized switching control through a PC-based graphical interface with point-and-click operation.

Typical Application

Although you can switch manually at your network location, our system also enables you to switch remotely over the Internet using any Web browser.

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SM500A: rear view: shown with various interface cards loaded. Cards not included.

TECH SPECS

Automatic Switching System Chassis:
Protocol — Transparent to all protocols
Relay Specifications — Latching type;
 Contact material: Gold-clad silver;
 Current capacity: 1 amp;
 Initial contact resistance:
  50 milliohms
Interface — Digital: RS-232/V.24, V.35, X.21/X.25, T1/T2;
 Analog: RJ-11, RJ-45;
 Coax: BNC, twinax
Environmental — Temperature: 32 to 158°F (0 to 70°C);
 Humidity: 5 to 95% (noncondensing)
Enclosure — Metal
Size — 7"H (4U) x 19"W x 6.5"D (17.8 x 48.3 x 16.5 cm)
Weight — 12 lb. (5.4 kg) fully populated

Switching Interface Cards:
Connectors — SM501-C: (3) M/34 F;
 SM503-C: (3) DB25 F;
 SM503-C-FM: (2) DB25 F, (1) DB25 M;
 SM504-C: (3) BNC F;
 SM507-C: (6) BNC F;
 SM508-C: (3) RJ-11 (4-wire);
 SM508-C-2: (6) RJ-11;
 SM509-C: (3) RJ-45 (8-wire);
 SM509-C-2: (6) RJ-45 (8-wire);
 SM511-C: (3) DB9 F;
 SM512-C: (3) DB15 F

Item	Code
BLACK BOX® Automatic Switching System	
First, order the chassis…	
Automatic Switching System Chassis	**SM500A**
…then order a Control Card with or without remote control for a chassis…	
Control Cards for Manual (Local) Control	
12-VAC (Requires SM514A-PS or SM514A-PS-E)	**SM531-C**
-48-VDC	**SM532-C**
Control Cards for Web Browser, SNMP, ASCII, and Manual (Local) Control	
12-VAC (Requires SM514A-PS or SM514A-PS-E)	**SM533-C**
-48-VDC	**SM534-C**
For advanced GUI-based management for SM533-C and SM534-C…	
Configuration Software	**SM540A**
For your SM531-C's power source, you'll need an external AC power adapter (order two for redundant power)…	
Power Supply	
110-VAC	**SM514A-PS**
220-VAC	**SM514A-PS-E**
To provide redundant power to a daisychain of multiple chassis, order…	
Dual Redundant Power Supply (115-/230-VAC, Switch-Selectable)	**SM535A**
(NOTE: A single SM535A provides redundant power for up to eight connected chassis. In this daisychain configuration, it attaches to the master chassis.)	
…then order switching interface cards for your chassis.	
AB V.35 Conductor (21 Leads) Card	**SM501-C**
AB RS-232 Conductor (25 Leads) Cards	
(3) DB25 Female	**SM503-C**
(2) DB25 Female/(1) DB25 Male	**SM503-C-FM**
AB Coax BNC Card (100 Mbps)	**SM504-C**
AB Double Coax Card (100 Mbps)	**SM507-C**
AB RJ-11 (4-Wire) Card	**SM508-C**
AB Dual RJ-11 (4-Wire) Card	**SM508-C-2**
AB RJ-45 (8-Wire) Card	**SM509-C**
AB Dual RJ-45 (8-Wire) Card	**SM509-C-2**
AB DB9 Card	**SM511-C**
AB DB15 Card	**SM512-C**
For empty slots, order…	
Blank Panel for SM500A	**SM518**