ioSafe

ioSafe x513 Hardware Guide

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Appendix A: Specifications

Appendix B: LED Indication Table

Before You Start

Before you start setting up the ioSafe, please check the package contents to verify that you have received the items below. Please also read the safety instructions carefully before use to prevent your ioSafe from any damages.

Note: **ioSafe uses an unmodified version of Synology's DSM. The software interface will sometimes refer to the Synology Product the ioSafe is based on.**

Package Contents

Main unit x 1	AC power cord x 1
	Expansion cable x 1
	Screws for 3.5" hard drives x 24 (Diskless Only)
	3mm Hex Tool x1
	Magnet x1
	Note: For storing the hex tool on the back of the device

ioSafe at a Glance
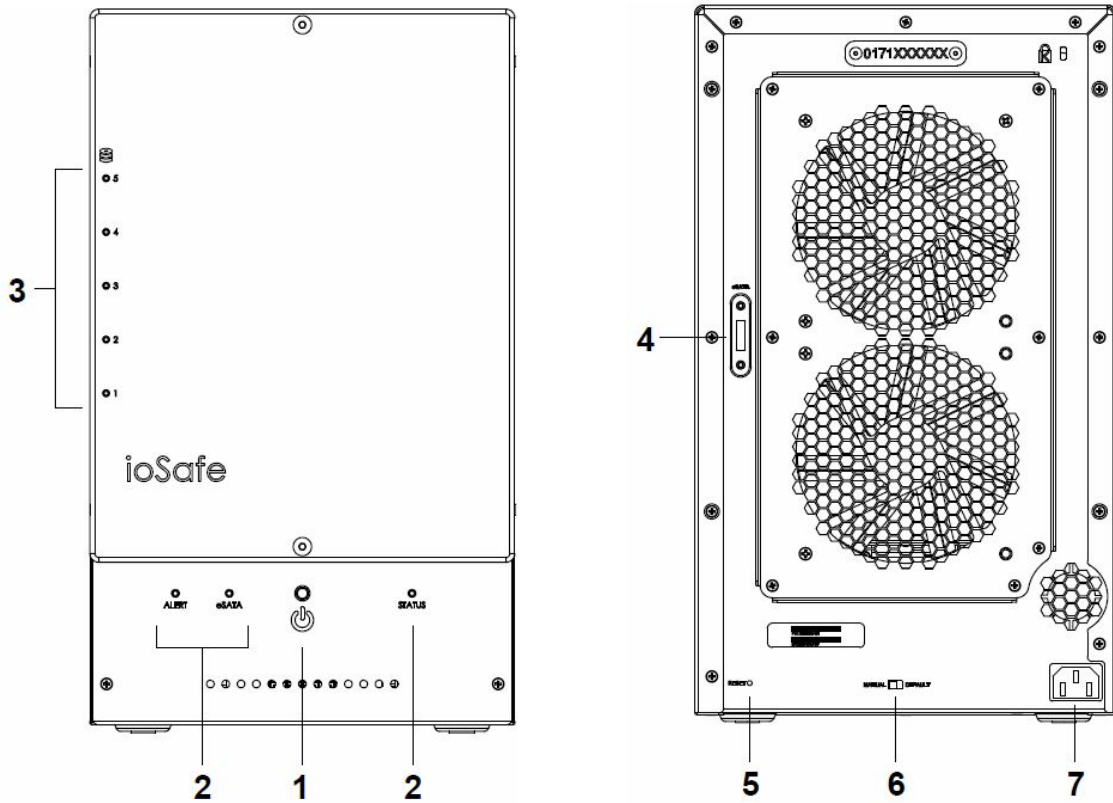
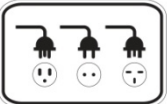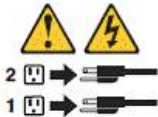| No.	Article Name	Location	Description
1)	Power Button	Front Panel	*In default mode:* x513 will be turned on or off automatically when the connected Synology DiskStation powers on or off. *In manual mode:* 1. When x513 is connected to cross-volume models, the power button has no power-on/off functions. 2. When x513 is connected to independent-volume models, press the power button to power it on. To power off x513, press and hold the button until the Power LED starts blinking. *Note:* For cross-volume and independent volume models, please refer to the *Hardware Specifications* table on Page 2.
2)	LED Indicators	Front Panel	Displays the status of internal disks and the system. For more information, see *LED Indication Table* in Appendix B.
3)	HDD Indicators		
4)	Expansion Port	Back Panel	Connect to a compatible ioSafe NAS
5)	RESET Button	Back Panel	Reboot x513 and restore its settings to factory default.
6)	Default/Manual Switch	Back Panel	Switch between power modes to turn x513 on/off automatically or manually.
7)	Power Port	Back Panel	The power port is where you connect the power cord to the ioSafe.
8)	Fans	Back Panel	The fans are built to exhaust waste heat. It will start automatically when the server starts. If the fan is malfunctioning, the system will beep every few seconds.

Safety Instructions

	Before cleaning, unplug the power cord first. Wipe ioSafe product with damp paper towels.
	Do not place the ioSafe product on a cart, table, or desk, which is not stable to avoid the product from falling over.
	The power cord must plug in to the right supply voltage. Make sure that the supplied AC voltage is correct and stable.
	To remove all electrical current from the device, ensure that all power cords are disconnected from the power source.
	Risk of explosion if battery is replaced with an incorrect type. Dispose of used batteries appropriately.
3-2-1	At ioSafe, we suggest a minimum of the "3-2-1 Rule" for backup: Make 3 complete copies of your data, keep them on at least 2 separate systems, and have at least 1 protected from natural disaster.

Hardware Setup

Tools and Parts for Hard Disk Installation

- A Phillips screwdriver
- 3mm Hex Tool (included)
- At least one 3.5" or 2.5" SATA hard disk
  (Please visit **www.iosafe.com** for compatible hard disk models.)

Warning: If you install a hard disk that contains data, the system will format the hard disk and erase all data. If you need the data in the future, please back it up before installation.

Install Hard Disks

1 Remove the Front Cover using the include 3mm Hex Tool
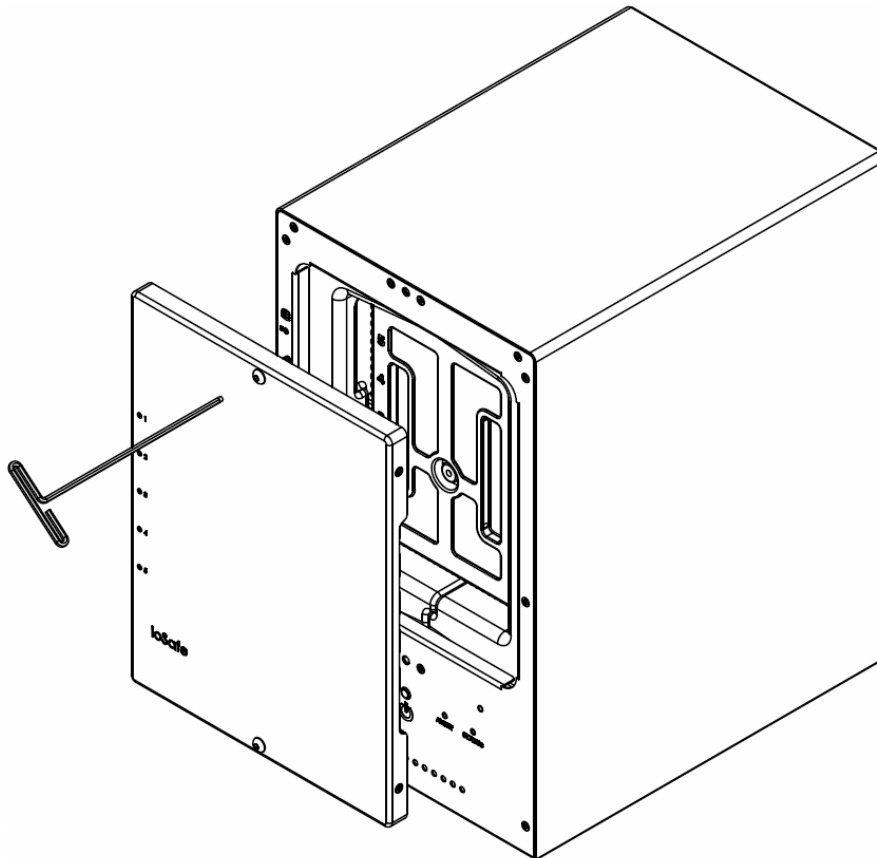
2 Remove the Waterproof Drive Cover using the 3mm Hex Tool.
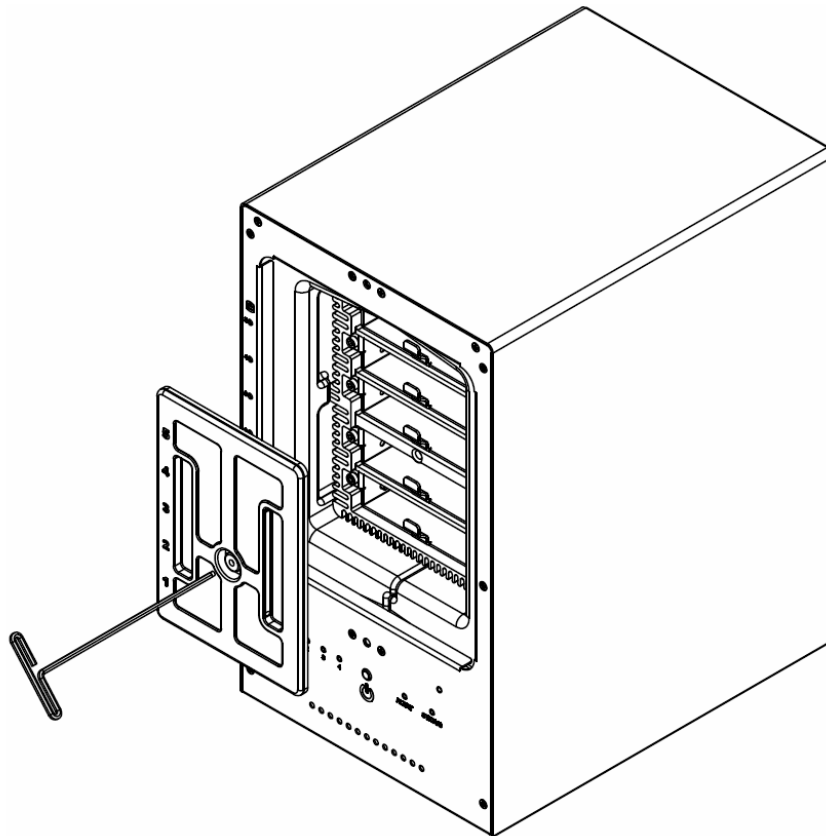
3 Remove the Drive trays using the provided 3mm Hex Tool.
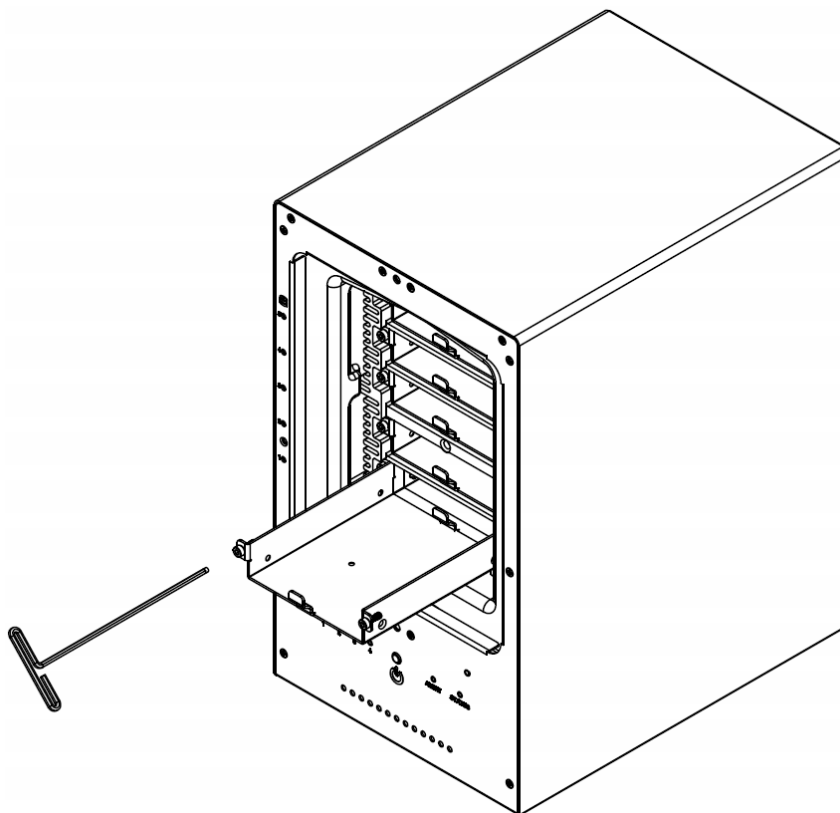
4 Install a compatible Hard Drive into each Drive Tray using (4x) Drive Screws and a Phillips screwdriver.

(Please visit **www.iosafe.com** for compatible hard drives models.)

> *Note:* If you want to set up a RAID set, it is recommended that all installed hard disks are of the same size to make the best use of hard disk capacity.
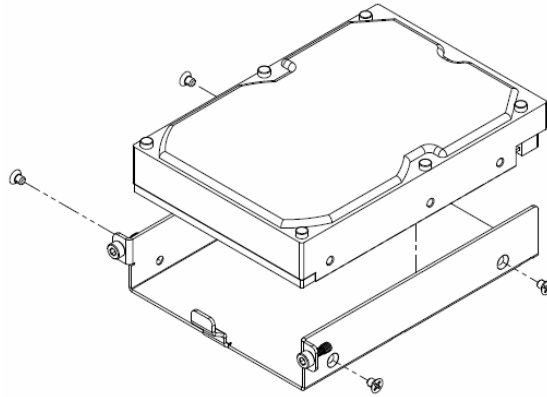
5 Insert the loaded hard drive tray into the empty hard drive bay and tighten the screws using the 3mm Hex Tool.
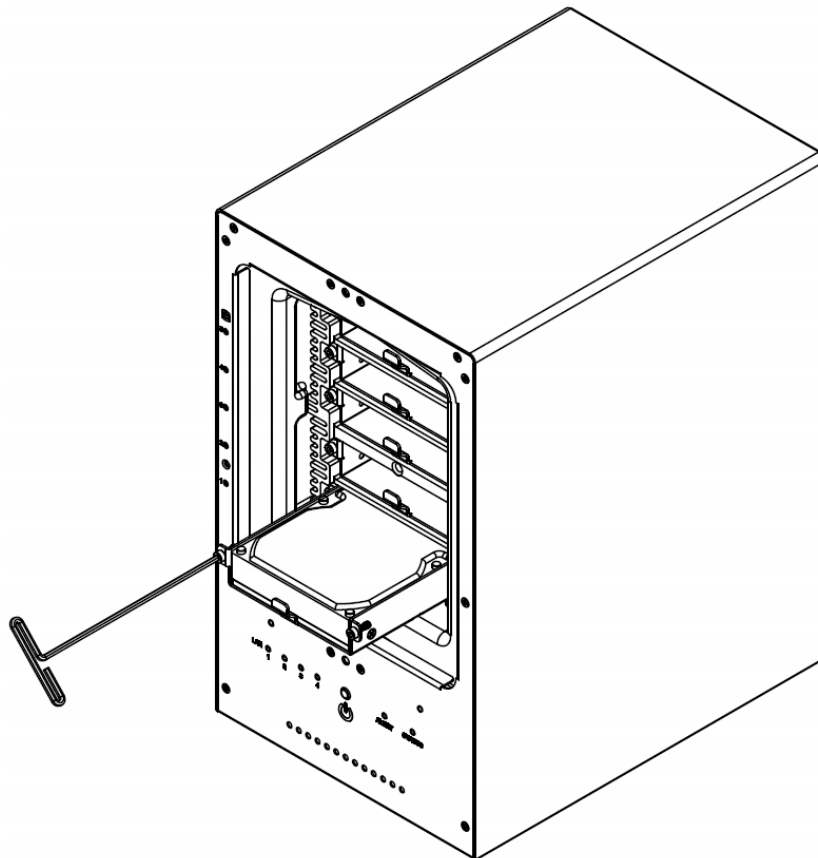
> *Important:* Make sure the tray is pushed in all the way. Otherwise, the hard disk might not be able to function properly.

6 Replace the Waterproof Drive Cover and securely tighten using the supplied 3mm Hex Tool

> *WARNING:* BE SURE TO TIGHTEN THIS SCREW USING THE PROVIDED HEX TOOL. THE HEX TOOL IS DESIGNED TO FLEX SLIGHTLY WHEN THE SCREW IS SUFFICIENTLY TIGHT AND THE WATERPROOF GASKET IS PROPERLY COMPRESSED. AVOID USING TOOLS OTHER THAN THE SUPPLIED HEX TOOL AS YOU COULD UNDER TIGHTEN OR BREAK THE SCREW.
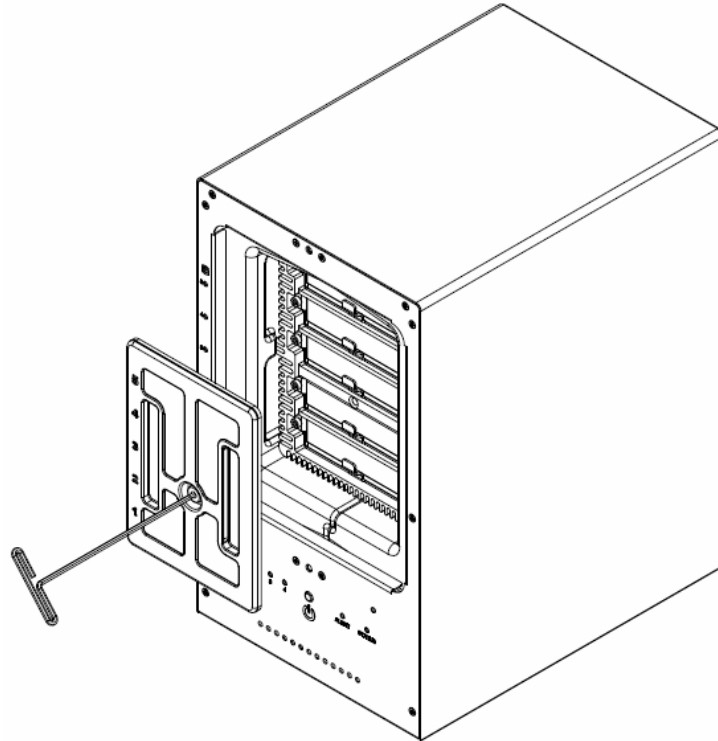
7 Install the Front Cover to finish the installation and protect the drives from fire. Keep the Hex Tool nearby for future use. A magnet is provided to attach the Hex Tool to the back of the ioSafe or some other convenient location.
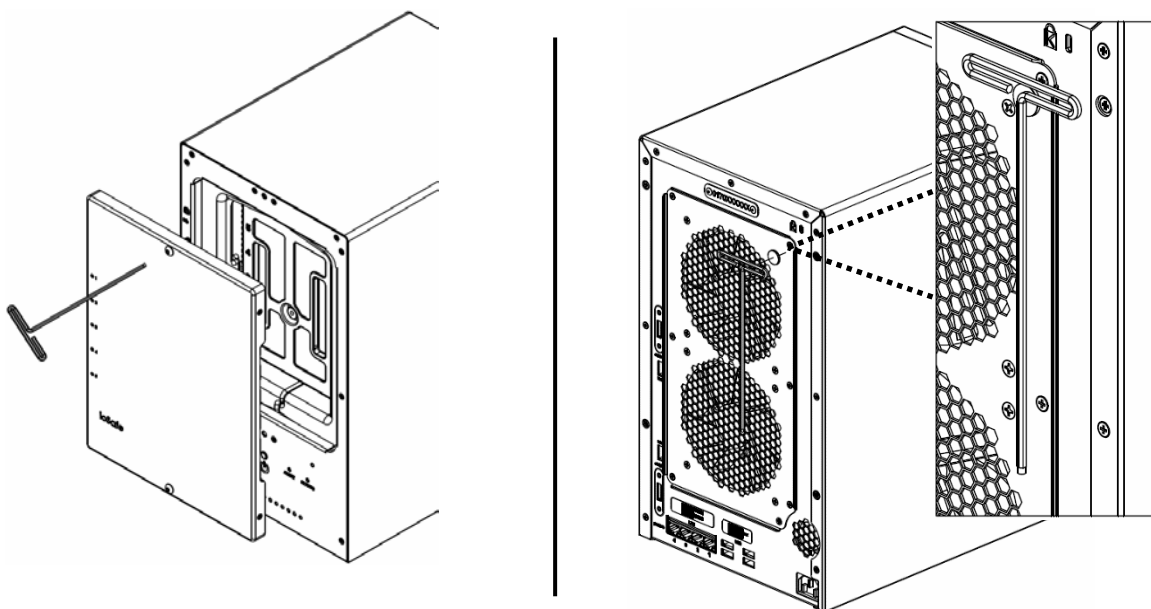
Connecting to the ioSafe NAS

1 Connect one end of the power cord to the power port of x513, and the other to the power outlet.
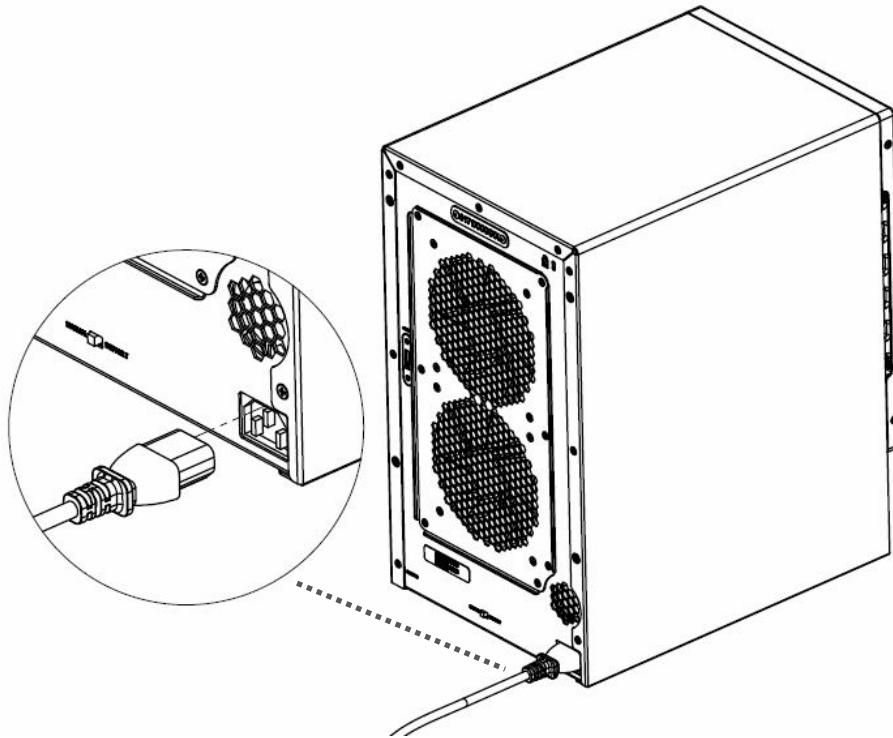
2 Connect the expansion cable between the expansion ports of x513 and a compatible ioSafe NAS.

Expansion Port 1

Expansion Port 2
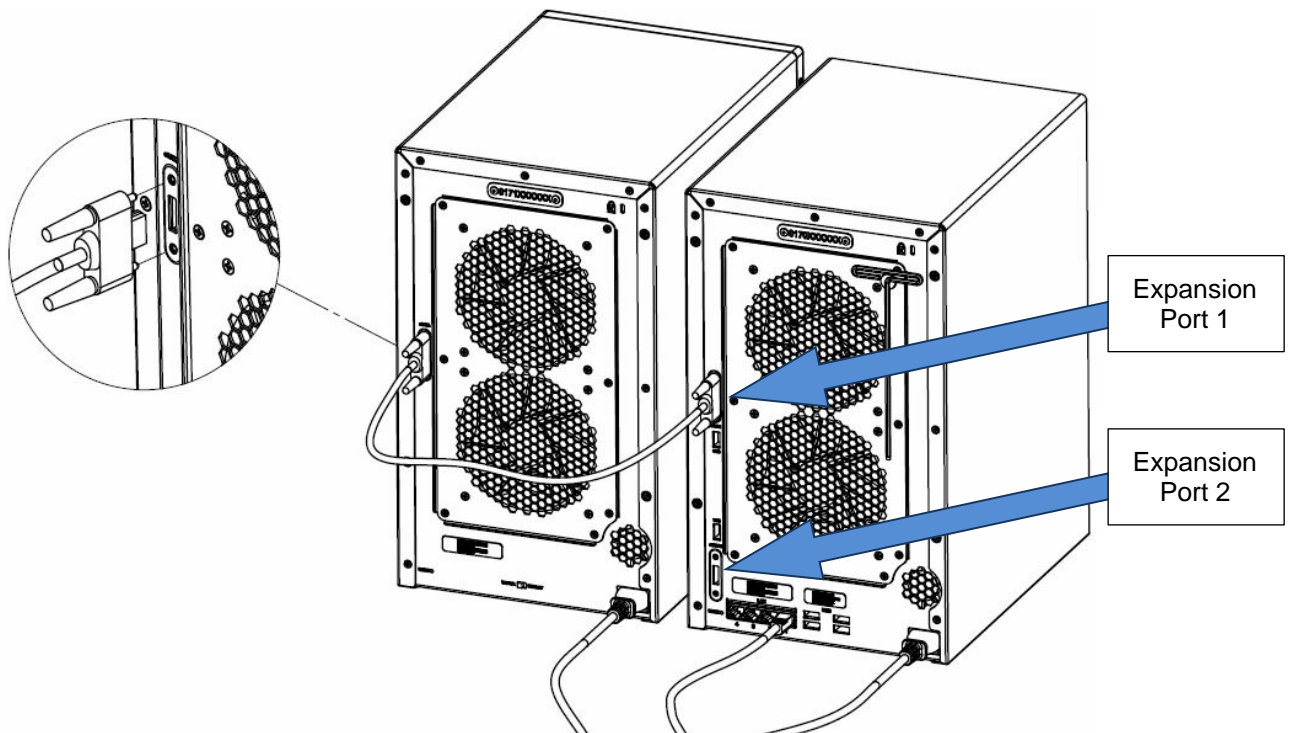
Note: After the connection is complete, x513 will be turned on or off automatically when the connected ioSafe NAS powers on or off.

Replace System Fan Assembly

Follow the steps below to replace the malfunctioning fans with a good set.

To replace the system fans:

1 Shut down your ioSafe x513. Disconnect all cables connected to your ioSafe to prevent any possible damages.

2 Remove the 7 perimeter screws that secure the malfunctioning fan assembly.

3 Remove the malfunctioning fan assembly:

    a Pull the assembly from the back panel of your ioSafe to expose the fan connections.

    b Disconnect the fan cables from the connector located near the bottom of the fan socket, and then remove the assembly.
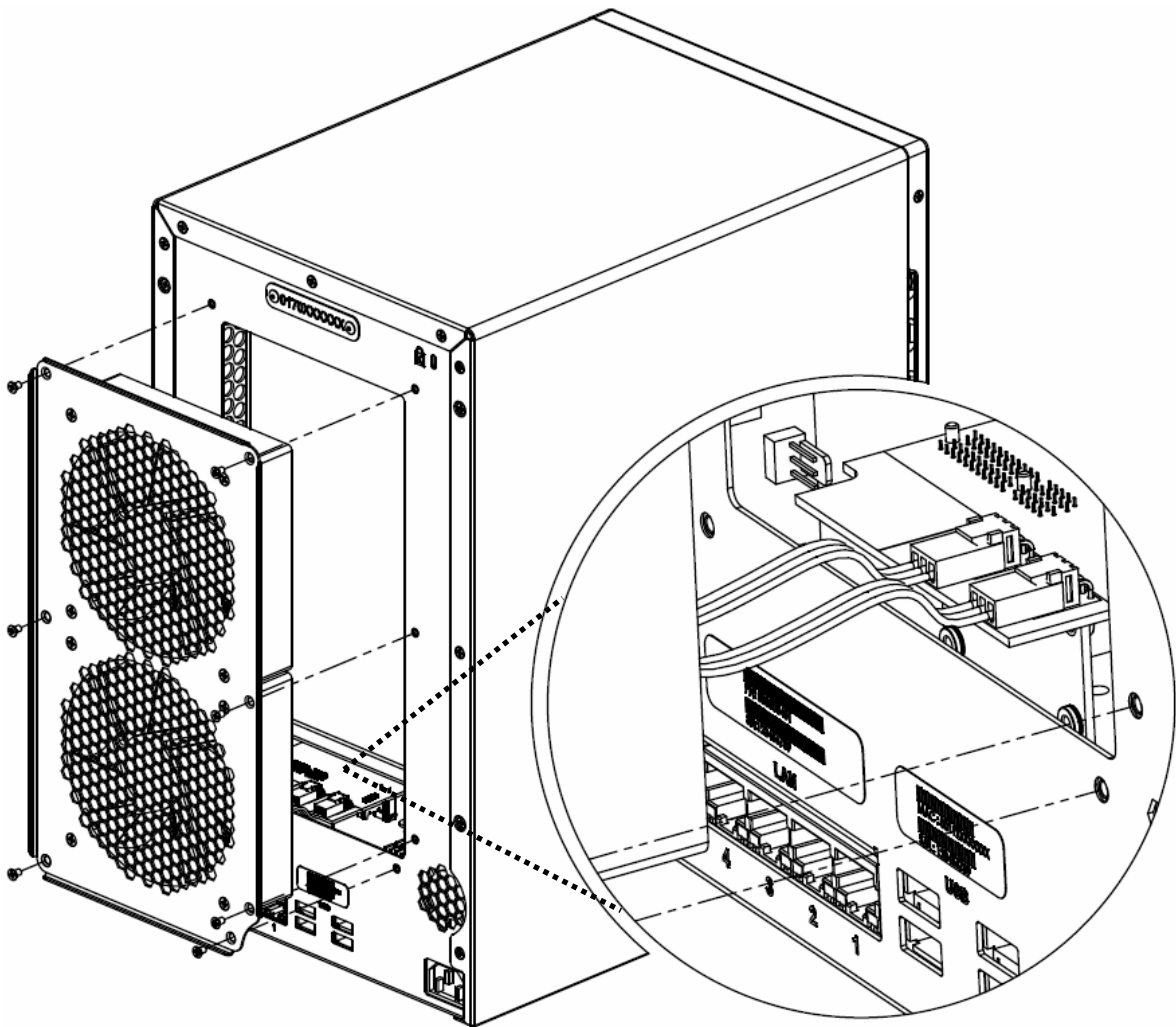
4 Install the new fan assembly:

    a Connect the fan cables of the new fans to the fan connectors.

5 Replace and tighten the 7 screws you removed in step 2.

How to Configure in DiskStation Manager

Important: Before starting to use ioSafe NAS with the x513 Connected, please see the following limitations of x513.

- x513 Expansion unit can be paired with only one compatible ioSafe NAS.
- The data of applications (such as Photo Station and Audio Station) can be stored on x513 only if you expand the internal volume of the master NAS with x513. They will not be stored on x513 if you create a new independent volume.
- Hard drives previously used in an ioSafe NAS will not be readable by directly inserting them into x513, and vise versa.

To configure your new x513, please follow the steps below:

1 Power on your ioSafe NAS master unit.

2 Open your DiskStation Manager with a web browser. Go to **Main Menu** > **Control Panel** > **Devices and Printers** to confirm x513 is connected to your ioSafe.
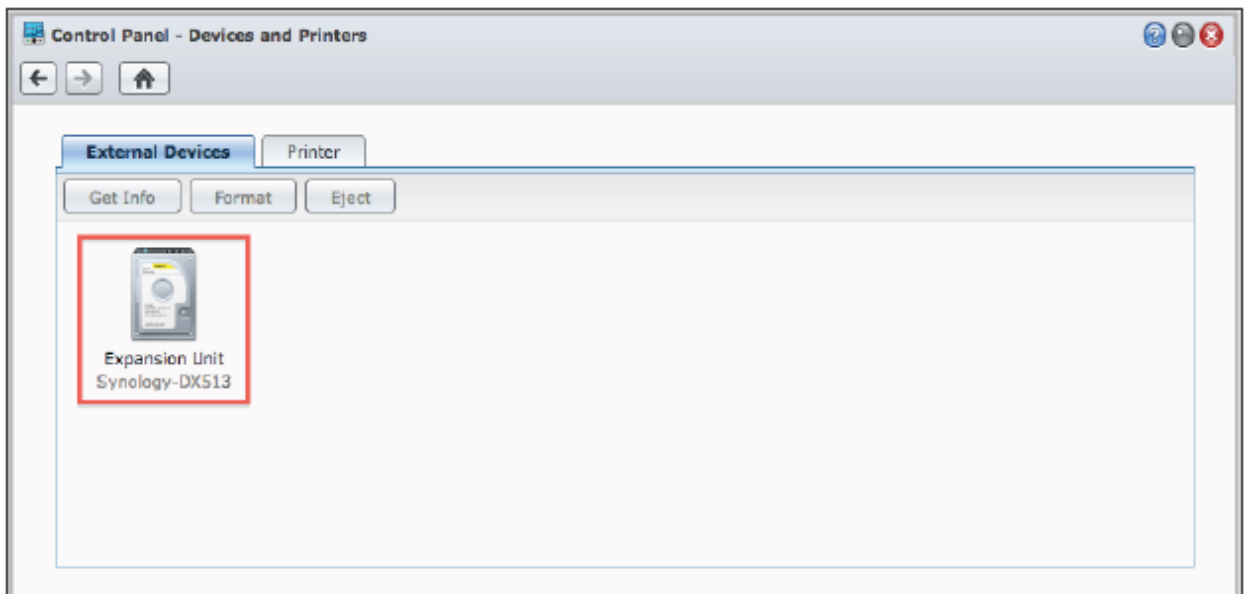
3 Go to **Main Menu** > **Storage Manager** to manage x513 for storage creation or expansion.

- *If you want to create a new volume with x513,* click **Create** and follow the Volume Creation Wizard to complete the creation (This is the preferred method).
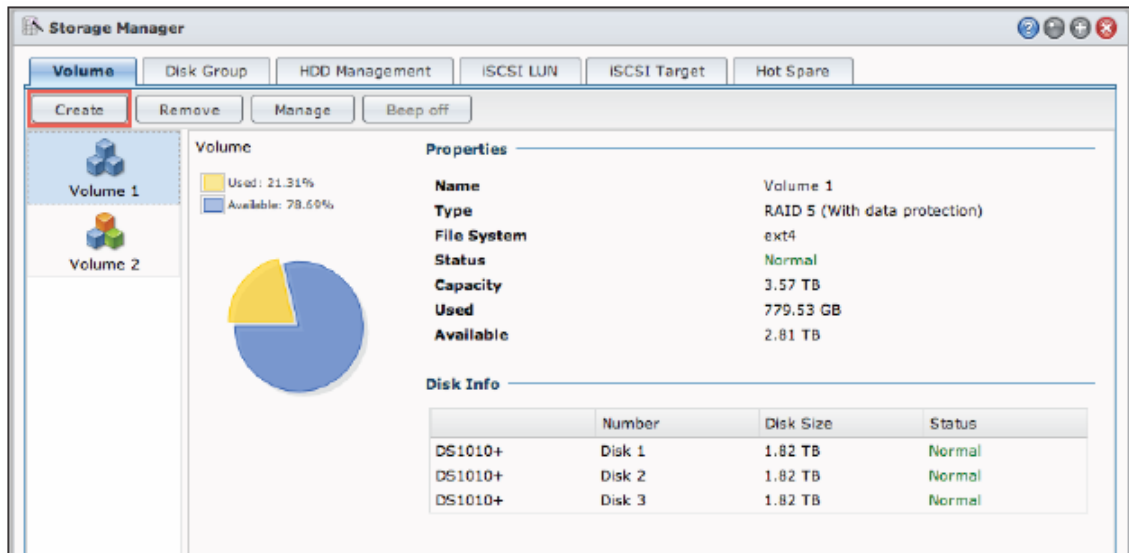
- *If you want to expand the existing volume with x513,* select the volume you want to expand from the volume list, click **Manage**, and follow the Volume Manager Wizard to complete the expansion.
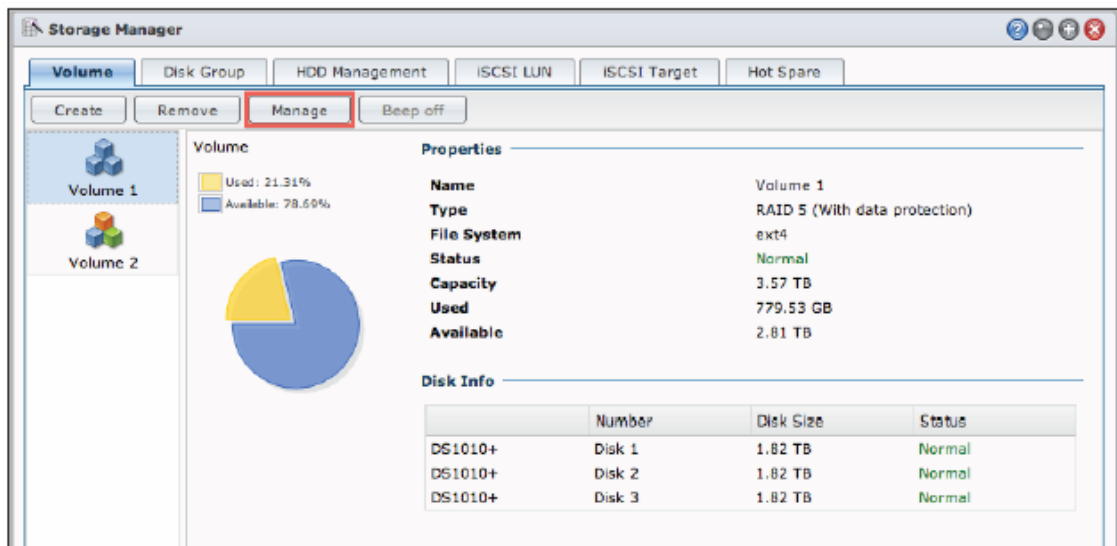
For detailed information about volume management, please go to **Main Menu** > **Storage Manager** and see the help page by clicking the help button at the top-right corner.

Learn More

Congratulations! Your x513 is now set up and ready to use. For more information or online resources about x513, please visit **www.iosafe.com** or **www.synology.com.**

Product Support

Congratulations! You are now ready to manage and enjoy all the features of your ioSafe. For more information regarding specific features, please check out **DSM Help** or refer to our online resources available at **www.iosafe.com** or **www.synology.com**.

Data Recovery Procedure

If the ioSafe faces possible data loss for any reason, you should immediately call the ioSafe Disaster Response Team at 1-888-984-6723 (US & Canada) or 1-530-820-3090 (International) extension 430. You can also send an email to **disastersupport@iosafe.com**. The professionals at ioSafe can determine the best actions to take to protect your valuable information. In some cases a self-recovery can be performed and provide you with immediate access to your information. In other cases, ioSafe may request that the product be returned to the ioSafe factory for data recovery. In any case, contacting ioSafe is the first step.

The general steps for disaster recovery are:

1. Email disastersupport@iosafe.com with your serial number, product type and date of purchase.
2. If you cannot email, call ioSafe Disaster Support Team at 1-888-984-6723 (US & Canada) or 1-530-820-3090 (International) extension 430
3. Report disaster event, and obtain return shipping address/instructions
4. Follow ioSafe team instructions on proper packaging.
5. ioSafe will recover all data which is recoverable according to the terms of the Data Recovery Service Terms and Conditions.
6. ioSafe will then place any recovered data on a replacement ioSafe device
7. ioSafe will ship the replacement ioSafe device back to the original user
8. Once the primary server / computer is repaired or replaced, the original user should restore the primary drive data with the ioSafe backup data

Contact Us

Customer Support

USA Toll Free Phone: 888.98.IOSAFE (984.6723) x400
International Phone: 530.820.3090 x400
Email: **customersupport@iosafe.com**

Technical Support

USA Toll Free Phone: 888.98.IOSAFE (984.6723) x450
International Phone: 530.820.3090 x450
Email: **techsupport@iosafe.com**

Disaster Support

US Toll Free Phone: 888.98.IOSAFE (984.6723) x430
International Phone: 530. 820.3090 x430
Email: **disastersupport@iosafe.com**

Corporate Headquarters

ioSafe, Inc.
10600 Industrial Ave, Suite 120
Roseville, CA 95678

Specifications

Item	ioSafe x513
Fire Protection	Protects data from fire. Up to 1550°F (843°C), 30 minutes per ASTM E-119.
Flood Protection	Protects data from flood. Fully submersed, fresh or salt water, 10 foot (3m) depth, 72 hours.
Compatible Drive Type	3.5" SATA(III) / SATA(II) HDD 2.5" SATA(III) / SATA(II) HDD 2.5" SATA(III) / SATA(II) SSD
Max. Capacity	40TB (5x 8TB hard drives)
Hot Swappable HDD	Yes
Size (HxWxD) (mm)	375 x 222 x 318
Weight (Kg)	27
AC Input Power Voltage	100V to 240V AC
Power Frequency	50/60Hz Single Phase
Operating Temperature	40 to 95˚F (5 to 35˚C)
Relative Humidity	5% to 95% RH
Maximum Operating Altitude	6,000 feet (2,000 m)
Agency Certifications	FCC Class B, CE Class B, BSMI Class B

LED Indication Table

LED Indication	Color	Status	Description
ALERT	Orange	Static	System fan is not working
	Off		System fan normal
eSATA	Green	Static	Connected to a NAS
	Off		Disconnected from a NAS
Hard Disk Status	Green	Static	Disk ready and idle
		Blinking	Disk is being accessed
	Orange	Static	Cannot Read/Write, Errors occur
	Off		No internal disk
POWER	Blue	Static	Power on
	Off		Power off
STATUS	Green	Static	RAID created
	Orange	Blinking	RAID degraded
	Off		No RAID or RAID crashed