

Infortrend EonNAS 1000 Series



Version 1.7

Copyright Notice

All rights reserved. This publication may not be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written consent of Infortrend Technology, Inc.

Disclaimer Infortrend Technology makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Furthermore, Infortrend Technology reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation to notify any person of such revisions or changes. Product specifications are also subject to change without prior notice.

Trademarks Infortrend, the Infortrend logo, SANWatch, ESVA, EonStor, EonStor DS, EonNAS, and EonPath are registered trademarks of Infortrend Technology, Inc. Other names prefixed with “IFT” and “ES” are trademarks of Infortrend Technology, Inc.

- Windows is a registered trademark of Microsoft Corporation.
- Mac OS X is a registered trademark of Apple Computer, Inc.
- Linux is a trademark of Linus Torvalds.

All other names, brands, products or services are trademarks or registered trademarks of their respective owners.

Legal Information

All Infortrend products, including the product customers have purchased from Infortrend, shall be subject to the latest Standard Warranty Policy available on the Infortrend website: <http://www.infortrend.com/global/Support/Warranty>

Infortrend may from time to time modify, update or upgrade the software, firmware or any accompanying user documentation without any prior notice. Infortrend will provide access to these new software, firmware or documentation releases from certain download sections of our website or through our service partners. Customer shall be responsible for maintaining updated version of the software, firmware or other documentation by downloading or obtaining from Infortrend, and installing designated updated code, including but not limited to firmware, microcode, basic input/out system code, utility programs, device drivers, and diagnostics delivered with Infortrend product.

Before installing any software, applications or components provided by a third party, customer should ensure that they are compatible and interoperable with Infortrend product by checking in advance with Infortrend. Customer is solely responsible for ensuring the compatibility and interoperability of the third party's products with Infortrend product. Customer is further solely responsible for ensuring its systems, software, and data are adequately backed up as a precaution against possible failures, alternation, or loss.

For any questions of hardware/ software compatibility, and the update/ upgrade code, customer should contact Infortrend sales representative or technical support for assistance. To the extent permitted by applicable laws, Infortrend shall NOT be responsible for any interoperability or compatibility issues that may arise when (1) products, software, or options not certified and supported by Infortrend are used; (2) configurations not certified and supported by Infortrend are used; (3) parts intended for one system are installed in another system of different make or model.

Contact Information

Customer Support

Contact your system vendor or visit the following support sites.

- [EonStor DS Support](#)
- [ESVA Support](#)
- [EonNAS Support](#)

Headquarters (Taiwan)

Infotrend Technology, Inc.

8F, No. 102, Sec. 3, Jhongshan Rd., Jhonghe Dist., New Taipei City 235, Taiwan

Tel: +886-2-2226-0126 Fax: +886-2-2226-0020 [Email](#), [Technical Support](#), [Website](#)

Japan

Infotrend Japan, Inc.

6F Okayasu Bldg., 1-7-14 Shibaura, Minato-Ku, Tokyo, 105-0023 Japan

Tel: +81-3-5730-6551 Fax: +81-3-5730-6552 [Email](#), [Technical Support](#), [Website](#)

Americas

Infotrend Corporation

2200 Zanker Road, Suite 130, San Jose, CA. 95131, USA

Tel: +1-408-988-5088 Fax: +1-408-988-6288 [Email](#), [Technical Support](#), [Website](#)

US East Coast Office

4 Northeastern Blvd. Suite 21B, Nashua, NH, 03062, USA

Tel: +1-603-610-6398 Fax: +1-603-610-6383 [Email](#), [Technical Support](#), [Website](#)

China

Infotrend Technology, Ltd.

Room 1210, West Wing, Tower One, Junefield Plaza No.6 Xuanwumen Street, Xuanwu District,
Beijing, China

Tel: +86-10-6310-6168 Fax: +86-10-6310-6188 [Email](#), [Technical Support](#), [Website](#)

Europe (EMEA)

Infotrend Europe LTD.

1 Cherrywood, Stag Oak Lane Chineham Business Park Basingstoke, Hampshire RG24 8WF, UK

Tel: +44-1256-707-700 Fax: +44-1256-707-889 [Email](#), [Technical Support](#), [Website](#)

Germany/ Infotrend Deutschland GmbH

Wappenhalle Business Center Konrad-Zuse-Platz 8, 81829 Munich, Germany

Tel: +49-89-2070-42650 Fax: +49-89-2070-42654 [Email](#), [Technical Support](#), [Website](#)

About This Manual

This manual introduces the hardware components of EonNAS system and describes how to install and maintain them.

For components that are not user-serviceable: Contact our support sites.

Software operation: Consult the User Manual in the CD-ROM.

Revision History

Version	Date	Description
1.0	Aug. 2011	Initial release
1.1	Nov. 2011	Copyright, Contact and support link update
1.2	Jan. 2012	Illustration update Added slide rail installation
1.3	Mar. 2012	Previously titled "EonNAS_1100_HMN" Added EonNAS 13x0 and 15x0 models Added system alarm descriptions
1.4	Jun. 2012	Updated restore to default actions
1.5	Aug. 2012	Updated 10Gb iSCSI descriptions
1.6	Nov. 2012	Added EonNAS 1110
1.7	Dec. 2012	Added EonNAS 1210

Safety Precautions

Read these instructions carefully before you install, operate, or transport EonNAS.

Installation and Operation

Install the rack cabinet and the associated equipment at a site where the ambient temperature stays lower than 40°C.

Install the power source socket outlet near the enclosure where it is easily accessible and ground the rack cabinet.

Secure airflow clearance inside and around the rack cabinet.

- Secure an 18 to 20cm clearance on the rear side.
- Do not cover the enclosure openings.
- Route the cables inside the rack cabinet.
- Do not leave the drive bays empty, since it will affect the airflow efficiency.

Secure each enclosure module using its retaining screws.

Put the power cords and other cables away from foot traffic. Do not place stuff over the power cords and make sure they do not rest against data cables.

Install all modules to the enclosure before powering on the EonNAS.

Ensure that the correct power range is being used before powering the device.

None of the covers or replaceable modules should be removed during operation.

If the enclosure is not used for a long time, disconnect it from mains to avoid transient over-voltage.

Important Notice

The use of certified components is strongly recommended to ensure compatibility, quality and normal operation with your products. Please contact your distributor for a list of certified components (eg. SFP, SFP+, HBA card, iSCSI cable, FC cable, memory module, etc.).

ESD Precautions

Handle the modules by their retention screws, ejector levers, or the module's metal frame/faceplate only. Avoid touching the PCB boards or connector pins.

Use a grounded wrist strap and an anti-static work pad to discharge static electricity when installing or operating the enclosure.

Avoid dust, debris, carpets, plastic, vinyl, and Styrofoam in your work area.

Do not remove any module or component from its anti-static bag before installation takes place.

Drives must not be stacked on top of each other without their protective drive trays. Even when drives are fixed in the drive trays, contacting the exposed PCB or rear-side interface may damage the drives.

Service and Maintenance

Keep the faulty module in place until you have a replacement unit in hand; an empty module greatly affects the efficiency of the airflow within the enclosure.

During service operation, place the enclosure on soft and clean surface to prevent damaging its exterior. Do not place power tools or other items on top.

When transporting the enclosure, repackage all disk drives separately in the original package foam blocks. Replaceable modules can stay in the enclosure if you are using the original package; if not, repackage them separately as well.

Disconnect the power cords before servicing or cleaning the enclosure.

Use a slightly moistened paper sheet or cloth for cleaning. Avoid using liquid or sprayed detergent.

When replacing hard disk drives, insert the trays as gently as possible and assure full engagement. Vibration and shock can easily damage hard drives.

Contact service personnel if any of the following situations occurs:

- The power cord or plug is damaged.
- The enclosure has been exposed to moisture.
- The system has not been working properly.
- The enclosure was dropped against a hard surface.
- The enclosure shows obvious signs of breakage.

To move the enclosure, more than one person might be necessary due to its weight. Drives should be removed from the enclosure beforehand.

Table of Contents

Copyright Notice	2
Legal Information	3
Contact Information	4
About This Manual	5
Safety Precautions	6
Installation and Operation	6
Important Notice	6
ESD Precautions	7
Service and Maintenance	8
1 Introduction	11
1.1 Product Overview	11
1.1.1 Front panel	11
1.1.2 Rear panel	12
1.1.3 1U EonNAS System Front Status Panel	14
1.1.4 2U EonNAS System Front Status Panel	15
1.1.5 Hard Drive LEDs	16
1.1.6 Rear Panel Ethernet Port LEDs	17
1.1.7 EonNAS 15x0 1Gb iSCSI Ports	18
1.1.8 EonNAS 15x0 10Gb iSCSI Ports	19
1.2 System Monitoring Features	21
1.2.1 Monitoring	21
1.2.2 I ² C bus	21
1.2.3 Audible Alarms	21
1.3 Hot Swapping	22
2 Hardware Installation	23
2.4 Before You Start	23
2.4.1 Slide rail installation (optional)	23
2.4.2 Hot-swappable components	23
2.4.3 Airflow concerns	23
2.5 1U EonNAS Slide Rail Installation (Optional)	24
2.5.1 IFT-9277 Kit Contents	24
2.5.2 Installation Procedure	25
2.6 2U EonNAS Slide Rail Installation (Optional)	28
2.6.1 IFT-9373 / 9CC / 9N1 Kit Contents	28
2.6.2 Installation Procedure	29
2.6.3 Removing the Enclosure	33
2.7 Installing Hard Drives	34
2.7.1 Prerequisites	34
2.7.2 Inserting the Hard Drive to the Tray and into the Enclosure	35
2.7.3 Drive Tray Numbering Sequence	36
2.7.4 Inserting the Drive Tray into the Enclosure	37
3 Connections	38
3.1 System Connections for Initialization	38
3.2 Status LED When Powered-on	39
3.3 EonNAS Initialization Process	40
3.4 Connection Concept	44

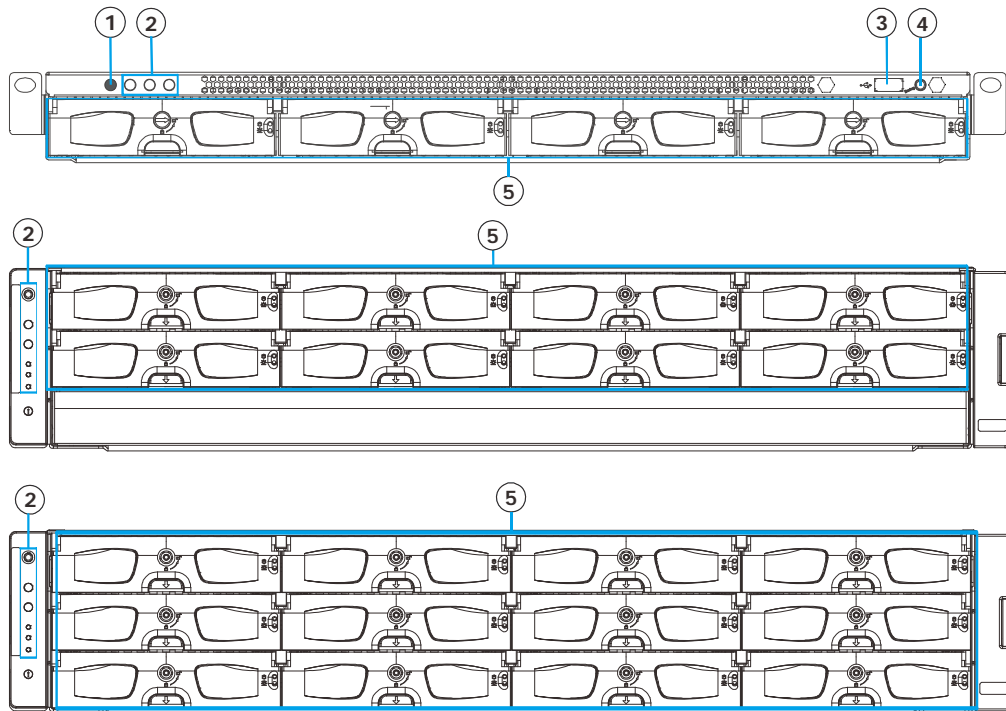
3.5	eSATA Port	45
3.6	USB External Expansion Port.....	46
3.7	Front Panel Quick Backup USB Port & Button (1U EonNAS only).....	47
4	System Maintenance	48
4.1	User replaceable components:	48
4.2	Replacing the Hard Disk Drive	49
4.3	Replacing the Power Supply (2U EonNAS only).....	51
4.4	Restore Default Settings.....	52
4.5	System Alarm Sound	53
	Appendix	54
	Technical Specifications.....	54
	Certifications	55

1 Introduction

1.1 Product Overview

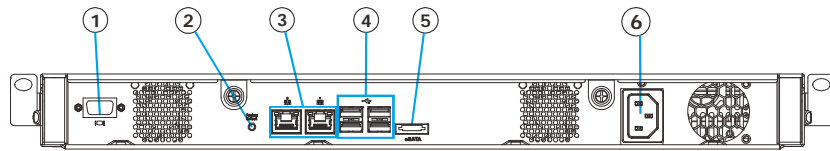
1.1.1 Front panel

From top to bottom, the EonNAS 1000 series consists of 1U and 2U systems. Looking at the front panel, there is a set of status LEDs **(2)** and hard drive slots **(5)**. Dedicated to the 11x0 model's front panel, there is a power button **(1)**, a quick backup USB port **(3)** and a quick backup button **(4)** accessible by the user on the front panel.

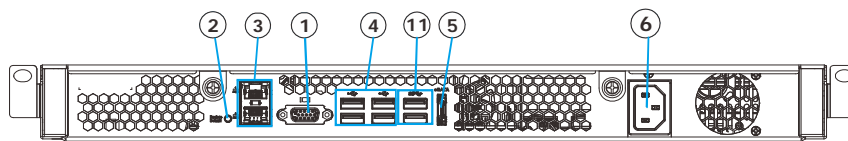


1.1.2 Rear panel

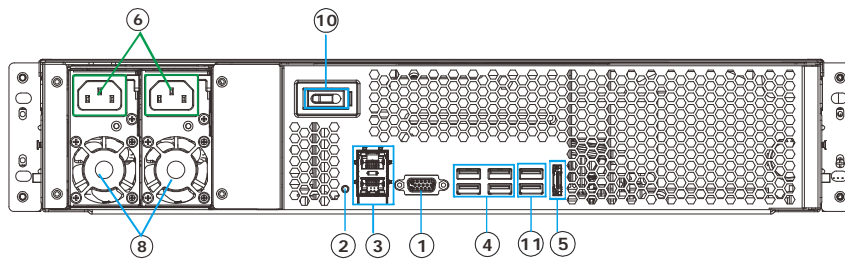
For detail EonNAS 1000 series rear connections, please refer to the illustration and table below.



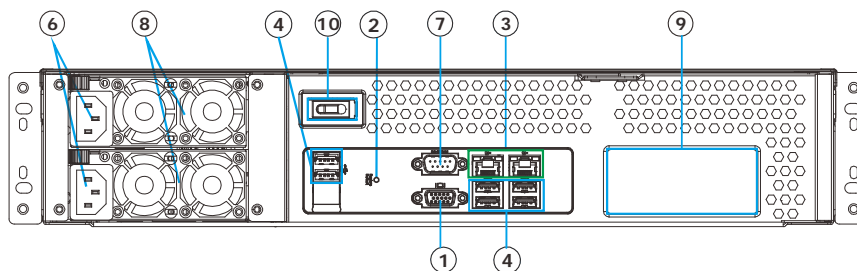
EonNAS 1100



EonNAS 1110



EonNAS 1210

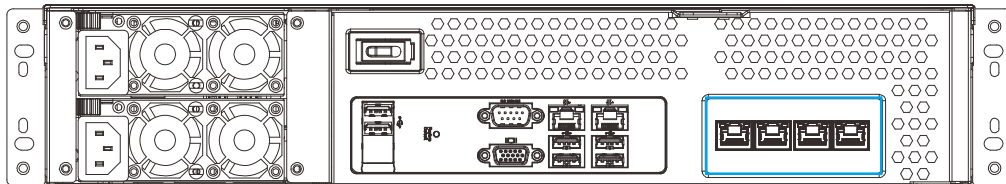


EonNAS 1310 & 1510

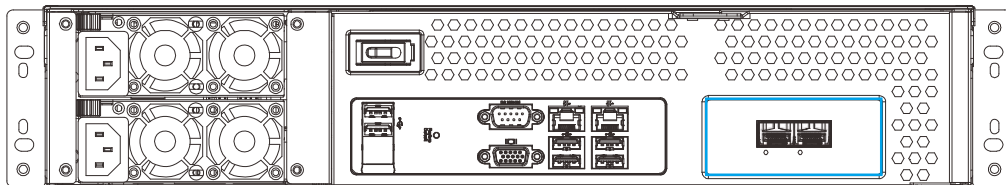
No.	Item /	Description
1	VGA port	VGA output connector.
2	Restore default button	The restore default button is for restoring the system to manufacturing settings (TCP / IP, system settings, etc.), please refer to " Restore Default Settings ". The button is NOT operational during initialization.

3	Ethernet	For accessing and configuring the EonNAS system.
4	USB ports	The USB ports are for external devices (DVD, external hard drives, printers, etc.); or to power eSATA devices (where applicable).
5	eSATA	The eSATA port is for external expansion purposes (intended for high speed external hard disk drive storage expansion).
6	Power	The power socket is for power cable connection.
7	Com. port	Reserved
8	Power	Two hot swappable power supplies.
9	EonNAS 15x0 Expansion	For EonNAS 15x0-1 and 15x0-2 only, expansion host port features four 1Gb iSCSI host ports for 15x0-1 models and two 10Gb iSCSI host ports for 15x0-2 models.
10	Power switch	For 13x0 and 15x0 models only, their power switches are located at the rear of the enclosure
11	USB 3.0	The USB 3.0 port differs to other USB ports in that it supports a maximum 5Gb/s transfer rate. The USB 3.0 ports are backward compatible with USB 2.0 specifications.

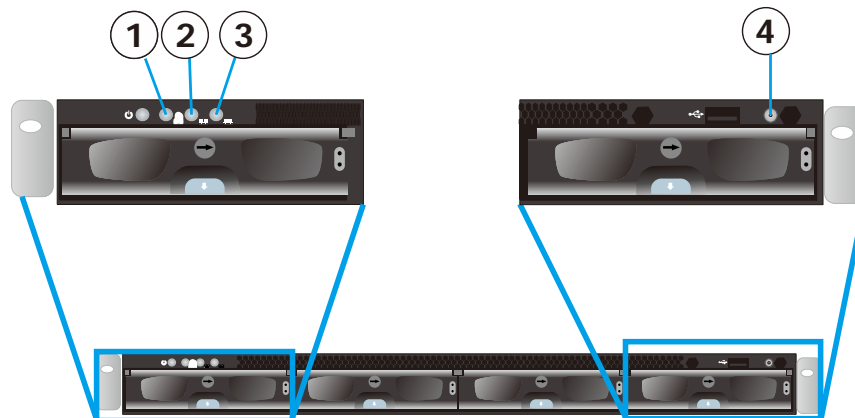
- EonNAS systems featuring four 1Gb iSCSI ports







- EonNAS systems featuring two 10Gb iSCSI ports

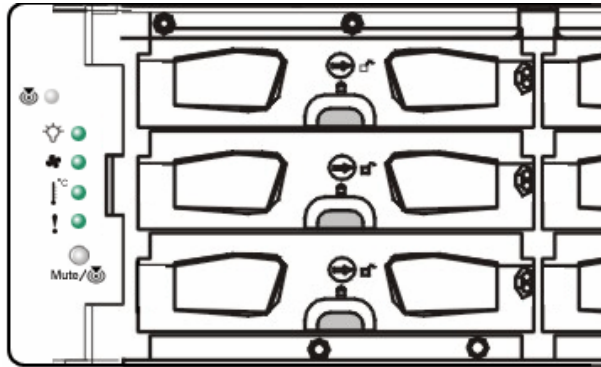








1.1.3 1U EonNAS System Front Status Panel



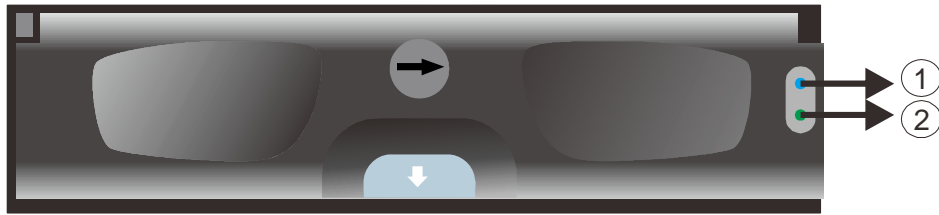
No. & Item	Color	Status	Position
1. System status LED		Off (Normal) / Red (system failure)	This LED indicates system failure when lit (fan, HDD, high temperature, etc.).
2. Ethernet port 1		Steady Green :cable connected	This LED indicates to users the statuses of the Ethernet ports (connected, disconnected, data transmission, etc.).
3. Ethernet port 2		Blinking Green : LAN activity Off: LAN cable disconnected	
4. Quick backup status LED		Green : USB device detected & ready to backup Blinking green : Data backup in progress Amber : Data backup process failed Blinking amber : Data backup configuration has not been set. Off : Standby for backup or backup process completed successfully.	This LED indicates to users the statuses of the quick backup process (USB device ready, backing up data in progress, no configuration set for backup, backup process failed, standby for backup, backup process completed successfully, etc.)

1.1.4 2U EonNAS System Front Status Panel



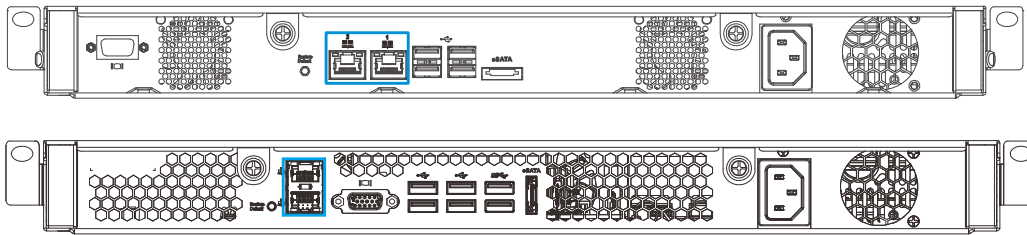
LEDs / Button	Icon	Color	Description
Service LED		White	This LED indicates the system requires service when lit.
Power Status LED		Green (Normal) / Amber (Fail)	This LED is used to warn users of power supply status
Cooling Module Status LED		Green (Normal) / Amber (Fail)	This LED is used to warn users of cooling module status
Temperature Sensor Status LED		Green (Normal) / Amber (Abnormal)	This LED is used to warn users of temperature status
System Fault LED		Green (operating normally) / Amber (Warning)	This LED indicates normal operation / system failure
Mute and Service LED Off Button	Mute/ 		This button is used to mute audible alarm / disables service LED

1.1.5 Hard Drive LEDs

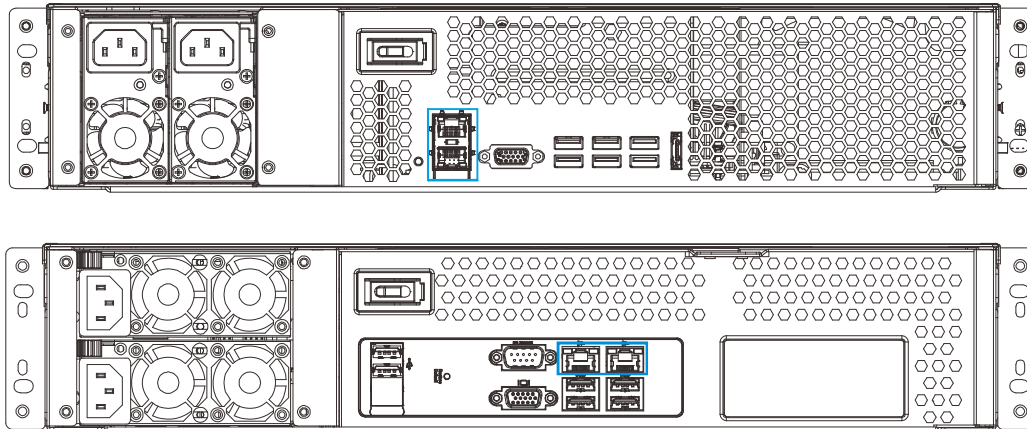


No. & Item	Color	Status
1. Drive Busy LED	Blue	FLASHING blue indicates data is being written to or read from the drive. The drive is busy. OFF indicates that there is no activity on the disk drive.
2. Power Status LED	Green / Red	GREEN indicates that the drive bay is populated and is working normally. RED indicates that the disk drive has failed, or a connection problem occurred.

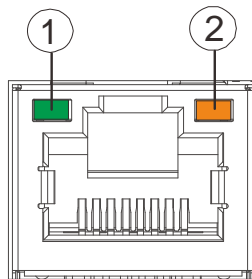
1.1.6 Rear Panel Ethernet Port LEDs



1U EonNAS systems

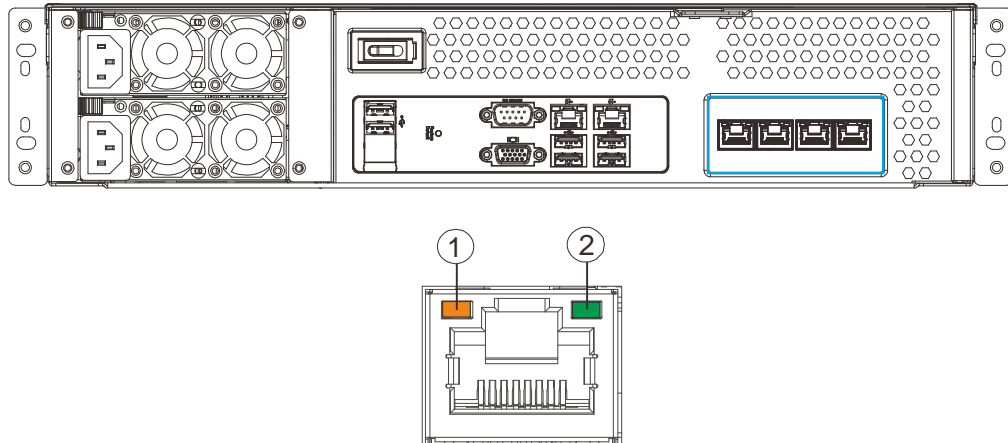


2U EonNAS systems



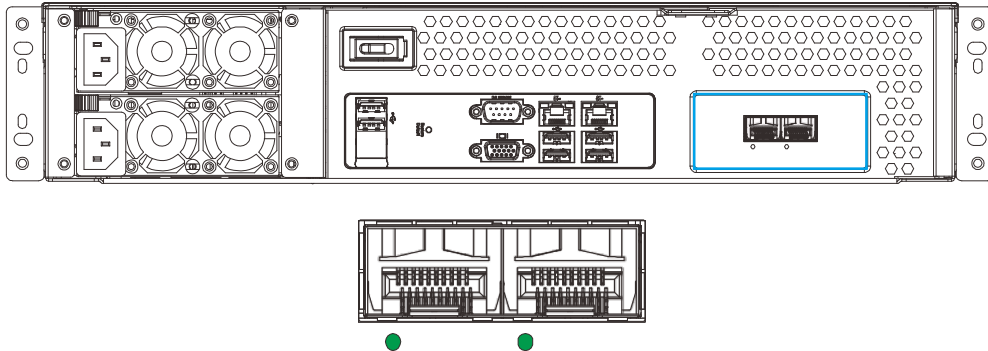
No. & Item	Color	Status
1. Link Status LED	Green	Steady green indicates connection established Off: indicates connection not established
2. Activity LED	Amber	Blinking amber indicates data transfer activity

1.1.7 EonNAS 15x0 1Gb iSCSI Ports



Position	Status
1. Link status LED	Amber indicates connection established Flashing amber indicates data activity
2. Speed LED	Green indicates GbE connection established Off indicates 10/100 connection established

1.1.8 EonNAS 15x0 10Gb iSCSI Ports



LED status	Color	LED Color & Status
Steady ON	Green	Steady green indicates a link has been established
Flashing	Green	Flashing green indicates an active link
Off	Off	Off indicates a link has not been established

The 15x0-2 model comes with two 10Gbps iSCSI channel host ports. The 10Gbps host connectivity is achieved by inserting SFP+ into the SFP+ cages on iSCSI ports and data signals are sent through optical cables.

The 10Gbps iSCSI channel standard allows for optical connections only. Optical cables can be used over longer distances and have been shown to be more reliable. Due to the demands of high transfer rates, optical cables are preferred for 10Gb iSCSI connectivity. Optical cables are also less susceptible to EMI.

The following transceiver and cables have been tested and proven to be compatible with your systems.

Item part number	Description
IFT-9370CSFP10G-0010	Small Form Pluggable 10Gb Optical Transceiver
IFT-9270CFCCab01	Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mmx2, 1 Meter
IFT-9270CFCCab02	Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mmx2, 5 Meters
IFT-9270CFCCab03	Optical FC cable, LC-LC, MM-62.5/125, Duplex, LSZH, O.D.=1.8mmx2, 10 Meters

The 10Gb iSCSI host ports connect to host adapters (HBA) that feature a 10Gbps transfer rate, SFP+ interface, and support full-duplex transfer. The HBA card best come with a 64-bit/133MHz PCI-X or PCI-E interface.



WARNING!

The SFP transceiver from Infortrend contains a laser diode featuring class 1 laser (incompliance with **Code of Federal Regulations (CFR), Title 21, Part 1040**).

All cables are sensitive and must be handled with care. To prevent interference within a rack system, the cable routing path must be carefully planned and the cables must not be bent.

Lasers



CAUTION!

Lasers can be hazardous and may cause permanent eye damage or blindness, and therefore must be treated and used with caution. Never look directly at the lasers.

1.2 System Monitoring Features

There are a number of monitoring approaches that provide the operating status of individual components.

1.2.1 Monitoring

The EonNAS system can monitor the following:

- PSU
- Cooling module

Cooling Module Speed Adjustment:

If temperature reading(s) exceed the temperature threshold, the firmware automatically raises the rotation speed of all cooling fans.

- Enclosure thermal sensor
- Hard drive

1.2.2 I²C bus

The presence detection circuitry and temperature sensors are interfaced through a non-user-serviceable I²C bus.

1.2.3 Audible Alarms

The system comes with audible alarms that are triggered when certain active components fail or when certain controller or system thresholds are exceeded. Whenever you hear an audible alarm, it is imperative that you determine the cause and rectify the problem immediately.

Event notification messages indicate the completion or status of array configuration tasks and are always accompanied by two or three successive and prolonged beeps. When sounded, please use the mute button on the [front status panel](#) to turn it off.



WARNING

Failing to respond when an audible alarm is heard can lead to permanent damage to the system. When an audible alarm is heard, rectify the problem as soon as possible.

1.3 Hot Swapping

The system comes with a number of hot-swappable components that can be exchanged while the system is still online without affecting the operational integrity. These components should only be removed from the system when they are being replaced.

The following components are hot-swappable:

- PSU modules on EonNAS 13x0 & 15x0 systems (including cooling modules)
- Hard drives



NOTE

Normalized airflow ensures sufficient cooling of the system and is only attained when all components are properly installed. Therefore, a failed component should only be removed when a replacement is available. Instructions on how to replace these hot-swappable components are given in [System Maintenance](#).

2 Hardware Installation

2.4 Before You Start

Some components are configured into fault-tolerant pairs and are independently hot-swappable while the failure of other components such as server board or the RAID controller can cause a down time.



NOTE

Always install the enclosure onto the rack before installing hard drives into the enclosure!

2.4.1 Slide rail installation (optional)

The slide rail is an optional accessory and is not included with the system for NAS11x0 systems but is included as a standard kit with EonNAS 13x0 and 15x0 systems. However if your rack / cabinet has sufficient means to support [enclosure specifications](#), then you do not need to install the slide rail included.

2.4.2 Hot-swappable components

HDDs in drive trays (RAID-5 configuration allows 1 hard drive to fail at any given time without data lost; RAID-6 configuration allows 2 hard drives to fail at the same time at any given time without data lost. Please refer to the Software Operation Manual for RAID configuration details and the maintenance section of this manual on how to replace hard disk drives)

2.4.3 Airflow concerns

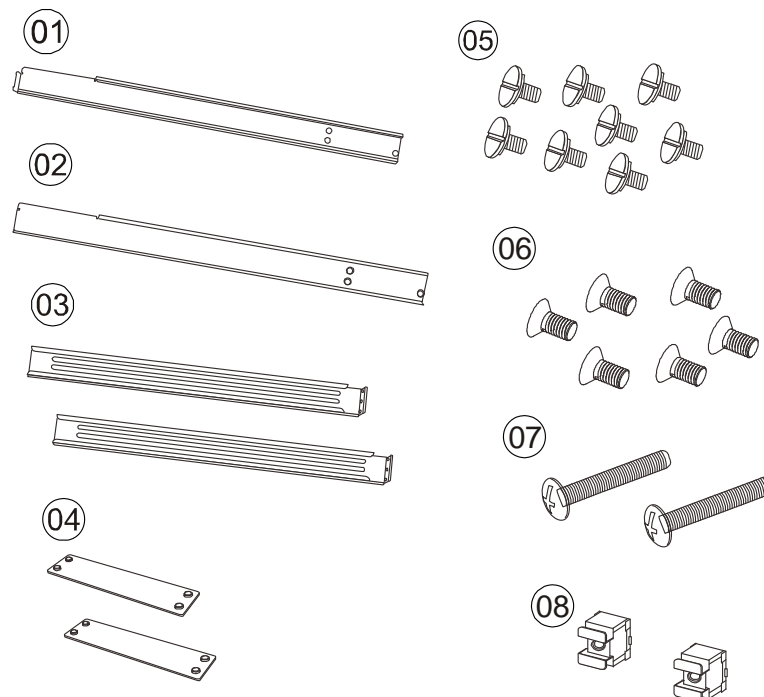
Allow 20cm of ventilation clearance in front and rear of the enclosure. Make sure cables are also placed well clear of the ventilation area behind the enclosure.

2.5 1U EonNAS Slide Rail Installation (Optional)

The following table shows all accessories that came with the IFT-9277CSlider36 rackmount rail installation kit, it is designed for 1U enclosures and 24~36" deep racks.

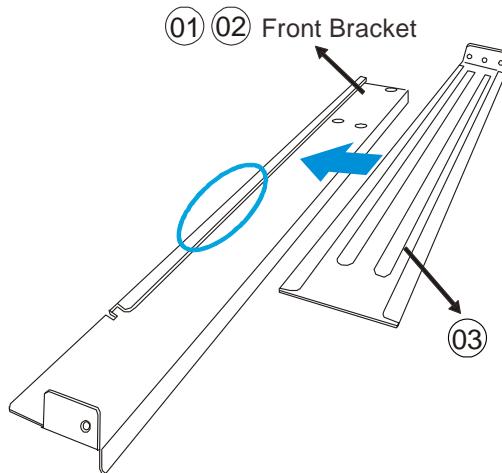
2.5.1 IFT-9277 Kit Contents

Item	Description	Quantity
01	Front bracket left	1
02	Front bracket right	1
03	Rear bracket	2
04	Bracket support	2
05	M5 x 5mm position screw	8
06	M5 x L10 crosshead screw	6
07	M5 x 35mm Cross Recess Round Head Screw	2
08	Cage Nut	2

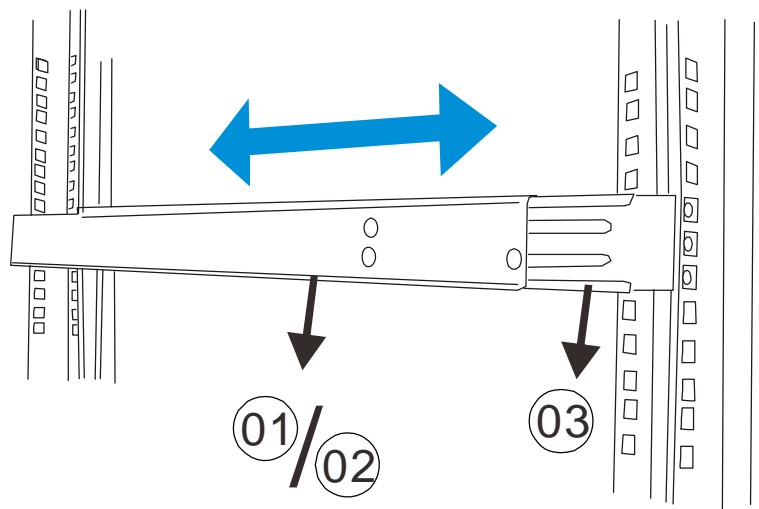


2.5.2 Installation Procedure

The installation of the IFT-9277 rack mount slide rail begins with assembling the slide rail (03) by inserting the rear bracket into the ditch (indicated by the blue circle) of the front brackets (01 & 02).



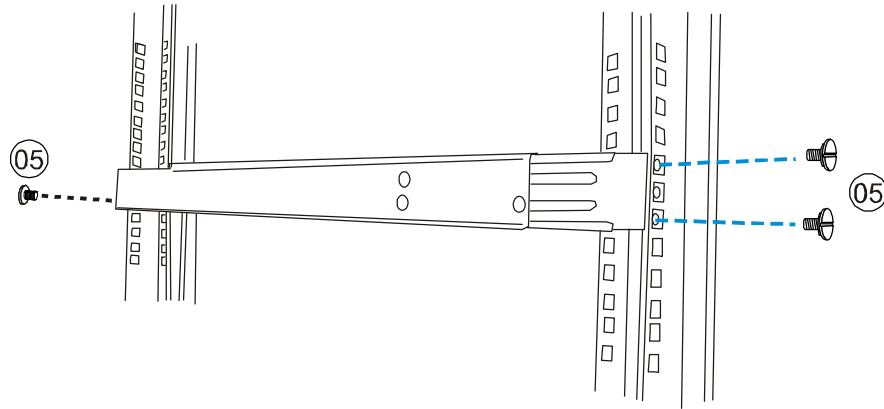
Determine where the slide rail (03) is going to be installed and adjust the length of the sliding front bracket (01 or 02) till it meets the front rack post.



Front rack post

Rear rack post

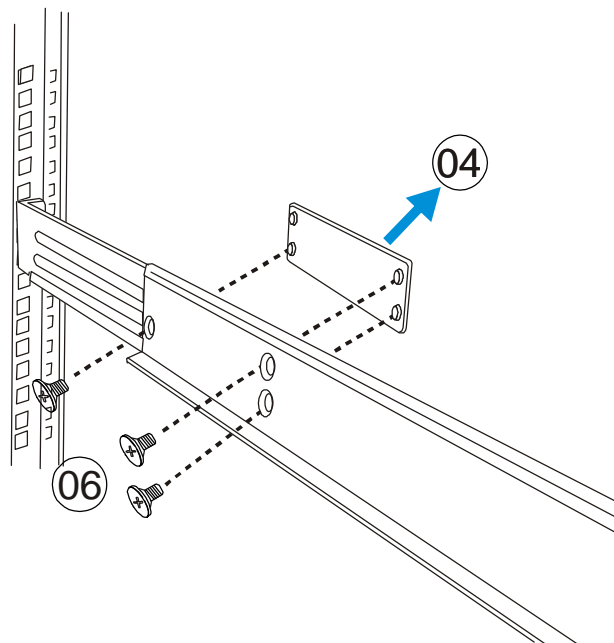
Screw one M5 x 5mm position screw **(05)** to the front rack post and two M5 x 5mm position screws **(05)** to the rear rack post (top and bottom positions) to secure the slide rail to the rack.



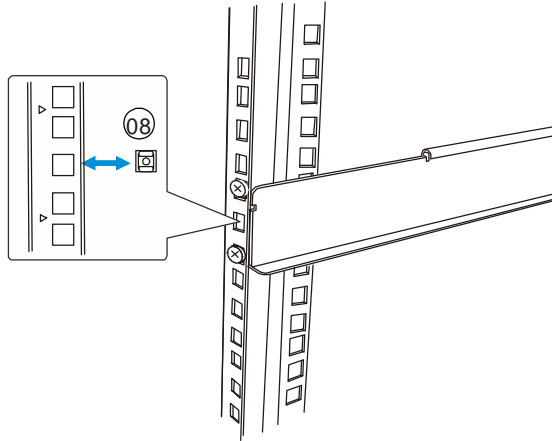
Front rack post

Rear rack post

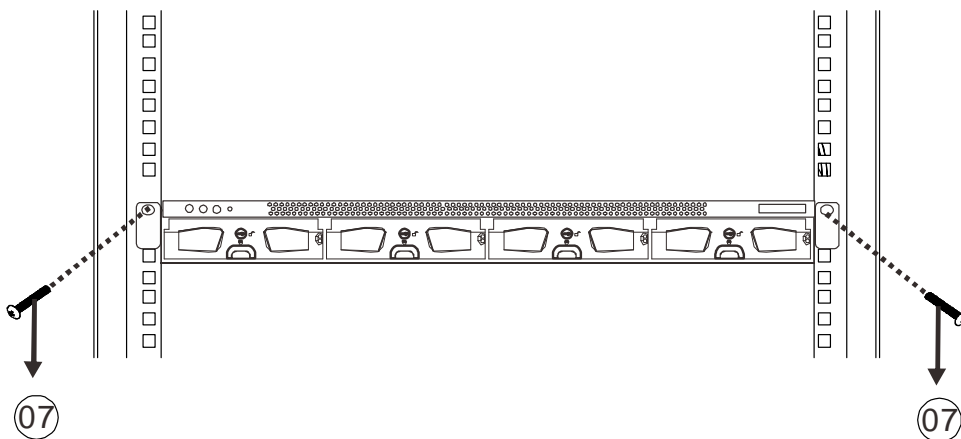
To fix the slide rails' length, attach a bracket support **(04)** to slide rail using three M5 x L10 crosshead screws **(06)**.



Attach one cage nut **(08)** to the front of the rack post. The cage nut will be used to secure the enclosure in place.



Lift the enclosure and align it with the slide rails on the rack, keeping pressure even on both sides, slowly push the enclosure into the rack. Fasten one M5 x 35mm crosshead screw **(07)** on each side of the enclosure chassis ears to secure the enclosure onto the rack.

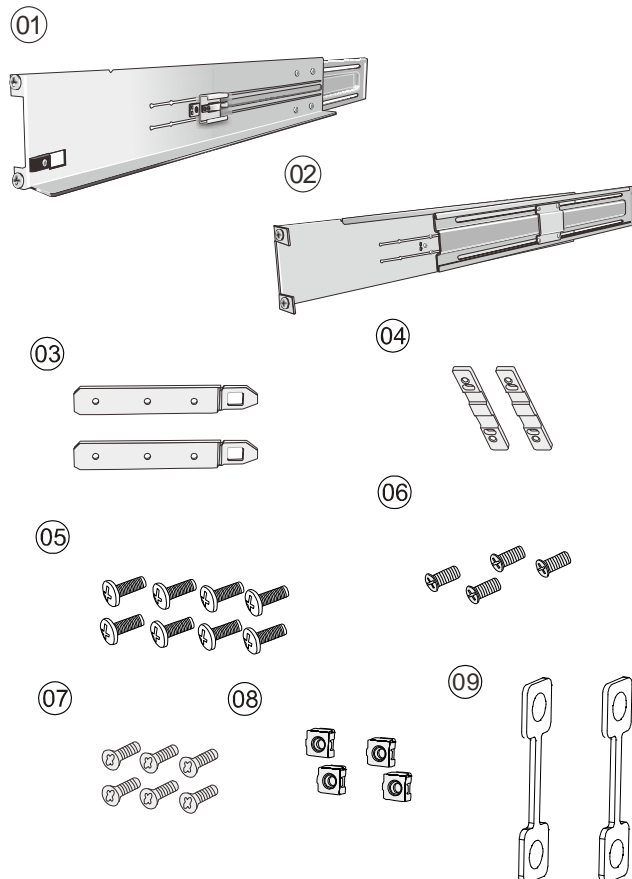


2.6 2U EonNAS Slide Rail Installation (Optional)

The following table shows all accessories that came with the IFT-9CCSlider36-0010 rackmount rail installation kit.

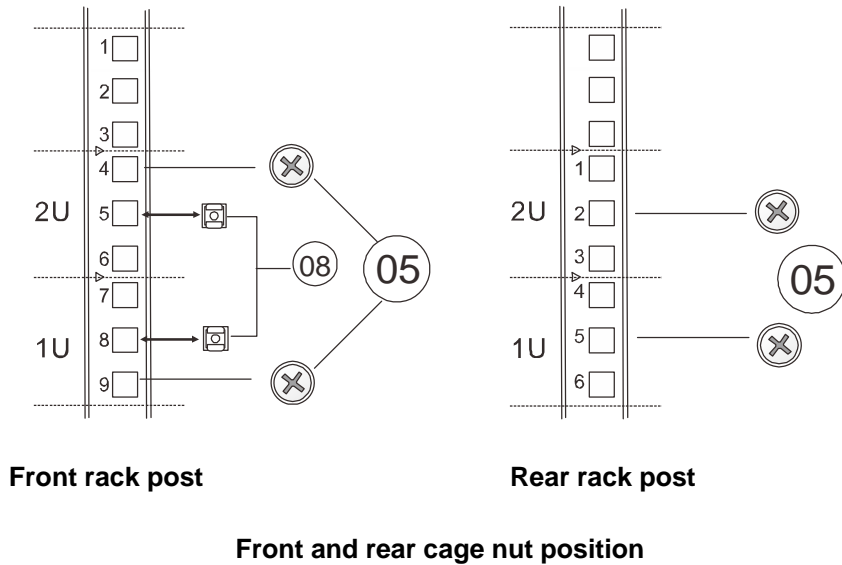
2.6.1 IFT-9373 / 9CC / 9N1 Kit Contents

Item	Description	Quantity
01	Mounting bracket assembly, L-shape, left-side	1
02	Mounting bracket assembly, L-shape, right-side	1
03	Inner glide	2
04	Screws, cross recess round head, M5x30	4
05	Cross recess truss head screws M5 x 9.0mm	8
06	#6-32 x10mm flathead screws	4
07	#6-32 L6 flathead screws	6
08	M5 cage nuts	4
09	Slide stopper	2

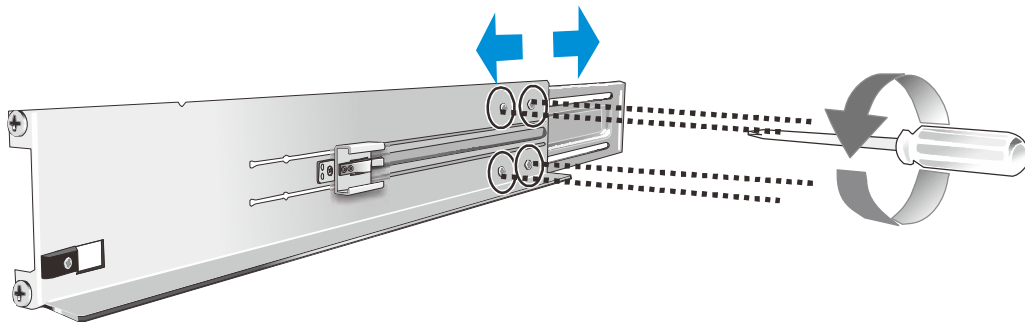


2.6.2 Installation Procedure

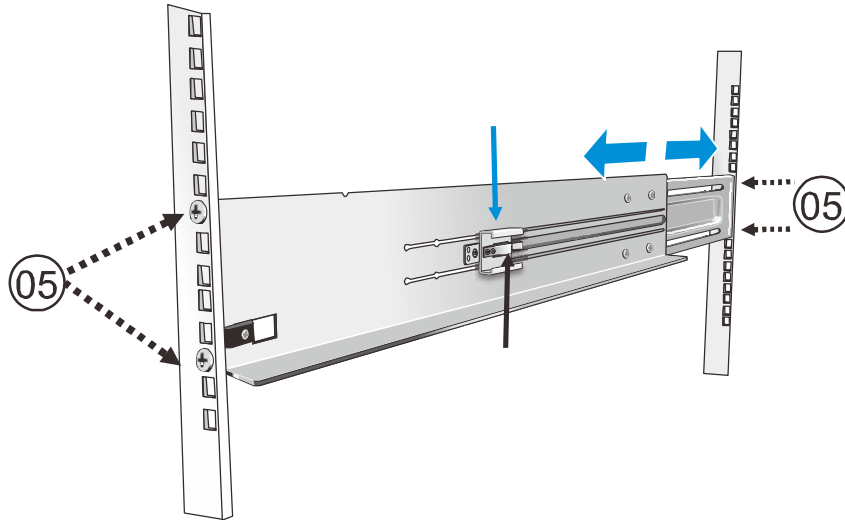
The installation begins with installing the cage nuts **(08)** provided to be mounted onto the posts (if your rack post do not have threaded holes) for cross recess truss head screws M5 x 9.0mm **(05)** to secure the enclosure. Please refer to the illustration below that matches your enclosure dimensions.



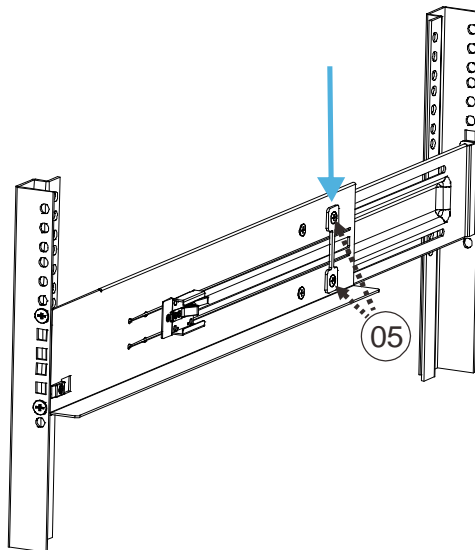
Adjusting the slide rail assembly to its appropriate lengths, make sure the L-shape rail **(01)** bend faces inwards, loosen the four screws to adjust its length.



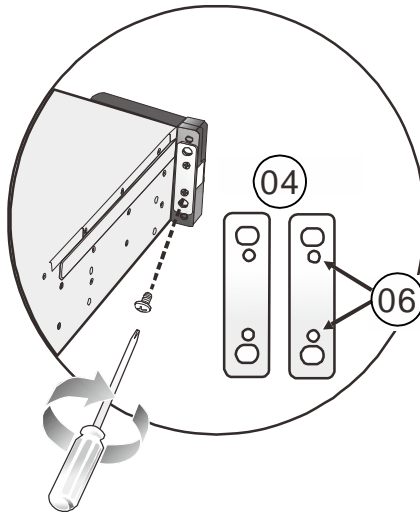
Secure the front end of the L-shape rail below the top cage nut (use for securing the enclosure). Extend the rail to the appropriate length where it meets the rear post and secure the front and rear using M5x0.9mm screws **(05)**. Slide runner (indicated by the **blue arrow**) and catch latch (indicated by the **black arrow**) is to meet with the inner glides.



Attach the slide stopper (indicated by the **blue arrow**) to fix the length of the rail in place and fix the slide rail onto the front and rear of the rack using M5x9.0mm screws **(05)**.

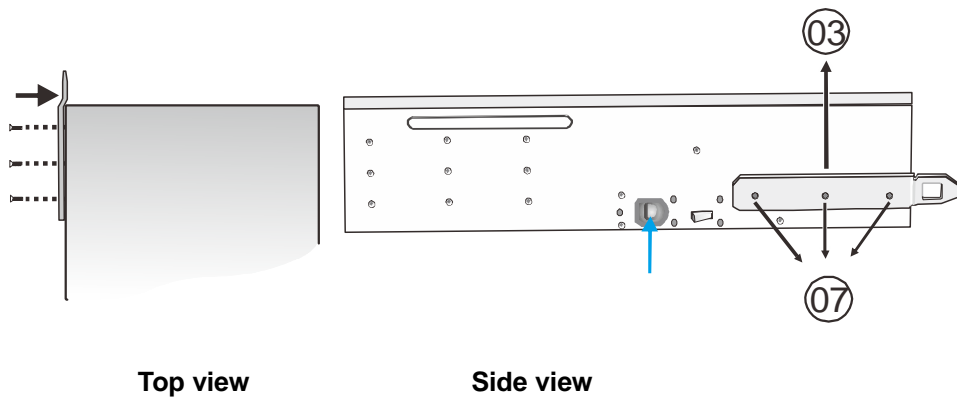


Attach the filler plates **(04)** behind the enclosure ears using two 32x10mm flathead screws **(06)** on each side (filler plates come with the system).

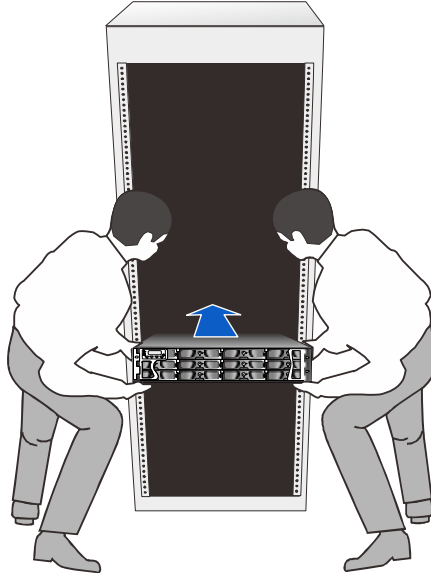


Attach the inner glides **(03)** to the left and right side of the enclosure using #6-32 L6 flathead screws **(07)**. Make sure the protruding end (indicated by the **black arrow**) is bent inward as shown in the illustration.

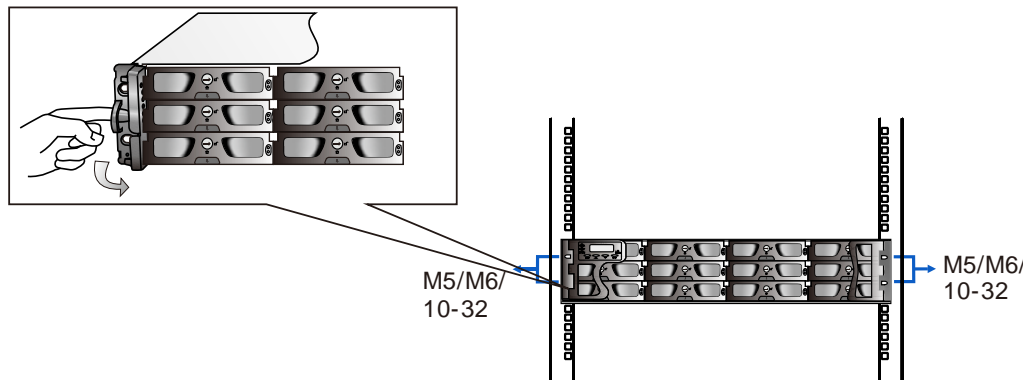
Rear of enclosure



It is strongly recommended that two people perform this procedure together! To mount the enclosure onto the rail and into the rack, place the enclosure on the installed rails and slide it into the rack until the front ears of the enclosure meets the front rack posts.



Secure the enclosure by using two #6 32x10mm flathead screws at the rear and four M5 x30mm screws on the forearm handles (forearm handles can also be secured using M6 / 10-32 screws from the system accessory box).

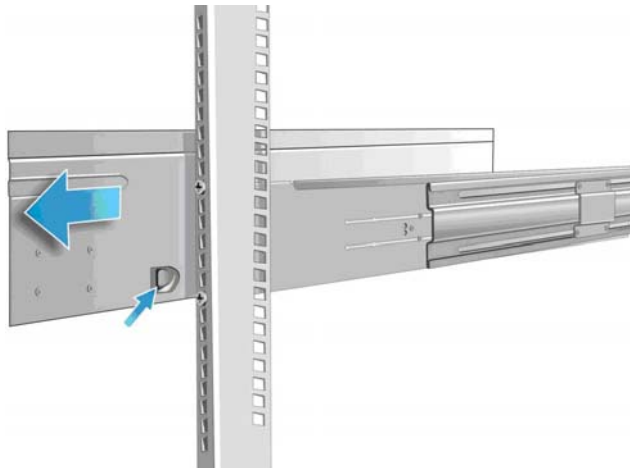


2.6.3 Removing the Enclosure

*Prior to removing the enclosure, power down your system (stop all I/O actions, please refer to Users' manual) and all hard drives have been removed!

*It is strongly recommended that two people work together on this procedure

1. Remove the screws from both sides of the enclosure's ears
2. Pull the enclosure out until it is stopped by the release latch
3. Use both hands to support the enclosure weight and use your index finger to press and pull the release latches (indicated by the small **blue arrow**) towards you. The larger blue arrow indicates the direction the enclosure should be pulled towards.



4. With another person's help, slowly pull the enclosure out of the rack once it has been released.

2.7 Installing Hard Drives

Hard drives are purchased separately. When purchasing hard drives, please consider the following factors:

2.7.1 Prerequisites

Capacity (MB/GB): Use hard drives that have the same capacity and rotation speeds. RAID arrays use a “least-common-denominator” approach meaning the maximum capacity used in each drive for comprising a logical configuration is the maximum capacity of the smallest drive. Profile: The enclosure drive bays are designed for 3.5-inch wide x 1-inch pitch hard drives.

Drive Interface Type: The enclosure accommodates SATA-II (3Gbps) or SATA-III (6Gbps) hard drives up to 3TB of capacity per disk.



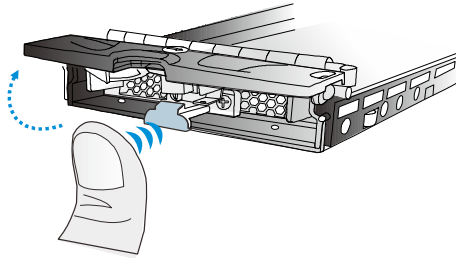
NOTE

The hard drives and drive trays should only be installed into the system after it has been mounted into a rack cabinet. If the hard drives are installed first, the system will be too heavy to handle and the possible impact during installation may damage your hard drives.

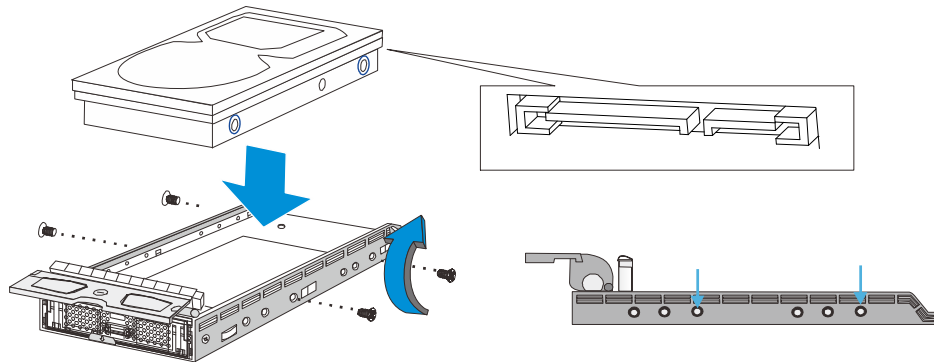
Users **MUST** install at least **ONE** hard drive into slot 1 to setup the EonNAS system.

2.7.2 Inserting the Hard Drive to the Tray and into the Enclosure

To remove the tray from the enclosure, press the release button and gently pull out the tray.



Place the hard drive into the drive tray. Make sure the hard drive's interface connector is facing the open side of the drive tray and its label side facing up.



Adjust the drive's location until the mounting holes in the drive tray are aligned with those on the hard drive. Secure the drive with four screws.

2.7.3 Drive Tray Numbering Sequence

EonNAS 11x0

Hard drive slot 1	Hard drive slot 2	Hard drive Slot 3	Hard drive slot 4
-------------------	-------------------	-------------------	-------------------

EonNAS 12x0 & 13x0

Hard drive slot 1	Hard drive slot 2	Hard drive Slot 3	Hard drive slot 4
Hard drive slot 5	Hard drive slot 6	Hard drive Slot 7	Hard drive slot 8

EonNAS 15x0

Hard drive slot 1	Hard drive slot 2	Hard drive Slot 3	Hard drive slot 4
Hard drive slot 5	Hard drive slot 6	Hard drive Slot 7	Hard drive slot 8
Hard drive slot 9	Hard drive slot 10	Hard drive Slot 11	Hard drive slot 12



WARNING

Tray numbering sequence is important because if any faults occur to disk drives, you need to identify the location of the faulty drive(s). For example, if you mistakenly remove 2 drives from a RAID5 logical drive, data will be lost.

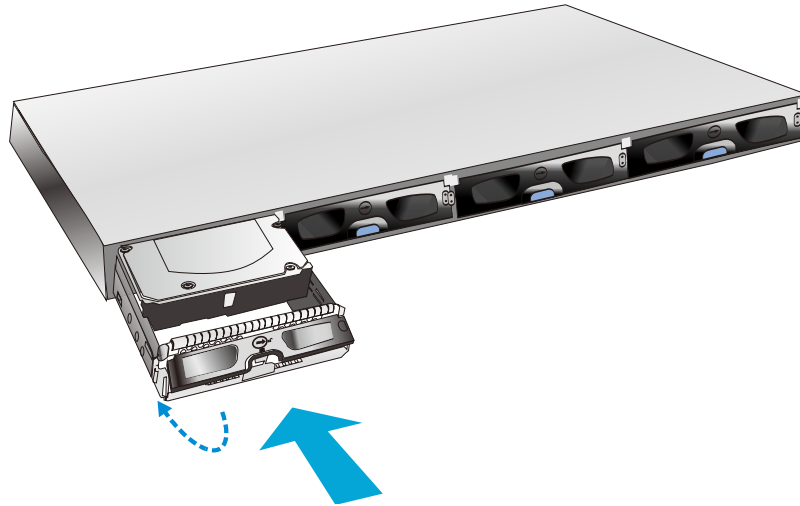
Below is a list of the level of fault tolerance for different RAID levels:

RAID Level	Minimum disk requirement	Max. No. of Failed Drives without Data Loss
Non-RAID	1	No fault tolerance. 1 drive fails and the data is lost.
0	2	No fault tolerance. 1 drive fails and the data is lost.
1	2	1 (mirrored pair)
5	3	1
6	4	2

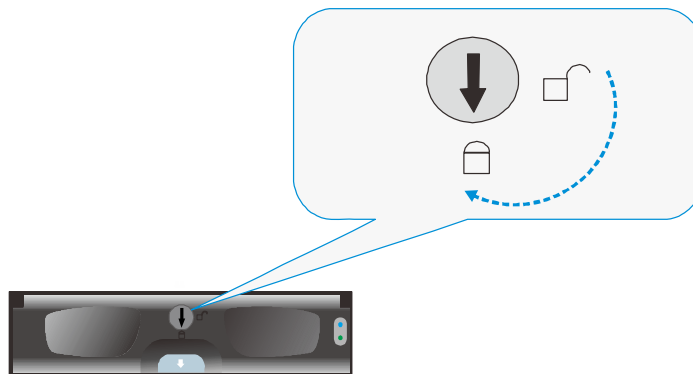
2.7.4 Inserting the Drive Tray into the Enclosure

Once the hard drives have been installed in the drive trays, the drive trays are ready to be installed into the system.

With the tray bezel open, insert the installed hard drive and tray into the enclosure. Once inserted, close the tray bezel.



Use a small flathead screwdriver to rotate the tray bezel lock from the unlock position to the lock position.



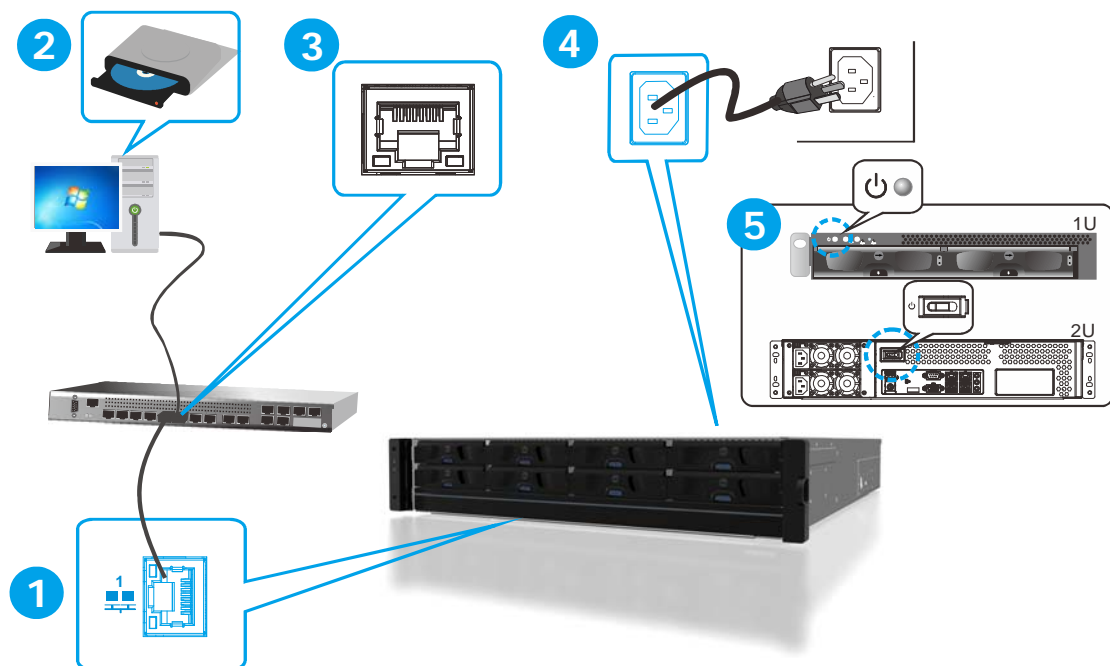
3 Connections

3.1 System Connections for Initialization



NOTE

Make sure you have at least installed one hard drive into the EonNAS system.



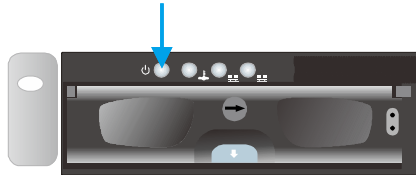
The system connection requires the user to

- (1) Connect an Ethernet cable from the EonNAS system to a switch / router
- (2) Place the CD that came with the system into your PC's CD-ROM
- (3) Connect an Ethernet cable from the "**SAME**" switch / router to the PC
- (4) Connect the power cable to the EonNAS system and to a power outlet
- (5) Press the power button to start up the system

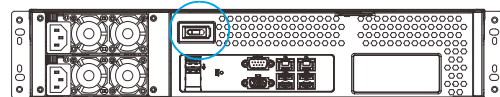
3.2 Status LED When Powered-on

Press the power button (shown below)




1U EonNAS front panel

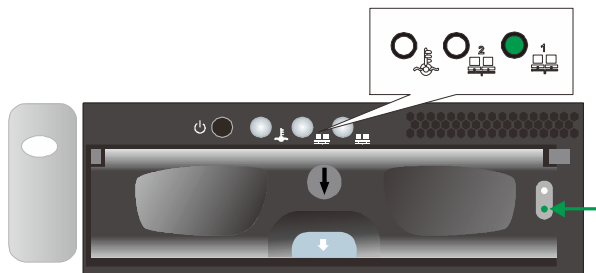


2U EonNAS rear panel



For 1U EonNAS systems

The system status LED  should remain off to indicate the system is operational and the Ethernet 1 & 2 LEDs   should light up (flashing) if they are connected; users can also check if the system is powered on by looking at the hard disk drive status LED (indicated by the **green arrow**) on the bezel tray.



For 2U EonNAS systems

When turned on, the service LED should remain off while the rest of the status LEDs on the front panel should light up green to indicate normal operation.

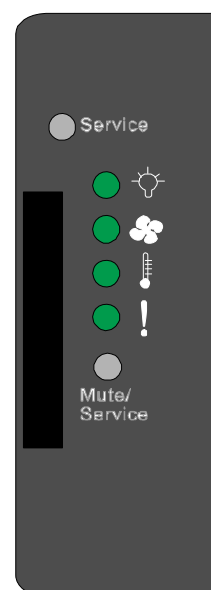
Service LED: Off

Power LED: **Green**

Cooling fan LED: **Green**

Thermal LED: **Green**

System fault LED: **Green**



3.3 EonNAS Initialization Process



NOTE

Turn off Windows firewall:


To turn off the Windows firewall, please refer to the instructions below.

Windows 7/ Vista:

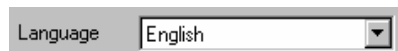
Click on the Start button > Control Panel > Security > Windows Firewall > turn off Firewall. You may be prompted for an administrator password or confirmation, type the password or provide confirmation.

Windows XP:

Click on the Start button > Control Panel > Windows Firewall > turn off Firewall.

1. Approximately 5 minutes after pressing the power button (if the user is near the system, after pressing the power button, a beep will sound after 2 minutes and two beeps will sound 3 minutes thereafter) double click on  found in the "fscommand" folder on the CD. A NasFinder window will appear.

2. Select your preferred interface language.



3. Highlight your system and click the "**Connect**" button.

Discovered Device List		
Name	Model	IP Address
NAS 1100	NAS-1100	10.0.0.2

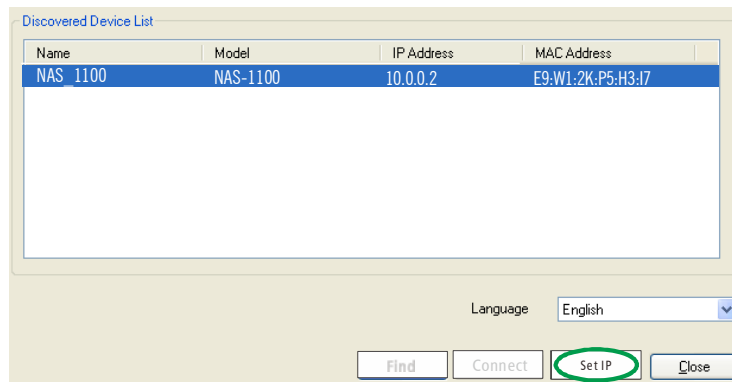


NOTE

If your EonNAS system was not found

- Make sure your PC and EonNAS are connected to the same switch / router!
- Try turning off the antivirus' firewall (please refer to its manual) then close the NasFinder and go back and start from step 3.
- Please refer to the setup instructions in the User Manual on the CD.

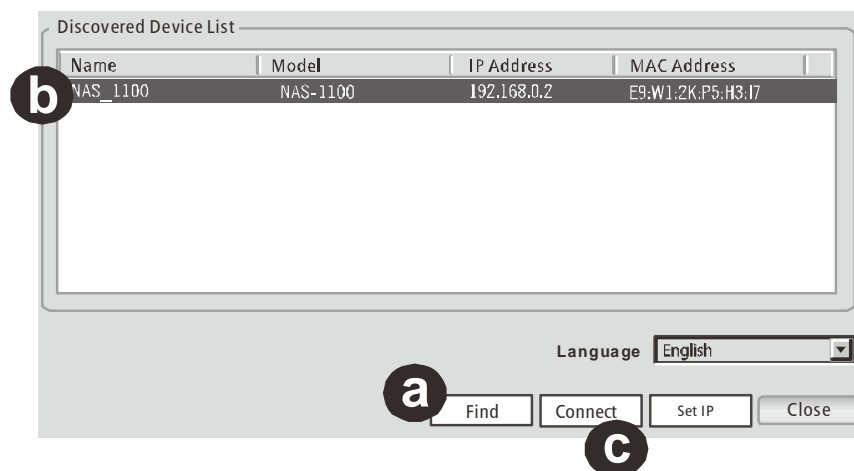
4. The “Set IP” button will light up. Click on it so the NasFinder can set an IP address for your EonNAS system.



5. The IP settings window appears with an IP address, click the Connect button, the following browser window will appear. Click on “OK”. When a prompt appears asking for password, please enter “admin”.



6. Wait for 5 seconds and
 - a. Click the “Find” button on your NasFinder.
 - b. Highlight the EonNAS system that matches the IP address set previously.
 - c. Click the “Connect” button.



7. The following screen will appear. Fill in your system's settings.

Host Name: Enter a unique name for your EonNAS system.

Timezone: Select your local time zone.

Password: Enter a new password for the admin account. (The default password is admin)

Host Name	<input type="text" value="NAS_1100"/>
Timezone	<input type="text" value="(GMT-08:00)America/Los_Angeles"/>
Password	<input type="password" value="•••••"/>
Confirm Password	<input type="password" value="•••••"/>

Click "next" when you're done.

8. The following screen appears. Unless you want to change the IP address, leave the current settings and click the Next button.

Interface		IP Address	Netmask	Gateway	Link
LAN1	<input type="radio"/> DHCP <input checked="" type="radio"/>	<input type="text" value="192.168.0.2"/>	<input type="text" value="255.255.255.0"/>	<input type="text" value="192.168.0.253"/>	<input checked="" type="radio"/>
LAN2	<input type="radio"/> DHCP <input checked="" type="radio"/>	<input type="text" value="10.0.0.3"/>	<input type="text" value="255.255.255.0"/>	<input type="text"/>	<input checked="" type="radio"/>

9. Enter a unique pool name, select the protection level, and click the Next button.

Pool Name:	<input type="text" value="Pool-1"/>
Data Protection Level:	<div> <input checked="" type="radio"/> Best Protection RAID 1: Provides best protection. Your data will be mirrored. </div> <div> <input type="radio"/> Better Protection RAID 6: Provides protection against two simultaneous drive failures. </div> <div> <input checked="" type="radio"/> Good Protection [Recommended] RAID 5: Provides protection against one drive failure. </div> <div> <input type="radio"/> No Protection RAID 0: Provides no protection but offers maximum capacity. </div>
Number of Drives:	4
Usable Capacity:	698.66 GB

10. Add at least one user account for accessing the new storage pool and click the Next button (The default user account is username: guest, password: guest).

Name	Password	Confirm Password	Home Directory
<input type="text" value="guest"/>	<input type="password" value="•••••"/>	<input type="password" value="•••••"/>	<input checked="" type="checkbox"/>
<input type="text"/>	<input type="password"/>	<input type="password"/>	<input type="checkbox"/>
<input type="text"/>	<input type="password"/>	<input type="password"/>	<input type="checkbox"/>

11. Change the default share folder settings or add a new folder and click on the Next button.

Folder	Access Rights	
EonShare	<input checked="" type="radio"/> Full Control	<input type="radio"/> Read Only
	<input type="radio"/> Full Control	<input type="radio"/> Read Only
	<input type="radio"/> Full Control	<input type="radio"/> Read Only

12. View the summary of configurations. Click Back to modify the parameters or Apply to complete the Startup Wizard. Press OK to initialize or to reboot when prompted!
13. Upon reboot, when you hear two beeps, you may then log into and use your EonNAS system (the whole process may take approximately 20 minutes to complete).

**NOTE**

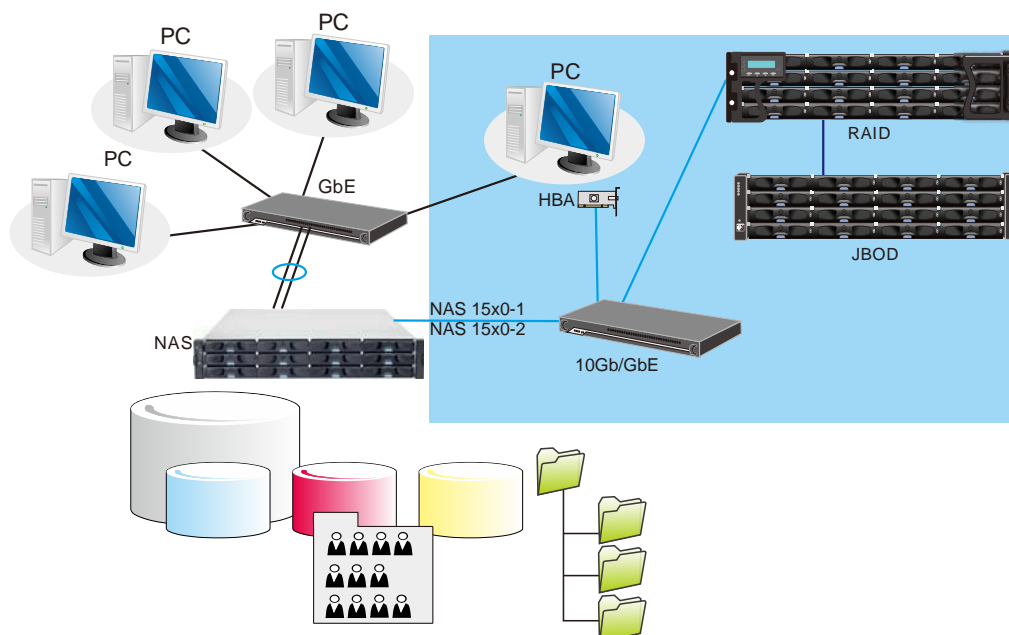
Remember to turn back on your Windows and antivirus' firewall. Setting can be found in the same location as the turning off option.

3.4 Connection Concept



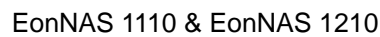
NOTE

Make sure the system has been initialized and set up to meet your network requirements. Once connected to the network, please power on the peripheral devices first (eg. switches, routers, servers, PCs, etc.).



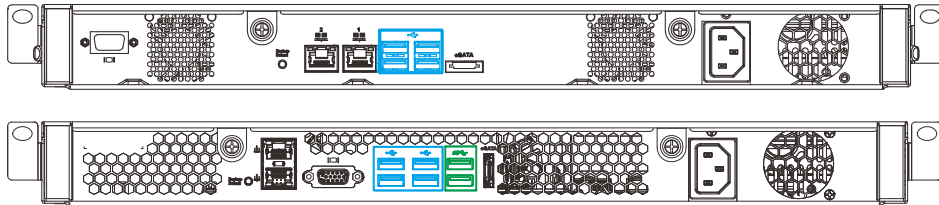
The system connection concept of EonNAS 1000 series is shown above where it connects to multiple client PCs through a GbE switch / router and for the variant models (15x0-1 and 15x0-2), they provide additional host connections (indicate by the blue line connecting to the shaded area) such as 4x 1Gb/s iSCSI and 2x 10Gb/s iSCSI channel host connections to RAID and indirectly to JBOD expansion enclosures. The two onboard 1Gb/s Ethernet ports can be trunked (shown by the blue circle). For detail RAID host port connections, please refer to the Hardware Manual that came with your RAID storage system(s).

The eSATA port can be used for external hard drive expansion (connecting to eSATA capable enclosures) or other eSATA capable devices. Most eSATA devices gain operating power from USB ports. It is essential to plug in the eSATA connector to the eSATA device and to the eSATA port before powering on (using USB connectors or an adaptor to supply power).

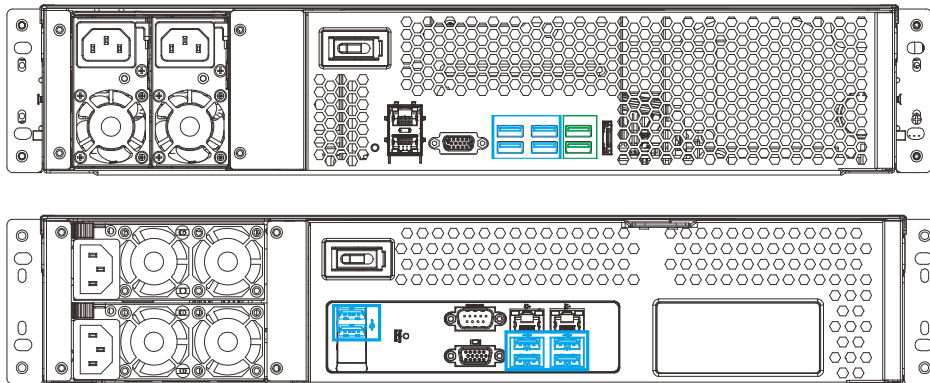


3.6 USB External Expansion Port


USB devices are hot-swappable. Users should hear a beep sound when a USB device is plugged-in and properly detected.



1U EonNAS systems



2U EonNAS systems

Specific models have USB3.0 ports (shown in green) labeled . For details, please refer to the [“Rear Panel”](#) section.

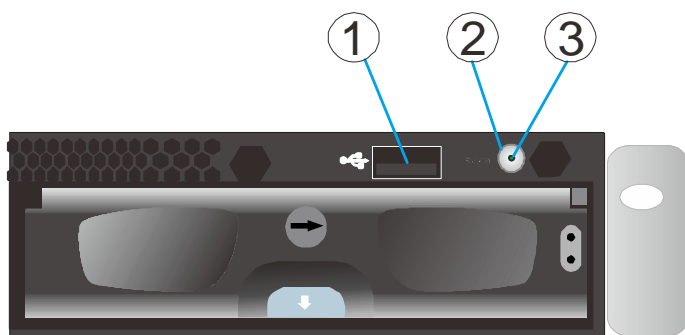
The quick backup USB port at the front panel must be setup in advance to utilize the quick backup functionality (please refer to the documents on the CD-ROM).



The front USB port can also be used for external storage medium expansion purposes or peripheral devices. For details, please refer to the documents on the CD-ROM or the manual of your USB device.

3.7 Front Panel Quick Backup USB Port & Button (1U EonNAS only)

The front USB port can be used for One-Touch Copy. Users need to setup their systems beforehand to perform One-Touch Copy. Log into the EonNAS management page and the settings can be found under “Backup > One-Touch Copy” (please refer to the EonNAS Software Manual). Once you have setup the One-Touch Copy function, simply plug in a USB storage device and press the quick USB backup button to initiate the One-Touch Copy process. A beep will sound when the quick backup process begins or when completed. The time required to backup will depend on the amount of data capacity you are backing up.



No.	Description
1	Quick USB backup port
2	Quick USB backup button
3	Quick USB backup status LED

Quick USB Backup Status LED

Color	Status
Off	Standby for backup or backup process has completed successfully.
Green	The USB device has been detected and ready for backup actions.
Blinking green	Data backup in progress.
Amber	The data backup process has failed.
Blinking amber	The data backup configuration has not been set.

4 System Maintenance



WARNING

Replace a failed hard disk drive from the system as soon as possible!

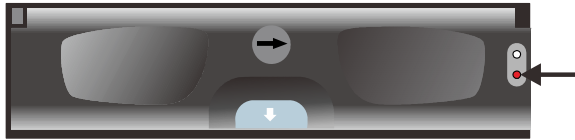
When inserting a removable module, do not use excessive force. Forcing or slamming a module can damage the connector pins either on the module itself or on the backplane.

4.1 User replaceable components:

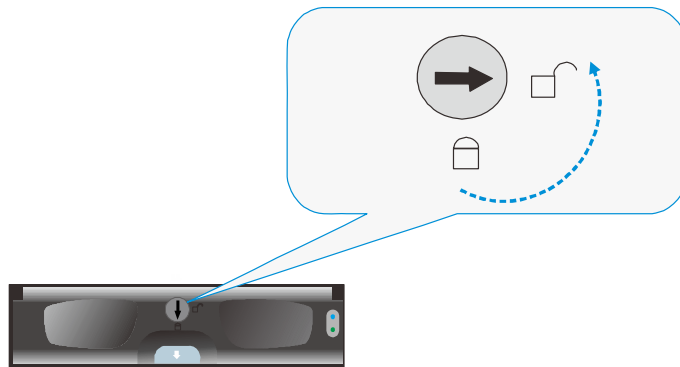
- HDDs in drive trays (for RAID configuration details, please see the EonNAS Software Manual).
- Power supply units (2U EonNAS only)

4.2 Replacing the Hard Disk Drive

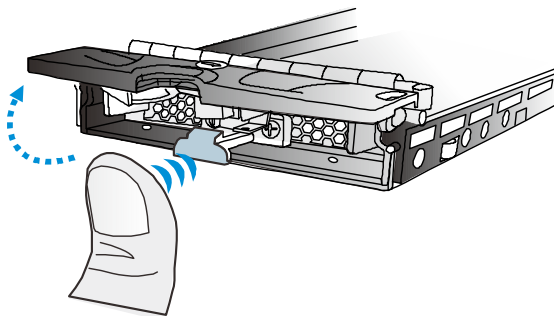
The easiest way to find out if your hard disk drive has failed is by looking at its status LED. If the power status lights up red, it indicates that the particular hard disk drive has failed.



Hard disk drives are hot swappable and to replace the failed hard drive, use a small flathead screwdriver to rotate the bezel lock from the lock position to the unlock position.

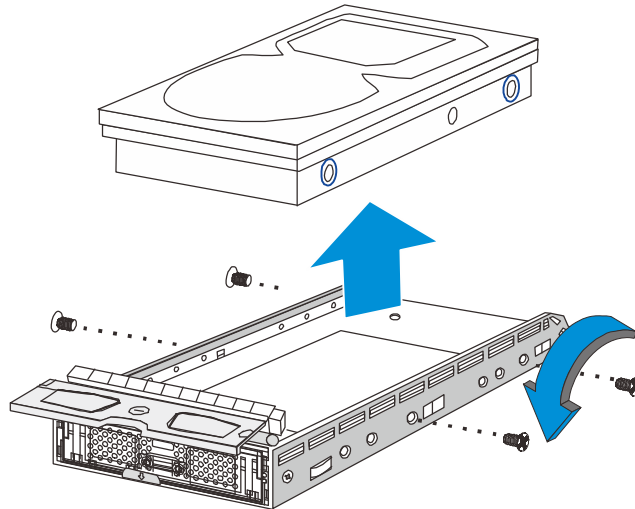


Press the release button on the tray bezel to open the bezel.



Remove the drive tray by pulling it one inch out of the drive bay and wait for at least 30 seconds for the disk drive to spin-down and then gently pull out the drive tray from the chassis.

Remove the four (4) retention screws that secure the hard drive from the sides of the drive tray (two on each side).



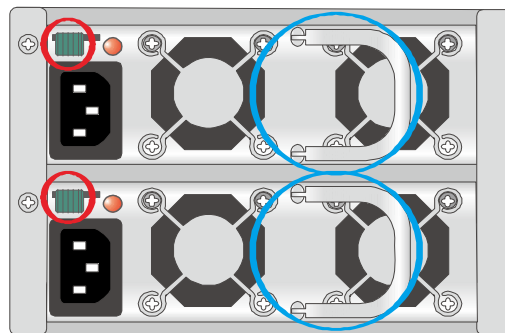
Install the replacement hard drive and reinserted into the enclosure as described in section "[Installing Hard Drives](#)".

4.3 Replacing the Power Supply (2U EonNAS only)

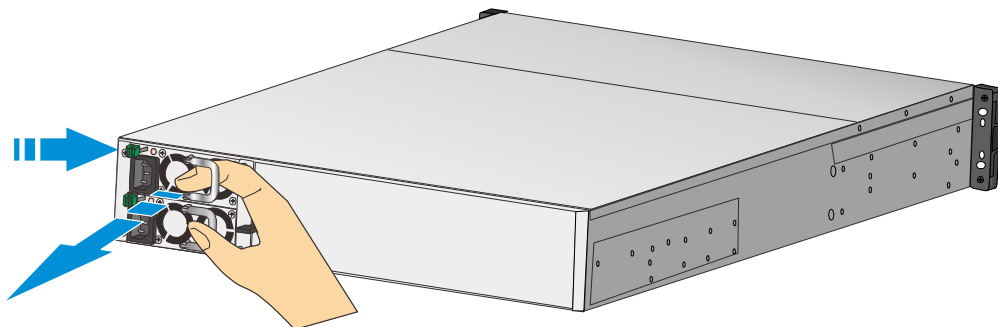
Power supplies are redundant and load-sharing. PSUs are hot swappable!

Disconnect the power cord from the failed power supply. (Its LED should light static Red).

Place your thumb around the left side of the PSU ejection lever (circled in **red**) while hooking your index and middle finger around the PSU handles (circled in **blue**).



Use your thumb to push the lever in the direction of arrow (shown below) to disengage the power supply and use your index and middle finger hooked around the ejection lever to pull out the PSU.



To install the replacement module, make sure it is gently inserted and is pushed all the way in.

Connect the power cord, power on, and check if the LED lights static Green.

4.4 Restore Default Settings

Under the following circumstances, you may need to restore to system default settings:

- You forgot your password and you are unable to access the EonNAS server

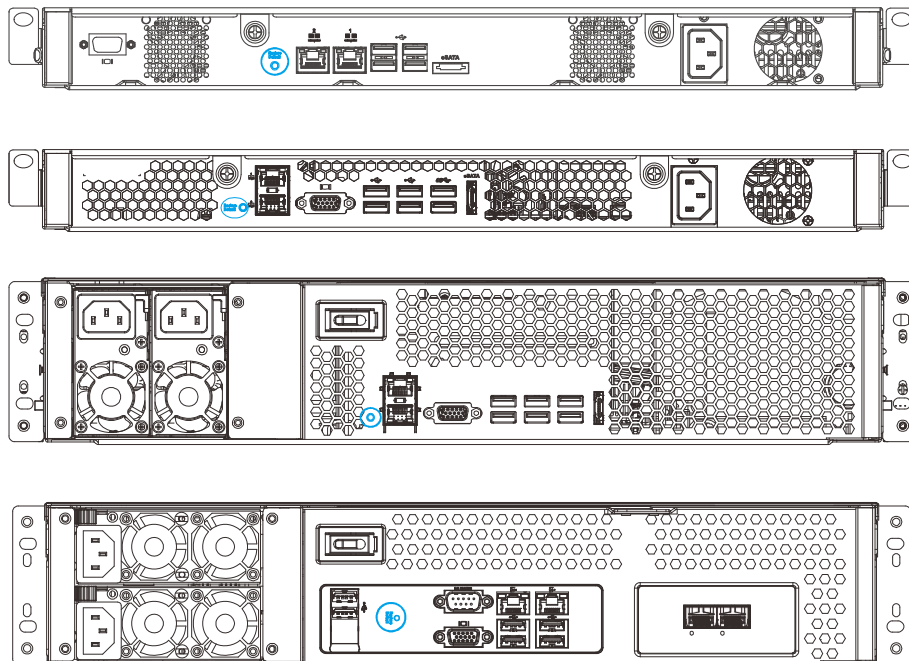
Note:

Restoring the system to its default settings should be your last option. The restore default function will disable Jumbo Frame, reset port trunking settings and reset the “Admin” user account back to default (account: admin / password: admin).

The restored “settings” will search the network in DHCP mode for about 3 minutes and if unsuccessful in acquiring an IP address, it will revert to the default IP address of 10.0.0.2 for Ethernet port 1 and 10.0.0.3 for Ethernet port 2.

To restore default settings:

- Stop all host I/Os.
- Use the tip of a pen, press and hold the restore default button for 3 ~ 5 seconds then release to restore to system default settings (a beep will sound to indicate that default settings have been restored).



- Settings mentioned above will be reset to manufacturer's default.

4.5 System Alarm Sound

The EonNAS system will sound alarm beeps to alert users that the system may be experiencing issues. The table below describes the type of beeps heard and what the issue(s) may be. When alarm sounds, please check the system log for details.

Type of sound	Description
Short beep (~1 second)	One beep <ol style="list-style-type: none">1. System startup (system loading from DOM).2. System shutting down3. System restored successfully4. Firmware update completed5. USB quick backup start / completed6. External drive inserted7. Beginning / completion of external data backup8. Pool rebuilt complete
Continuous long beeps (~3 seconds/per beep) till muted manually	<ol style="list-style-type: none">1. 95% hard drive storage capacity used2. 100% hard drive storage capacity used3. RAID operating in degraded mode4. Hardware error (cooling fan, power, etc.)5. Failed operation (failure of external backup, quick backup, failed to restore back to default, etc.)

Appendix

Technical Specifications

Dimensions	1U EonNAS: 439(W) x 511 (D) x 43 (H) mm 2U EonNAS: 445.6(W) x 650.25 (D) x 88.0 (H) mm
Chassis	1U EonNAS: 1U rack-mount chassis 2U EonNAS: 2U rack-mount chassis
Storage	1U EonNAS: 4 hot-swappable 3.5" SATA HDDs 2U EonNAS 12x0 / 13x0: 8 hot-swappable 3.5" SATA HDDs 2U EonNAS 15x0: 12 hot-swappable 3.5" SATA HDDs Supported RAID levels: 0, 1, 5, 6, 0+1, 1+0
Backplane	SATA backplane for 4 / 8 / 12 3.5" HDDs
Onboard LAN	2 x Gb Ethernet RJ-45 ports
Mounting	Rackmount rails for 19" rack cabinets (optional)

Operating Environment

Temperature	Operating: 5 to 40°C (32° F to 104° F);
Humidity	Operating: 5% to 80%, non-condensing

Certifications

Summary

EMC / Safety	BSMI
	CB
	FCC /CE Class A
	UL60959/ IEC 60950
	CCC
	GOST

警告使用者：

這是甲類資訊產品，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對策



WARNING

An incorrect battery replacement (wrong specification) may result in short-circuit or explosion! To replace a battery, always purchase from the system vendor or only use batteries with specifications matching or recommended by the system vendor.



警告

如果將電池更換成錯誤類型的電池，會有爆炸的危險！電池只能更換為與製造商建議相同或等同類型的電池。