Pro Switching Systems for Network Backup and Redundancy

Industry-leading solutions to prevent downtime and ensure network access.

Keep data moving between your copper or fiber circuits.

Secure, reliable switching for mission-critical applications:

» Corporate networks  » Aviation and transit systems
» Government computing  » Industrial engineering
» Energy and utilities  » Military systems
» Healthcare and biotech  » Stock exchange networks

Pro Switching System Plus (4U)  Pro Switching System (2U)  Pro Switching System NBS (1U)
The Pro Switching System Plus is an intelligent ganged switching system consisting of a chassis and individual interface cards. Its advanced design gives incredible flexibility and performance.

Switch one card individually or switch the entire rack through a Controller Card. You can even daisychain multiple chassis to control up to 4080 individual ports.

The chassis includes a backplane for plugging in the cards. Just order the cards you need, as well as a power supply (or for redundancy, order two).

Switch securely.

For fail-safe operation, the system uses proprietary micro-mirror or latching relay switching technology. That means data can continue to pass through even if the power has been cut off.

Each chassis also has a keyed switch so you can enable/disable manual switching from the front-panel toggle switches.

The Controller Card.

One is required for each 18-slot chassis, and it takes up two card slots. The Controller Card enables you to individually switch any port from the front panel or gang switch the entire system.

For more capabilities, choose models with an RS-232 serial controller or choose an SNMP-based Ethernet controller, which also includes GUI Switchcenter software. These intelligent cards enable you to switch from anywhere in the world via an RS-232 or IP connection.

Network Disaster Recovery/Continuation of Operations

The Pro Switching System Plus is an intelligent, secure switching system for access control, disaster recovery, and network backup.

- Offers secure switching via latching relays or micro-mirror switching mechanisms.
- Chassis holds up to 16 switch modules. Mix and match data, voice, video, and power switching modules in one chassis.
- Cascade multiple 18-slot chassis to support up to 4080 ports.
- Controller cards for switching locally or remotely.
- Performs Layer 1 switching. Operates independently of data rates, protocols, formats, or signal levels.

**WARRANTY — 1 Year**

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**TECH SPECS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
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<tbody>
<tr>
<td>Pro Switching System Plus</td>
<td>SM960A</td>
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<td>Power Supply, 120–240 VAC, External</td>
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<td>Controller Cards</td>
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<td>Logic Only, 1 In/2 Out</td>
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<td>1 In/2 Out</td>
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**NOTE:** For 240-VAC cards, see blackbox.com.

For help configuring your switch, contact Tech Support at 724-746-5500.
Pro Switching System (2U)
Get full-performance gang-switching capabilities in an ultra-compact, 2U chassis.

- Save space in your rack with this 2U chassis.
- Mix and match hot-swappable RS-232, RS-530, video, fiber, CAT5e, and CAT6 A/B switching modules in a single chassis.
- Chassis holds up to 18 modules. Cascade multiple chassis and racks for additional switching ports.
- Offers secure switching via latching relays.
- Choose a single-power card or dual-redundant power cards.
- Performs secure switching via latching relays.
- Control switching locally or remotely.
- ● WARRANTY — 1 Year

This intelligent ganged switching system consists of an ultra-compact 2U 18-slot chassis, and A/B switching, controller, and power supply cards.

Controller Cards take up only one slot, and Power Cards take up one slot or two slots for redundancy, leaving you with 13–16 slots for A/B Switch Cards. All occupy one slot, except for the DB25 Cards, which require three slots.

Switch one card individually or switch the entire chassis through a Controller Card. You’ll need one Controller Card per rack chassis. If you daisychain multiple chassis, the card in the first chassis controls the entire system.

Each chassis also has a keyed switch so you can enable/disable manual switching from the front-panel toggle switches.

TECH SPECS

Switches — Controller Cards: (1) momentary toggle switch, (1) 8-position DIP switch, (1) momentary push-button switch, (1) key-lock switch
CE Approval — Yes
RoHS — Yes

Connectors — SM261A-CARD: (2) two-position DC power headers, (2) two-position alarm contact terminal block;
SM261A-VAC: (1) IEC input, (1) three-position alarm contact terminal block;
SM261A-VDC: (1) three-position DC power, (1) three-position alarm contact terminal block;
SM262A-SM266A: (3) DB25 F;
SM268A–SM269A: (3) RJ-45;
SM276A–SM278A: (3) duplex ST or SC;
SM277A–SM278A: (3) MM ST, Non-Latching SM278A-ST;
SM279A-BLNK: Blank Panel, Front/Rear

Indicators — SM261A-CARD: (2) LEDs: Power;
SM262A–SM266A: (3) duplex ST or SC;
SM276A, SM276A-LCH: (3) F-connectors

Size — SM260A (including handles and connectors): 3.5" (2U) x 19" W x 12.5" D (8.9 cm x 48.3 cm x 31.8 cm)
Weight — SM260A: Empty: 2.5 lb. (1.1 kg)

Controller and switch card options.
You can choose an RS-232 Only Controller Card, which enables gang switching via the manual toggle switch or with serial commands, or an RS-232/10-GbE networking while keeping connections for older RS-232 and 75-ohm video connections.

Secure and fallback switching.
For fail-safe operation, all the switch cards (except those noted) use proprietary latching or micro-mirror relay switching technology, so data can continue to pass through even if the power has been cut off.

The non-latching fiber cards fall back to a Port C (chassis) to Port A connection when power fails. When power is restored, the non-latching switch card reconnects Port C to the originally selected port. These types of cards provide a fallback or failover connection during power outages.

To power your chassis, order one or two external power supplies and the power adapter card. For backup power, add a Redundant Power Supply Card.

For help configuring your switch, contact Tech Support at 724-746-5500.
Add access control, network backup, and failover switching to your data networks.

- Use to shut off access to your private network based on time of day, virus detection, or hacker alerts.
- For A/B switching between 10/100/1000 copper networks.
- Latches the A/B position to keep signals moving even if power is lost.
- Enables individual or simultaneous (ganged) circuit control.
- Features highly reliable internal telecommunications relays.
- All switches include a removable key for securing the gang switching function.
- Transparent to data rates, protocols, formats, and signal levels.
- Compact, 1U-high rackmountable chassis.
- Includes dual power inputs for redundancy.
- Daisychain multiple units for additional ports.
- ✧ Warranty ✧ — 1 Year

Use this Layer 1 switching system to add network backup and failover switching to your data networks. It’s ideal for mission-critical applications, including classified information and military systems, broadcast networks, and stock exchanges.

With the Pro Switching System NBS (1U), RJ-45 A/B, it’s very simple to switch all users from a main network to a backup network at the chassis itself using a momentary toggle switch on the front or via a serial RS-232 workstation.

But you can also order network manageable (MA) models, which in addition to manual toggle-switch and RS-232 control, support control from a remote workstation via its 10BASE-T Ethernet port. Through this TCP/IP connection, you can switch and monitor the system’s circuits using Telnet, SNMP, or a Web browser link.

The network manageable models also feature auto bypass and auto recovery. If the “normal” network paths between the chassis and the device being monitored go down for any reason, the chassis will automatically switch from the normal connection state to the bypass, or failover, connection state.

On every Pro Switching System NBS (1U), RJ-45 A/B version, each switching circuit has a common (C) port that’s latched to its associated A or B port, which means it passes signals even if the chassis is without AC power. Because its relays are physically latched into position, once a position is set, it stays set. The switch circuit is as reliable as the CATx cables connected to it.

A key-lockable switch secures gang switching. With the key-lock switch enabled, all ports in the system can be simultaneously switched by pressing the momentary toggle switch on the chassis’ front.

Port settings are also software controllable, so you can toggle a connected device from the A to the B position from a workstation. You not only have reliable network paths, but you can automate switching to control individual settings.

Need to add ports later? Simply daisychain multiple Pro Switching System NBS (1U), RJ-45 A/B chassis together and control them as a single system. You can control up to 4080 ports or 255 chassis as part of a single system.

versions for switching four RJ-45 leads or all RJ-45 leads.

Four Pro Switching System NBS (1U), RJ-45 A/B models switch four leads (Pins 1/2 and 3/6) on their RJ-45 ports. They’re designed for use in 10BASE-T/100BASE-TX Ethernet, T1 circuit switching, and similar applications where no more than two pairs of leads are used.

But we also offer two versions that switch all eight leads of the RJ-45 connectors. They’re for use in 10BASE-T/100BASE-TX/1000BASE-TX Ethernet networks, for switching RS-232 circuits that use both data and hardware handshake leads, or any application that requires use of more than four leads.

**Tech Specs**

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<th>Item</th>
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<td>Pins 1/2 &amp; 3/6</td>
<td>NBS008A</td>
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<td>8-Port Network Manageable</td>
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<td>All Pins</td>
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<tr>
<td>8-Port Network Manageable</td>
<td>NBSALL8MGR</td>
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Pro Switching System NBS (1U), Fiber Multimode SC A/B

Prevent costly network downtime with this reliable gang switching system for fiber networks.

- Multiport switching to prevent lost productivity and business downtime on optical fiber networks.
- Provides A/B switching between fiber SC multimode terminated circuits.
- Features highly reliable micro-mirror optical switching.
- Latches the A/B position to keep signals moving even if power is lost.
- Enables individual or simultaneous (ganged) circuit control.
- Lockable switch with removable key for securing gang switching control.
- Transparent to data rates, protocols, formats, and signal levels.
- Supports Gigabit fiber network connections.
- Compact, 1U-high rackmountable chassis.
- Includes dual power inputs for redundancy.
- Daisychain multiple units for additional ports.

++ Warranty — 1 Year

Use this optical Layer 1 switching system to add network backup and failover switching to fiber connections on your data networks. It’s ideal for mission-critical classified government and military networks, broadcast networks, private medical/healthcare systems, and factory/industrial applications.

With the Pro Switching System NBS (1U), Fiber Multimode SC A/B, it’s very simple to switch all users from a main network to a backup network at the chassis itself using a momentary toggle switch on the front or via a serial RS-232 workstation.

But you can also order network manageable (MA) models, which in addition to manual toggle-switch and RS-232 control, support control from a remote workstation via its 10BASE-T Ethernet port. Through this TCP/IP connection, you can switch and monitor the system’s circuits using Telnet, SNMP, or a Web browser link.

The network-manageable models also feature auto bypass and auto recovery. If the “normal” network paths between the chassis and the device being monitored go down for any reason, the chassis will automatically switch from the normal connection state to the bypass, or failover, connection state.

On all switch versions, unique latching optical switch mechanisms and micro-mirrors optically route signals between ports. And because the system is fiber based, there’s no need to worry about EMI/RFI interfering with signaling in electronically noisy applications.

The system uses duplex SC connections for each channel (port) to form bidirectional data paths to your 62.5/125-m multimode network segments.

Simply connect fiber cables between the system’s circuits and the network connections you want to control. As soon as the fiber cables are plugged into the chassis, the selected data paths become active.

Each switching circuit has a common (C) port that’s latched to its associated A or B port, which means it transmits signals even if the chassis is without AC power. Because its relays are physically latched into position, once a position is set, it stays set.

A key-lockable switch secures the gang switching function. With the key-lock switch in the enabled position, all ports in the Pro Switching System NBS (1U), Fiber Multimode SC A/B can be simultaneously switched by pressing the momentary toggle switch on the chassis’ front.

Port settings are also software controllable, so you can toggle a connected device from the A to the B position from a workstation. You not only have reliable network paths, but you can automate switching to control individual settings.

Need to add ports later? Simply daisychain multiple chassis together — up to 255 in all — and control them as a single system.

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<td>6-Port Network Manageable</td>
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</tbody>
</table>
Most products are in stock and ready to ship.

If you don’t find exactly what you need, we’ll customize it for you!

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- Cable Management

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Connectors, Adapters, & Terminators

Interface & Protocol Converters
- DIN Rail
- Digital I/O & Serial Cards

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- Copper & Fiber
- Data Sharers/Broadcast Units

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- Wallplates
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- Industrial
- Wireless

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- Network Video Equipment
- LCD Displays & Touchscreens
- Audio Equipment
- Wireless Presentation Systems

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- Network Security & Firewalls
- Media Converters
- Switches & Routers
- Ethernet Extenders
- Serial & Console Servers
- Print Servers
- Industrial Ethernet
- SFPs
- VoIP
- PoE
- Wireless

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- Parallel Switches
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Specialty Switches
- Video
- Ethernet
- Fallback
- Console Port Managers
- USB
- Ganged
- Hardened
- PoE
- Fiber

T1/E1/G.703/DDS/ISDN
- CSU/DSUs
- Terminal Adapters
- Channel Banks
- Repeaters & Extenders

Voice Communications
- Phone Line Management
- Headsets
- Teleconferencing

Tools & Testers
- Copper & Fiber
- Diagnostic Scanners & Software
- Data Tool Kits

Wireless
- Access Points
- Device Servers
- Modems
- Print Servers
- Routers
- Extenders

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