NEXSAN E-Series™
E48-E48X and E60-E60X Quick Start

N∃XSAN

This Quick Start Guide is intended to help you quickly get your Nexsan Storage System and Nexsan Storage Expansion unpacked, mounted, and connected. For detailed instructions, refer to your *Installation Guide* and the *Nexsan High-Density Storage User Guide*, available at https://helper.nexsansupport.com/esr_downloads.html.

NOTE: If you are installing a storage expansion as part of a Unity Storage System, refer to the Unity *Quick Start Guide* for information about installation order, cabling, and connectivity.

Required tools and equipment

To perform the installation, you will need the following tools and equipment:

- a suitable equipment rack (1000mm deep for E48, 1200mm deep for E60) with sufficient load capacity to hold the E-Series enclosure.
- PH2 and PZ2 screwdrivers.

For a Nexsan E48 and E60 Storage Systems, you will also need:

- enough CAT5e or CAT6 Ethernet cable to connect the system to the local area network (LAN).
- enough suitable cable to connect the enclosure to the storage area network (SAN).

Before you begin

Before installing the Nexsan Storage System, prepare the installation site and rack. Each enclosure uses 4U of rack space. The Nexsan E48 and E48X and their variants are designed to run from a 100–240V power supply. The Nexsan E60 and E60X and their variants are designed to run from a 200–240V power supply, due to their high peak power loading.
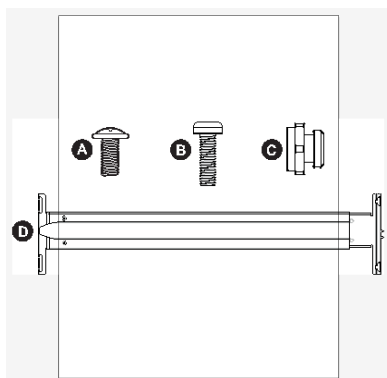
⚠️ **CAUTION:**

- Ensure that the ambient temperature at the installation is between 10°C (50°F) and 35°C (95°F).
- Always fully stabilize racks with wall anchors or stabilizing legs, or both, before mounting the Nexsan storage system or any other components on the rack.
- Place the rack so that there is unrestricted air flow at both the front and rear of the enclosure.
- Ensure that the floor beneath the mounting rack has enough load-bearing capacity to support the rack and all mounted components.
- Ensure that the power drawn by the Nexsan Storage System does not overload the available electrical supply.

1 Unpacking the system

1. Remove the outer packaging sleeve.
2. Remove the accessory box and disk boxes.
3. Open the accessory box and ensure that all expected contents are present:
   - Rack mounting hardware package:

   - **A** ten (10) screws for securing the rails to the rack (PH Flanged 10-32 UNF 1/2").
   - **B** four (4) screws for securing the front of the enclosure to the rack (PZ Pan Head 10-32 UNF 7/8").
   - **C** ten (10) rail nuts.
   - **D** two (2) rail assemblies, one left and one right.
   - Two (2) power cables.
   - One (1) disposable ESD strap.
   - For Nexsan E48X and E60X Storage Expansions only: Four (4) SAS cables for attaching the storage expansion to the main storage system.
   - Any additional items that may have been ordered, such as SAS cables or Fibre Channel cables.
4. Open the disk box and make sure that the correct number of disk drives is included.

5 With the help of a second person, carefully lift the enclosure out of the box.

> **CAUTION:**
> - The Nexsan Storage System is heavy and requires two people to lift it and slide it onto the mounting rails. Do NOT attempt to mount the system onto the rails by yourself.
> - When removing the system from the packaging, DO NOT lift the enclosure by any plastic parts or module handles on the chassis. Lift the enclosure ONLY by the bottom edges of the chassis.

NOTE: The packaging that the system ships in is reusable and should be retained for future re-shipment.

2 Preparing the system

Remove the PSUs from the Nexsan Storage System or Nexsan Storage Expansion.
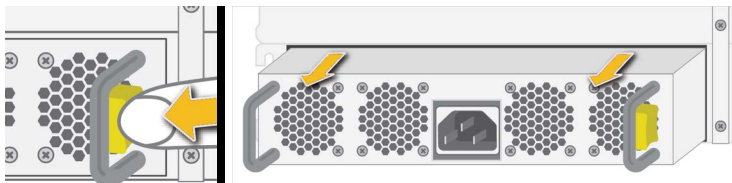
> **CAUTION:** Handle the PSUs and RAID Controllers/Expansion Controllers ONLY by the handles and outer coverings. DO NOT touch any internal components or connectors. Doing so may harm the electronics inside.

Removing the power supply units (PSUs)

1 Press the spring lock tab inward.

2 Carefully remove the PSU from the enclosure. Support the weight of the PSU with your free hand while removing it.

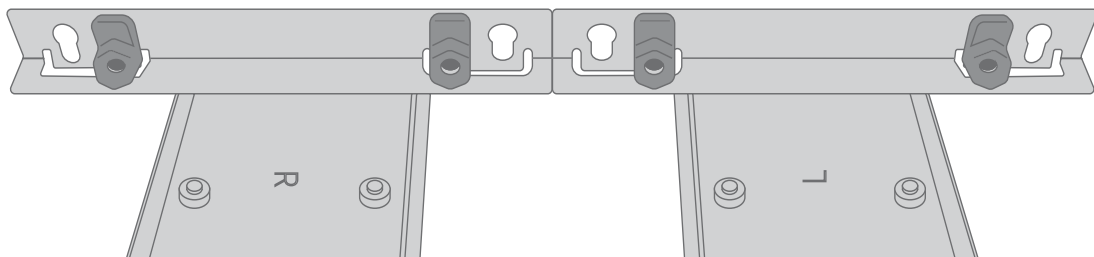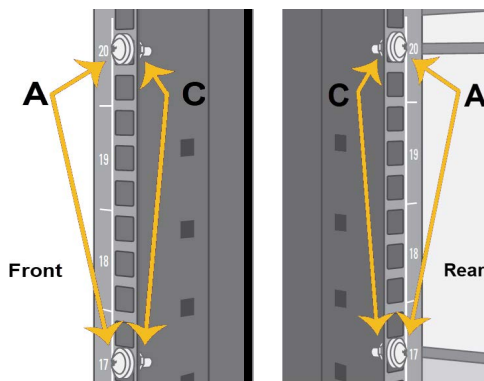> **NOTE:** Due to the close fit, a firm steady pressure is required to remove the PSU.

3 Attaching the rails to the rack

NOTE: It is good practice to install equipment in a rack from the bottom up.

NOTE: The rails are labeled "L" (left) and "R" (right) on the outside surfaces. When installing them into the rack, be sure to place them on the correct sides and with the tapered end of the rail facing forward.

1 Attach the rack nuts to the front of the rack on both sides. The rack nuts should be mounted on the inside of the rack.

2 Attach the rack nuts to the rear of the rack on both sides.

3 Extend the rail slides to fit your rack. The rails can be adjusted to between 26" (66cm) and 36" (91.4cm).

4 For square-hole racks only: For each of the four plastic brackets, place the bracket nut into the bracket and then snap the bracket into the appropriate place on the front of the mounting rail, as shown:
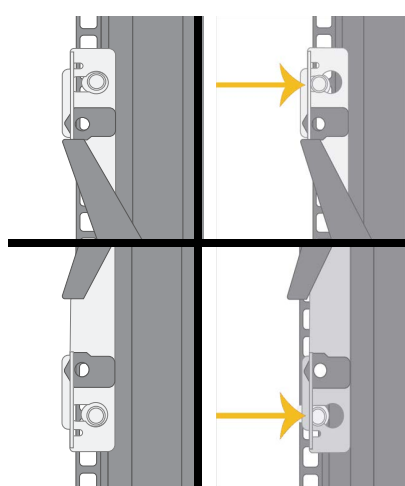
5 Attach the front slide of the left rail to the rack nuts by sliding the large part of the mounting hole over the rack nut and then pressing outward to seat the nut in the small part of the mounting hole.

6 Repeat Step 5 for the rear of the left rail.

7 Repeat Step 5 and Step 6 for the right rail.

> **NOTE:** The rails may seem loose before the enclosure is mounted on them. This is normal. Once the enclosure is on the rails, the rails are stabilized by the enclosure.
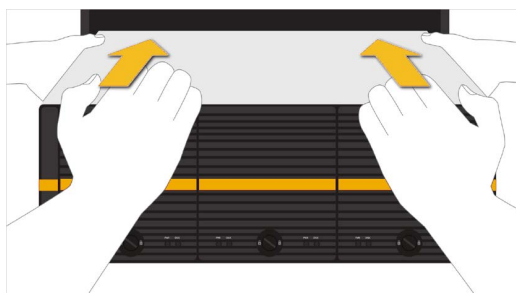

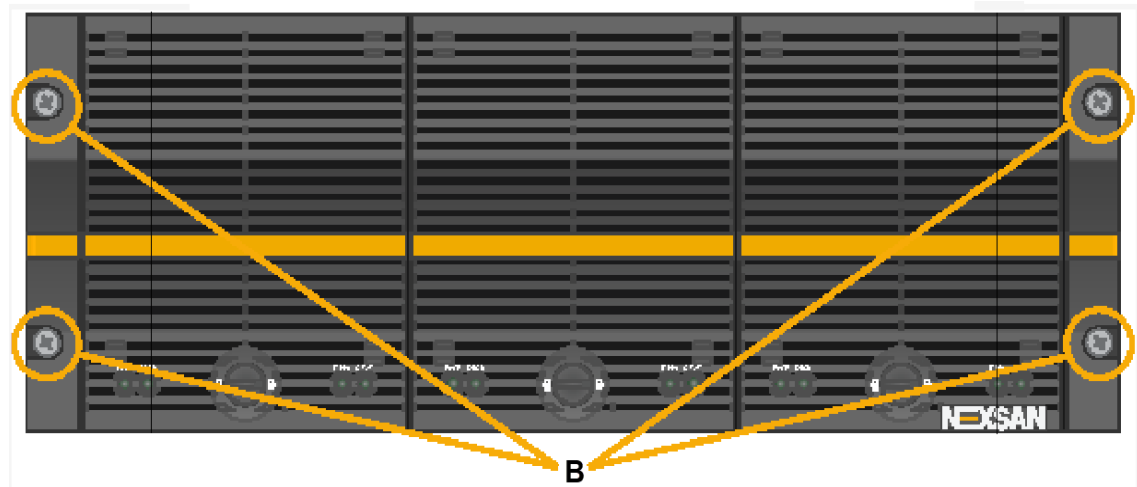## 4 Mounting the enclosure on a rack

⚠ **CAUTION:**
- Nexsan Storage Systems are heavy and require two people to lift and slide onto the mounting rails. Do NOT attempt to mount the system onto the rails by yourself.
- When removing the system from the packaging, DO NOT lift the enclosure by any plastic parts or module handles on the chassis. Lift the enclosure ONLY by the bottom edges of the chassis.

1 With the help of a second person, carefully lift the enclosure and slide it onto the mounting rails so that the mounting ears sit against the rack face.

2 Using the bolts supplied, tightly bolt the front of the enclosure to the rack.

B

⚠ **CAUTION:** Always fully secure all rack-mounting hardware when installing any Nexsan storage enclosure in a rack. Insufficient rack-mount support may allow the enclosure to fall onto other rack-mounted hardware or onto the floor, potentially damaging equipment or causing injury to nearby personnel.

5 Replacing the PSUs

CAUTION: Handle the PSUs and RAID Controllers/Expansion Controllers ONLY by the handles and outer coverings. DO NOT touch any internal components or connectors. Doing so may harm the electronics inside.

1 Replace the two Power Supply Units (PSUs), sliding them into the PSU slots until the lock tab clicks.

   NOTE: Make sure that the PSU is right side up. The spring lock tab should be on the right.

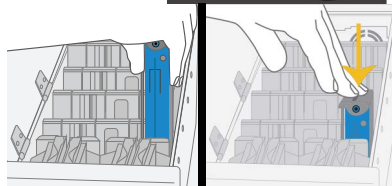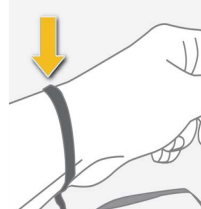   **NOTE:** DO NOT connect the power cords to the PSUs at this time.

6 Loading disk drives

CAUTION:

- **Only open ONE drawer at a time.** Close and lock each drawer before opening another one. Failure to do so may overbalance the rack, causing equipment damage or injury to personnel.
- Do not lean on or place any heavy object on an open drive drawer. Doing so may damage the drawer slide mechanism or overbalance the rack.
- Before opening any drive drawers on the Nexsan storage enclosure, **be sure that the internal temperature is 10°C (50°F) or above**. If the enclosure has been shipped or stored in low temperatures, allow the system to come to room temperature to prevent component damage.

- Computer components and disk drives are sensitive to electrostatic discharge (ESD). Be sure to **ground any electrostatic charge from your person** before touching components with your hands or tools. While installing the drives, **use the included anti-static wrist-strap**.

1 Ground any electrostatic charge from your person by touching a metal part of the rack or any properly grounded conductive object (such as the ground point at an anti-static workstation).

2 Attach the clip end of the anti-static wrist strap to the rack's ESD grounding pin or to any bare metal part of the rack. Secure the loop end around your wrist.

3 Turn the lock counter-clockwise to unlock the drawer.

4 Carefully slide the drawer all the way out.

5 Open the drive drawer lid.

6 Starting at the front of the drawer, and using the drive guides to help you orient the disks, carefully load each disk drive into a drive slot. Make sure that each disk is fully seated.
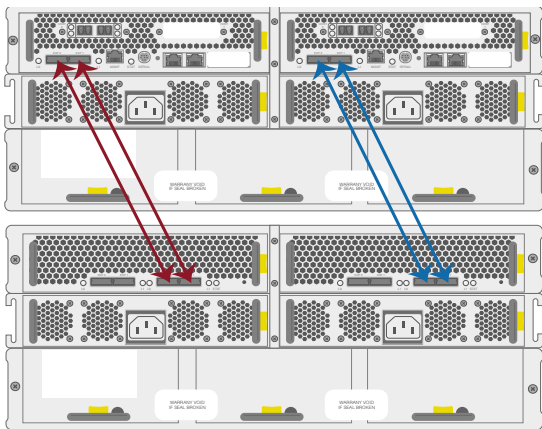

CAUTION: ALWAYS load disk drives in rows of four. Do NOT leave large gaps between disk drives as this decreases cooling efficiency and may result in some disk drives overheating.
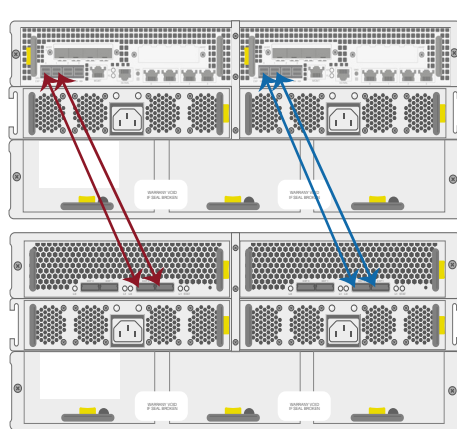
NOTE: You can mix SAS and SATA drives, and drives with different speeds in the same drawer, but it is recommended that the SAS/faster drives are loaded toward the front of the drawer.

7 Close the drive drawer lid.

8 Carefully slide the drawer back into the enclosure, making sure that it is flush with the rest of the front panel.

9 Turn the lock clockwise to lock the drawer.

10 Repeat Step 3 through Step 9 for the other two drive drawers.

7 Attaching cables to the storage expansion (if applicable)

Nexsan E48V/VT/P or E60 Storage System (shown on top)   *Nexsan E48P or E60 Storage System (shown on top)*
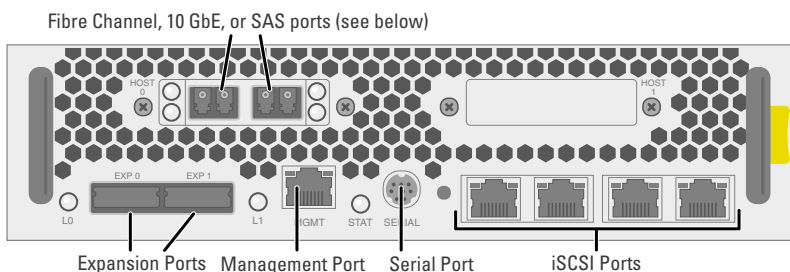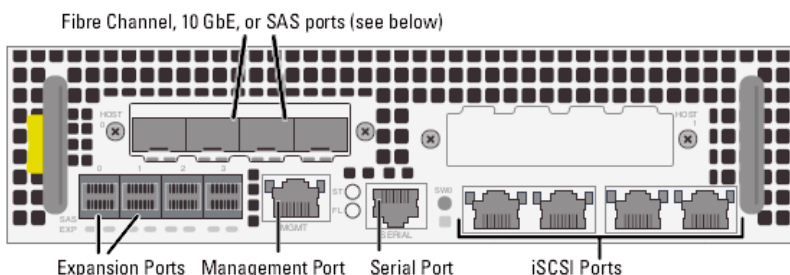

1. Connecting to E48V/VT or E60: Insert one mini-SAS cable into each expansion port on the first RAID Controller of the main storage system (labeled EXP0 and EXP1).
   Connecting to E48P or E60P: Insert one mini-SAS HD cable into each of the left-most expansion ports (labeled SAS EXP 0 and 1) on the first RAID Controller of the main storage system.
2. Insert the other ends of the SAS cables into the **EXP IN 0** and **1** expansion ports on the left Expansion Controller in the Nexsan Storage Expansion.
3. Repeat Step 1 and Step 2 for the second RAID Controller and Expansion Controller.

> ⚠️ **CAUTION:** If you are installing two storage expansions onto a single Nexsan Storage System, or if you need to "hot-add" the storage expansion to a running Nexsan Storage System, you MUST follow the instructions under "Attach a Nexsan Storage Expansion to a Nexsan Storage System" in the *Nexsan E48X and E60X Installation Guide*, at https://helper.nexsansupport.com/esr_downloads.html.

Connecting Nexsan E48V/VT/P or E60

Connect all necessary communication cables (Fibre Channel/10GbE iSCSI/SAS, Ethernet, expansion, serial) to the appropriate connectors on the RAID Controller. For detailed instructions, see the *Nexsan E48 and E60 Installation Guide*.
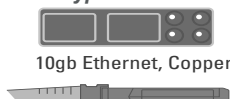
E48/V/VT or E60

Fibre Channel, 10 GbE, or SAS ports (see below)

Expansion Ports   Management Port   Serial Port   iSCSI Ports

E48P or E60P

Fibre Channel, 10 GbE, or SAS ports (see below)

Expansion Ports   Management Port   Serial Port   iSCSI Ports
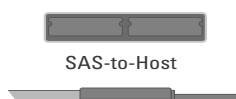
Host Connector Types

Fibre Channel   10gb Ethernet, Optical   10gb Ethernet, Copper   SAS-to-Host

8 Powering on

⚠️ **CAUTION:**

- When applying power to the system, use ONLY the originally supplied IEC power cords. Do NOT use other power cords, even if they appear identical to the supplied cords.
- Nexsan E-Series Storage Systems do not have power switches. Do NOT attach the power cords until the enclosure is fully installed, with all disk drives in place.

Powering up the Nexsan Storage Expansion first (if applicable)

1 Using the two power cords supplied, connect each storage expansion PSU to an electrical power source.
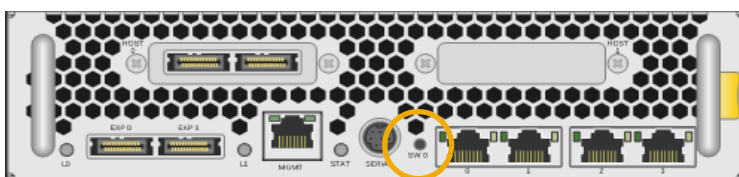2 Wait about 10 seconds, then power up the main storage system the expansion is attached to.

Powering up the Nexsan Storage System

3 Using the two power cords supplied, connect each PSU to an electrical power source.
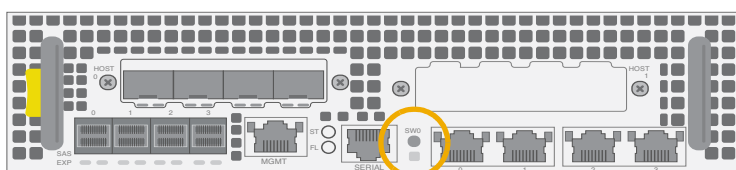
   NOTE: You may need to use the SW0 switch to initiate the power up sequence. Press and hold the SW0 switch until you hear the system cooling fans start up and then release. Do not hold the SW0 switch in for longer than that as it may cause the product controllers to start in Emergency Mode.

   NOTE: If the audible alarm sounds when the storage system is first powered on, the controller batteries may be discharged. Press either **SW0** switch on the rear of the enclosure to silence the alarm.

E60/E48/V/VT SW0 Switch (circled)

E60P/E48P SW0 Switch (circled)

Check the connection to the Nexsan Storage Expansion (if applicable)

4 When the main storage system is fully powered up (this may take up to 5 minutes), check the **EXP IN L0** and **L1** LEDs next to the expansion ports on the Expansion Modules. Both LEDs should be green.

If either of the EXP IN LEDs are flashing amber:

- Power down both the Nexsan Storage System and the Nexsan Storage Expansion, correct the cabling (see *Attaching cables to the storage expansion (if applicable)*), and then repeat steps 1 through 4.
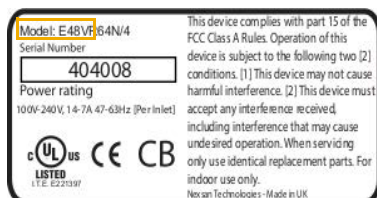
9 Registering and configuring E-Series systems

The Nexsan Product ID is located on a label on the bottom left of the rear panel (see example to the right - Model number highlighted).

Go to http://register.nexsan.com to register your product.

When the system has finished booting up, follow the instructions in Chapter 1 "Basic Setup" of the *Nexsan High-Density Storage User Guide* (go to https://helper.nexsansupport.com/esr_downloads.html) to get the system up and running.

NOTE: The default IP addresses for the RAID Controllers in a dual-Controller system are 10.11.12.13 and 10.11.12.14. In a single-Controller system, the default IP address is 10.11.12.13. It is very important, however, that you change these IP addresses by following the instructions under "Initial Network Address Setup," in Chapter 1 of the *Nexsan High-Density Storage User Guide*.