Infortrend Hardware Manual

EonNAS Pro Series

Version 1.5

Contact Information

Customer Support

Contact your system vendor or visit the following support sites.

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- ESVA Support
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Safety Precautions

Read these instructions before you install, operate, or transport the system.

Setup the system 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.

Secure airflow clearance around the enclosure:

- Secure an 18 to 20cm clearance around the enclosure.
- Do not cover the enclosure openings.
- Do not leave the drive bays empty as it will affect the airflow efficiency.

NEVER remove more than one hard disk drive tray out of the enclosure at the same time!

Secure each hard disk drive using its retaining screws.

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

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

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

ESD Precautions

Avoid touching the PCB boards or connector pins on the hard drives.

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

Do not remove the hard disk drive from its anti-static bag before installation takes place.

Hard 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 connector interface may damage the hard drives.

Component Compatibility

The use of compatible components is strongly recommended to ensure compatibility, quality and normal operation with your system. Please contact your vendor for a list of compatible components.

Service and Maintenance

Keep the faulty hard disk drive in place until you have a replacement unit in hand; removing a hard disk drive tray will affect airflow within the enclosure.

When transporting the enclosure, repackage all disk drives separately in the original package foam blocks.

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 drives, insert the hard drive cage as gently as possible while assuring 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.

When relocating the enclosure, hard drives should be removed from the enclosure beforehand. Please remember the installation order of the hard disk drive and their corresponding slots.

About This Manual

This manual introduces the hardware components of EonNAS Pro NAS systems and describe how to install, operate and maintain them.

For the following subjects, please consult other resources for more information:

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	December, 2011	Initial release
1.1	February, 2012	Updated certificates Updated LCD power saving functions Updated support of single hard drive for initialization Updated Contact Information
1.2	May, 2012	Merged EonNAS Pro 200, 500, 800 & 850 series into EonNAS_Pro_Series_HMN. Updated component compatibility notice
1.3	June, 2012	Updated restore to default actions
1.4	August, 2012	Updated 10Gb iSCSI descriptions
1.5	December, 2012	Added EonNAS Pro 210, 510 & 810

Table of Contents

Introduction

The Network Attached Storage (NAS) systems are high-performance and versatile storage solutions for sharing files and volumes across the Ethernet network. NAS separates application servers and data, and stores data on storage devices that perform dedicated file serving tasks. They are dedicated high-performance storage solutions providing files or shares for access from numerous clients. The advantages include:

- Ease of administration
- Ease of installation
- Ease of capacity expansion
- Compact in size for mobility and ease of placement
- The ability to serve a common set of files to a heterogeneous client population
- Improved performance based upon dedicated file service processing
- 1Gb / 10 Gb iSCSI expansion host ports for extended connectivity (selected models only)

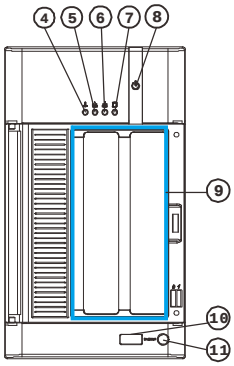
Front Panel Overview

The systems are ruggedly built and come in two (2), five (5) and eight (8) hard drive bay variations. The hard drive bay supports a single 3.5 inch SATA hard drive up to 3TB in storage capacity. Systems may come with or without a LCD screen for status display and quick configuration purposes. All systems also feature a quick USB backup port on the front panel.

Features

- LCD screen for quick function access and status monitoring (selected models only)
- Rugged construction
- Single hard drive support up to 3TB
- Hot swappable hard drives
- Versatile miniaturized NAS storage for ease of placement or mobility
- Easy to setup and operate
- External eSATA / USB hard disk drive expansion
- Easy to access front USB port for one-touch data backup

System Front panel



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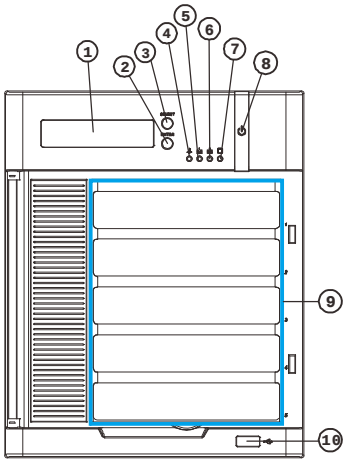

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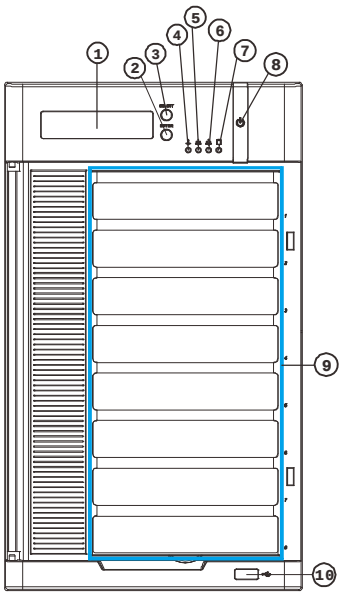

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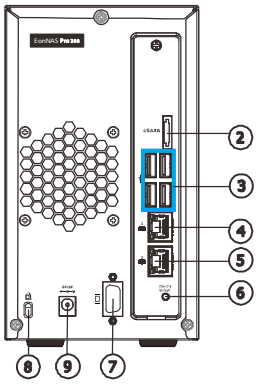
No.	Item	Description
1.	**LCD screen**	The LCD displays system statuses and offer users quick access system menus. Once initialized, if the LCD has been left idling for more than 60 seconds, the LCD will automatically power off. Users can press the “SELECT” or “ENTER” button to reactivate the LCD screen.
2.	**Enter button**	The Enter button is used for making a selection while browsing system menus.

3.	**Select button**	The Select button is used for browsing system menus.
4.	**System status LED**	The system status LED warns users system faults.
5.	**Ethernet 1 LED**	The LED indicates the status of the Ethernet 1 connection.
6.	**Ethernet 2 LED**	The LED indicates the status of the Ethernet 2 connection.
7.	**HDD LED**	The hard drive LED indicates the status of the hard drives.
8.	**Power button**	The power button is used to turn on or force-turn-off (when the system hangs).
9.	**Hard drive slots**	The slots are in ascending numeric order from top to bottom.
10.	**Quick backup USB port**	The quick backup USB port offers a fuss-free data backup experience.
11.	**Quick backup button & LED**	For use with quick USB backup port.

*****Inside the front panel cover, there is a label showing the default IP addresses for the Ethernet ports. This is useful when you restore to default and wish to log in manually to setup the system.

System Rear panel



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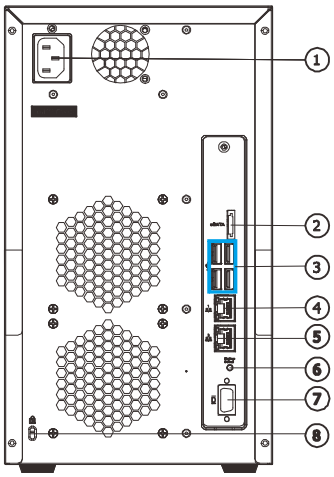

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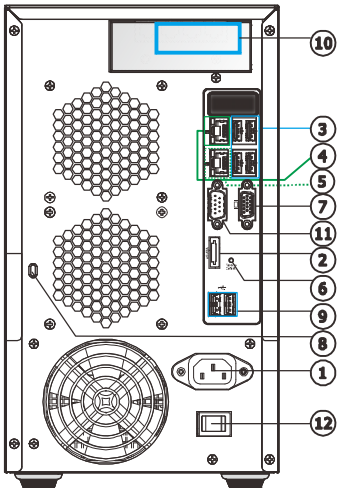

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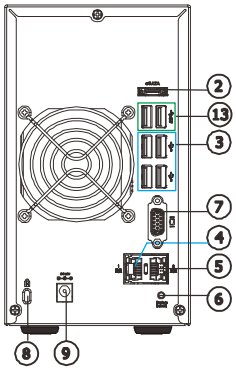

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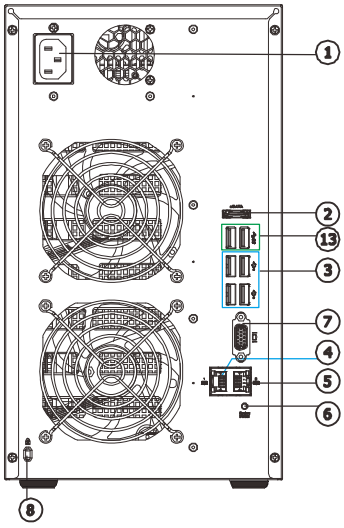


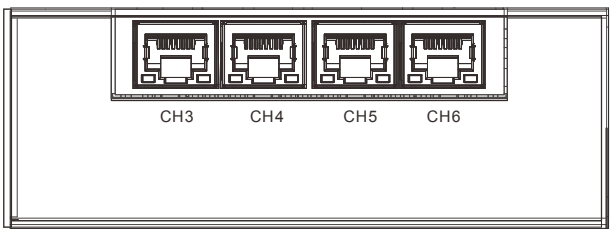
510 / 810

No.	Item	Description
1.	Power socket	The power socket is for power cable connection.
2.	eSATA port	The eSATA port is for external expansion purposes (intended for high speed external hard disk drive storage expansion).

3.	USB ports	The USB ports are for external expansion purposes (CD, DVD, USB flash drives, printers, etc.); or to supply power to external eSATA devices.
4.	Ethernet port 1	Ethernet port 1 is used for accessing and configuration.
5.	Ethernet port 2	Ethernet port 2 is used for accessing and configuration.
6.	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.
7.	VGA port	Reserved.
8.	Kensington lock-hole	For use with a Kensington lock. Please refer to your Kensington lock for instructions.
9.	Power adaptor	For plugging in the power adaptor.
10.	Expansion host port location	For selected models only, expansion host port features four 1Gb iSCSI host ports or two 10Gb iSCSI host ports.
11.	Serial COM port	The serial COM port is reserved for maintenance purposes.
12.	ATX power switch	The ATX power switch acts as a secondary power switch and it must be switched to the “ON” position to power-on the system.
13.	USB 3.0 port	The USB 3.0 port differs to other USB ports in that it supports a maximum 5Gb/s transfer rate.

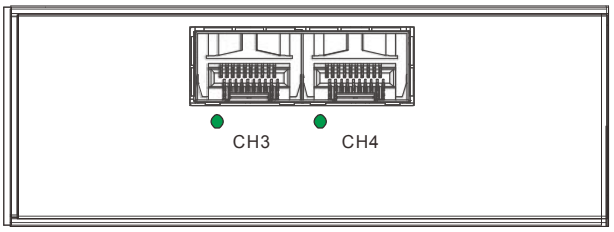
Additional 1Gb iSCSI Expansion Ports

For selected models that has four additional 1Gb iSCSI host ports. From left to right are CH3, CH4, CH5 and CH6 1Gb iSCSI host ports.



Additional 10Gb iSCSI Expansion Ports

For selected models that has two additional 10Gb iSCSI host ports. From left to right are CH3 and CH4 10Gb iSCSI host ports.



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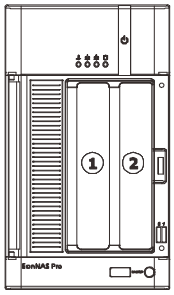
Hard Drive Designation

The hard drives are placed in numeric order from top to bottom. When installing hard drives, always install to the top empty tray(s) and work your way down in order!



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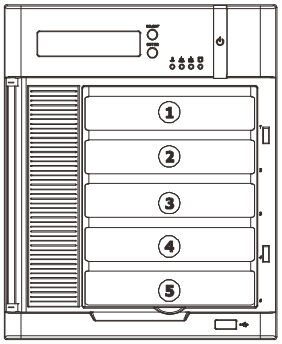

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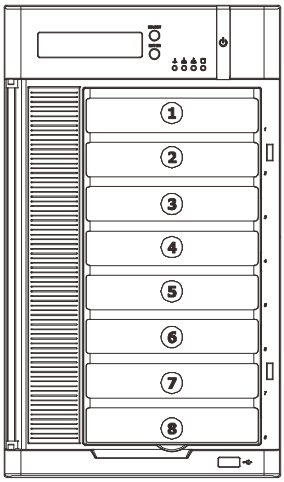

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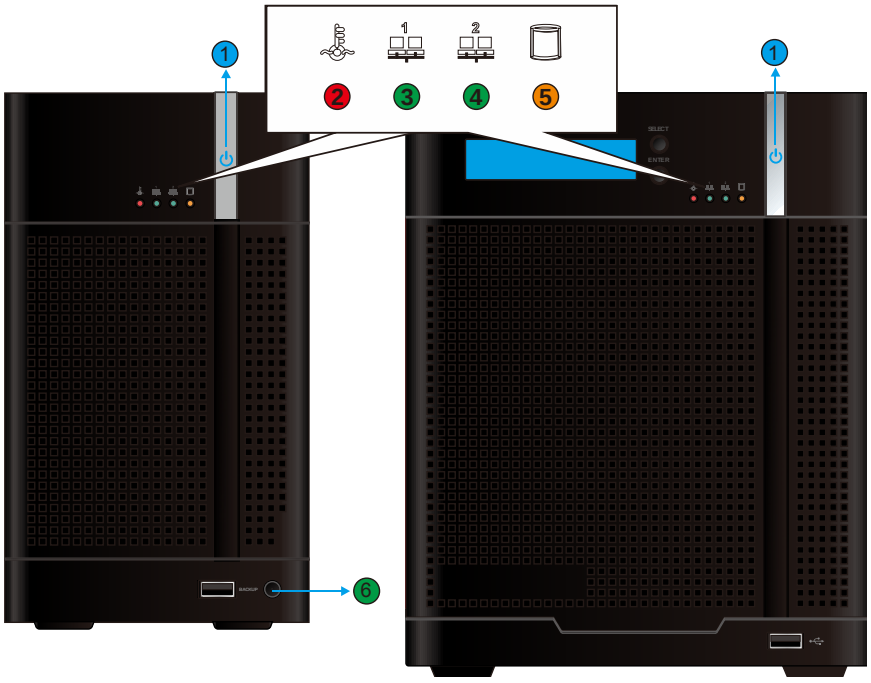
Front Panel LED Definitions



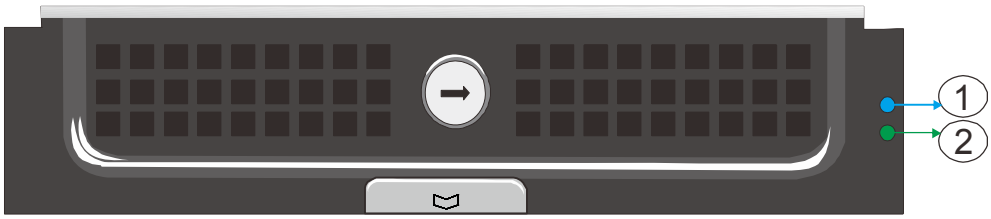
Systems without LCD **Systems with LCD**

Front Panel LEDs

No.	Item	LED Color & Status
1.	**Power button**	**Blue** indicates the system has powered on **Off** indicates the system has powered off
2.	**System status LED**	**Off** indicates the system is operating normally **Red** indicates system failure
3.	**Ethernet 1 LED**	**Steady Green** indicates connection established **Blinking Green** indicates LAN activity **Off** indicates the connection is no established
4.	**Ethernet 2 LED**	
5.	**HDD status LED**	**Blinking amber** indicates the hard drive I/O activity **Off** indicates there is no hard drive I/O activity
6.	**USB Quick Backup 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

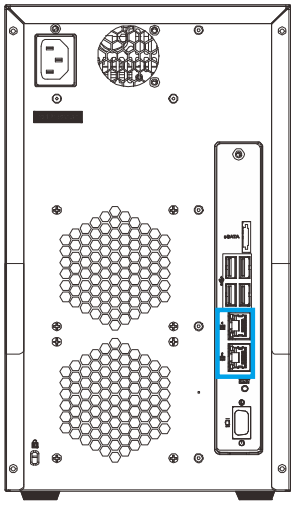
Drive Tray LEDs

Two (2) LED indicators are located on the right hand side of each drive tray. When notified by a drive failure message, you should check the drive tray indicators to find the exact failed drive.



No.	LED	LED Color & Status
1.	**Drive Busy LED**	**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** indicates that the drive bay is populated and is working normally. **RED** indicates that the disk drive has failed, or a connection problem occurred.

Ethernet Port LEDs



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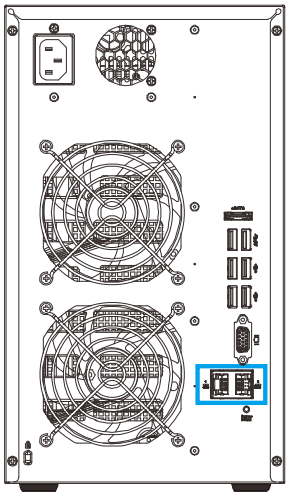

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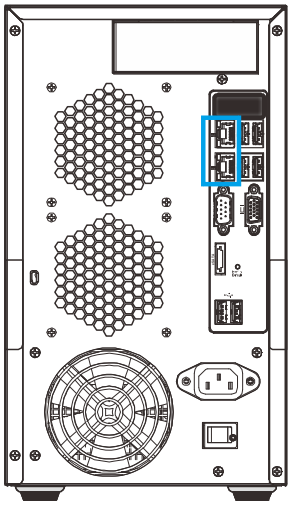

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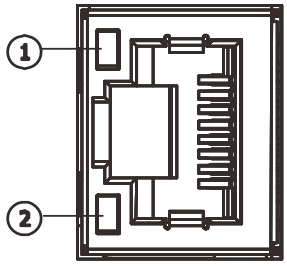
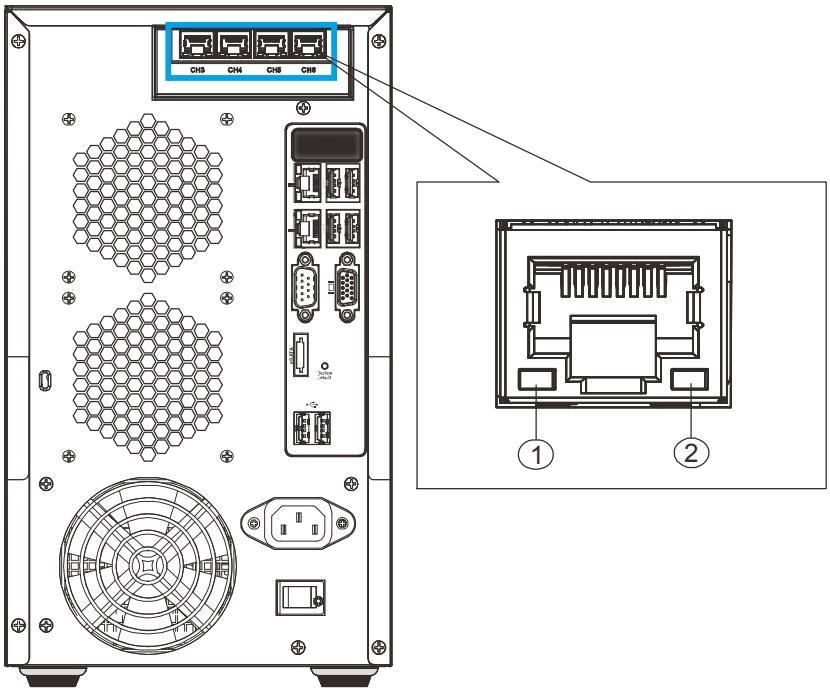


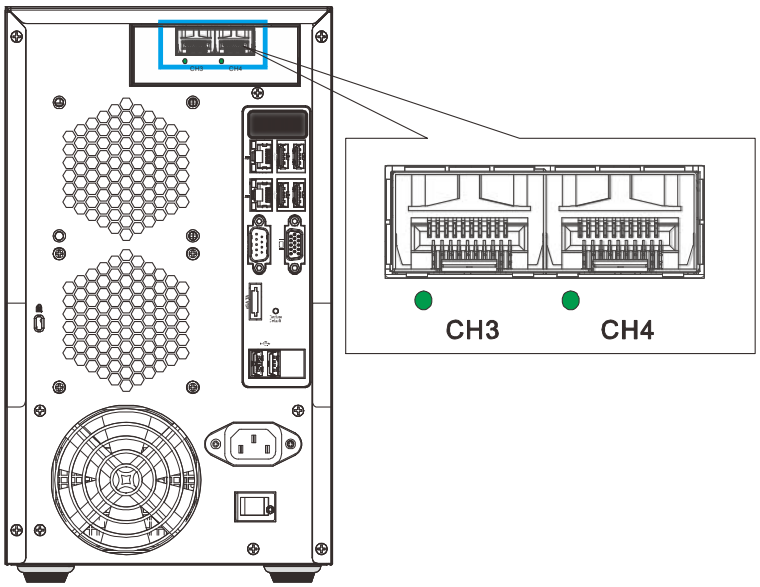
No.	LED	Status
1.	**Activity LED**	**Blinking amber** indicates data transfer activity
2.	**Link Status LED**	**Steady green** indicates connection established **Off** indicates connection not established

1Gbps iSCSI Host Ports (selected models only)



No.	LED	LED Color & Status
1.	Link Status LED	**Steady green** indicates 1000 Mb connection established. **Off** indicates 10/100 Mb connection established.
2.	Activity LED	**Blinking amber** indicates data transfer activity. **Off** indicates there is no I/O activity.

10Gbps iSCSI Host Ports (selected models only)



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 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 allows for optical connections, only. Optical cables can be used over longer distances and are more reliable. Due to the demands of high transfer rates, optical cables are preferred for 10Gb iSCSI connectivity.

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 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.

Hardware Installation

Component Compatibility

The use of compatible components is strongly recommended to ensure compatibility, quality and normal operation with your system. Please contact your vendor for a list of compatible components.

Before You Start

Items received in the package:

- The NAS system and hard drive trays (preinstalled into the system)
- Two Ethernet cables
- Quick installation guide
- CD-ROM
- Power cable

There are some tools and components that are user provided:

- a small size flat-blade screwdriver for unlocking and locking hard drive trays
- At least one 3.5 inch SATA hard drive (up to 3TB per drive is supported).

 NOTE

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

 WARNING

For internal airflow and safety reasons, please remove only one hard drive tray at a time and never leave two or more hard drive bays empty without drive tray!

Airflow Concerns

Allow 20cm of ventilation clearance around the enclosure. Make sure cables are also placed well clear of the ventilation area behind the enclosure and away from foot traffic.

Installing Hard Drives

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

Hard Disk Drive 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) and SATA-III (6Gbps) hard drives up to 3TB in capacity per hard disk drive.

 NOTE

Only install hard drives into the enclosure after the system has been placed in the desired setup location. If hard drives are installed first, the system may be too heavy to handle and possible impact during transportation may damage your hard drives.

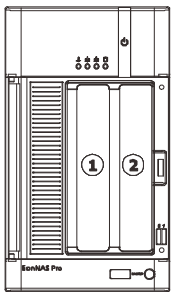
DO NOT attempt to shift or tilt the system once the system has powered on to avoid damaging the hard drives.

NEVER remove two or more hard drive trays out of the system at the same time!

Hot-swappable Hard Drives

The hard drives in drive trays are hot swappable components. Please refer to the Software Manual for RAID configuration details and the maintenance section of this manual on how to replace hard drives.

Drive Tray Numbering Sequence



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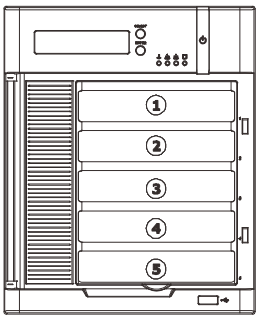

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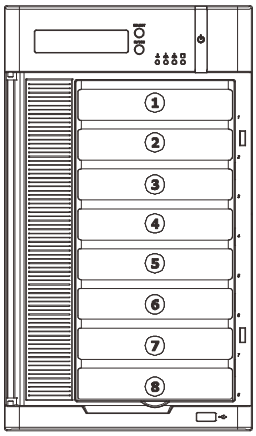

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Tray numbering sequence is important because if any faults occur to disk drives, you should be able to identify the location of a faulty drive. Below is a list of the level of fault tolerance for different RAID levels:

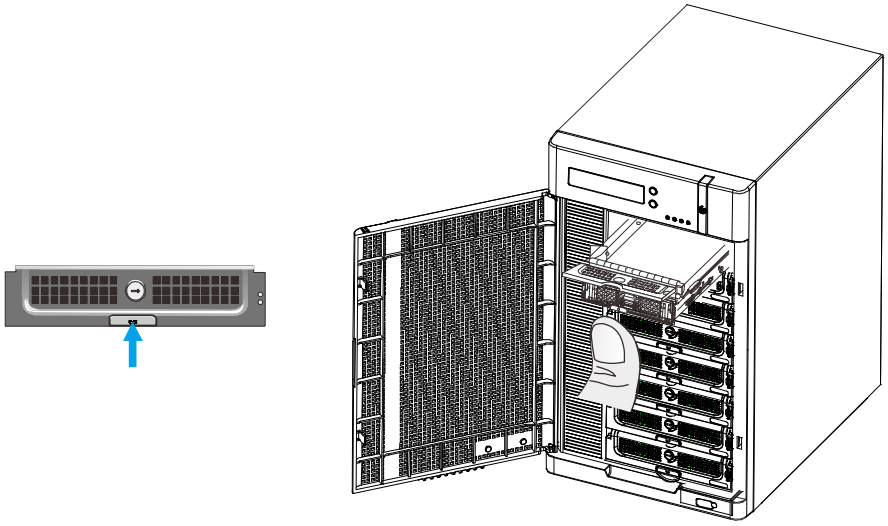
RAID Level	Minimum disk requirement	Max. No. of Failed Drives without Data Loss
Non-RAID	**1**	No fault tolerance. 1 drive fails and the data is lost.
0	**2**	No fault tolerance. 1 drive fails and the data is lost.
1	**2**	1 (mirrored pair)
5	**3**	1
6	**4**	2

Recognizing drive location is important. For example, if you mistakenly remove 2 drives from a RAID5 logical drive, data will be lost.

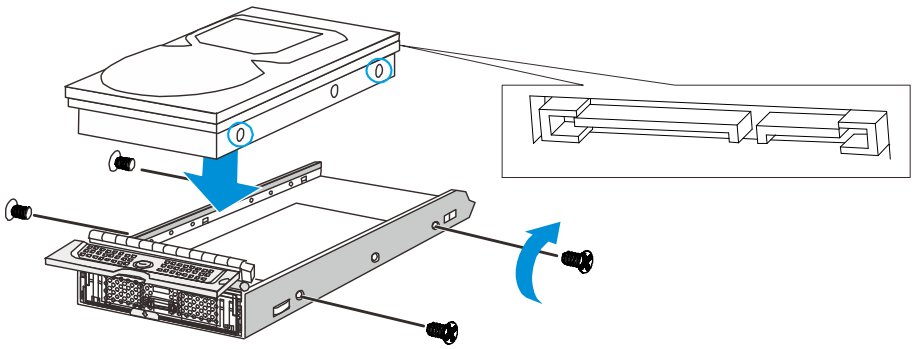
For detail RAID configuration methods, please refer to the Web Interface Manual.

Installing Hard Drive into the Drive Tray

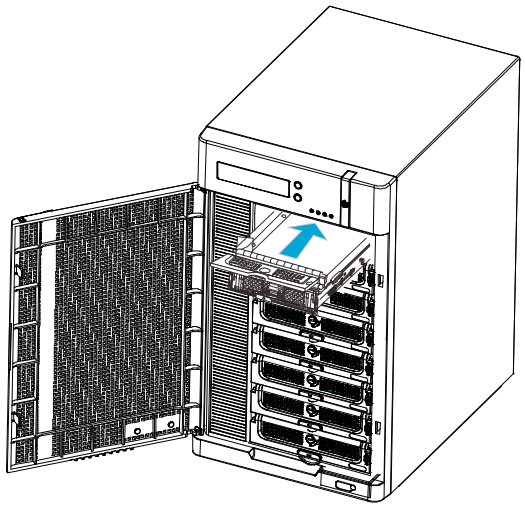
1. Open the front panel of the system.
2. Press the release button (indicated by the **blue arrow**) on the bezel, the bezel panel should open automatically and gently pull out the hard drive tray.



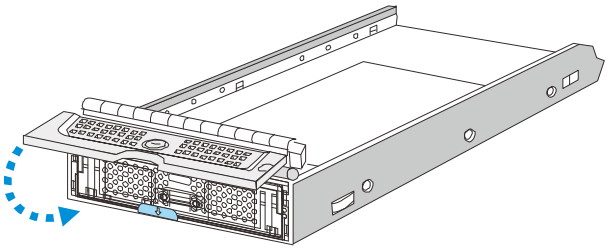
3. Place the hard drive into the drive tray. Make sure the hard drive's interface connector is facing the open side of the drive tray and its label side facing up. Adjust the drive's location until the mounting holes in the drive tray are aligned with those on the hard drive. Secure the drive with four (4) supplied flat head screws.



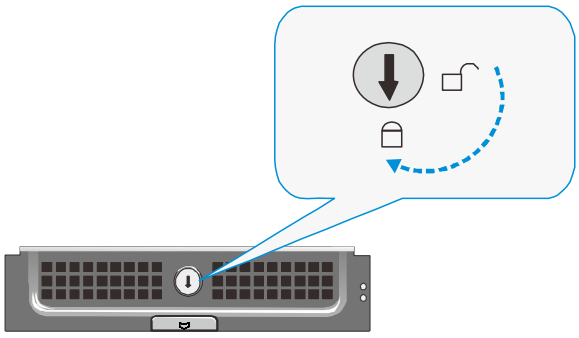
4. With the tray bezel open, insert the hard drive and tray into the system enclosure.



5. Close the tray bezel.



6. Use the small flat blade screwdriver to turn the bezel lock from the unlock to lock position.



7. Repeat above steps to install other hard drives.

8. Close the system front panel when you are done installing hard drives.

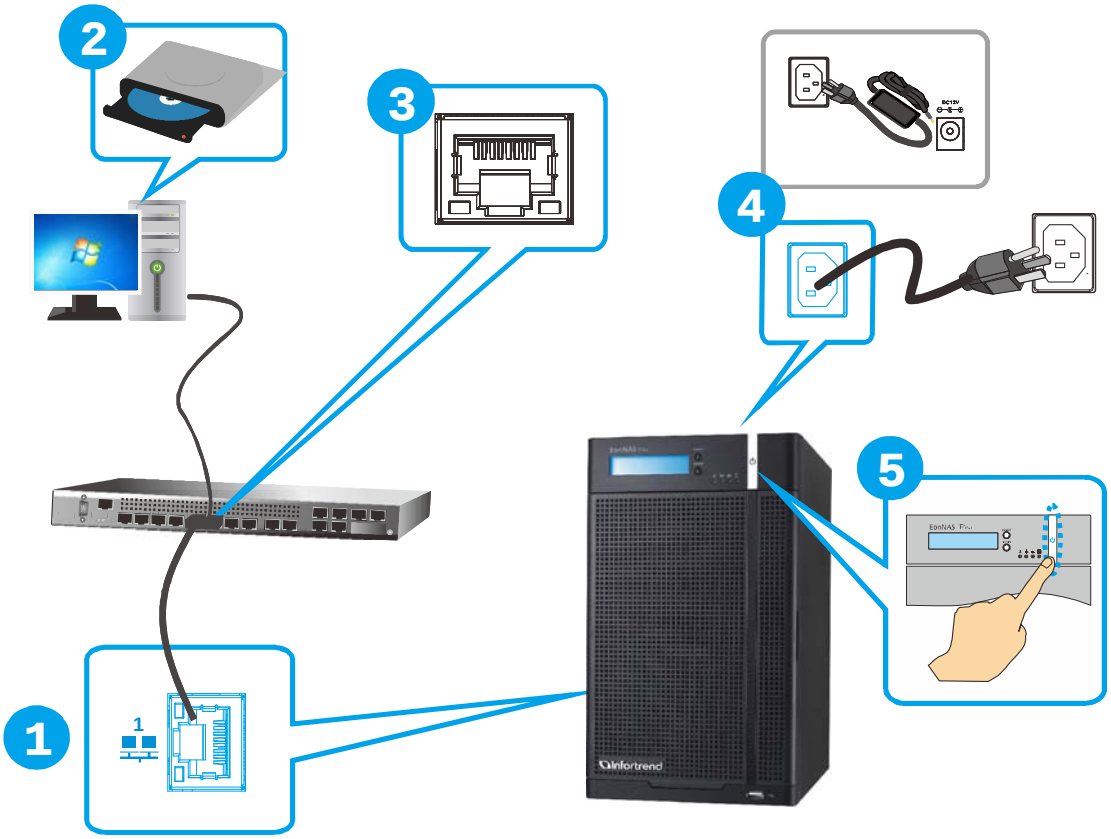
NOTE

When hot-swapping hard drive(s), a beep should sound to indicate the hard drive has been detected by the system followed by the power status LED lighting up green.

Connections, Powering-on & Initialization

Connecting the NAS System

> NOTE
>
> Make sure you have at least installed one hard drive into the NAS system.



The system connection requires the user to

(1) Connect an Ethernet cable from the NAS 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

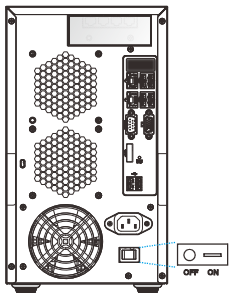
(4) Connect the power cable to the NAS system and to a power outlet

(5) Press the power button to start up the system

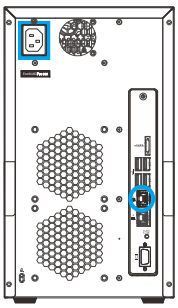
Powering On the System for the First Time

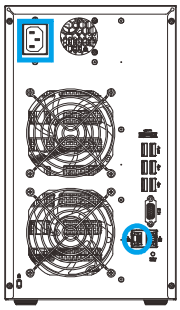
The initialization process only occurs if it is the first time you power on your system. Before you power-on, please make sure you have done the following:

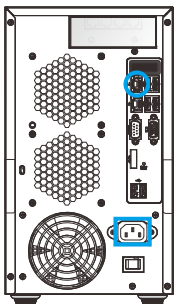
1. Have a Windows OS PC ready for use.
2. Install at least one (1) hard drive into enclosure's hard drive slot 1 for the initialization process.
3. For 850 series, make sure the ATX power switch is in the "OFF" position (shown on the right).
4. Make sure you have connected the following:



- One end of the Ethernet cable to Ethernet port 1 (indicated by the **blue circle**) and the other end into a switch.
- The adaptor plug / power cable to the power socket (indicated by the **blue rectangle**) and the other end into a power outlet.







5. Power-on peripheral devices first (eg. switches, routers, servers, PCs, etc.).
6. For 850 systems, turn the ATX power switch to the "ON" position.

NOTE

To manually setup the system, users can log in using the default Ethernet 1 IP address <10.0.0.2>; default Ethernet 2 IP address <10.0.0.3>; default username: **admin**, default password: **admin**.

For details, please refer to the Web Interface Manual for details.

Powering-on the System & Initialization

WARNING

Hard drive data will be erased!

NOTE

Turn off Windows firewall:

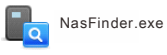
To turn off the Windows firewall, please refer to the instructions below.

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.

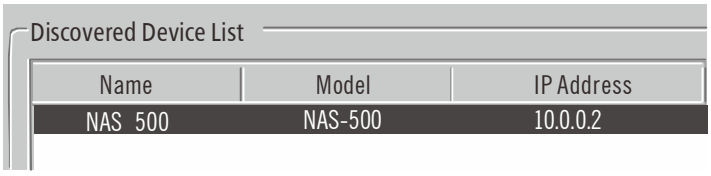
Windows XP:

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.

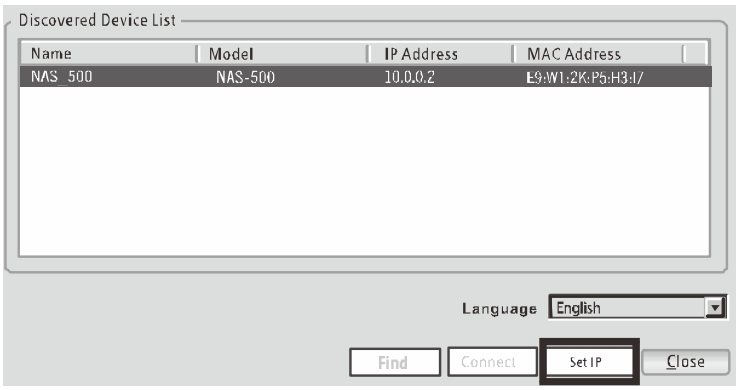


NOTE

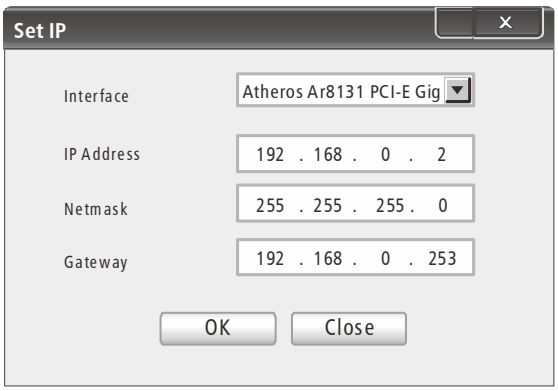
If your NAS system was not found

- Make sure your PC and NAS 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.

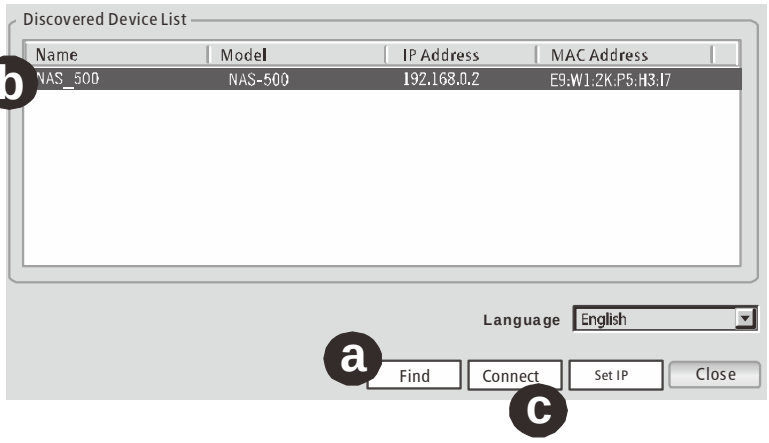
4. The “Set IP” button will light up. Click on it so the NasFinder can set an IP address for your EonNAS system.



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.

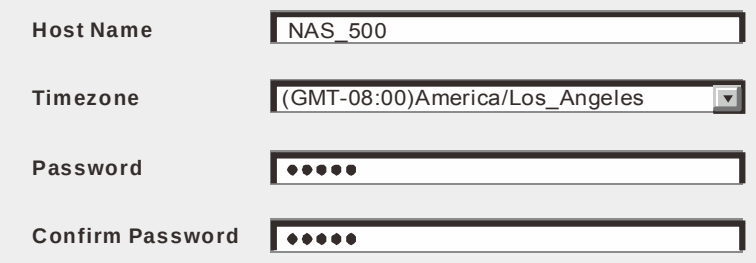


7. The following screen will appear. Fill in your system's settings.

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

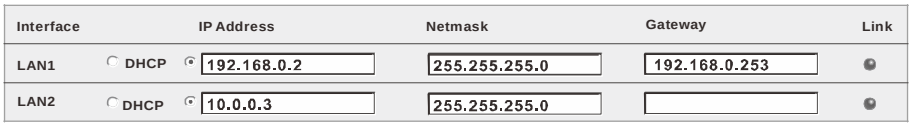
   Timezone: Select your local time zone.

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

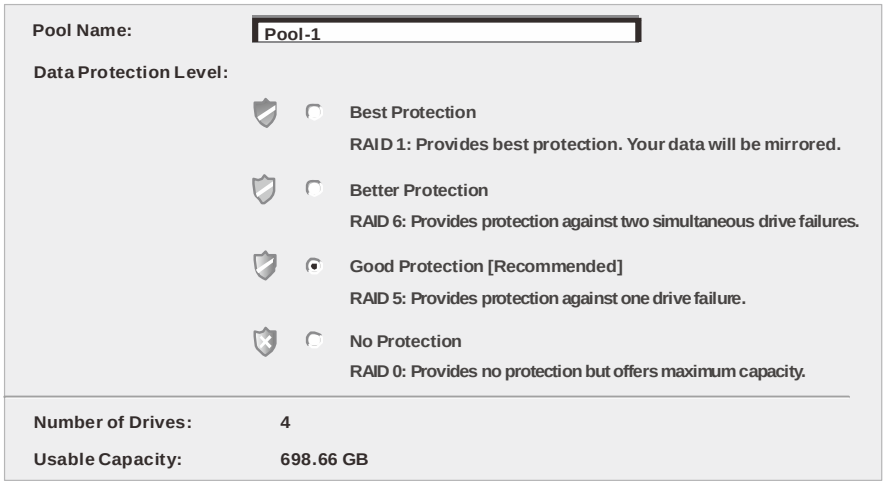


   Click the "**Next**" button.

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

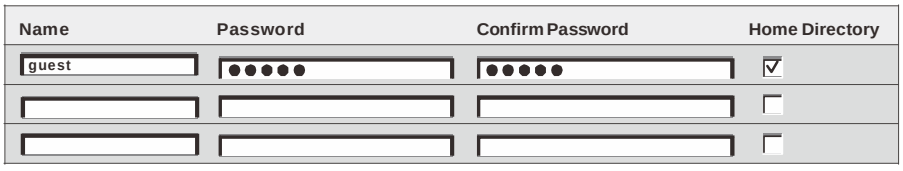


9. Enter a unique name, select the protection level, and click the Next button.



   Click the "**Next**" button.

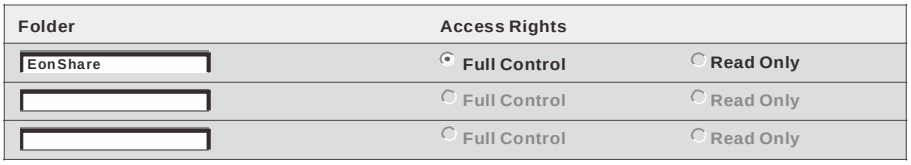
10. Add at least one user account for accessing the new storage pool and click the Next button. (The default user account is username: guest, password: guest.)



    Click the "**Next**" button.

11. You can change the default shared folder settings or add a new folder and

click the Next button.



Click the "**Next**" button.

12. V iew 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).

    During the initializing process, the OS of the system will be copied onto the installed hard drive(s). This initialization process may take up to 20 minutes. The Quick Initialization process creates the following:

    - One storage pool "EonPool" with all drives
    - Non-RAID with only one HDD; RAID 1 with two HDDs or RAID 5, when more than two HDDs installed
    - One shared volume "EonShare"
    - One account with username: **guest**; password: **guest** with full access
    - Default admin account name: **admin**; password: **admin**

NOTE

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

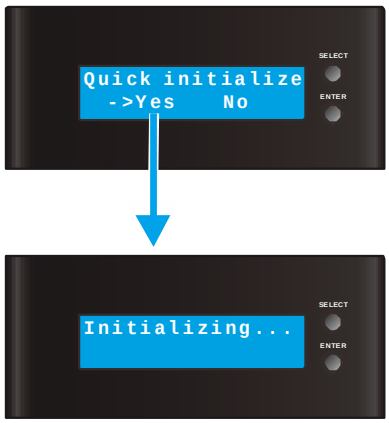
Quick Initialization Using Systems' LCD Screen

NOTE

The quick initialization method is NOT the recommended way to initialize the system as default settings will be applied. Changes can later be made using its GUI interface.

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) the following message will appear on the LCD:

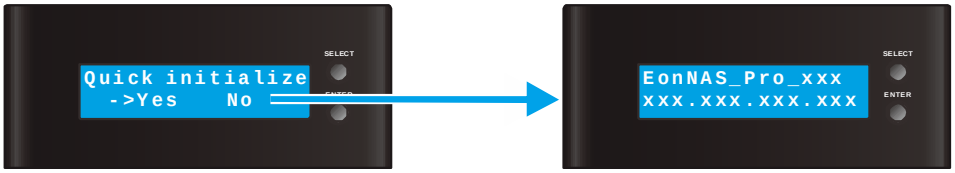
Press the "Select" button to move the cursor to "Yes", press the "Enter" button and the system will begin the automated process and the screen will show "Initializing…".



When initialization has completed, the LCD will show the following:

The reboot process takes approximately 3 minutes.

If you press the "Enter" button with the cursor pointed at No, it will bring you to the main system menu screen, which is described in the following section.



Setting up the System Using LCD Screen Menu

This section describes the menus and sub-menus shown on the LCD module and how to setup and change the settings within.

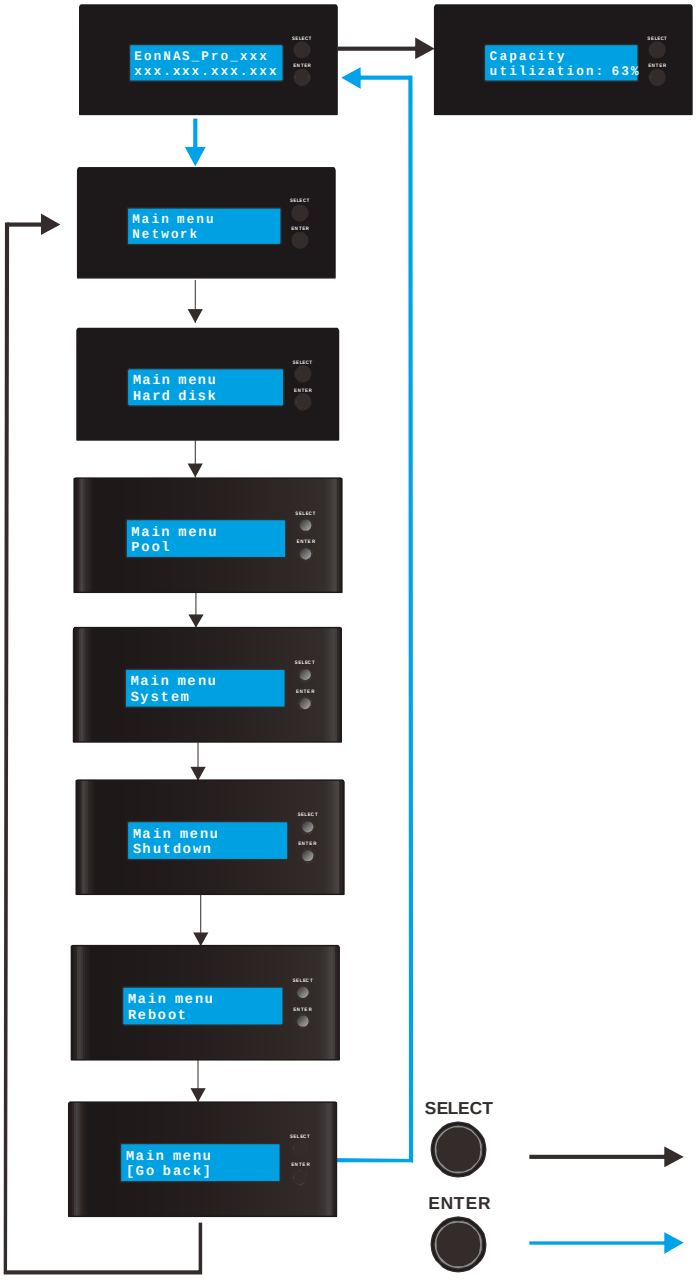
Due to the vast menus and sub-menus that are available on the LCD module, it is recommended that users **NOT** use the LCD module to set up the system. It is recommended that users refer to the Web Interface Manual to setup the system using the web interface!

Main Menu

For systems with a LCD screen, it provides users with basic system statuses and TCP/IP configuration settings. To setup specific settings, users need to log into the web user interface (please refer to the Web Interface Manual).

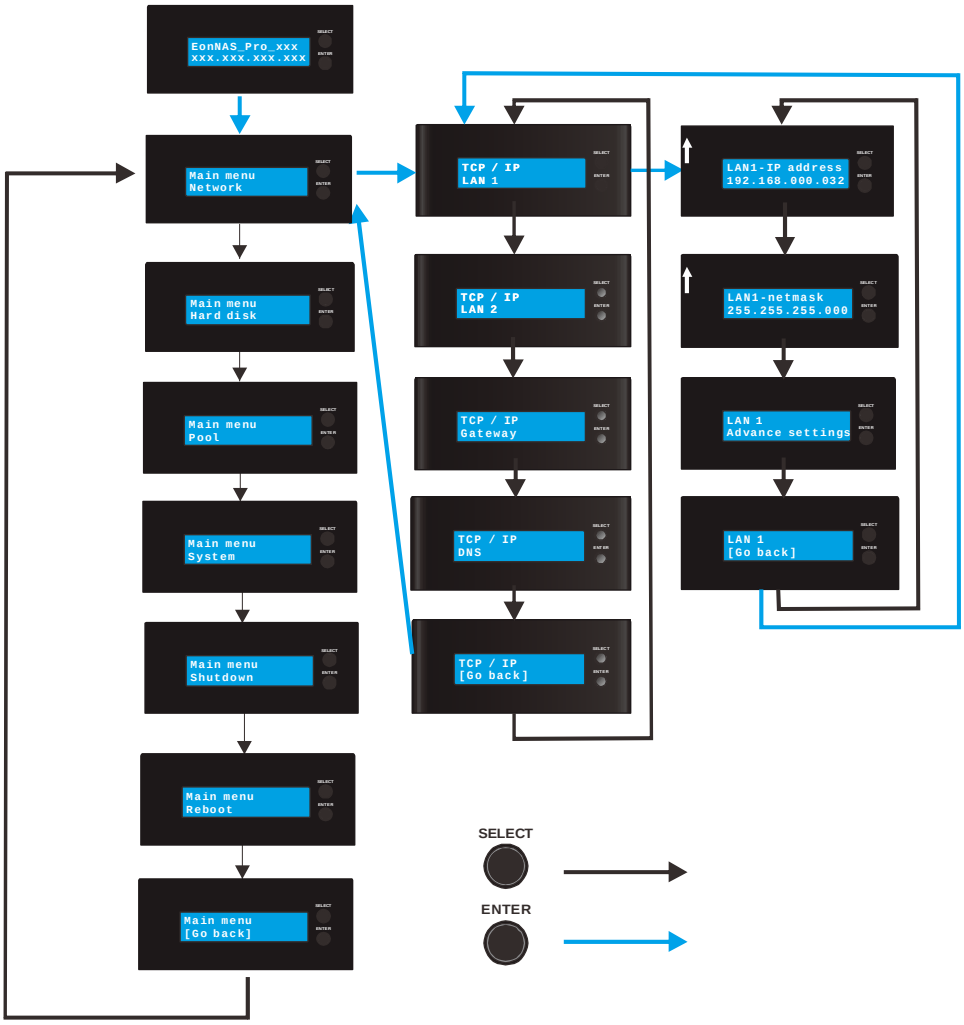
NOTE

It is recommended that users log into the web user interface to configure the system. There are seven (7) sub-menu selections: TCP/IP, Physical Disk, Pool, System, Shut Down, Reboot and Back.



TCP/IP – LAN1 / LAN2 Menu

From the Main Menu, press the “SELECT” button to reach the TCP/IP menu and press the “ENTER” button to go into the TCP/IP sub-menu (LAN 1 example is shown below).



Setting IP addresses

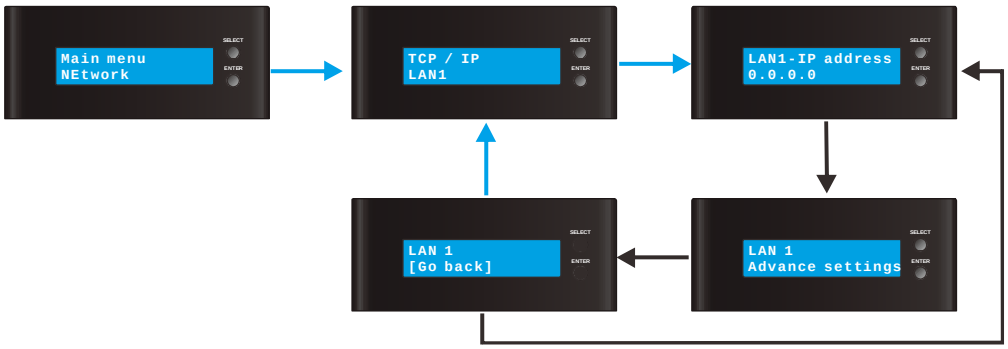
Press the “ENTER” button to enter the sub-menu (LAN1 – IP) from “TCP / IP – LAN1” to configure an IP address and an underline cursor appears (eg. **1**92.168.000.032). With the underline cursor beneath the number you wish to modify, press the “SELECT” button and the digit will change incrementally. Once you have set the desired number, press the “ENTER” button and the cursor will move onto the next digit (eg. 1**9**2.168.000.032). The rest of the IP addresses are configured likewise.

Note:

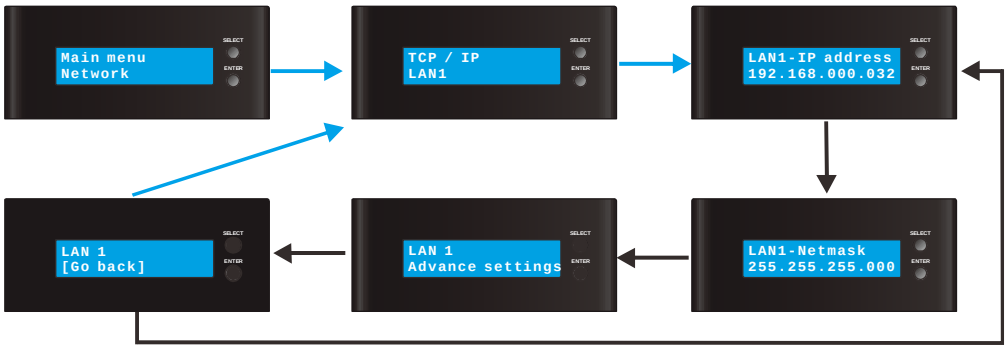
The specific LAN 0, LAN1, Gateway and DNS settings can also be configured in the web interface. Please refer to the Web-Interface Manual for details.

LAN 1 – Enter Settings Menu

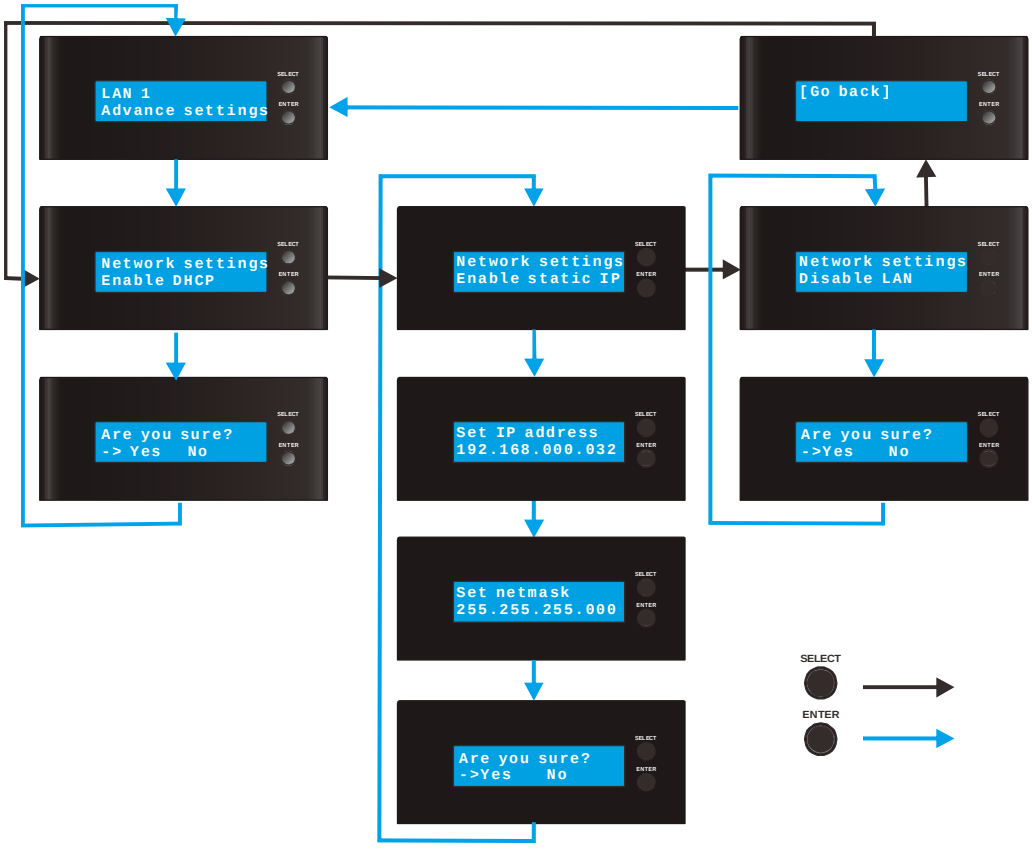
If LAN 1 did not establish a connection, the following menus will appear:



When LAN 1 has established a connection, menus will appear with IP addresses:



Once you are in the “LAN 1 Enter Settings” screen, you can configure detail LAN settings (settings can also be configured using the web interface, please refer to the Web Interface Manual).

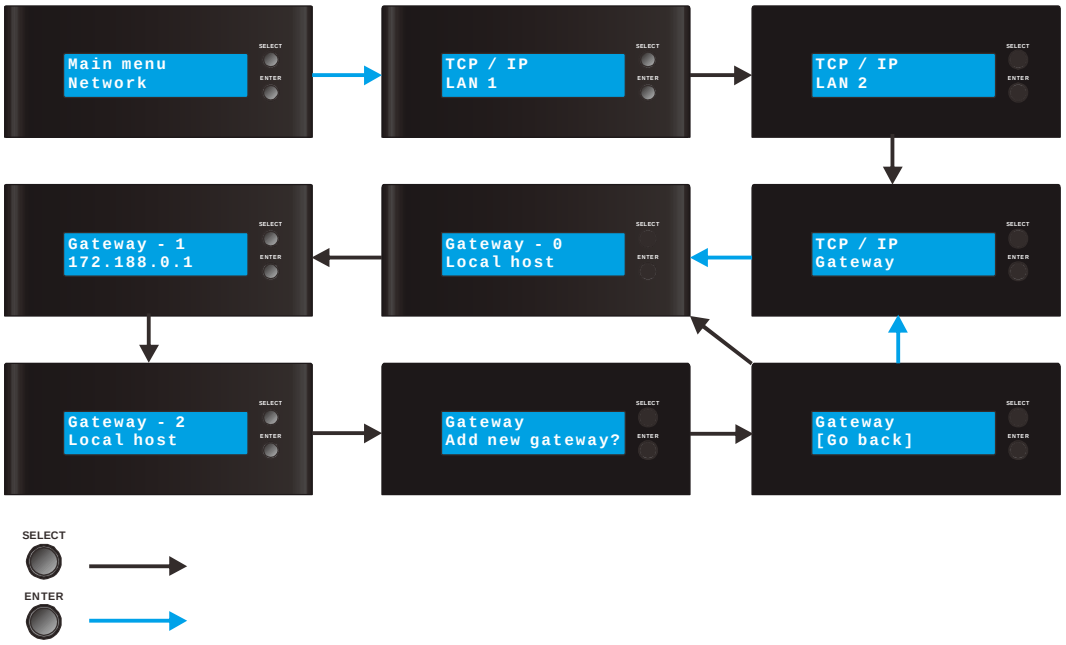


To configure an IP address, press the “ENTER” button to access the Set IP Address screen and an underline cursor appears (eg. **1**92.168.000.032). With the underline cursor beneath the number you wish to modify, press the “SELECT” button and the digit will change incrementally. Once you have set the desired number, press the “ENTER” button and the cursor will move onto the next digit (eg. 1**9**2.168.000.032). The rest of the IP addresses are configured likewise.

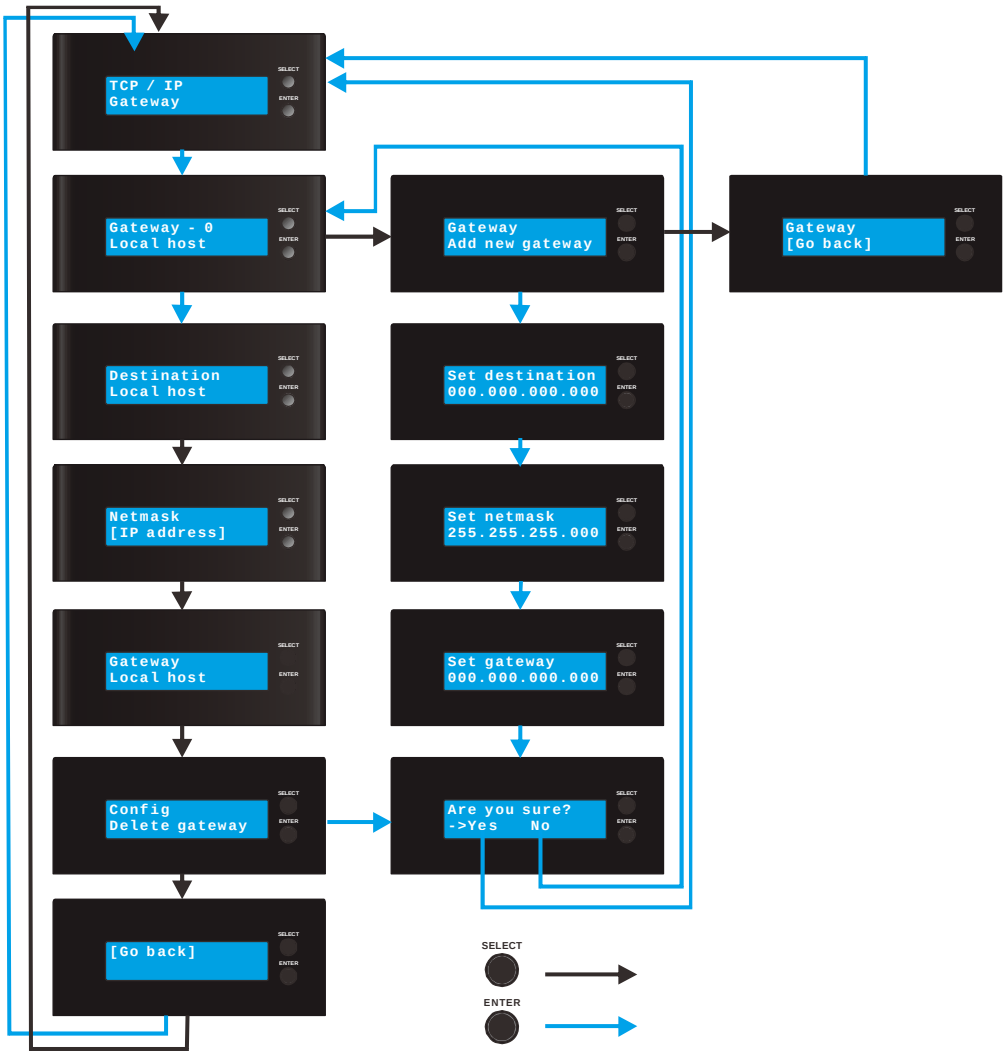
Note:
LAN 2 settings are also configured likewise with users pressing the “ENTER” button at the LAN 2 screen.

Gateway Menu

There are Gateways -0, -1, -2 menus and if a gateway has been setup, the menus will show “Local host” and when setup, it will show an IP address:

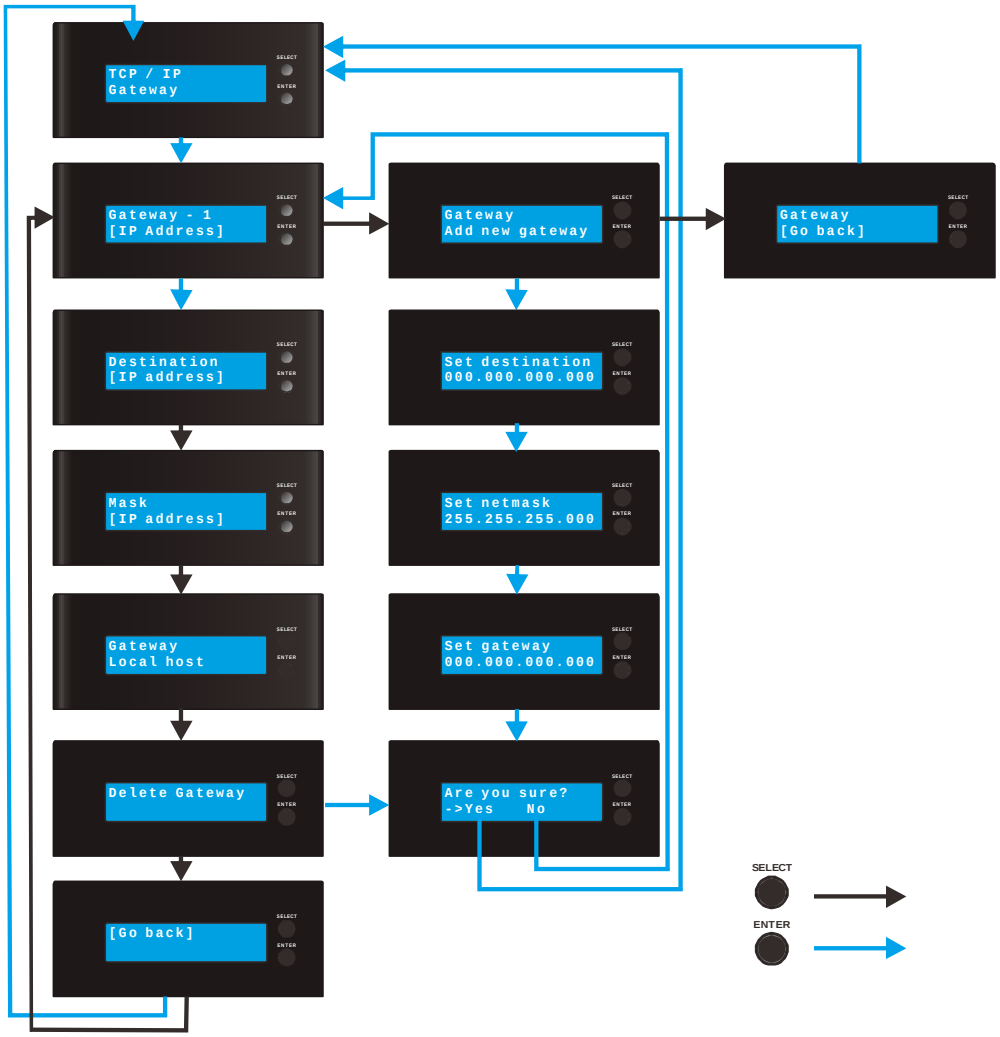


Once you are in the “Gateway Local host” screen, you can configure detail gateway settings (settings can also be configured using the web interface, please refer to the Web Interface Manual).



Press the “ENTER” button to enter the sub-menu (Set Destination) from the screen “Gateway - Add New Gateway” and you will see an underline cursor (eg. **0**00.000.000.000). To configure the destination IP address, press the “SELECT” button with the underline cursor beneath the number you wish to modify. By pressing the “SELECT” button, the digit will change incrementally. Once you have set the desired number, press the “ENTER” button and the cursor will move onto the next digit (eg. 0**0**0.000.000.000). The rest of the IP addresses are configured likewise.

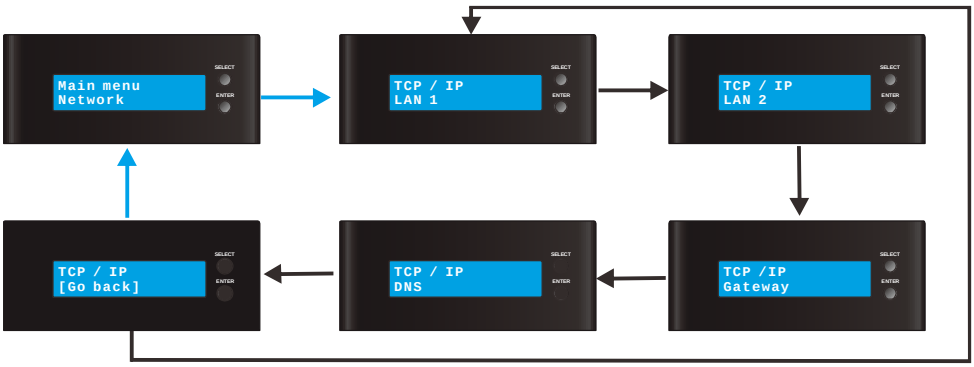
If a Gateway has been setup, an “IP address (xxx.xxx.xxx.xxx)” will appear in the menus. Once you are in the “Gateway-1 [IP address]” screen, you can change the gateway settings (settings can also be configured using the web interface, please refer to the Web-Interface Manual).



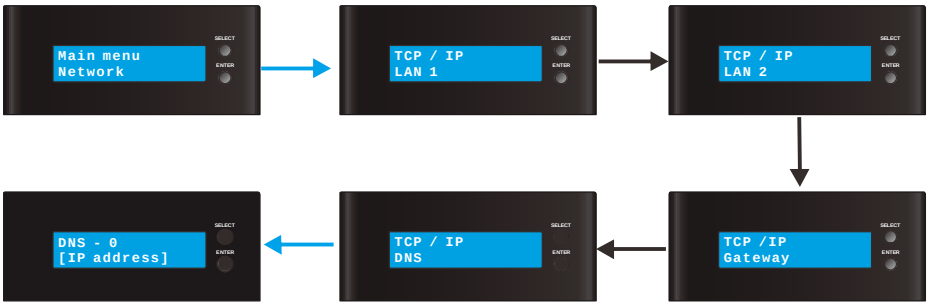
To configure the destination IP address, please refer to the previous page for instructions.

DNS Menu

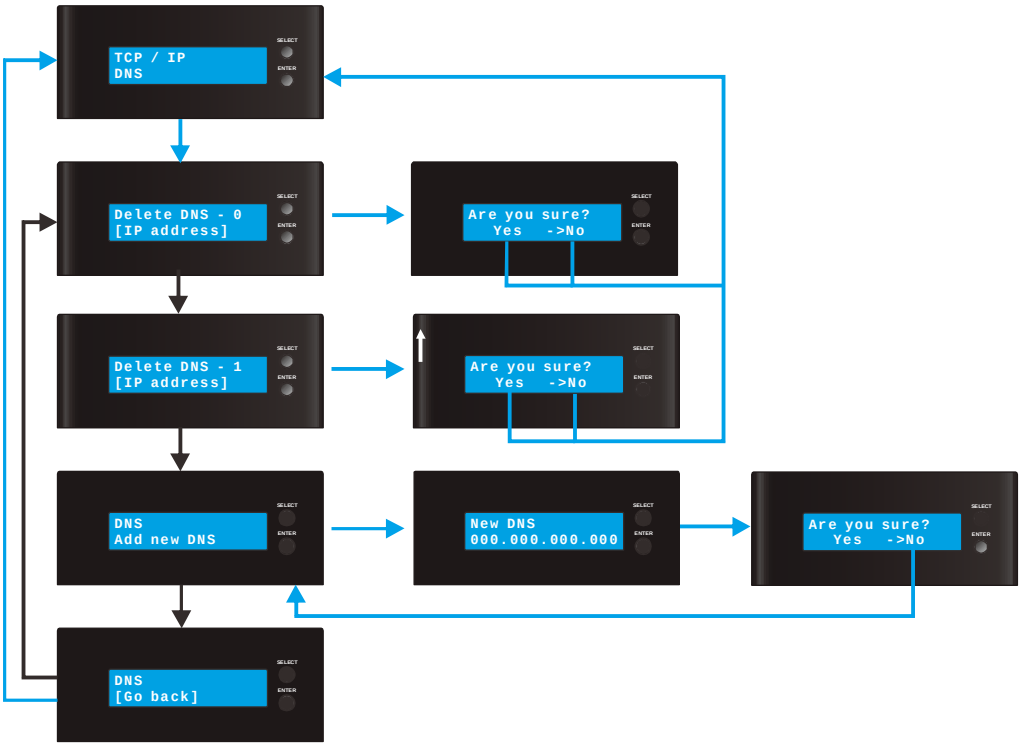
The path to the DNS screen is shown below:



To access the DNS settings, the path is shown below:



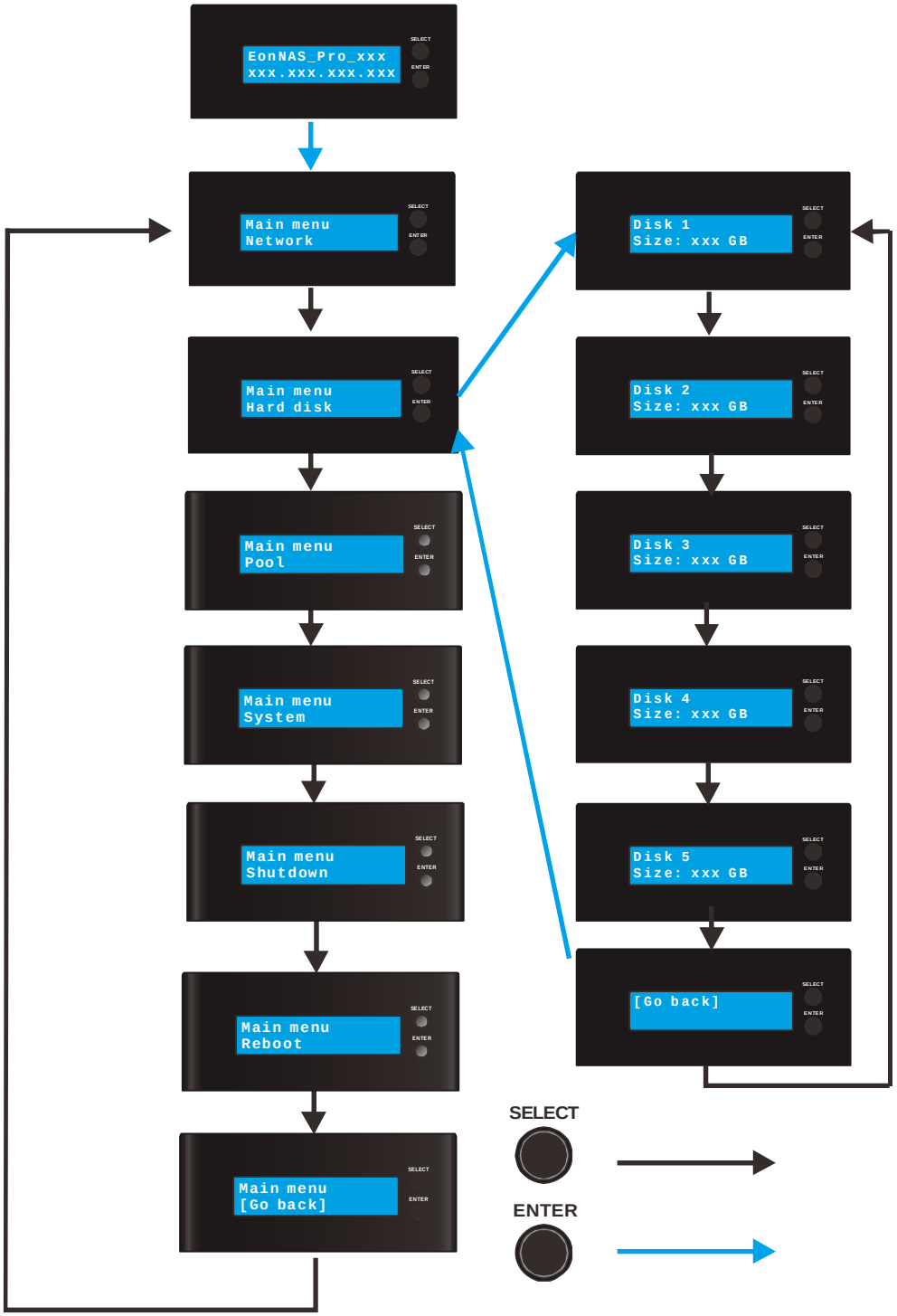
If a DNS has been setup, an “IP address (xxx.xxx.xxx.xxx)” will appear in the menus. Once you are in the “DNS-x [IP address]” screen, you can change (add or delete) the DNS settings. Deleting adding any one of the DNS settings will bring you back to the main “TCP / IP DNS” screen (settings can also be configured using the web interface, please refer to the Web Interface Manual).



Press the “ENTER” button to enter the sub-menu (Add New DNS) from the screen “DNS – Add New DNS” and you will see an underline cursor (eg. **0**00.000.000.000). To configure a DNS IP address, press the “SELECT” button with the underline cursor beneath the number you wish to modify. By pressing the “SELECT” button, the digit will change incrementally. Once you have set the desired number, press the “ENTER” button and the cursor will move onto the next digit (eg. 0**0**0.000.000.000). The rest of the IP addresses are configured likewise.

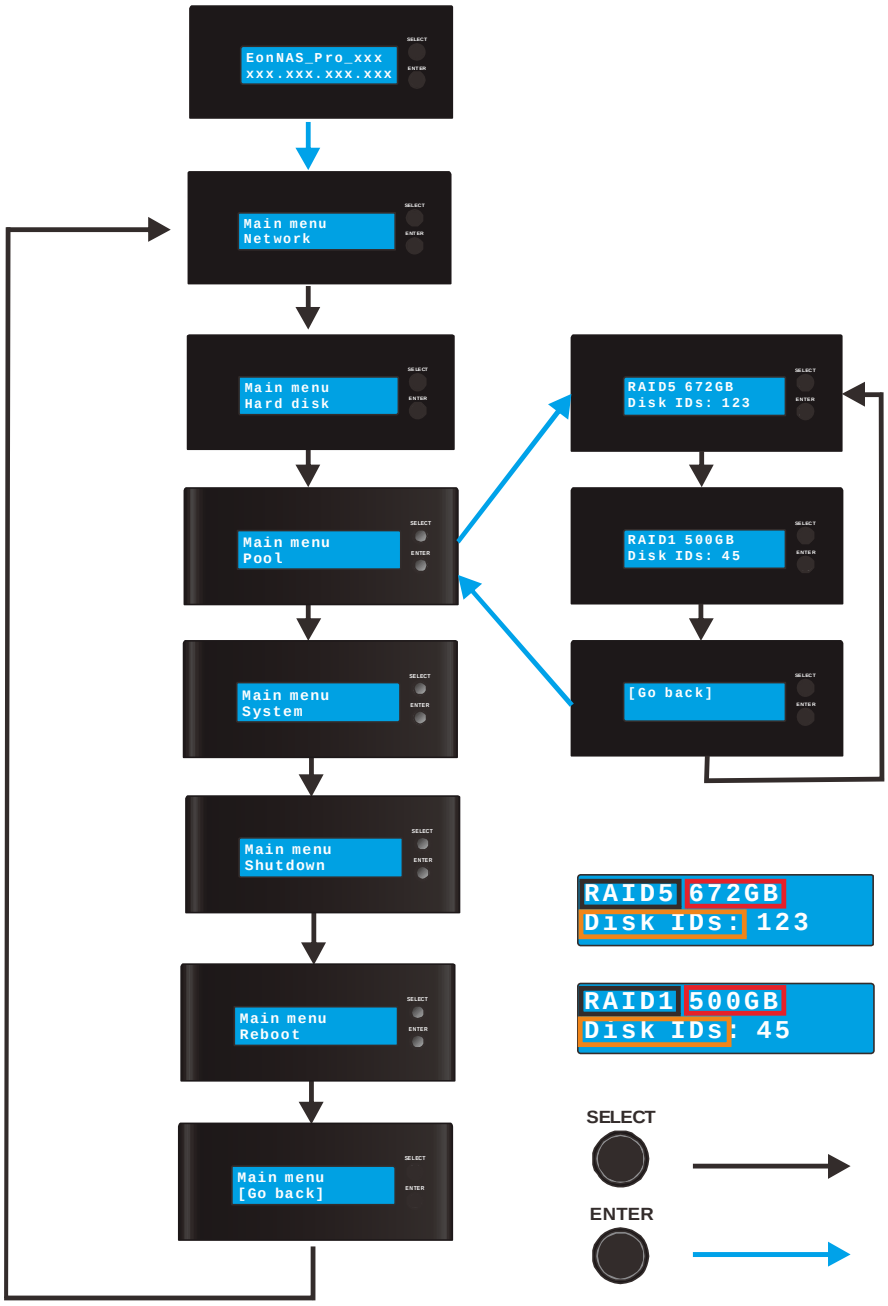
Physical Disk Menu

The Physical disk menu does not have user configurable settings. The numbers of hard drives that will appear when you press the “SELECT” button depends on the number of hard drives installed.



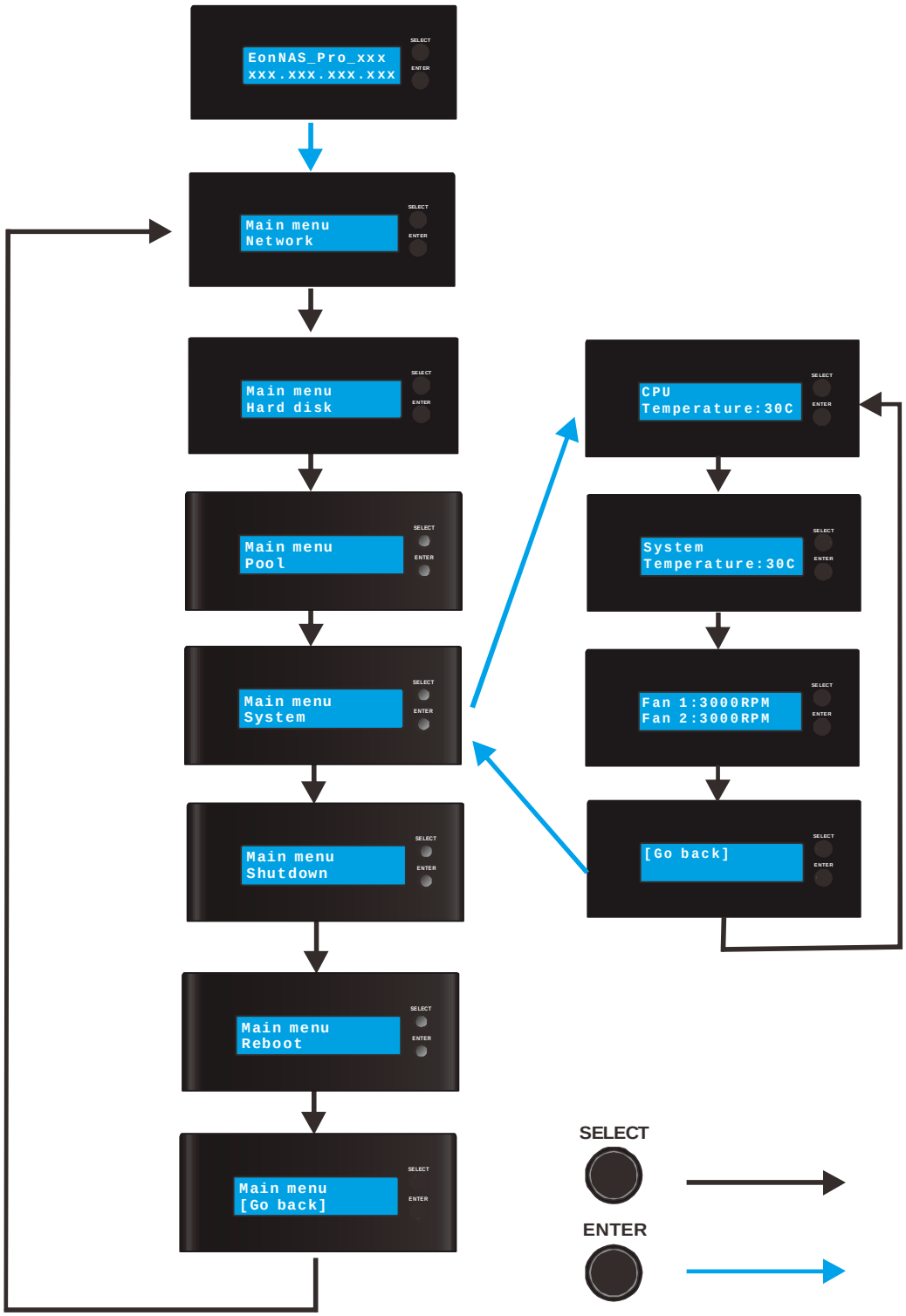
Pool Menu

The pool menu does not have configuration settings. When users press “ENTER” to access the pool sub-menu, it displays the current pool(s) created. In the example below, it shows a pool with **672GB** storage capacity configured in **RAID 5** (**utilizing disks 1, 2 and 3**) and another pool with **500GB** storage capacity configured in **RAID 1** (**utilizing disks 4 and 5**).



System Menu

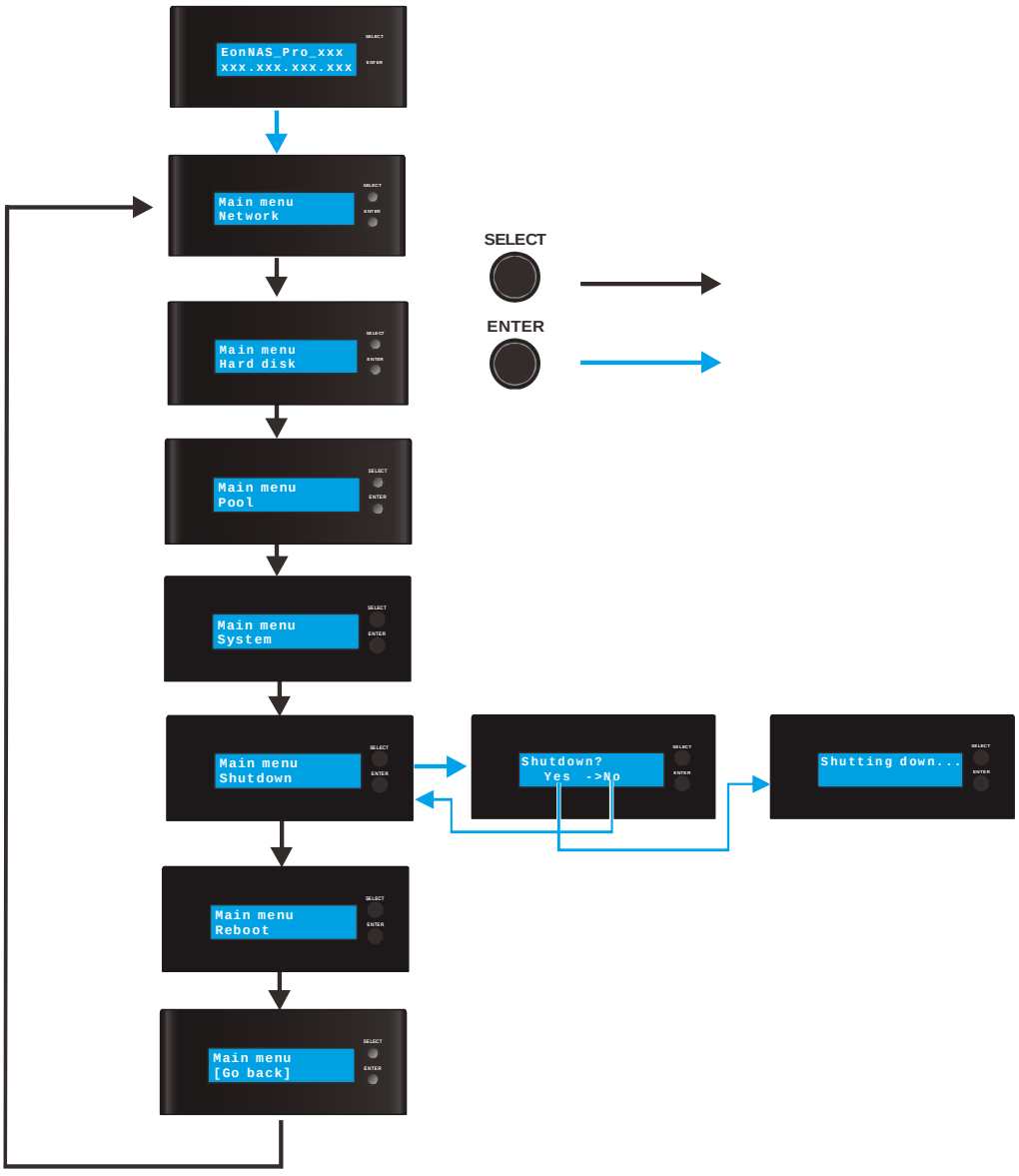
The System menu has no user configurable settings. It displays system statuses such as CPU temperatures and system fan's operational speeds.



Shutdown

Press the “Enter” button to bring up the confirmation screen (Yes or No). Press the “Select” button to choose yes or no and the “Enter” button to make your selection. The system will sound one beep before shutting down. If you press Enter while selecting:

- **Yes**: system shuts down (a beep will sound)
- **No**: returns to the previous menu



Note:

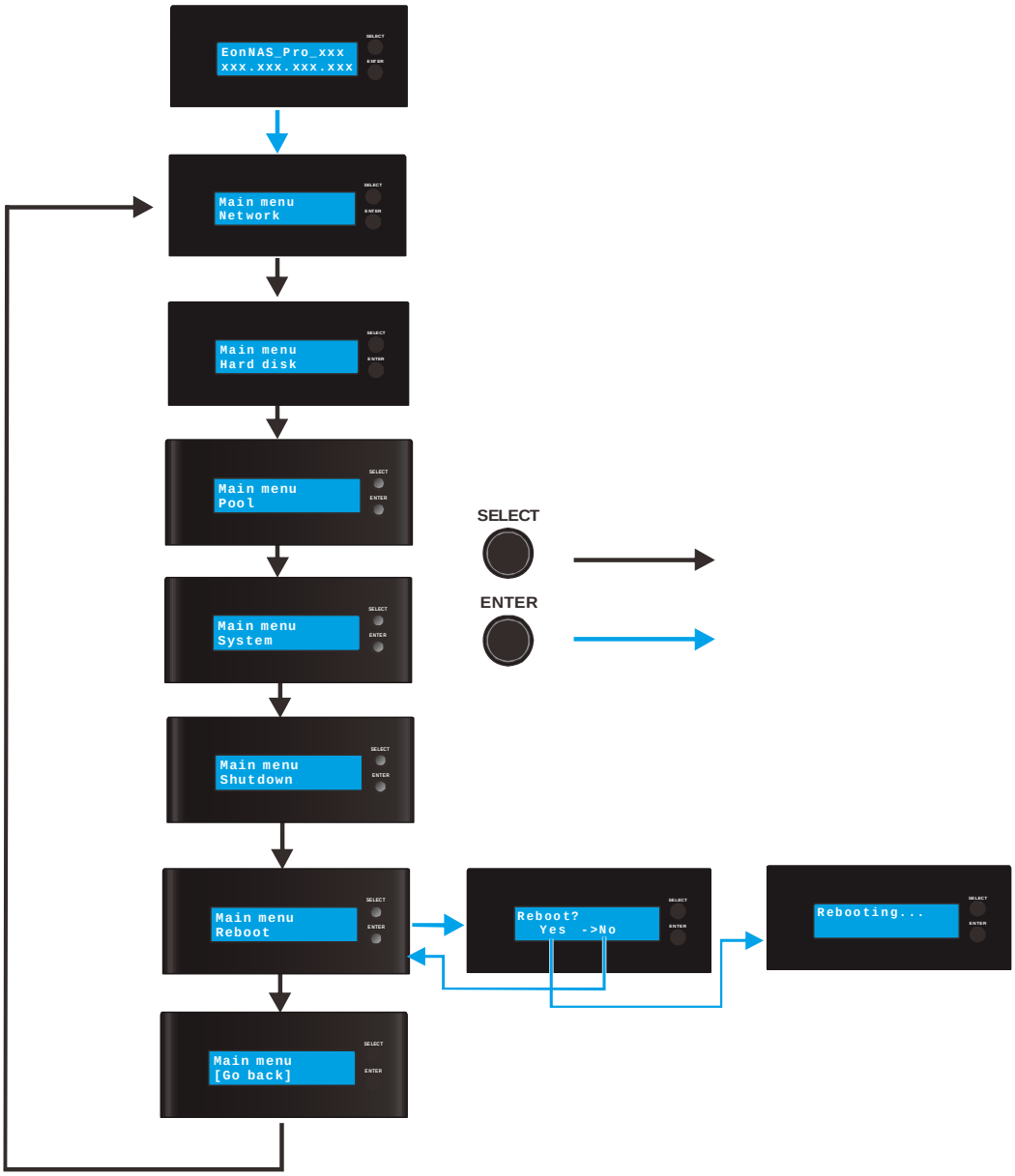
If the system becomes unresponsive, users can force shutdown the system. To force shut down the system, press and hold (approx. 5 seconds) the power button until the system shuts down. This should only be done when the system is unresponsive!

Reboot

Press the “ENTER” button to bring up the confirmation screen (yes or no). Press the “SELECT” button to choose yes or no and the “ENTER” button to make your selection. When you press the ENTER button with the arrow pointing at:

- Yes: system reboots (a beep will sound)
- No: returns to the previous menu

Once you have configured all your system settings, you may begin to create pool(s) for network storage.



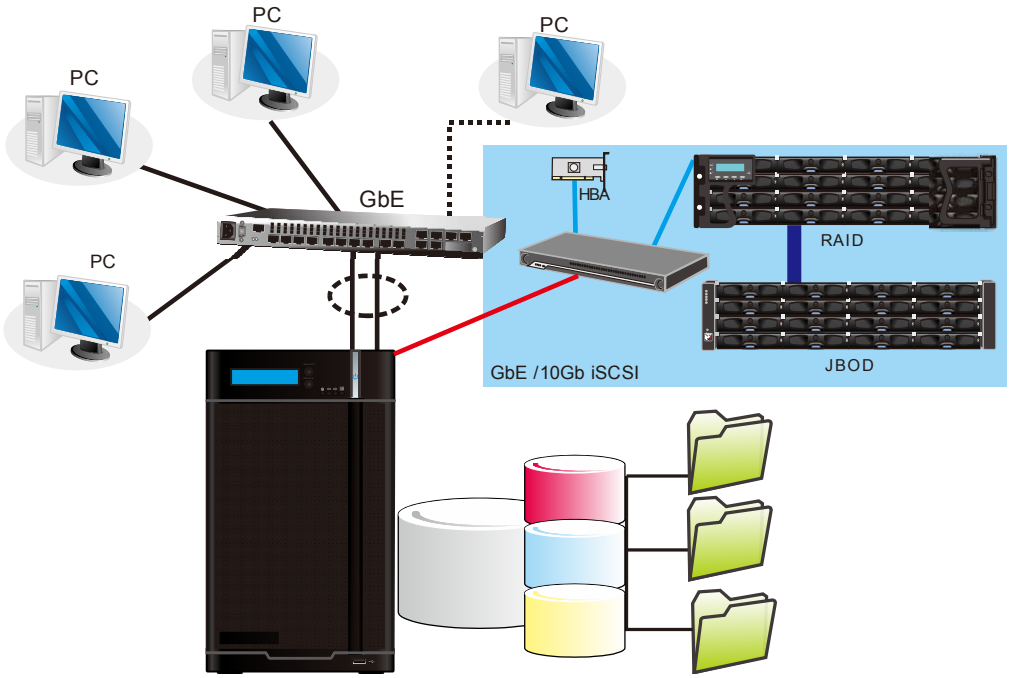
Connections

Component Compatibility

The use of compatible components is strongly recommended to ensure compatibility, quality and normal operation with your system. Please contact your vendor for a list of compatible components.

Connection Concept

Use CAT5e or better quality Ethernet cables, router and switch to construct your Ethernet network.



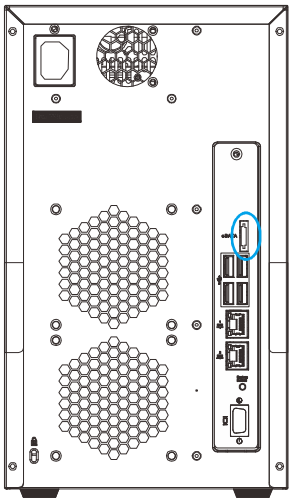
Users can trunk (black dotted circle) Ethernet ports 1 and 2 to boost the bandwidth. Users can also create pools and folders to share over the network. Please refer to the Web Interface Manual for detail configurations.

The blue shaded area applies to selected expansion connectivity models only (shown using a **red line** connected to the NAS system). The expansion ports on selected models allow for extra connectivity to RAID and JBOD storage expansion (please refer to respective RAID and expansion enclosure manuals for details).

eSATA External Expansion Port

eSATA devices are hot-swappable.

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 (connecting USB connectors or an adaptor to supply power).



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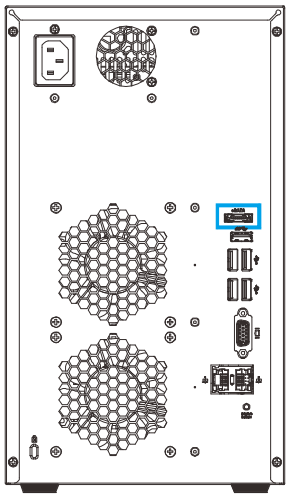

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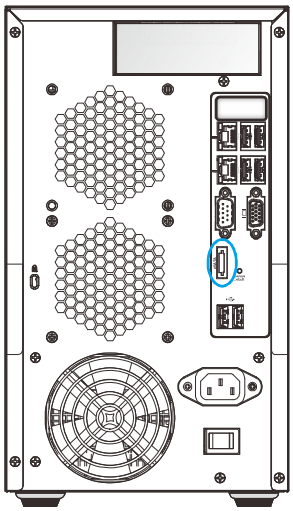


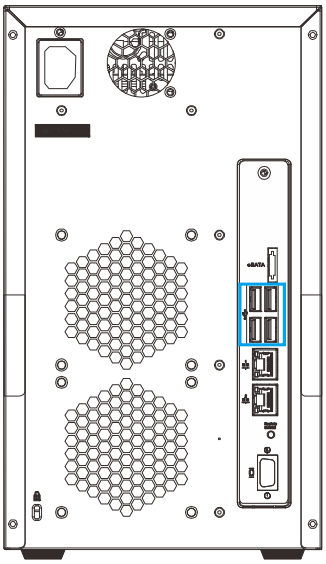
850

USB External Expansion Port

USB devices are hot-swappable.

The USB ports on the back of NAS systems can be used for external storage expansion purposes or peripheral devices. For USB expansion or peripheral device details, please refer to the manual that came with your USB device.

Some systems come with USB 3.0 ports labeled  (shown in green below).



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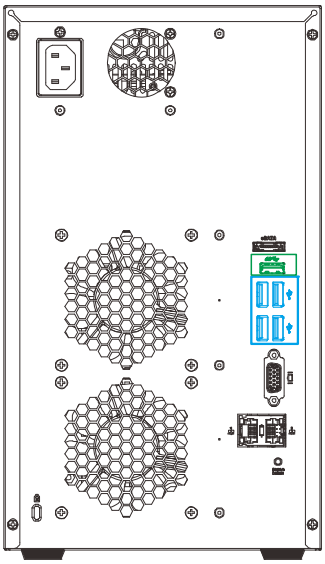

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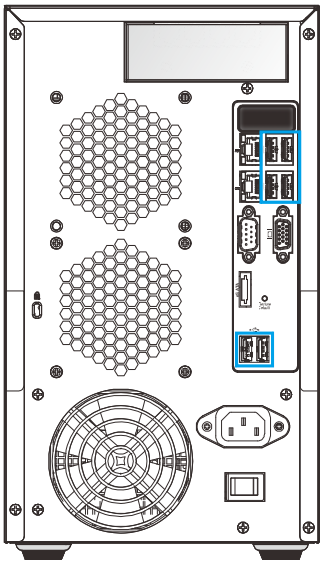

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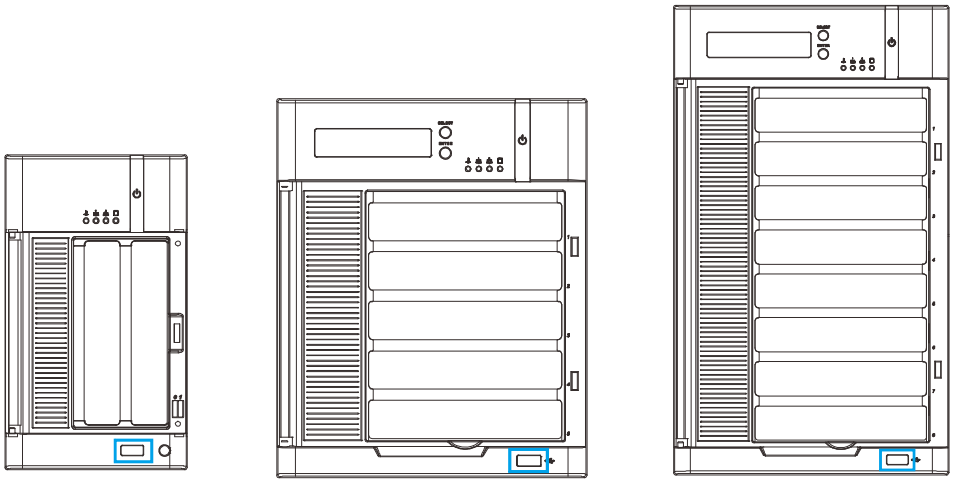
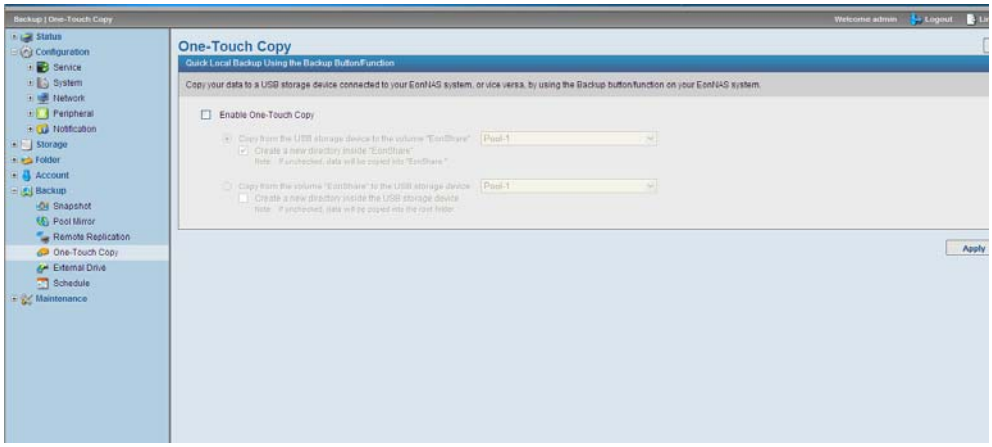
USB Quick Backup Functionality

The USB port located at the bottom right corner can be used for One-Touch Copy.



Users **MUST** setup their systems beforehand to perform this task (please refer to the Web Interface Manual). You can find the One-Touch Copy settings under the following directory: Backup > One-Touch Copy in the web interface. For details, please refer to the Web Interface Manual.

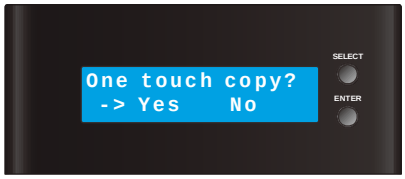


For Systems Without LCD Screen

Please refer to descriptions here for USB quick backup LED status details.

For systems with a LCD screen

Simply plug in a USB flash drive to the front USB port and the LCD will display the following:



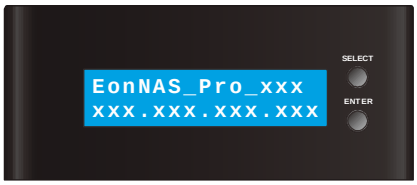
Press the “Select” button to choose between the options and “Enter” to execute your selection. When completed, the LCD will display the following:

When the One-Touch copy function has failed, the LCD will display the following:

When the “One touch copy” function has **NOT** been setup and a USB flash drive is plugged into the front USB port, it will show the following:

Pressing the ENTER or SELECT button will bring you to the following screen:

From here, pressing the ENTER or SELECT button will bring you back to the main menu.



Maintenance

> WARNING
>
> Replace a failed hard disk drive from the system as soon as possible to ensure data redundancy.

When inserting a hard drive, do not use excessive force. Forcing the hard drive can damage the connector pins either on the hard drive itself or the backplane within the system enclosure.

DO NOT remove two or more hard drive trays out of the enclosure at the same time! Should you suffer multiple hard drive failures, always replace one hard drive at a time!

User replaceable components:

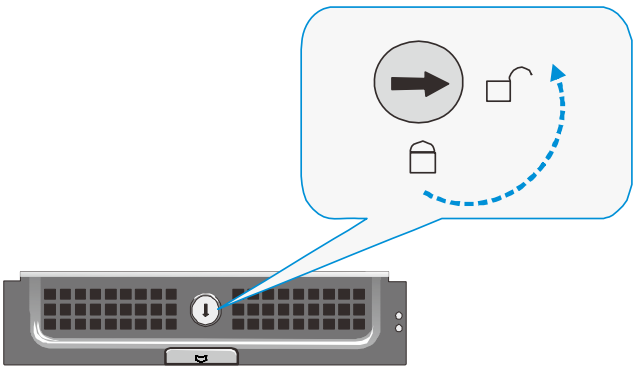
- Hard drive

Replacing the Hard Drive

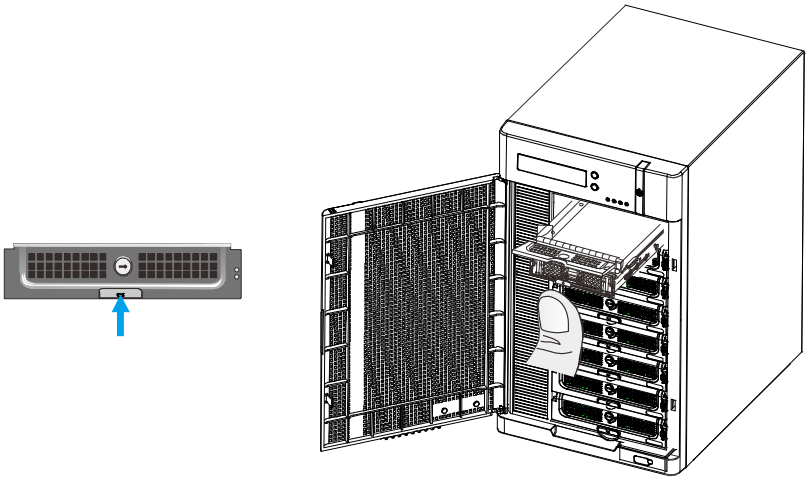
The easiest way to find out if your hard disk drive has failed is by looking at the hard drive status LED. If the power status lights up red, it indicates that that particular hard disk drive has failed. Hard drives are hot swappable, to replace it, please refer to the following procedure:

1. **Locate** the failed hard drive with a red status LED (hard drive status LED).

2. **Unlock** the hard drive tray by turning the bezel to the unlock position.

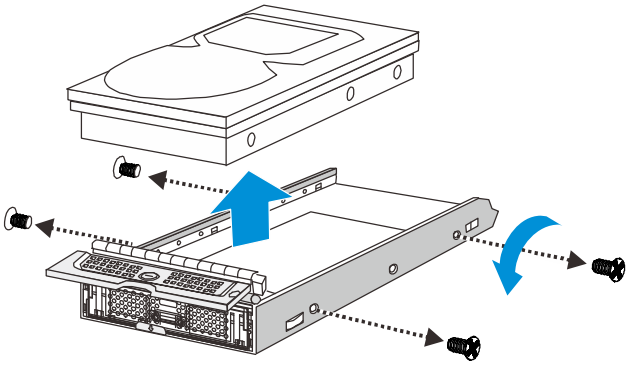


3. **Open the tray bezel** by pushing the release button (indicated by the **blue arrow**) and the front bezel will automatically open.

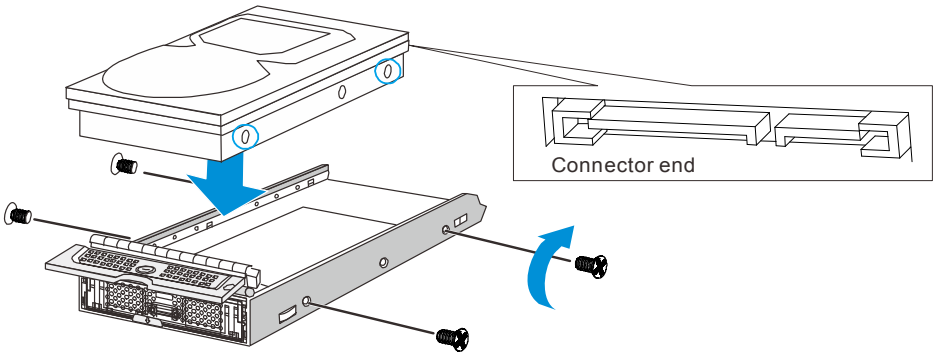


4. **Remove the drive tray** by pulling it one inch away from the drive bay. Wait for at least 30 seconds for the hard drive to spin-down, and then gently and carefully remove the drive tray from the chassis.

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



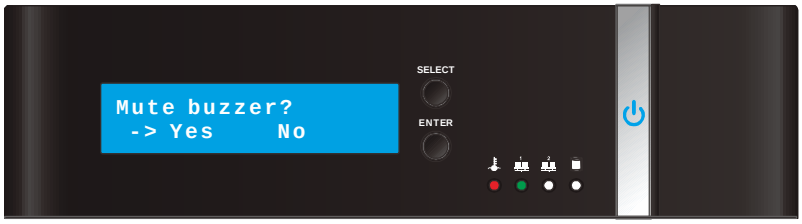
6. **Install the replacement hard drive** as shown below and reinserted into the enclosure (or refer to Installing Hard Drives).



System Error Buzzer

> **Note:**
>
> **For systems without a LCD screen**, if you hear an error buzzer, please log into the system through a browser and check the system log.
>
> The LCD module provides basic action(s) and monitoring statuses only, it is recommended that in an event of an error, users log into the web-interface to get a better picture of the overall system statuses!

If your system has encountered an error, a single beep buzzer alarm will sound continuously until you manually turn it off and a “Mute Buzzer -> Yes No” prompt will show on the LCD module. With the arrow pointed at “Yes”, press the “ENTER” button to turn off the buzzer.



Once an error has occurred, users must log into the web interface and check the system logs to identify the issue(s). Below is a list of the possible triggering events and simple countermeasures.

1. **CPU or system temperature** exceeded the threshold limit:
    - When you have determined the CPU or system temperature is the cause of the system error, please check for obstructions in front of and behind the system enclosure to ensure normal airflow is sustained. If error persists, please contact technical support.
2. **System fan** failure:
    - When you have determined the system fan has completely failed or is operating below its normal rev range, please contact technical support.
3. **Hard drive failure:**
    - When you have determined a hard drive or hard drive(s) have failed. Press the “ENTER” button with the arrow pointed at “Yes” to mute the buzzer.

Open the front system panel cover and check all hard drive status LEDs. Normal operation hard drive's power status LED should light up green, failed hard drive power status LEDs will light up **red**.

Once you have located the failed hard drive, remove it out of the system and replace it with a new one (please refer to replacing the hard drive).

NOTE

When hot-swapping (while system is in operation), once you have inserted the hard drive, a beep will sound to indicate the hard drive has been detected by the system followed by the power status LED lighting up green.

*Please turn over the page to see the system's alternative action!

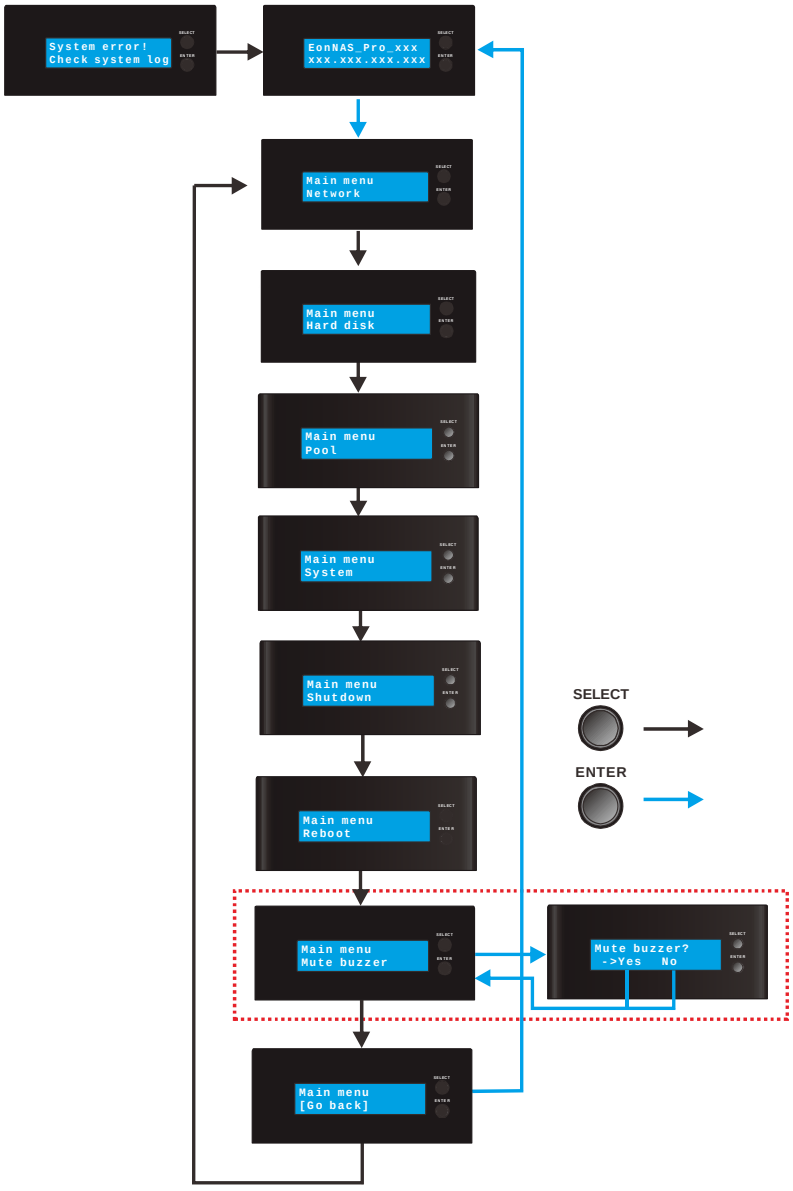
Buzzer Sounds

Type	Description
Short beep	1. When system is booting 2. Shutting down the System 3. System reset successfully 4. Firmware has been updated 5. USB One-Touch copy started / completed (front USB port) 6. Plugged-in external device recognized 7. External backup started / completed (scheduled and rear USB ports only) 8. Pool rebuilding or completed 9. Two short beeps will sound (with a pause in between) to indicate the system is booting into NAS OS
Repetitive Long beep	1. Storage capacity utilization is at 95% 2. Storage capacity utilization is full 3. RAID in degraded mode 4. System anomaly (cooling fan, power, high temperature) 5. Failed operation (USB OT copy or external backup failed) 6. System reset failed

*For setting schedule(s) or viewing system log(s), please refer to the web interface manual.

The following occurs when the alarm sounds but is not attended to within 30 seconds. The “Mute Buzzer -> Yes No” screen will be replace with the “System Error! Check Logs” screen while the alarm continues to sound and the system status LED lights **red**.

From here, to mute the buzzer, you must navigate your way through the main menu, shown below in the **red dotted rectangle**:



From here, once you have rectified the error and the “Main Menu Mute Buzzer” menu will disappear from the main menu selection.

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 NAS server

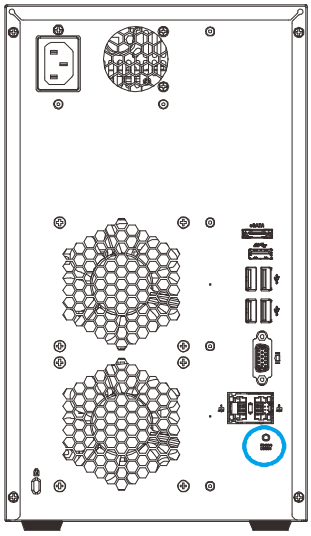
Note:

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 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; default username: **admin**, default password: **admin**.

To restore default settings:

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



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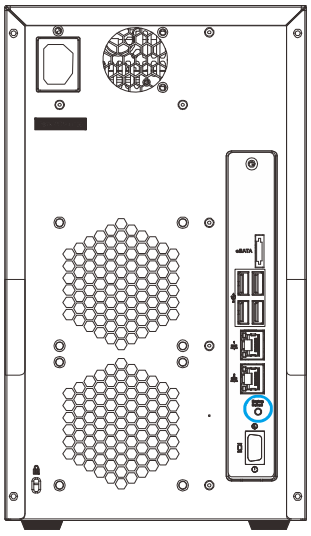

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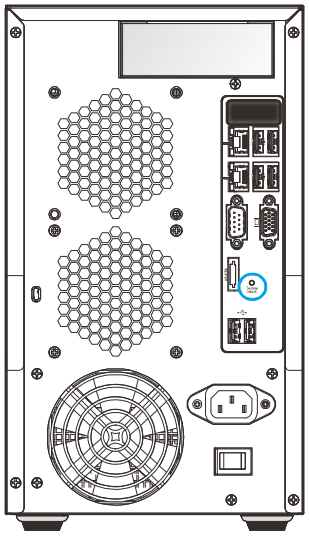

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Appendix

Technical Specifications

Hardware

Dimensions	**EonNAS Pro 2x0:** 102(W) x 245 (D) x 150 (H) mm **EonNAS Pro 5x0**: 175(W) x 245(D) x 225(H) mm **EonNAS Pro 8x0**: 175(W) x 245(D) x 310(H) mm **EonNAS Pro 850 series**: 175(W) x 380(D) x 310(H) mm
Chassis	Tower chassis
Storage	**Hard drives:** **EonNAS Pro 2x0:** 2 hot-swappable 3.5” SATA HDDs **EonNAS Pro 5x0**: 5 hot-swappable 3.5” SATA HDDs; **EonNAS Pro 8x0:** 8 hot-swappable 3.5” SATA HDDs **RAID Levels:** **EonNAS Pro 2x0**: 0, 1 **EonNAS Pro 5x0 / 8x0 RAID levels**: 0, 1, 5, 6, 10 **EonNAS Pro 850 series RAID levels**: 0, 1, 5, 6, 10, 50, 60 **Note**: • There are minimum disk number requirements for certain RAID configuration. Please refer to this table for details. • Please use hard drives of the same spindle speed and storage capacity!
Onboard LAN	2 x GbE Ethernet RJ-45 ports
Cooling	2 system fans

* All designs and hardware specifications are subject to change without prior notice. For the latest specifications and details, please contact your vendor.

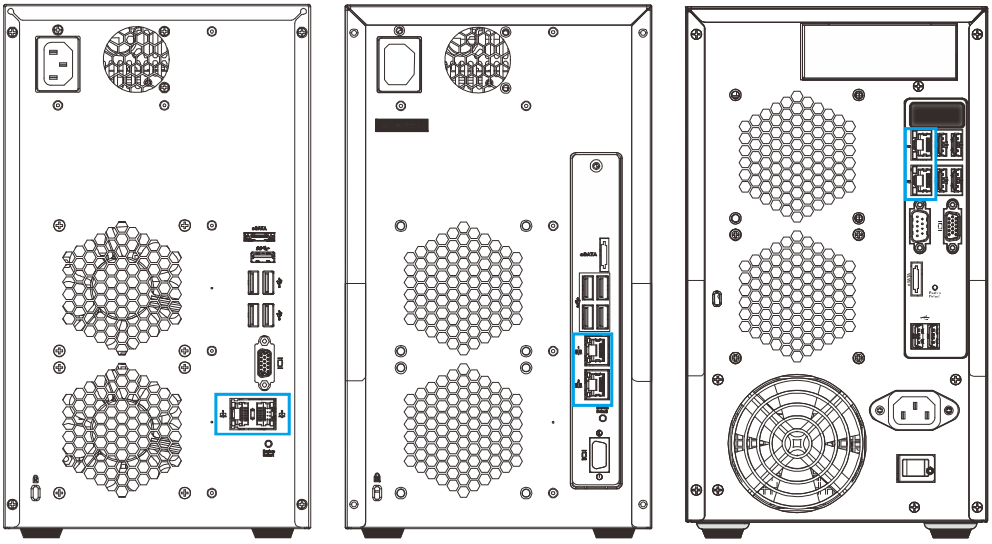
Operating Environment

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

Host Port Pinouts

Interface	EonNAS Pro 2x0	EonNAS Pro 5x0	EonNAS Pro 8x0	EonNAS Pro 8x0-1	EonNAS Pro 8x0-2
1Gbps iSCSI Host Port				**V**	
10Gbps iSCSI Host Port					**V**
1Gbps Ethernet Port	**V**	**V**	**V**	**V**	**V**

1Gbps Ethernet Host Port

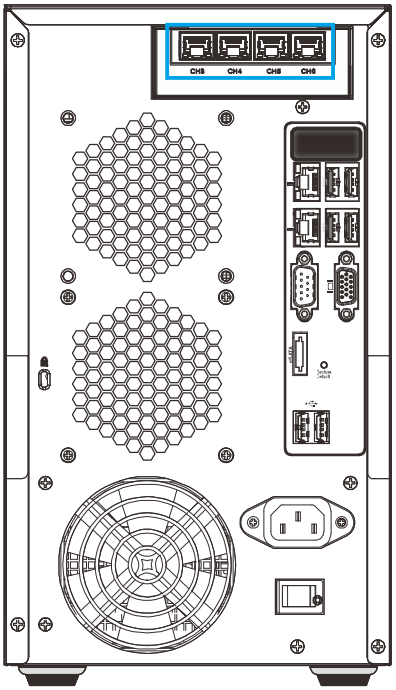


Pin	Name	Pin	Name
1	BI_DA+	5	BI_DC-
2	BI_DA-	6	BI_DB-
3	BI_DB+	7	BI_DD+
4	BI_DC+	8	BI_DD-

NOTE

Automatic MDI/MDI-X Crossover: Crossover can be implemented internally at hub or switch or externally through twisted pair media.

1Gbps iSCSI Host Port

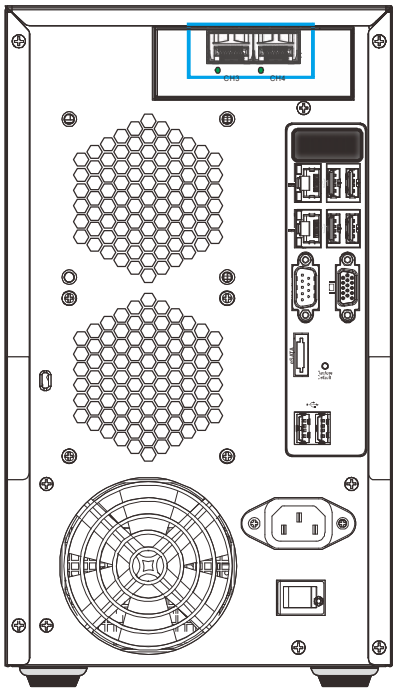


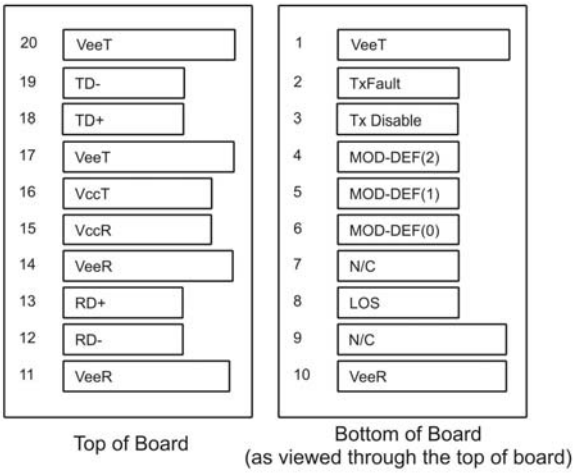
Pin	Name	Pin	Name
1	BI_DA+	5	BI_DC-
2	BI_DA-	6	BI_DB-
3	BI_DB+	7	BI_DD+
4	BI_DC+	8	BI_DD-

NOTE

Automatic MDI/MDI-X Crossover: Crossover can be implemented internally at hub or switch or externally through twisted pair media.

10Gbps iSCSI Host Port





Pin	Name	Description
1	V_{EET}	Transmitter ground
2	T_{FAULT}	Transmitter fault indication – High indicates a fault condition
3	T_{DIS}	Transmitter Disable – Module electrical input disables on high or open
4	MOD_DEF(2)	Module definition 2 – Two wire serial ID interface data line (SDA)
5	MOD_DEF(1)	Module definition 1 – Two wire serial ID interface clock line (SCL)
6	MOD_DEF(0)	Module definition 0 - Grounded in module (module present indicator)
7	No Connect	Internal pullup 30KΩ to Vcc
8	RX_LOS	Indicates loss of signal; High indicates loss of received optical signal
9	No Connect	Internal pullup 30KΩ to Vcc
10	V_{EER}	Receiver Ground
11	V_{EER}	Receiver Ground
12	RD-	Inverse Received DATA Out
13	RD+	Received Data Out

14	V_{EER}	Receiver ground
15	V_{CCR}	Receiver power +3.3V
16	V_{CCT}	Transmitter power +3.3V
17	V_{EET}	Transmitter ground
18	TD+	Transmitter DATA In
19	TD-	Inverse Transmitter Data In
20	V_{EET}	Transmitter Ground

Certifications

Safety	UL (60950-1 2'nd) BSMI CNS 14336: 2005 CB IEC 60950-1, 2'nd Edition GOST-R GOST R 60950-1-2005
EMC	EN 55022: 2006/A1:2007 EN 55024:1998/A1:2001/A2:2003 EN 61000-3-2:2006/A1:2009/A2:2009 EN 61000-3-3:2008 BSMI (CNS 13438) FCC (FCC Part 15,subpart B)
Environment	IEC 60068-2 MIL-STD-810E/883E ISTA ASTM-D3332 ISO 4180 ISO 7779/3744
Others	EU RoHS China RoHS