

XN1 Series

Hardware Manual

February 2026

ANNOUNCEMENT

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TABLE OF CONTENTS

Announcement	i
Notices	v
Regulatory Statements	vi
FCC Statement.....	vi
CE Statement.....	vi
UL Statement.....	vi
Preface	x
About This Manual	x
Warranty	x
Precautions.....	x
Related Documents	xi
Technical Support.....	xi
Information, Tip, and Caution	xii
Conventions	xii
1. Product Overview	1
1.1. Introduction to XN1 Series	1
1.2. Hardware Specifications.....	2
1.3. Package Contents	2
2. Overview of System Components	3
2.1. Front Panel	3
2.2. Rear & Side Panel	6
3. Support and Other Resources	10
3.1. Getting Technical Support.....	10
3.2. Documentation Feedback	11
Appendix	12
End-User License Agreement (EULA)	12

FIGURES

Figure 1-1 Series Form Factor 2

Figure 2-1 Series System Controls and Indicators 3

Figure 2-2 XN1 Disk Drive Numbering 6

Figure 2-3 Rear Panel Components 7

Figure 2-4 XN1 Service Door Open Indicator - 1 8

Figure 2-5 Service Door Open Indicator - 2 9

Figure 2-6 Side Panel 9

TABLES

Table 1-1 Series Models 2

Table 2-1 XN1 System Control and Indicator Description 4

Table 2-2 Rear Panel Component Description..... 7

Table 2-3 Rear Panel Component Description..... 9

NOTICES

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REGULATORY STATEMENTS

FCC Statement

This device has been shown to be in compliance with and was tested in accordance with the measurement procedures specified in the Standards and Specifications listed below.

Technical Standard: FCC Part 15 Class A
 IC ICES-003

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。VCC1-A

警告：這是甲類的資訊產品。在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

CE Statement

This device has been shown to be in compliance with and was tested in accordance with the measurement procedures specified in the Standards and Specifications listed below.

Technical Standard: EMC DIRECTIVE 2014/30/EU
 (EN55032 / EN55035)

UL Statement

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:

1. Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
2. Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
3. Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
4. Circuit Overloading - Careful consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
5. Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).



CAUTION

The main purpose of the system left and right ears are for 19" rack use only. Do NOT use those ears to carry or transport the system.

The ITE is not intended to be installed and used in a home, school or public area accessible to the general population, and the thumbscrews should be tightened with a tool after both initial installation and subsequent access to the panel.

Warning: Always remove all power supply cords before service

This equipment intended for installation in restricted access locations.

- Access should only be allowed by qualified SERVICE PERSONS or by USERS who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.
- Access is through the use of a TOOL or lock and key, or other means of security, and is controlled by the authority responsible for the location.
- Recommended operation temperature: 0°C ~ 35°C (32°F ~ 95°F); operation rating (100-127 Vac, 50-60Hz, 10.0A; 200-240 Vac, 50-60Hz, 5.0A)



CAUTION

CAUTION: (English)

Risk of explosion if battery is replaced by incorrect type. Please replace the same or equivalent type battery use and dispose of used batteries according to the instructions.

ATTENTION: (French)

IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES USAGÉES CONFORMEMENT AUX INSTRUCTIONS.

VORSICHT: (German)

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Entsorgung gebrauchter Batterien nach Anleitung.

ADVERTENCIA: (Spanish)

Las baterías pueden explotar si no se manipulan de forma apropiada. No desmonte ni tire las baterías al fuego. Siga las normativas locales al desechar las baterías agotadas.

ВНИМАНИЕ: (Russian)

Опасность взрыва при замене батареи неправильного типа. Пожалуйста, устанавливайте на место батареи такого же или аналогичного типа и утилизируйте использованные батареи в соответствии с инструкциями.

警告: (Traditional Chinese)

電池如果更換不正確會有爆炸的危險，請依製造商說明處理用過之電池。

警告: (Simplified Chinese)

电池如果更换不正确会有爆炸的危险，请依制造商说明处理用过之电池。



CAUTION

Replacing incorrect type of battery will have the risk of explosion. Please replace the same or equivalent type battery use and dispose of used batteries according to the instructions.



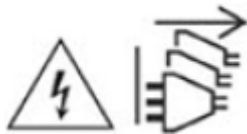
CAUTION RESTRICTED ACCESS LOCATION

This system is intended for installation only in restricted access locations as defined where both these conditions apply:

- Access can only be gained by service persons or by users who have been instructed about the reasons for the restrictions applied to the location and about any precautions that shall be taken.
- Access is through the use of a tool or lock and key, or other means of security, and is controlled by the authority responsible for the location.

Warning

- Electric shock hazard



The system may have one or more power supply unit (PSU) cords. To avoid serious injuries, it is recommended that all PSU power cords must be disconnected by trained service technicians before installing or replacing system components.

PREFACE

About This Manual

This manual provides technical guidance for designing and implementing QSAN XN1 series storage systems, and they are intended for use by system administrators, storage consultants, or anyone who has purchased these products and is familiar with servers and computer networks, network administration, storage system installation and configuration, storage area network management, and relevant protocols.

Warranty

QSAN provides a limited warranty for QSAN-branded hardware products:

- System hardware and peripheral products: 5 years limited warranty from date of original purchase.
- Battery Backup Module or super capacitor module (applies for cache-to-flash module): 1-year limited warranty from date of original purchase.

For more detail warranty policy, please refer to QSAN official web site:

<https://www.qsan.com/warranty>

Precautions



CAUTION

Do NOT attempt to service, change, disassemble or upgrade the equipment's components by yourself. Doing so may violate your warranty and expose you to electric shock. Refer all servicing to authorized service personnel. Please always follow the instructions in this manual.



CAUTION

Before beginning any removal or replacement procedure, remember to follow the standard safety precautions and the electrostatic discharge procedure.



CAUTION

Because the system is very heavy, follow the standard safety precautions when lifting assemblies of materials. This requires two people and sometimes a lifting tool.

Related Documents

There are related documents which can be downloaded from the website.

- [Quick Installation Guide](#)
- [Software Manual](#)
- [Compatibility Matrix](#)
- [White Papers](#)
- [Application Notes](#)

Technical Support

Do you have any questions or need help trouble-shooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355

- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Teams / Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

Information, Tip, and Caution

This manual uses the following symbols to draw attention to important safety and operational information.



INFORMATION

INFORMATION provides useful knowledge, definition, or terminology for reference.



TIP

TIP provides helpful suggestions for performing tasks more effectively.



CAUTION

CAUTION indicates that failure to take a specified action could result in damage to the system.

Conventions

The following table describes the typographic conventions used in this manual.

CONVENTIONS	DESCRIPTION
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels. Example: Click the OK button.
<Italic>	Indicates a variable, which is a placeholder for actual text provided by the user or system. Example: copy <source-file> <target-file>.
[] square brackets	Indicates optional values. Example: [a b] indicates that you can choose a, b, or nothing.
{ } braces	Indicates required or expected values. Example: { a b } indicates that you must choose either a or b.
vertical bar	Indicates that you have a choice between two or more options or arguments.
/ Slash	Indicates all options or arguments.
underline	Indicates the default value. Example: [<u>a</u> b]

1. PRODUCT OVERVIEW

Thank you for purchasing QSAN Technology, Inc. products. The XN1 series is the leading desktop tower NAS developed to allow compact workspace to easily enhance file retention and sharing process.

1.1. Introduction to XN1 Series

XN1 redefines compact professional storage with agile performance and unified services. With onboard high speed internet connection, PCIe expansion, and dedicated SSD acceleration bays, XN1 empowers modern teams for file sharing, virtualization, and media workflows. All the hardware modules are inside the chassis including system controllers, front panel, rear panel, power supply units and fan modules, and expansion slots for optional high-speed host cards. This manual will direct you step by step to familiarize you with the hardware components, how to install the system, carry out the initial configuration, and provide you with some quick maintenance guidelines.



INFORMATION

For how to use the QSM (for Unified storage) operating system, please refer to the [QSM Software Manual](#).

XN1 series models support LFF (Large Form Factor) with 8-bay, 4-bay SKU and dedicate SFF (Small Form Factor) SSD slot for SSD acceleration features.



XN1 5-Bay Form Factor



XN1 9-Bay Form Factor

Figure 1-1 Series Form Factor

The following tables provide detailed information about all XF4 and XN4 series models arranged by form factors.

Table 1-1 Series Models

MODEL NAME	CONTROLLER TYPE	BAY COUNT
XN1209-4A	Embedded Controller	8-bay 3.5" disk tray and 1 dedicated 2.5" disk tray in a desktop chassis
XN1209-4C		
XN1205-4A		4-bay 3.5" disk tray and 1 dedicated 2.5" disk tray in a desktop chassis
XN1205-4C		

1.2. Hardware Specifications

For detailed hardware specifications, please refer to the [XN1 Data Sheet](#).

1.3. Package Contents

For detailed package contents, please refer to the [Quick Installation Guide](#).

2. OVERVIEW OF SYSTEM COMPONENTS

This chapter outlines the key hardware components of the system. After reading this chapter, you will have a basic understanding of each part of the hardware and give you the ability to be able to successfully configure and operate your system.

2.1. Front Panel

In this section, we will describe the system controls and indicators, disk drive numbering, and the disk drive LEDs in the front panel.

2.1.1. System Controls and Indicators

The XN1 series adopts a clean, service-friendly layout. All user operations are consolidated in the upper-left control panel, allowing quick access and clear visibility during daily use and maintenance. The figure below takes an example and contains details of the button and indicator module. Please refer to the following for the definition of LED behavior.

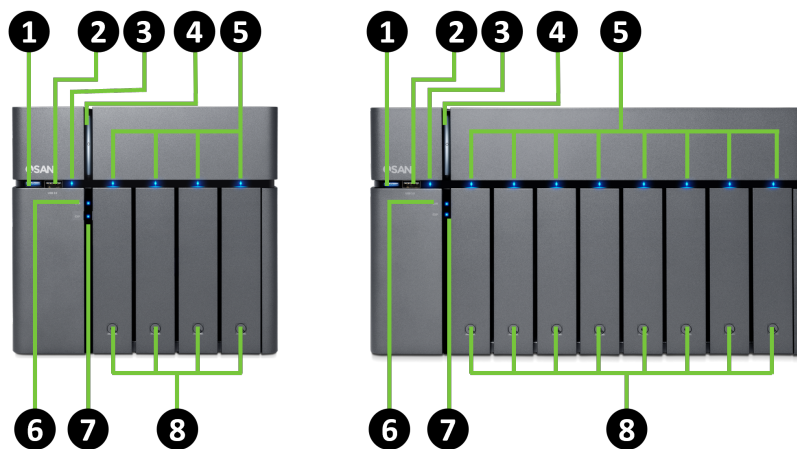


Figure 2-1 Series System Controls and Indicators

Table 2-1 System Control and Indicator Description

NUMBER	DESCRIPTION	DEFINITION
1	Empty	Empty
2	USB 3.0 Port	The USB port is designed to manage the XN1 appliance.
3	Solid State Drive Status LED	<p>The Solid State Drive Status LED indicates the current status of the SFF slot.</p> <ul style="list-style-type: none"> • Solid Blue: The SSD is attached and is being detected. • Blinking Blue: The inserted SSD is being accessed. • Solid Amber: There is an error occurring to the inserted SSD. • Blinking Alternately in Blue and Amber: The SSD is being rebuilt or being identified. • Off: There is no SSD being detected.
4	System Power Button / LED	<p>Power Button</p> <ul style="list-style-type: none"> • Press the button once to turn ON the system power, and keep pressing for 4 seconds to turn OFF the system power. <p>Power LED</p> <ul style="list-style-type: none"> • Solid White: The system Power is ON. • Blinking White: The system is starting up, shutting down, or the NAS is not configured. • Solid Amber: Occurring critical conditions such as full/near-full capacity, fan failure, bad sector or disk failure, degraded read-only pool, or hardware self-test error. • Blinking Alternately in White and Amber: The firmware update is in progress, RAID rebuilding is in process, or software-

		<p>controlled LED indication.</p> <ul style="list-style-type: none"> • Off: The System is powered off.
5	Disk Drive LEDs	<p>Disk Drive LEDs</p> <ul style="list-style-type: none"> • Solid Blue: The hard disk is attached, and there is no data access. • Blinking Blue: The disk is being accessed. • Solid Amber: A disk read/write error occurs. • Blinking Alternately in Blue and Amber: The hard disk is being rebuilt or identifying a specific disk drive. • OFF: There is no disk drive inserted.
6	System LAN Status LED	<p>System LAN Status LED</p> <ul style="list-style-type: none"> • Solid Blue: The system is connected to the network. • Blinking Blue: The system is being accessed through the network.
7	PCIe Expansion Slot Status LED	<p>PCIe Expansion Slot Status LED</p> <ul style="list-style-type: none"> • Solid Blue: The host card is being accessed. • OFF: The host card is not being accessed.
8	Disk Drive Lock	<p>The Disk Drive Lock can be locked by the lock key provided in the default accessory package.</p> <ul style="list-style-type: none"> • Turn the key counterclockwise: Lock the disk drive tray. • Turn the key clockwise: Unlock the disk drive tray.

2.1.2. System Disk Drive Numbering

Figures below illustrate the system disk drive numbering. The XN1 system disk drive numbering is single row from left to right, and the dedicated SFF disk drive number would be the last number of the system.



XN1 5-Bay Form Factor



XN1 9-Bay Form Factor

Figure 2-2 Disk Drive Numbering



TIP

Please insert any one of the first four hard drives, the event log can be saved and displayed at the next system startup. Otherwise, the event log cannot be saved.

2.2. Rear & Side Panel

In this section, we will describe the name and location of the key components in the rear panel. The following content outlines the details of the rear panel and components.

2.2.1. Rear Panel

The following image and table illustrate each component of the rear panel including the controller module.

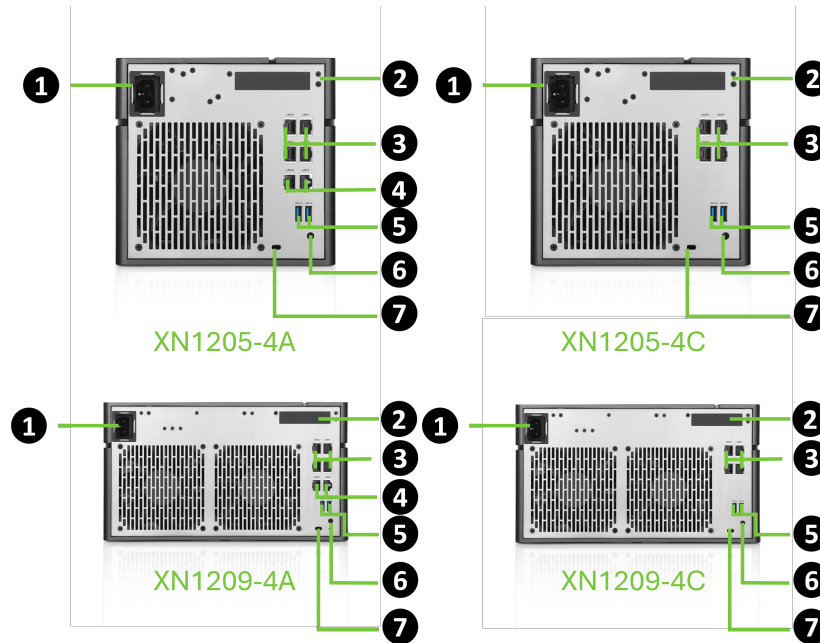


Figure 2-3 Rear Panel Components

Table 2-2 Rear Panel Component Description

ITEM NUMBER	DESCRIPTION
1	Power Port
2	PCIe Expansion Slot (Manufacturing Option) (4A Models: PCIe Gen4 x8 / 4C Models: PCIe Gen3 x2)
3	2.5 GbE (RJ45) LAN Port
4	10 GbE (RJ45) LAN Port (Only Available on 4A Models)
5	USB Port
6	Console Port

2.2.2. Side Panel

Please refer to the following figure to disclose the service door and find the side panel.

1. Use the key provided in the accessory box to press the door button



Figure 2-4 Service Door Open Indicator - 1

2. Remove the service door.



Figure 2-5 Service Door Open Indicator - 2

Please refer to the following figure for the side panel indicator.



Figure 2-6 Side Panel

Table 2-3 Rear Panel Component Description

NUMBER	DESCRIPTION
1	M.2 NVMe 2280 Slot (Only Supports QSAN MD4 Series)
2	2.5" SSD slot

3. SUPPORT AND OTHER RESOURCES

3.1. Getting Technical Support

After installing your device, locate the serial number on the sticker located on the side of the chassis or from the **System -> Maintenance > System Information** and use it to register your product at https://www.qsan.com/business_partnership. We recommend registering your product in QSAN partner website for firmware updates, document download, and latest news in eDM. To contact QSAN Support, please use the following information.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Teams / Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

Information to Collect

- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages or capture screenshots
- Product-specific reports and logs
- Add-on products or components installed
- Third-party products or components installed

Information for Technical Support

If the technical support requests you to download the Service Package, please navigate in the **System -> Maintenance > System Information**, and then click the **Download Service Package**

button to download. Then the system will automatically generate a zip file the default download location of your web browser.

3.2. Documentation Feedback

QSAN is committed to providing documentation that meets and exceeds your expectations. To help us improve the documentation, email any errors, suggestions, or comments to docsfeedback@qsan.com.

When submitting your feedback, include the document title, part number, revision, and publication date located on the front cover of the document.

APPENDIX

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- This EULA shall be governed by and constructed according to the laws of R.O.C. Any disputes arising from or in connection with this EULA, User agree to submit to the jurisdiction of Taiwan Shilin district court as first instance trial.