NEXSAN U2G424 Storage Expansion System Quick Start Guide

Firmware Version 7.3

This document provides installation steps for racking, cabling, and setting up the Nexsan UNITY U2G424 Storage Expansion System, and cabling all Nexsan storage components for power and data/host connectivity. For additional documentation, please visit https://www.nexsan.com/support/

Taking delivery

Your Unity shipment includes the U2G424 Storage Expansion, and other Nexsan storage systems or hardware, depending on your configuration. Check to ensure no damage has been sustained to the packaging in transit. If anything appears damaged, you should file a claim with your reseller.

Hardware overview

The main components of the U2G424 are shown in the following front and rear view diagrams:

Front view



Rear view



Item	Name	Description
A	Tray handles (2)	For secure insertion and removal of entire unit to and from rack.
B	Front panel	Power button. LEDs for: Power Status & Fail, Temperature, Fan. See ***page 5*** for function and indication descriptions.
C	Disk slots	Total physical storage capacity of 24 x 3.5” HDD bays.
D	Expander panel (host connectivity)	Single/dual expander(s), 1 IPMI port and 4 x mini SAS HD ports. See ***page 5*** for description.
E	Fan assemblies	4 x 6056 hot swap fans.
F	Power supply units (2)	AC 800W 1+1 redundant 80 + Platinum/Titanium. Universal A/C Input, 100~127V / 200~240V.

1 Prepare for installation

A Carefully read safety notices on *page 6*.

B Ensure ahead of time that you have a suitable rack; see *Rack and enclosure specifications* on *page 6*.

C Ensure that you have a Phillips screwdriver.

D Have someone assist you during installation.

CAUTION: Acclimate new disk drives to room temperature for two hours before you install them.

2 Unpack the UNITY U2G424

A Remove all the components from the packaging. Reach under the chassis to pull it free from the foam insert.

Do NOT lift the UNITY U2G424 chassis from its packaging using the controller handles or the attached rails.

B Place the components on an anti-static surface until you are ready to use them.

UNITY UG2424 package contents

- One Unity Storage Expansion System
  - 2 outer-rack rail assemblies (inner-chassis rails are already installed)
  - 4 mounting screws with 4 washers to attach outer-rack rails to the rack (1 on the front and 1 on the back for both the left and right rail assemblies)
  - 2 long screws to secure the chassis to the rack from the front (attached to the chassis)
- Up to twenty-four SAS HDD or SAS SSD drives (check that the components included in your shipment correspond to your packing slip)
- Four SAS cables, HD Mini SAS to HD Mini SAS (may be optional, check shipment components and packing slip)
- Two power cords
- One electrostatic discharge (ESD) wrist strap

3 Rack the UNITY U2G424

CAUTION: Physical installation requires two people.

Example rack positions for components:

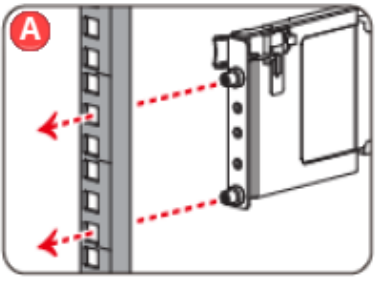
- UNITY NV4000 on top, Unity Storage Expansion below

Example of UNITY NV4000 with U2G424

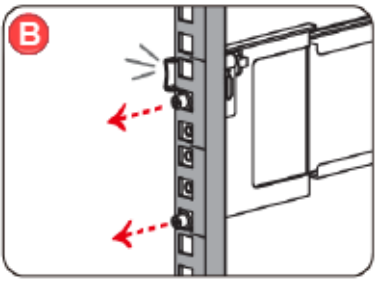


▶ Step 1: Attach the slide rail bracket assembly to the rack frame

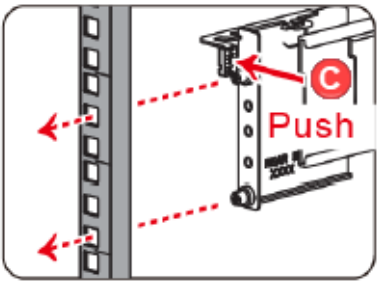
A Align and attach the front rail bracket to the rack.



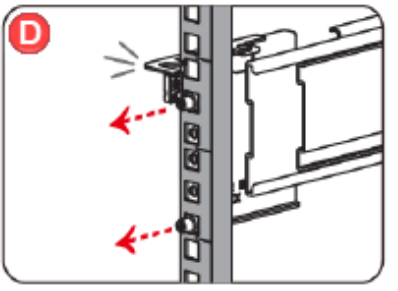
B Ensure that the latch on the rail is hooked into the rack.



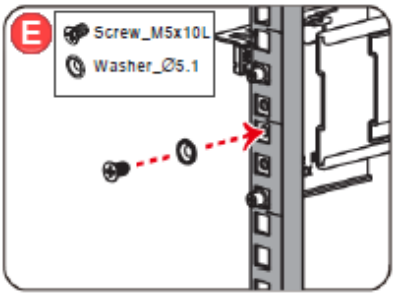
C Align and attach the rear rail bracket to the rack by pushing the latch outward.



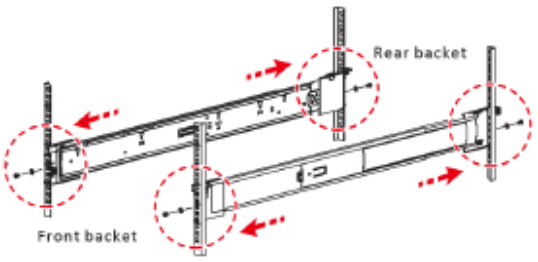
D Ensure the latch is hooked onto the rack.



E Secure the rail bracket with washer & screw, on both sides of the rail bracket, front &back.

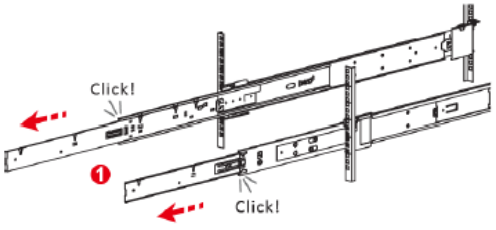


F Repeat steps A-E to install the other side of the rack.

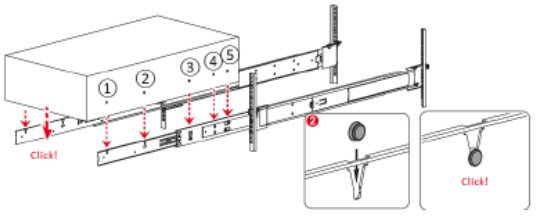


▶ Step 2: Attach the UNITY U2G424 on to the rack frame

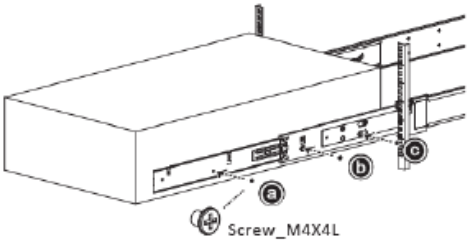
A Pull the inner and middle rail to fully locked position.



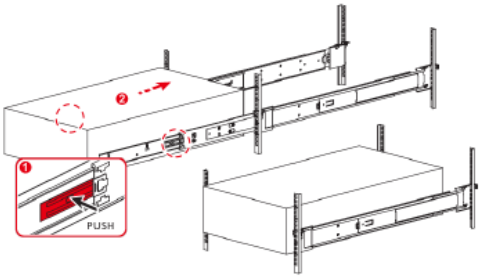
B Position the chassis vertically into the rail. Ensure the standoffs on the chassis slide into the v slots on the rail bracket.



C Secure the chassis to the rail with screws.



D Push the release tab on the inner rail and push the chassis into the frame.



▶ Step 3: Install SAS HDD or SAS SSD drives

CAUTION: Put on the ESD wrist strap before starting:

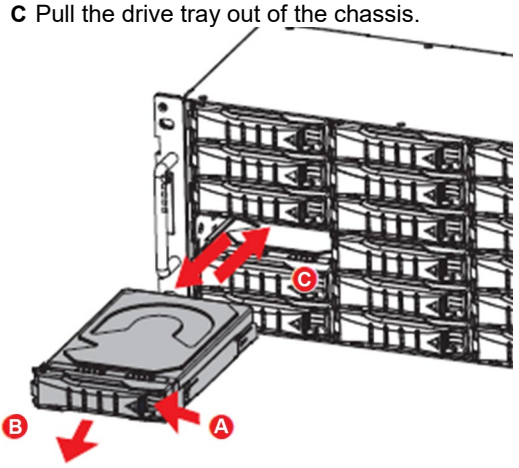
- Slip the wrist loop over your hand (left or right), then tighten the loop against your wrist.
- Attach the clip end of the anti-static wrist strap to a properly grounded metal surface.

To remove the trays from the chassis:

A Press the ejector on the tray to release the handle.

B Pull the tray handle completely outward.

C Pull the drive tray out of the chassis.

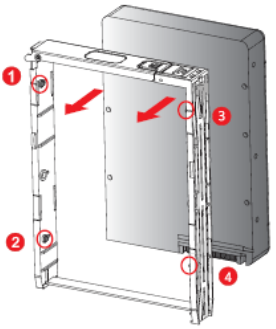


To install the disks in the drive trays:

D Match dimples on HDD with the tool-less tray.

E Align the HDD with the tray by placing it against each other.

F Insert the HDD into the tool-less tray in the suggested order 1 – 4 below. Make certain to attach the side of the tray with the larger dimples to the HDD first and the side with the smaller dimples last for easier installation.



To install the drives into the chassis:

G Push the tray with the installed disk drive into the end of the drive slot in the chassis.

H Close the tray handle.

CAUTION: If the U2G424 is not fully populated, to ensure proper airflow you MUST install drive blanks to complete the last incomplete row of drives, AND if applicable, install drive blanks in the row immediately following the last populated row.

4 Install the Unity Storage System

Unpack and install any Unity Storage System included in your Unity shipment.

For detailed instructions, refer to the appropriate *Nexsan Unity Quick Start Guide* included in the Unity packaging, or visit: https://www.nexsan.com/support/ .

5 Connect to a Unity Storage System

This section describes the steps for connecting the U2G424 expansion to a Unity Storage System.

▶ Step 1: Cross-connect the storage expansion to the storage system

A Cross-connect from the Add-on HBA SAS OUT ports on the Unity Storage System to the HBA SAS IN ports on the U2G424, as shown in the *UNTY NV4000 connected to U2G424 Expansion* diagram just below.

CAUTION: Do not connect to the Unity Storage Expansion from the lower, onboard SAS ports on the UNTY U2G424.

Use SAS cables that can extend the length of the U2G424 when the drawer is pulled open.

The Unity Storage System is hot pluggable: Once in service, powering down is not normally required to add a Unity Storage Expansion.

▶ Step 2: Connect the power cables

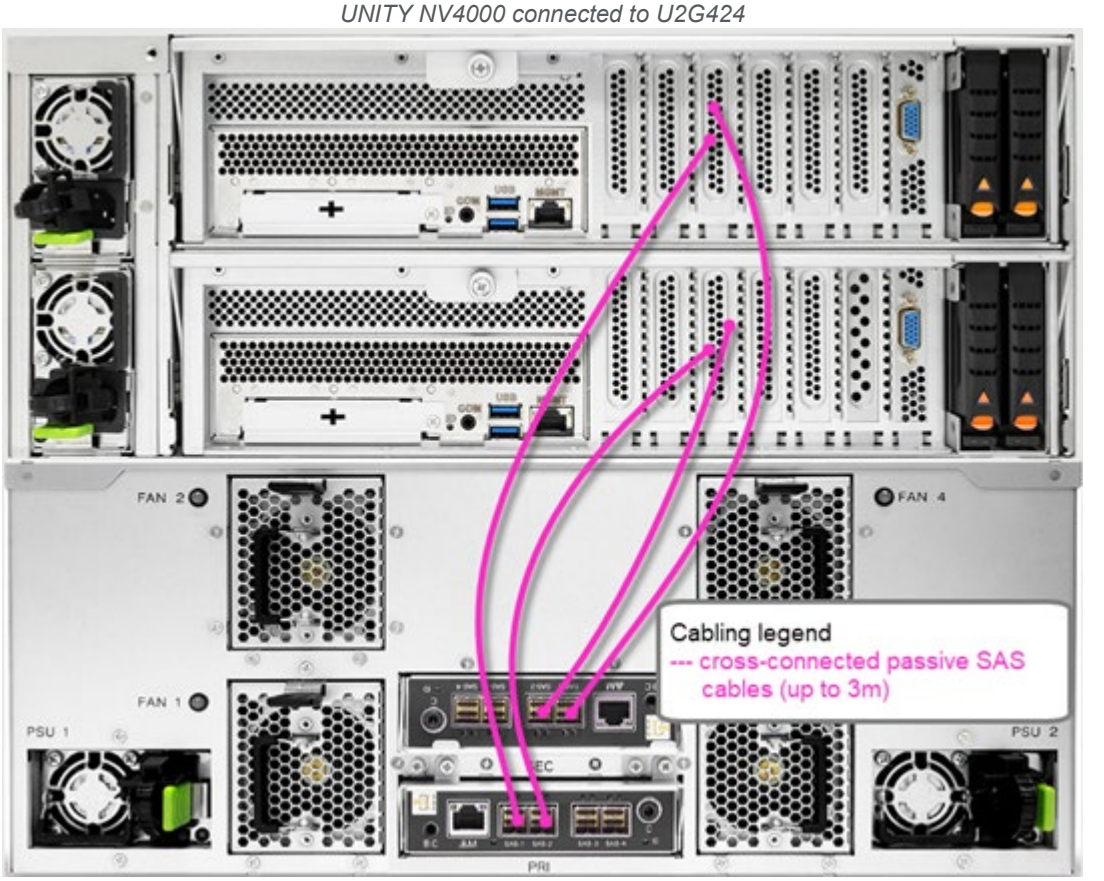
A Plug the power cords into their respective power supplies on the rear of the U2G424.

B Plug the power cords connected to the power supply units into a high-quality strip that offers protection from electrical noise & power surges.

CAUTION: Use only the power cords supplied with the U2G424. Do not use another type of cord or extension cords. If you require additional power cords, please contact your Nexsan sales representative or reseller.

NOTE: We strongly recommend that you use an Uninterruptible Power Supply (UPS).

UNITY NV4000 connected to U2G424



6 Power on Unity components

Power on the Unity components for the first time in the sequence as described in this section.

▶ Step 1: Power on your Unity Storage Expansion

Press and hold the power button located on the left front panel of the chassis until the power LED lights up.

NOTE: If you are adding multiple Unity Storage Expansions, power them on from last to first.

▶ Step 2: Power on Unity Storage System

A Press and hold the power button located on the right front panel of the chassis until the power LED lights up.

B Verify that the power LEDs on the front control panel are illuminated to ensure that the controller nodes are receiving power and the power modules are functioning properly.

C Verify that the drive carrier LEDs are illuminated in green.

7 Monitor the Unity Storage Expansion

This section describes the front panel LEDs that help you to monitor the Nexsan Unity U2G424 Storage Expansion.

Control panel LEDs

The control panel located on the front left side of the U2G424 has a power button and four status LEDs. The functions and indicators provide critical info related to the system, as per the icons and associated information below.

	Power Button
Behaviour	Status
Normal	Off
Press	Boot off
Long Press	System shutdown

	Power Status LED
Behaviour	Status
On	Blue
Off	Off
ID	Blue (blinking)

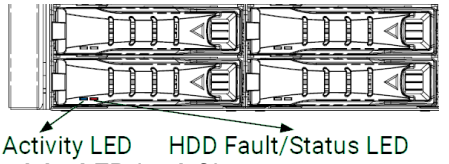
	Power Failure LED
Behaviour	Status
Normal	Off
Failed	Red

	Temperature Failure LED
Behaviour	Status
Normal	Off
Failed	Red

	Fan Fault Status LED
Behaviour	Status
Normal	Off
Failed	Red

Drive carrier LEDs

Each drive carrier has two LEDs, an HDD Activity LED and an HDD Fault/Status LED, further described below.



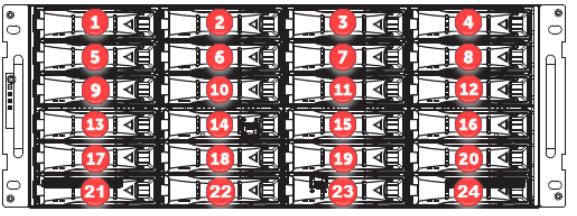
HDD Activity LED (on left)

Color	Behavior
Blue LED (solid)	Disk drive is present.
Blue LED (blinking, 8Hz)	Disk drive is detected.
Blue LED (blinking, 0.5Hz)	Disk drive is in locate status.
Blue LED (off)	Disk drive is not connected or the system power is off.

HDD Fault/Status LED (on right)

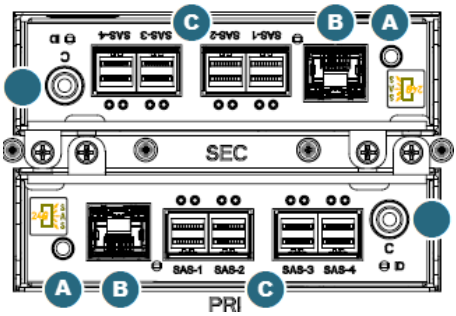
Color	Behavior
Red LED (solid)	Disk drive fault has occurred. Set any by the following bits: 1. RQST MISSING 2. RQST FAULT
Red LED (off)	Disk drive in normal status.

Drive slot map



Rear expander panel

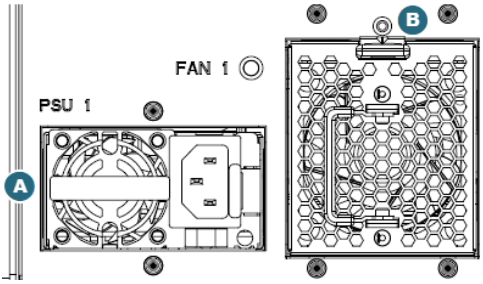
The U2G424 offers single/dual expander(s) with one IPMI port and four mini HD ports per expander module. If dual, primary (PRI) is at bottom, and secondary (SEC) is inverted at top. Consult the table below to monitor the panel with the LED indicators.



Item		LED	Status
A	Console Port (Expander ID)	Off	NormaL
		Blue (blinking)	Identity
B	IPMI LAN Port	Green	Stable connection
		Green (blinking)	Data send/receive
C	SAS Ports	Off	No connection
		Blue	Normal
		Red	Failed

Rear PSU & fan LEDs

The U2G474 has two power supply units and four cooling fans. Use the table below for monitoring status. The diagram below shows PSU1 and Fan1.



Item		LED	Status
A	Power Supply Unit (PSU)	Green	OK
		Green (blinking)	Ready
		Amber	Failed
		Amber (blinking)	Warning
B	Fan	Green	Normal
		Red	Failed

Safety notices

- This equipment must be installed and operated in compliance with local laws and regulations.
- Ensure that the ambient temperature at the installation is between 5°C (41°F) and 30°C (86°F). If the temperature at the site is not actively regulated, ensure that daily and seasonal temperature changes will not result in the ambient temperature going outside these limits.
- Always fully stabilize racks with wall anchors or stabilizing legs, or both, before mounting Nexsan storage enclosures on the rack.
- Situate the rack so that full air flow at both the front and the rear of Nexsan storage enclosures is possible.
- Ensure that the floor beneath the mounting rack has enough load-bearing capacity to support the rack and all mounted components.
- Always fully secure all rack-mounting hardware when installing Nexsan storage enclosures in a rack. Insufficient rack-mount support may allow the unit to fall onto other rack-mounted hardware or onto the floor, potentially damaging equipment or causing injury to nearby personnel.

Specifications

Rack and enclosure

- 4U enclosure height
- The rack must have square holes
- Maximum distances: 30" (800 mm)

Physical specs

- Height: 6.9" 174 mm
- Width: 17.2" 438 mm
- Depth: 15.1" 386 mm
- Weight: 65 lbs 29.5 kg (no drives installed)

Power requirements

- 800W 1+1 hot swap redundant power supply 80+ Platinum/Titanium
- Platinum, AC Input:100-127V, 7A, 50-60Hz DC Output: 800W
- Titanium, AC Input: 200-240V, 3.5A, 50-60Hz DC Output: 800W
- Power consumption varies depending on the number and size of drives, running fans, and room temperature.

Part number: PN0450193. Rev: 10.25. Release Date: Oct. 2025
Related Documentation: Nexsan Unity Hardware Maintenance Guide, Nexsan Unity Software User Guide, Nexsan Unity Help, Nexsan Unity nxadmin CLI Reference Guide.

Technical Support

By Email: support@nexsan.com
By Web: https://www.nexsan.com/support/

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