Enclosure and rack systems

Trends like virtualization, consolidation, convergence, and blade server adoption are forcing different types of equipment to share the same space. Today's high-density devices generate tremendous amounts of heat. Rapidly changing business conditions require the IT environment to adapt and adjust faster than ever, and the imperative of uninterrupted uptime now has the corollary demand of efficiency.

Schneider Electric enclosure and rack systems

Today's high-density server and networking applications demand a rack infrastructure that can mount a mix of different equipment and support high-capacity cable management in an efficient, flexible design.

Racks and enclosures: the building blocks of every IT environment

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Whether it's a network closet, server room, or data center of any size, IT operations rely on racks and enclosures for support, organization, and management of the rack-mount equipment. Servers, storage, switches, routers, PDUs, console port servers, KVM switches — today's racks and enclosures are expected to support a greater number and variety of applications and devices.

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NetShelter SX applications and selection

The world’s most versatile rack enclosure for demanding IT environments

Ready for high-density environments right out of the box, NetShelter SX rack enclosures offer the most standard features on the market today. Influenced by 10 years of customer feedback, Schneider Electric has specifically engineered the next-generation NetShelter SX enclosure to handle today’s power-hungry, high-density server and networking applications.

The NetShelter SX is the base building block of the InfraStruxure system. NetShelter SX has many inherent features that facilitate a faster installation and reduce handling at installation, lowering your installation and operating costs. In addition, the homogenous appearance of the NetShelter SX and its sister components in an InfraStruxure solution provides a clean, consistent look that every first-rate data center requires.

Rack enclosure systems for converged IT: high efficiency, high density, integrated solutions

With IT hardware trending toward Converged Infrastructure (CI) and single-source IT providers, a simplified prebuilt and pretested solution is more standardized, better defined, and quickly becoming preferred over the numerous combinations of IT hardware and software solutions of the past. Customers are looking for solutions that deliver fully populated IT racks — whether to the customer site or a co-location facility.

Schneider Electric rack systems have been pre-engineered as an optimized system for efficiently housing multiple IT equipment types in high-density situations. Special packaging options for NetShelter SX enable integrators to “rack and stack” the solution for a truly end-to-end converged system delivered prebuilt, pretested, racked, and shipped to the end customer. The packaging provides peace of mind of safe delivery of costly IT investment and the partner provides a choice of simplified, plug-and-play, integrated solutions.

Rack enclosure systems for server applications: high efficiency, high density

Servers are the lifeblood of any organization’s IT operations. But keeping today’s high-density servers up and running — keeping that lifeblood flowing — has become more challenging than ever. Current trends, such as virtualization, consolidation, and adoption of blade servers, mean more cable clutter blocking proper airflow, more hot air recirculation, and more inefficiency.

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Features

Best-in-class design
Offers most standard features to facilitate installation and speed of deployment.
Guarantees compatibility with all EIA standard 19 in. rack-mount equipment — or your money back.
Integrates seamlessly with the full line of InfraStruxure components.

Greatest flexibility
Available in 24U, 42U, 45U, and 48U heights, 24 in. and 30 in. widths, and 32.5 in., 42 in., and 47.5 in. depths.

Easily adjustable vertical mounting rails for equipment varying in depth.
Rapid installation of vertical rack PDUs in the rear vertical zero-U accessory channel of NetShelter enclosures.

Superior cable management capabilities
Accommodate high-density networking and blade applications.
Easy installation to enable faster and easier moves, adds, and changes.

Promote proper airflow to improve cooling efficiency.

Applications for height

24U enclosures — Remote offices and small spaces.
42U enclosures — Standard height used globally, designed to fit through standard doorways.
45U enclosures — Enclosures with additional U-spaces for environments that standardize on a 45U, 7 ft. enclosure height.
48U enclosures — More U-spaces for more equipment in the same footprint.

Applications for width

24 in. wide enclosures are the standard for most server applications. For higher densities, a deeper enclosure may be required.
30 in. wide enclosures offer more space for high-capacity cable management and power distribution. Typically, wider enclosures are used for networking applications but the extra side space is often requested in blade server applications.

NetShelter SKUs

| NETSHE-AR3100 42U 24 in. 42 in. Low/medium-density servers |
| NETSHE-AR3105 45U 24 in. 42 in. Low/medium-density servers |
| NETSHE-AR3107 48U 24 in. 42 in. Low/medium-density servers |
| NETSHE-AR3150 42U 30 in. 42 in. Networking and blade applications |
| NETSHE-AR3152 45U 30 in. 42 in. Networking and blade applications |
| NETSHE-AR3300 42U 24 in. 47.5 in. Medium/high-density servers |
| NETSHE-AR3305 45U 24 in. 47.5 in. Medium/high-density servers |
| NETSHE-AR3307 48U 24 in. 47.5 in. Medium/high-density servers |
| NETSHE-AR3350 42U 30 in. 47.5 in. HD networking and blade applications |
| NETSHE-AR3355 45U 30 in. 47.5 in. HD networking and blade applications |
| NETSHE-AR3356 48U 30 in. 47.5 in. Networking and blade applications |
| NETSHE-AR3360 42U 30 in. 42 in. High-density networking |
| NETSHE-AR3364 45U 30 in. 42 in. Very-high-density networking |
| NETSHE-AR3347 48U 30 in. 47.5 in. Very-high-density networking |
| NETSHE-AR3200 42U 24 in. 42 in. 2 x 20U compartments for colocation |
| NETSHE-AR3104 24U 24 in. 32.5 in. Remote server applications |
| NETSHE-AR3812 42U 24 in. 32.5 in. Audiospecial applications |
| NETSHE-AR3814 42U 24 in. 32.5 in. Audiospecial applications |

1 The following can be preconfigured without standard doors and side panels. Reference part numbers AR3105- X010 for no sides, AR3105- X010 for no doors, and AR3105- X017 for no side/no doors. More configurations are available; contact your local Schneider Electric sales representative for more information.
2 IAA Compliant enclosure available.
3 White enclosure available.
4 Shock packaging available for shipping enclosures with up to 2,000 lbs. of equipment installed.
NetShelter SX enclosure features

More standard features for faster installation

1. **Cable access roof**
   - Eight cable entry slots
   - Toolless mounting of overhead cable trough system
   - Snap-in mounting to allow easy roof removal and installation with cables in place

2. **Integrated baying brackets**
   - Preinstalled on frame, front and back
   - Spacing options at 24 in.
   - Bays with other Schneider Electric power and cooling products

3. **Preinstalled leveling feet and castors**
   - Easily adjustable leveling from top-down
   - Castors standard on all enclosures

4. **Toolless, zero-U accessory channel**
   - Toollessly mount rack PDUs
   - Toollessly mount vertical cable organizers

5. **Easily adjustable vertical mounting rails**
   - Simple screw and cam engagement
   - Captive screws — no loose hardware
   - Easy visual alignment for quick adjustment
   - Adjust in 0.25 in. increments through enclosure
   - Hole cutouts for 0U installation (AR8469) of Data Distribution Cable (DDC) accessories

6. **Half-height side panels**
   - Easy and safe handling
   - Quick release latch
   - Lockable — same key as doors
   - Enclosure width remains the same with or without sides attached

Other standard features include:
- Integrated electrical bonding of sides, doors, roof, and rails to frame
- Ventilated front and rear doors
- Split-rear ventilated rear doors for better clearance in hot aisle
- Numbered U positions front and back
- Open bottom for unobstructed under-floor access
- 3,000 lb. static load, 2,250 lb. dynamic (rolling) load
- UL Listed
- Electronic Industries Association (EIA)/ECA-310-E compliant
- Meets IBC seismic requirements with proper bolt-down hardware

NetShelter SX networking enclosure

Optimized NetShelter SX design for enhanced networking application support and a superior solution for side airflow Cisco Nexus®, Catalyst®, and MDS networking switches

1. **Cable access roof**
   - Extra-large cable access slots for high-density cabling and brush strips for air containment
   - Two spring-loaded pins allow for easy roof removal and installation with cables in place

2. **Networking-style mounting rails**
   - Easily align rails that adjust in 0.25 in. increments
   - Left vertical mounting rail contains additional cable channel
   - Rail position preset to accommodate Cisco switches and cable management

3. **Preinstalled vertical cable managers**
   - Front vertical mounting rails feature preinstalled, single-sided vertical cable managers
   - Smooth plastic fingers provide proper bend radius for cables

4. **Vertical mounting rails for side-to-side airflow**
   - Front-right vertical mounting rail open for improved side airflow

Side airflow cooling

Support cooling for small and large networking switches mounted within an enclosure.

- Side airflow solution (AR7742/AR7747) for Cisco Nexus 7018
- Side airflow duct kit (AR7715) mounts inside 30 in. wide enclosures for Cisco 6500 and 9500 series switches
- Side airflow duct kit (AR7725) mounts inside 30 in. wide enclosures for Cisco Nexus 7009

All solutions
- Direct cool air at the front of the enclosure directly and predictably to the intake at the side of side airflow switches
- Consist of two duct assemblies that act as diverters, utilizing the existing fan power of the switch
- Contain a system of baffles located throughout the enclosure to mitigate exhaust air from recirculating back into the air intake

AR3340 with AR7725 duct kits for Cisco Nexus 7009
AR3140 — 42U x 30 in. W x 42 in. D
AR3340 — 42U x 30 in. W x 47.5 in. D
AR3347 — 48U x 30 in. W x 47.5 in. D

AR3340 networking enclosure and AR7742 side airflow solution for Nexus 7018
AR3140 networking enclosure and AR7715 internal side airflow duct kit for Catalyst and MDS
Server and networking applications
As the number of IT components within each rack enclosure continues to increase, so do the number of power and data cables. Schneider Electric offers a large selection of vertical and horizontal cable managers to address today’s cable routing demands. From toolless-install ring-style managers for server applications, to high-density finger-type managers for supporting patching and switches, Schneider Electric is a leader in innovative, application-driven solutions.

Our unique overhead cable management system turns the top of the enclosure into a cable tray, eliminating the need to use space under a raised floor and permitting better organization in nonraised floor environments.

Schneider Electric has a strong history supporting the server applications in data centers around the world. The innovative, toolless, snap-in accessories have become the benchmark for server cable management.

Check out “Cable Management for Enclosure and Rack Systems” for a comprehensive list of cable management options.

High-capacity cable managers can be used to support fiber and copper cable bundles.

1. AR7560A — High-capacity vertical cable manager for NetShelter SX 30 in. wide enclosures (AR3x5x), supports 190 to 250 CAT 6A/CAT 6 data cables per section and 190 CAT 6A (0.25 in. to 0.30 in. dia.) per channel section. Each kit covers one corner of the enclosure.
2. AR7581A — Hinged covers for AR7580A vertical cable managers.
3. Fiber slack spools for mounting to the vertical mounting rails of NetShelter SX 30 in. wide enclosures (AR3x5x).

Additional high-capacity vertical cable managers and covers available for specific enclosure heights, 42, 45, and 48U. Visit the website for a complete listing.

NetShelter SX cable management
Toolless accessories
Vertical cable management
Schneider Electric specializes in toolless-install accessories by the use of the zero-U channels located in the rear of every NetShelter SX enclosure.

1. Vertical 0U accessory channels
   - Allows toolless mounting of vertical rack PDUs
   - Toollessly mount vertical cable organizers
   - Additional vertical 0U accessory channels:
     - AR7502: Vertical 0U accessory channel, 42U, qty. 2
     - AR7502: Vertical 0U accessory channel, 45U, qty. 2
     - AR7572: Vertical 0U accessory channel, 48U, qty. 2
     - AR7511: Narrow vertical 0U accessory channel, 42U
     - AR7505: Vertical cable organizer, center rear mount

2. AR8442 — Vertical cable organizer, eight cable rings, zero U
   - Supports 35 to 55 CAT 6/CAT 6A data cables
   - Mounts toollessly on the vertical 0U accessory channel

3. AR8443A — Vertical fiber organizer
   - Installs toollessly
   - Takes up one bay of channel
   - Fiber spool only kit available (AR8444)

4. AR8457 — Data distribution 0U SX panel
   - Installs toollessly
   - Takes up one bay of channel
   - Toollessly mount up to four DDC cable heads, 24 ports for rack-to-rack connections

5. AR7710 — Cable containment brackets with rack PDU mounting
   - Low-profile vertical cable management
   - Support 60 to 90 CAT 6/CAT 6A data cables
   - Mount toollessly on the vertical 0U accessory channel

6. AR7711 — Zero-U accessory bracket
   - Mounts rack PDUs in rear-facing orientation
   - Supports third-party accessories in numerous mounting configurations
   - Mounts 1U or 2U patch panels or other networking accessories

7. AR8621 — Hook-and-loop cable managers, qty. 10
   - Mount toollessly on the vertical 0U accessory channel
   - Secure and bundle cables with hook-and-loop ties

8. AR7721, 22, 23 — Low-profile vertical cable managers, zero U
   - Supports up to 38 CAT 6A or 251 fiber cables
   - Mounts toollessly on the vertical 0U accessory channel

Visit the website for a complete listing.

NetShelter SX cable management

Horizontal cable managers

Finger-type horizontal cable managers
Cable managers for patching and crossover applications featuring smooth radius plastic fingers that protect the cable from kinking and binding. Hinged, snap-on covers provide a clean look and retain large cable bundles. These cable managers include hardware for double-sided configurations with two units.

- AR8008BLK/AR8016ABLK
- AR8129
- AR8429

Ring-type horizontal cable managers
Economical cable managers for patching applications featuring various configurations to meet specific needs.

- AR8425A — 1U horizontal cable manager with four rings
- AR8426A — 2U horizontal cable manager with four rings
- AR8428 — 2U horizontal cable manager with four rings and pass-through holes
- AR8427A — 2U horizontal cable manager with multiple rings and small cable retainers
- AR8113A — Cable management rings (qty. 5 large, 5 small)
- AR7707 — Cable management rings, 8 in. deep for 30 in. wide enclosures (AR3x5x), qty. 8

Horizontal cable management accessories
- AR8429 — 1U cable pass-through manager with brush strip
- AR8129 — Cable management arm for use with sliding shelves
- AR8008BLK — Horizontal cable side channel (18 in. to 30 in. adjustment) for routing cable front-to-back between the standard wide rack mounting rails or AR6030 and AR8428 horizontal cable managers
- AR8016ABLK — Horizontal cable side channel (10 in. to 18 in. adjustment) for routing cable front-to-back between the standard wide rack mounting rails or AR6030 and AR8428 horizontal cable managers
- AR7706 — Mounting rail brush strips for 30 in. wide enclosures (AR3x5x), qty. 6

NetShelter SX cable management

Overhead cable troughs and partitions

- NetShelter enclosures feature the ability to integrate a system of troughs and partitions for routing power and data cable across the top of the enclosures
- Troughs and partitions reduce the need for expensive suspended cable tray systems
- Troughs and partitions install tirelessly with snap-in tabs and have standard attachment points for cable ladder systems
- Enclosure troughs are shown here; for information on power and cooling troughs and partitions, see the Schneider Electric website

Power cable trough
- Supports power distribution cables
- Provides separation from data cables
- Data cables pass through underneath to front partitioned area
- AR8561 — Cable trough, 24 in. enclosures
- AR8571 — Cable trough, 30 in. enclosures

Pass-through data cable partition
- Partitions the top of the enclosure into cable routing areas
- Pass-through hole provides cable access into multiple cable areas
- AR8163ABLK — Pass-through data partition, 24 in. enclosures
- AR8173BLK — Pass-through data partition, 30 in. enclosures

Solid data cable partition
- Partitions the top of the enclosure into cable routing areas
- Solid face provides clean appearance at the front of the enclosure
- AR8162ABLK — Solid data partition, 24 in. enclosures
- AR8172BLK — Solid data partition, 30 in. enclosures

Check out Application Note #133: “Cable Trough, Ladder, and Partition Configuration Guide.”

Cable ladders and accessories
Cable ladders and attachment kits for routing power and data cabling overhead from rack to rack.

- Cable Ladder 12 in. (AR8165AKIT — 6 in. ladder with attach kit)
- AR8461
- AR8462
- AR8463
- AR8464
- AR8465
- AR8466
- AR8467
- AR8468
- AR8469
- AR8470


Shelving
Fixed and sliding shelves to enable the mounting of tower units, monitors, and other equipment into the rack environment.

- **AR8105BLK** — Fixed shelf 50 lb.
- **AR8122BLK** — Fixed shelf 250 lb.
- **AR8123BLK** — Sliding shelf 100 lb.
- **AR8128BLK** — Sliding shelf 200 lb.
- **AR8126ABLK** — 17 in. sliding keyboard shelf
- **AR8127BLK** — 19 in. sliding rotating keyboard shelf
- **AR8006A** — Misc. equipment support rails for 24 in. wide enclosure

Bolt-down and stabilization
Stabilization plates and hardware to prevent tip-over in stand-alone rack applications and meet specific anchoring requirements.

- **AR7700** — NetShelter SX stabilization plate to prevent tipping when sliding out equipment
- **AR7701 & AR7701-S** — NetShelter SX bolt-down kit — meets IBC seismic requirements for moderate seismic zones
- **AR7305A** — NetShelter SX pass-through side panel 42U x 42 in. deep
- **AR7313** — NetShelter SX pass-through side panel 42U x 47.5 in. deep
- **AR7315** — NetShelter SX pass-through side panel 45U x 42 in. deep
- **AR7316** — NetShelter SX pass-through side panel 45U x 47.5 in. deep
- **AR7375** — NetShelter SX pass-through side panel 48U x 42 in. deep
- **AR7379** — NetShelter SX pass-through side panel 48U x 47.5 in. deep
- **AR7252** — Networking roof for high-density cabling 30 in. wide x 42 in. deep
- **AR7716** — Networking roof for high-density cabling 30 in. wide x 42 in. deep
- **AR7209** — Open roof support bridge for overhead troughs and partitions
- **AR7305A** — NetShelter AV enclosure top mount conduit access adapter
- **AR7215** — NetShelter AV enclosure top mount conduit access adapter
- **AR7309** — Open roof support bridge for overhead troughs and partitions
- **AR7313** — NetShelter SX pass-through side panel 42U x 42 in. deep
- **AR7315** — NetShelter SX pass-through side panel 42U x 47.5 in. deep
- **AR7316** — NetShelter SX pass-through side panel 45U x 42 in. deep
- **AR7318** — NetShelter SX pass-through side panel 45U x 47.5 in. deep
- **AR7375** — NetShelter SX pass-through side panel 48U x 42 in. deep
- **AR7379** — NetShelter SX pass-through side panel 48U x 47.5 in. deep
- **AR7305A** — NetShelter AV enclosure top mount conduit access adapter
- **AR7209** — Open roof support bridge for overhead troughs and partitions
- **AR7309** — Open roof support bridge for overhead troughs and partitions
- **ACF501** — Roof fan for 24 in. wide x 42 in. deep enclosures, 120 Vac
- **ACF503** — Roof fan for 24 in. wide x 42 in. deep enclosures, 208 – 230 Vac
- **ACF504** — Roof fan for 30 in. wide x 42 in. deep enclosures, 120 Vac
- **ACF506** — Roof fan for 30 in. wide x 42 in. deep enclosures, 208 – 230 Vac
- **ACF507** — Roof fan for 30 in. wide x 42 in. deep enclosures, 115 Vac
- **AR8132A** — Combination lock handle for NetShelter SX enclosures, qty. 2

Hardware kits
Available for additional hardware needs or to accommodate equipment mounted in varying mounting options.

- **AR8100** — M6 cage nuts and screws, qty. 32
- **AR8400** — #12-24 screws, qty. 100
- **AR8005** — #10-32 cage nuts, qty. 36

Rack components
Replacement doors, side panels, roofs
Standard doors, side panels, and roofs are available for all enclosure sizes. Check the enclosure product page options tab for a list of these rack components.

Specialty roofs, side panels, and accessories
- **AR7252** — Networking roof for high-density cabling 30 in. wide x 42 in. deep
- **AR7716** — Networking roof for high-density cabling 30 in. wide x 42 in. deep
- **AR7209** — Open roof support bridge for overhead troughs and partitions
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- **AR8132A** — Combination lock handle for NetShelter SX enclosures, qty. 2

Rails
Mounting rails
Vertical EIA rail mounting kits for different widths and depths.

- **AR7510** — 23 in. EIA mounting rails for 42U x 30 in. wide enclosures

Recessed rail kits
Intermediate mounting rails for supporting shallow depth equipment.

- **AR7503** — 42U x 24 in. wide
- **AR7504** — 48U x 24 in. wide
- **AR7508** — 42U x 30 in. wide
- **AR7578** — 48U x 30 in. wide
**Open frame racks**

**NetShelter two- and four-post open frame racks**

The NetShelter two- and four-post open frame racks offer a quality solution for the economical installation of rack-mountable equipment, where security at the individual rack level is not required. Open frame racks provide unobstructed airflow and fast, easy access to installed equipment, and can be paired with high-density vertical cable managers for maximum cable volume. The two-post rack offers cost-conscious customers a simple solution for supporting networking equipment and patching applications. The four-post rack offers more strength and features for supporting servers and networking equipment. Recent improvements to the four-post racks increase cable management options and flexibility.

**Performance vertical cable managers**

**AR8444** — Cable slack spools
- Toollessly mounts on back panel
- Provides smooth radius support for cable slack

**AR8621** — Toolless hook-and-loop cable managers
- 18 in. straps for large data cable bundles
- Various mounting positions on back panel of vertical cable managers

**AR8680** — Cable divider/organizer
- For creating multiple cable pathways within vertical cable managers
- Includes tie-off features for securing cabling using toolless hook-and-loop cable managers (AR8621)

**Performance vertical cable managers: Accessories and applications**

**AR201** — two-post rack
- Self-squaring design
- 45U mounting spaces (84 in. tall)
- Black finish
- 6061-T6 structural grade aluminum
- Weight capacity (static load) 750 lb.

**AR203A/AR204A** — four-post rack
- Threaded #12-24 holes (AR204A)
- Square holes for cage nuts and server mounts (AR203A)
- New design for easier assembly
- Steel construction
- 44U mounting spaces (84 in. tall)
- Black finish
- Multiple toolless mounting points for hook-and-loop fasteners (AR8621) or toolless cable management rings (AR7540)
- Multiposition rack PDU mounting bracket (AR8652)
- Reversible stabilization plates
- Grounding inserts
- Weight capacity (static load) 2,000 lb.

**VDIM33174** — 4U overhead patch frame
- 19 in. frame
- Weight capacity up to 33 lb.
- Attaches to cable ladder and wire basket trays for network patching overhead row

**Vertical cable managers**

- Preassembled, ready for installation
- Fits two- and four-post open frame racks
- Slam-to-latch full length door opens to left or right
- Cable management backplate or midspan bracket for toollessly mounting cable management accessories and rack PDUs
- AR8615 — 6 in. wide, 84 in. height, single-sided
- AR8625 — 6 in. wide, 84 in. height, double-sided
- AR8635 — 10 in. wide, 84 in. height, single-sided
- AR8645 — 10 in. wide, 84 in. height, double-sided
- AR8665 — 12 in. wide, 84 in. height, single-sided
- AR8675 — 12 in. wide, 84 in. height, double-sided

**Four-post rack accessories**

**AR8652** — Rack PDU mounting bracket
- Mounts on sides as a spacer when using vertical cable managers between two racks
- Mounts on face of vertical rails, perpendicular for single rack applications
- Designed to toollessly mount Schneider Electric rack PDUs

**AR8450A** — Trough and partition adapter
- Provides mounting locations for overhead trough and partition cable management system

**Performance vertical cable manager: Accessories and applications**

**AR8652 mounted on right rear corner of four-post rack with rack PDU**
NetShelter CX enclosure

Soundproofed “server room in a box,” which allows for IT deployment wherever and whenever it is needed.

Cleary deploy servers and networking equipment in a quiet, ventilated, secure, and office-ready cabinet. The NetShelter CX is a cost-effective alternative for when there is no space, budget, or time for a traditional server room or wiring closet.

**Standard features**

Floor space requirements: Enclosures are designed to be placed directly against a wall. Clearance of 8 inches on both sides of the cabinet is essential for normal operation.

Cooling system: One ultra-low-noise exhaust fan module, 1.2 kW maximum recommended total thermal load (or 4,100 BTU/hr). One module with AR4018A, two with AR4024A, and three with AR4038A.

Noise reduction: 18.5 dB broadband noise reduction, measured 39 in. from the front of the enclosure. (HP* and Dell® servers were used as noise source in noise reduction measurements).

Mobility:
- Four heavy-duty castor-type wheels<br>- Front wheels have 360° rotation for maneuverability — rear wheels have fixed front-to-back motion for stability.

Rear and side access:
- Detachable rear side panels, left and right, for equipment installation and maintenance access.
- Detachable rear fan modules provide completely open rear rack access.

Grounding: All equipment installed within a NetShelter CX should have conventional grounding via power cables but, unlike conventional metal-case cabinets, the NetShelter CX has no requirement for additional grounding in the form of ground strapping or pipe earthing, etc. The enclosure shell is constructed entirely from nonconductive materials, and the rack is completely isolated from outside contact.

Door locking: Key-operated lock.

NetShelter CX Mini enclosure

The CX “Mini” is a purpose-built tower server enclosure aimed at small, non-IT spaces such as home office, school, AV, small office, and remote office environments.

**NetShelter CX accessories — Mini**

- AR4000MV/12U — 12U vertical mounting rail kit for NetShelter CX Mini. Converts basic enclosure to a 12U rack enclosure.
- AR4000MV-FR — Fixed rail kit for NetShelter CX Mini provides two horizontal mounting ledges for equipment placement. Must be used with AR4000MV12U vertical mounting rail kit.
- AR4601 — Bolt-down kit — two L-shaped brackets secure the enclosure to the floor.

NetShelter CX Mini features

- **Ventilation system** — The ultra-low-noise exhaust fan module has a 800 W maximum recommended total thermal load.
- **Cable management** — Two cable ports allow passage into and out of the enclosure for power and networking cables.
- **Mobility** — Four office-style castors.
- **Access** — A detachable and lockable rear panel ensures security and quick access to the equipment inside.
- **Integrated power strip** — Includes three IEC outlets and two sets of three regional-specific equipment cords. The power strip is removable to allow installation through the rear, without power-off equipment.

NetShelter CX accessories — 18, 24, 38U

- **AR4601** — Bolt-down kit — two L-shaped brackets secure the enclosure to the floor.
- **AR4602** — Allows use of NetShelter SX handles including combination lock handles (AR8132A) and NetBotz Rack Access PX-HID (AP9361).
- **AR4701** — Dust filter pack for 38U. Includes filter pack for 18 and 24U.
- **AR4703** — Air intake holes.
- **AR4702** — Air outlet holes.
- **AR4703** — Fan booster increases the CX thermal capacity by up to 40%.

NetShelter seismic enclosure

Enclosure designed for essential facilities and carrier applications in seismic environments. Meets NEBS test standard GR-63-CORE Zone 4 at 1,000 lb. equipment load.

- **AR106** — 6U x 24 in. wide x 16 in. deep enclosure with perforated door.
- **AR109** — 9U x 24 in. wide x 16 in. deep enclosure with perforated door.
- **AR112** — 12U x 24 in. wide x 20 in. deep enclosure with perforated door.
- **AR8213** — Roof fan tray 120V as an accessory for the AR106, AR109, AR112 only.

NetShelter WX wall-mount enclosure

Support remote patching and networking applications in a convenient wall-mount rack with easy-install rear-hinged section and reversible doors.

- **AR100** — 13U x 23 in. wide x 25 in. deep, wall-mount enclosure with vented sides and glass front door.
- **AR100HD** — 13U x 23 in. wide x 25 in. deep, wall-mount enclosure with vented sides and full ventilated front door.
- **AR8206BLK** — Roof fan tray 120V.
- **AR8207BLK** — Roof fan tray 208/230 V.
- **AR8359** — Caster kit for NetShelter WX.
- **AR8355** — Ventilation plates for NetShelter WX.

**Specialty enclosures**

- **AR2145BLK** — 42U x 24 in. wide x 42 in. deep, NEBS enclosure, with sides.
- **AR2145BLK** — 42U x 24 in. wide x 42 in. deep, NEBS enclosure, without sides.
Rack cooling and airflow management

Air sealing
Covers open rack space to prevent air recirculation and reduce bypass airflow to improve cooling efficiency.

• AR8136BLK — 1U toolless snap-in blanking panel, 10 pk
• AR8136BLK200 — 1U toolless snap-in blanking panel, 200 pk
• AR8108BLK — 1U standard metal blanking panel, 2 pk
• AR8110BLK — 1U, 2U, 4U, 8U, blanking panel kit
• AR7708 — NetShelter SX Air Recirculation Prevention Kit for closing gaps and pass-through holes between side panels and equipment mounting rails
• AR7731 — NetShelter SX external air sealing kit

KoldLok® raised floor grommets
Seal a variety of cutouts in a raised floor environment to reduce cold air leakage and improve cooling efficiency.

• Cover length of floor tile, 10 pk

Side airflow cooling
Support cooling for small and large networking switches mounted within networking enclosures.

• AR7742 (42U) / AR7747 (48U) — Side airflow solution for Cisco Nexus 7019 attaches to sides of 47.5 in. deep enclosures
• AR7715 — Side airflow duct kit mounts inside 30 in. wide enclosures for Cisco 6509, 6513, 9509, 9513, and 9500 series switches
• AR7725 — Side airflow duct kit mounts inside 30 in. wide enclosures for Cisco 7009 series switches
• System consists of two duct assemblies that act as diverters, utilizing the existing fan power of the switch
• Systems of baffles are located throughout the enclosure to mitigate exhaust air from recirculating back into the air intake

Global power densities are increasing and becoming more unpredictable. Whether deploying rack power distribution in a wiring closet, server room, or data center, Schneider Electric offers a consistent way to meet a variety of power density applications up to 22 kW per strip.

Schneider Electric Rack PDUs have sufficient power and receptacle outputs to meet high kW loads in a minimal amount of space. Their ease of installation accelerates speed of deployment and reduces installation costs. With advanced rack power distribution, Schneider Electric offers real-time remote load monitoring of connected equipment and individual outlet power control for remote power recycling.

Manage power at the rack level with pinpoint control

• Basic Rack PDU — Entry-level power distribution for rack-mount equipment
• Metered Rack PDU — Advanced power distribution provides real-time remote monitoring of connected loads
• Switched Rack PDU — Premium power distribution allows remote control of individual outlet and monitoring of aggregate current consumption
• Metered-by-Outlet — Provides real-time remote monitoring of each individual outlet
• Rack Automatic Transfer Switch — Provides redundant power to single-corded equipment

Rack power distribution

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• Rack Automatic Transfer Switch — Provides redundant power to single-corded equipment

Rack PDU local display

Load indicator LEDs

Serial connection: local configuration and out-of-band management

User interactive display for local access

Environmental monitoring port for external temperature/humidity probe

For a comprehensive list of Rack PDUs, download the latest pocket guide.
Optimize rack space. Maximize system visibility.

Rack LCD Consoles include a keyboard, mouse, 17 in./19 in. LCD console, and optional integrated 8/16 port analog KVM switch (17 in. model only), all in a compact 1U design. This compact design allows a KVM switch to be mounted in the rear of the Rack LCD Console or eliminate the need for a separate KVM switch altogether by choosing a Rack LCD Console with integrated 8/16 port analog KVM switch. The console is easily installed and minimizes support and maintenance costs, ensuring lower cost of ownership. The ultra-thin LCD screen, touch pad technology, and easy-to-install single user rack-mount kit combine to form a high-quality, streamlined solution built for server management. The Rack LCD Consoles can be used in a variety of IT environments, from computer rooms to large data centers.

- Ultra-thin 17 in. or 19 in. LCD monitor
- Integrated keyboard with number pad
- USB port for external media
- Space-saving 1U design
- Touch pad mouse
- Easy to install

Access your servers across the room or across the world.

Schneider Electric Rack KVM switches empower IT administrators through both local and remote POST- and BIOS-level access and control of connected servers. Schneider Electric Analog, CAT-5 Analog, and IP KVM switches help reduce total cost of ownership — minimizing space, hardware, electricity, and cabling by leveraging just one keyboard, monitor, and mouse for multiple servers. Improve return on investment and flexibility through enterprise-level scalability with centralized management. IT infrastructure management in data centers, computer rooms, and remote branch offices is now possible with greater control and peace of mind with Rack KVM switches.

LCD monitors and KVM switches

NetBotz security and environmental monitoring

Security and environmental monitoring for network closets to data centers

NetBotz

Surveillance:
- Leverage NetBotz®, Pelco® IP and CCTV camera technology to monitor IT assets remotely

Management capabilities:
- Alarming allows alerts, multiple notification methods, scheduling, graph and video attachments, and escalation
- StruureWare Central available for centralized monitoring of multiple appliances

Environmental monitoring:
- Wide range of sensor support to monitor the health of your IT assets
  - Temperature, humidity, leak, door, smoke, vibration, dew point, airflow, dry contact, 4 – 20 mA, and 0 – 5 V

Access control:
- Control and manage access privileges for NetShelter SX enclosures over the network

High-level security option for NetShelter SX

NetBotz rack access PX — HID system APX61
- Configure individual HID proximity cards for access or schedule access to equipment for maintenance purposes
- Control and manage rack access privileges from a Web browser
- Perform audit trails on rack access
- Receive alarm notification when the rack is in a compromised security state

NetBotz rack access pod 170 — NBPD0171
- Rack access pod connects via A-Link and mounts in the rack basement, minimizing space usage
- Rack access solution scales easily and can be used with any NetShelter SX brand enclosures

LCD Console with Integrated KVM Switch SKU

17 in. Rack LCD Console with Integrated 8-Port KVM Switch
- AP5508
17 in. Rack LCD Console with Integrated 16-Port KVM Switch
- AP5516
KVM USB Cable, 12 ft.
- AP5501
KVM USB Cable, 25 ft.
- AP5503

KVM Switches with CAT-5 Type Connection SKU

32-Port Digital Enterprise IP KVM with Virtual Media, Two Remote Users
- KVM128P
16-Port Digital Enterprise IP KVM with Virtual Media, Two Remote Users
- KVM81P
16-Port Digital KVM with Virtual Media, One Remote User
- KVM11HP
16-Port Analog Enterprise KVM with Virtual Media, Two Local Users
- KVM221A
16-Port Analog KVM, One Local User
- KVM11A
8-Port Analog KVM, One Local User
- KVM018A
KVM USB Server Module
- KVM-USB
KVM PS2 Server Module
- KVM-PS2
KVM USB Server Module with Virtual Media
- KVM-USBMV
KVM PS2 Server Module with Virtual Media and DAC Support
- KVM-PS2MV
KVM Serial Server Module
- KVM- SERIAL
KVM to Rack PDU Power Management Cable
- AP5561
KVM 1U Bracket for Rear Mount Behind Rack LCD Console
- KVM-LCDMOUNT
KVM Access Software License Upgrade to Enterprise (1,024 Nodes)
- SDBVM1024N

Cables SKU

KVM USB Cable
- AP5253
KVM PS2 Cable
- AP5250
KVM Daisy-chain Cable
- AP5263

KVM Switches with CAT-5 Type Connection SKU

8-Port Analog KVM
- AP5011
16-Port Analog KVM
- AP5012

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## NetShelter Enclosure and Rack Accessory Compatibility Chart

### Vertical Cable Management

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR7502</td>
<td>NetShelter SX 42U Vertical PDU Mount and Cable Organizer</td>
</tr>
<tr>
<td>AR7505</td>
<td>Rear Center Mount Cable Two for NetShelter SX</td>
</tr>
<tr>
<td>AR7511</td>
<td>Narrow Vertical Cable Organizer, NetShelter SX, 42U</td>
</tr>
<tr>
<td>AR7502</td>
<td>Vertical Cable Organizer, NetShelter SX, 41U</td>
</tr>
<tr>
<td>AR7572</td>
<td>NetShelter SX 45U Vertical PDU Mount and Cable Organizer</td>
</tr>
<tr>
<td>AR7580A</td>
<td>Vertical Cable Manager for NetShelter SX 750 mm Wide 45U</td>
</tr>
<tr>
<td>AR7581A</td>
<td>Hinged Covers for NetShelter SX 750 mm Wide 45U Vertical Cable Manager (6)</td>
</tr>
<tr>
<td>AR7585</td>
<td>Vertical Cable Manager for NetShelter SX 750 mm Wide 45U</td>
</tr>
<tr>
<td>AR7586</td>
<td>Hinged Covers for NetShelter SX 750 mm Wide 45U Vertical Cable Manager (6)</td>
</tr>
<tr>
<td>AR7588</td>
<td>Vertical Cable Manager for NetShelter SX 750 mm Wide 45U</td>
</tr>
<tr>
<td>AR7589</td>
<td>Hinged Covers for NetShelter SX 750 mm Wide 45U Vertical Cable Manager (6)</td>
</tr>
<tr>
<td>AR7706</td>
<td>NetShelter SX 750 mm Mounting Rail Brush Strips</td>
</tr>
<tr>
<td>AR7721</td>
<td>Vertical Cable Manager for NetShelter SX 830 mm Wide 42U</td>
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<tr>
<td>AR7722</td>
<td>Vertical Cable Manager for NetShelter SX 830 mm Wide 41U</td>
</tr>
<tr>
<td>AR7723</td>
<td>Vertical Cable Manager for NetShelter SX 830 mm Wide 41U</td>
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<tr>
<td>AR8442</td>
<td>Vertical Cable Organizer for NetShelter SX I/O Channel</td>
</tr>
<tr>
<td>AR8443A</td>
<td>Vertical Floor Organizer</td>
</tr>
<tr>
<td>AR8444</td>
<td>Fiber Spots</td>
</tr>
<tr>
<td>AR8008BLK</td>
<td>Side Channel Cable Trough</td>
</tr>
<tr>
<td>AR8016BLK</td>
<td>NetShelter SX Side Channel Cable Trough</td>
</tr>
</tbody>
</table>

### Rack Cooling SKUs

<table>
<thead>
<tr>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR7508</td>
<td>NetShelter SX Air Recirculation Prevention Kit</td>
</tr>
<tr>
<td>ACF001</td>
<td>RM Air Distribution Unit 120 V</td>
</tr>
<tr>
<td>ACF002</td>
<td>RM Air Distribution Unit 208/230 V</td>
</tr>
<tr>
<td>ACF003</td>
<td>RM Air Distribution Unit 100 V</td>
</tr>
<tr>
<td>ACF002</td>
<td>NetShelter SX Roof Fan Tray 115 VAC</td>
</tr>
<tr>
<td>ACF003</td>
<td>NetShelter SX Roof Fan Tray 115 VAC</td>
</tr>
<tr>
<td>ACF501</td>
<td>NetShelter SX Door Fan Tray 208/230 V AC</td>
</tr>
<tr>
<td>ACF502</td>
<td>NetShelter SX Door Fan Tray 208/230 V AC</td>
</tr>
<tr>
<td>ACF501</td>
<td>NetShelter SX Door Fan Tray 750 mm VAC</td>
</tr>
<tr>
<td>ACF502</td>
<td>NetShelter SX Door Fan Tray 750 mm VAC</td>
</tr>
<tr>
<td>ACF503</td>
<td>NetShelter SX Door Fan Tray 750 mm VAC</td>
</tr>
<tr>
<td>AR7715</td>
<td>NetShelter SX Internal Side Air Flow Duct Kit</td>
</tr>
<tr>
<td>AR7725</td>
<td>NetShelter SX Internal Side Air Flow Duct Kit for Nexus 7000</td>
</tr>
<tr>
<td>AR7742</td>
<td>NetShelter SX 42U Nexus 7018 Duct Kit</td>
</tr>
<tr>
<td>AR7747</td>
<td>NetShelter SX 48U Nexus 7018 Duct Kit</td>
</tr>
</tbody>
</table>

For a comprehensive list of compatible accessories, visit the www.schneider-electric.com product pages and view the "Options" tab to search through the available options. Or download the latest compatibility chart.
Online resources

Help me choose
Visit Rack PDU selector

See for myself
Visit Rack PDU test-drive sites

NetShelter SX multimedia product demo
Receive a guided tour of the NetShelter SX enclosures — at your convenience. Free online multimedia demo walks you through ease-of-use, power distribution, cooling, and cable management benefits. Click here.

Additional resources
Click here to download White Paper #44:
“Improving Rack Cooling Performance Using Airflow Management Blanking Panels”

Click here to download Application Note #133:
“Cable, Trough, Ladder, and Partition Configuration Guide”

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