



ioSafe 1019+ Network Attached Storage Device User Manual

[Home](#) » [ioSafe](#) » ioSafe 1019+ Network Attached Storage Device User Manual 



1019+ Network Attached Storage Device User Manual



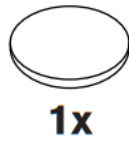
ioSafe® 1019+ Network-Attached Storage Device User Manual

Contents

- [1 General Information](#)
- [2 Hardware Installation](#)
- [3 Install Synology DiskStation Manager](#)
- [4 Connect and Log in to Synology DiskStation Manager](#)
- [5 Using Synology DiskStation Manager](#)
- [6 Replace System Fans](#)
- [7 Product Support](#)
- [8 Technical Specifications](#)
- [9 Documents / Resources](#)
 - [9.1 References](#)
- [10 Related Posts](#)

General Information

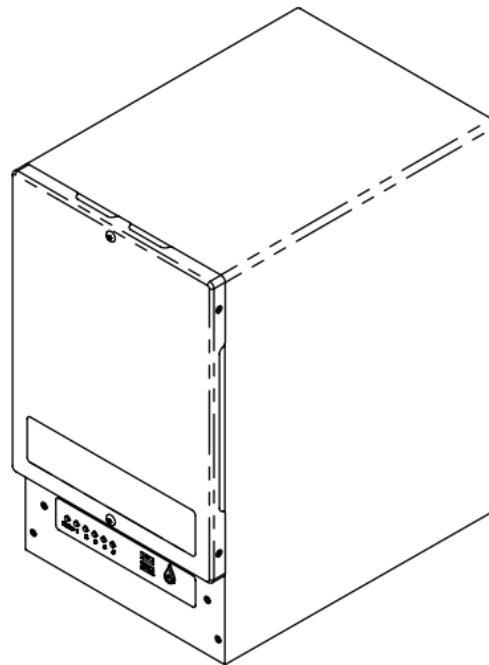
1.1 Package Contents Check the package contents to verify that you have received the items below. Please contact ioSafe® if any items are missing or damaged.



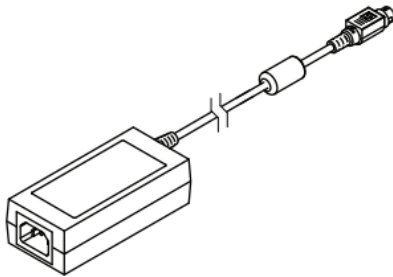
1x



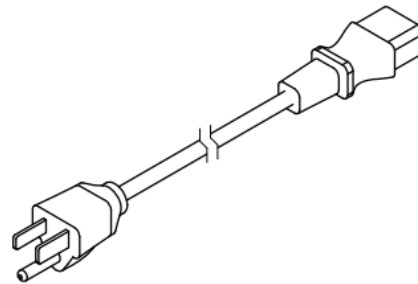
24x*



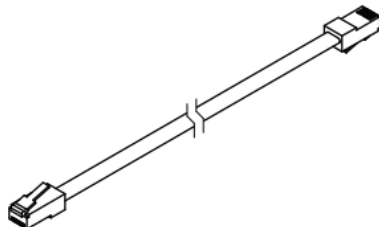
1x



1x



1x**



1x



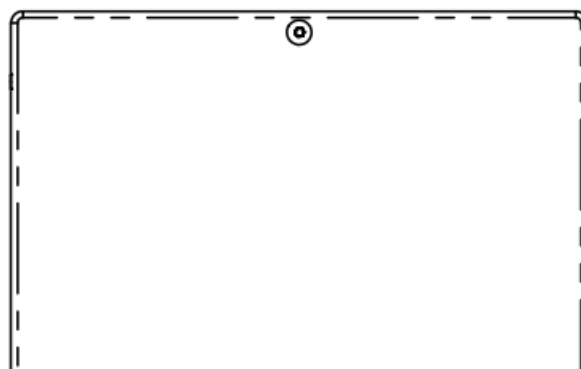
1x

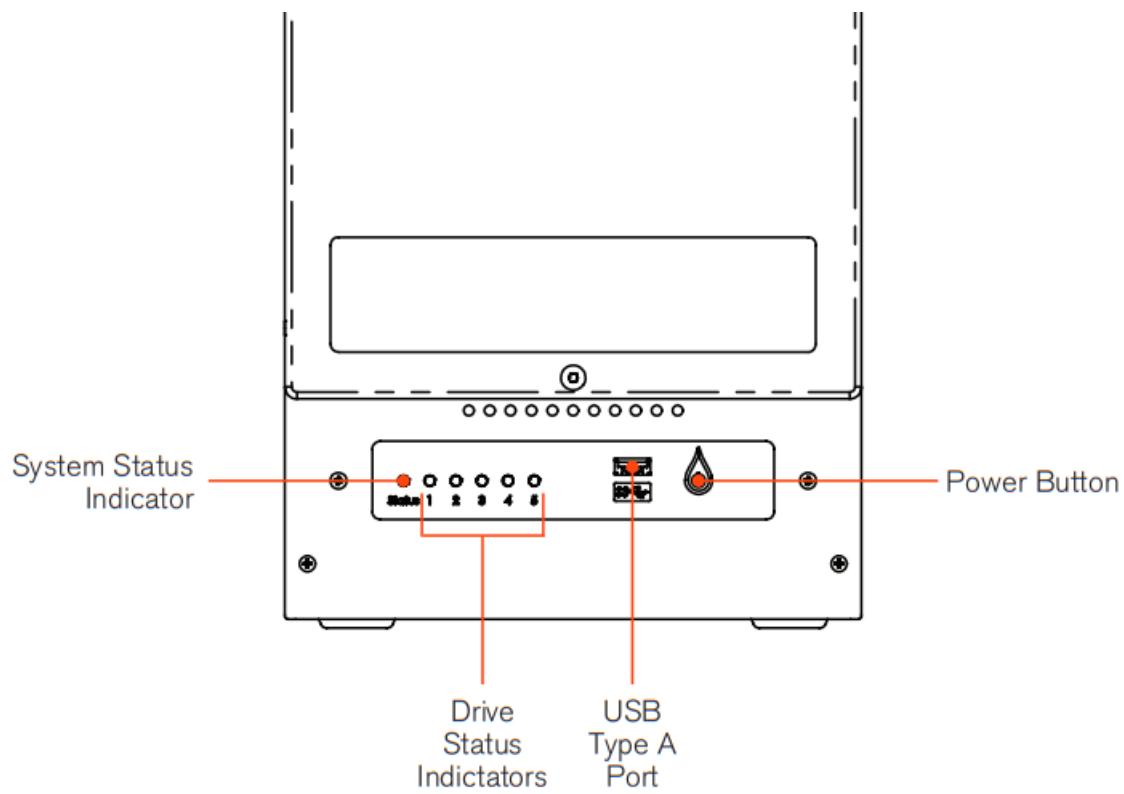
*Only included with unpopulated units

**Power cable is localized to the region you purchased your product for, whether North America, European Union/United Kingdom, or Australia. European Union and United Kingdom units are packaged with two power cables, one for each region.

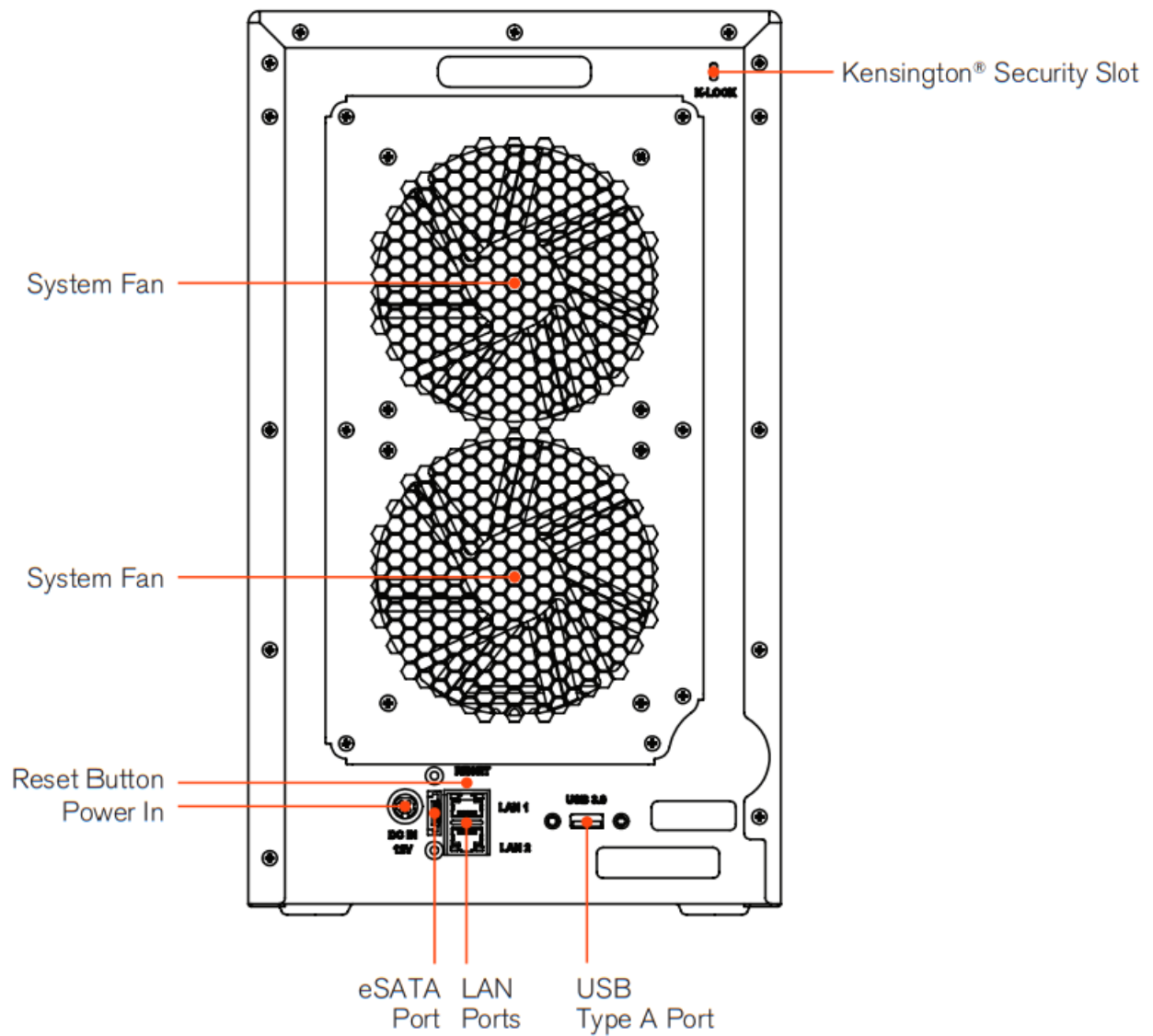
1.2 Identifying Parts

Front





Rear



1.3 LED Behavior

LED Name	Color	State	Description
Status		Blinking	The unit is operating normally. Indicates one of the following states: <ul style="list-style-type: none">•Volume degraded•Volume crashed•Volume not created•DSM not installed
		Off	The hard drives are in hibernation.
	Green	Solid	The corresponding drive is ready and idle.
		Blinking	The corresponding drive is being accessed
Drive Activity LEDs #1-5	Amber	Solid	Indicates a drive error for the corresponding drive
		Off	No internal drive is installed in the corresponding drive bay, or the drive is in hibernation.
Power	Blue	Solid	This indicates that the unit is powered on.
		Blinking	The unit is booting up or shutting down.
		Off	The unit is powered off.

1.4 Warnings and Notices

Please read the following before using the product.

General Care

- To avoid overheating, the unit should be operated in a well-ventilated area. Do not place the unit on a soft surface, such as a carpet, that will obstruct air flow into the vents on the underside of the product.

- The internal components in the ioSafe 1019+ unit are susceptible to static electricity. Proper grounding is strongly recommended to prevent electrical damage to the unit or other connected devices. Avoid all dramatic movement, tapping on the unit, and vibration.
- Avoid placing the unit close to large magnetic devices, high voltage devices, or near a heat source. This includes any place where the product will be subject to direct sunlight.
- Before starting any type of hardware installation, ensure that all power switches have been turned off and all power cords have been disconnected to prevent personal injury and damage to the hardware.

Hardware Installation

2.1 Tools and Parts for Drive Installation

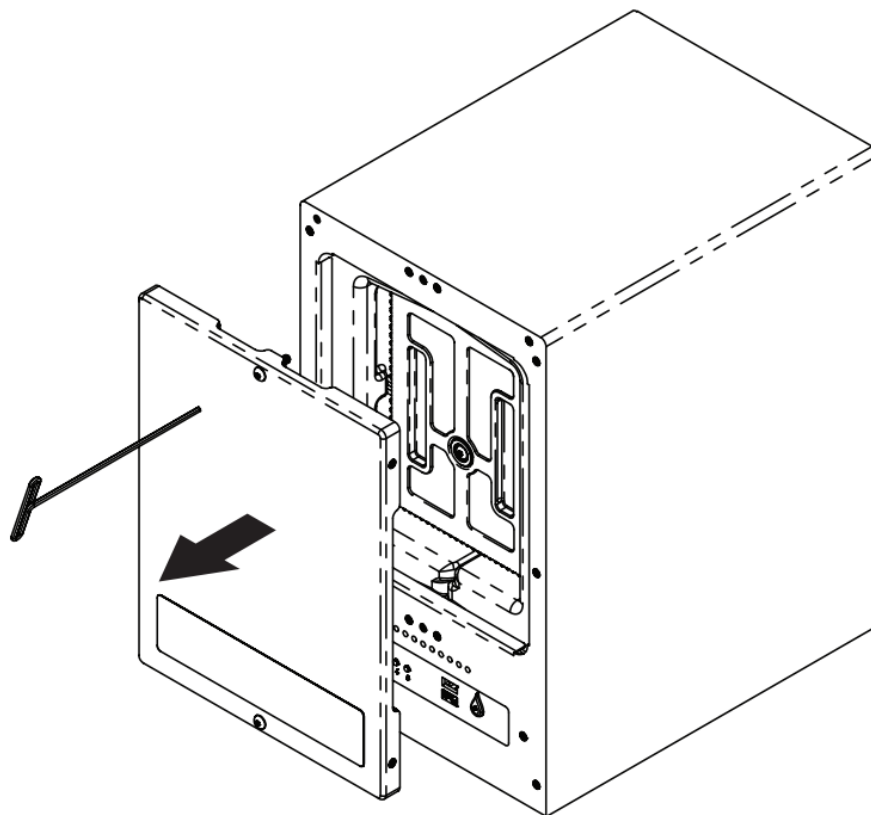
- A Phillips screwdriver
- 3mm hex tool (included)
- At least one 3.5-inch or 2.5-inch SATA hard drive or SSD (please visit iosafe.com for a list of compatible drive models)

STOP Formatting a drive will result in data loss, so be sure to back up your data before beginning this operation.

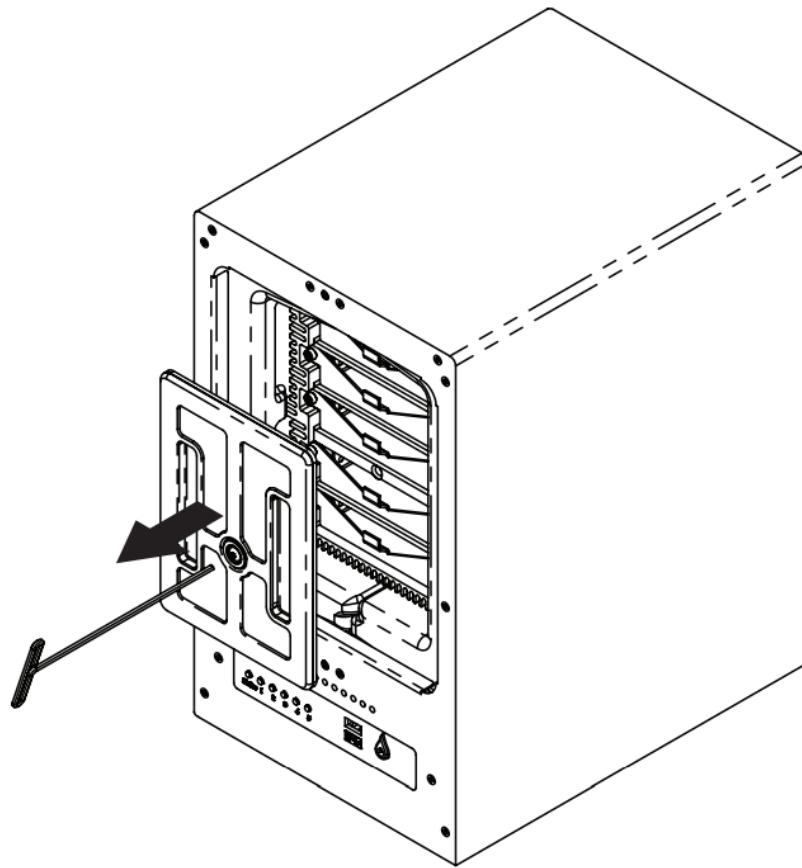
2.2 SATA Drive Installation

NOTE If you purchased an ioSafe 1019+ that was shipped with hard drives pre-installed, skip Section 2.2 and continue on to the next section.

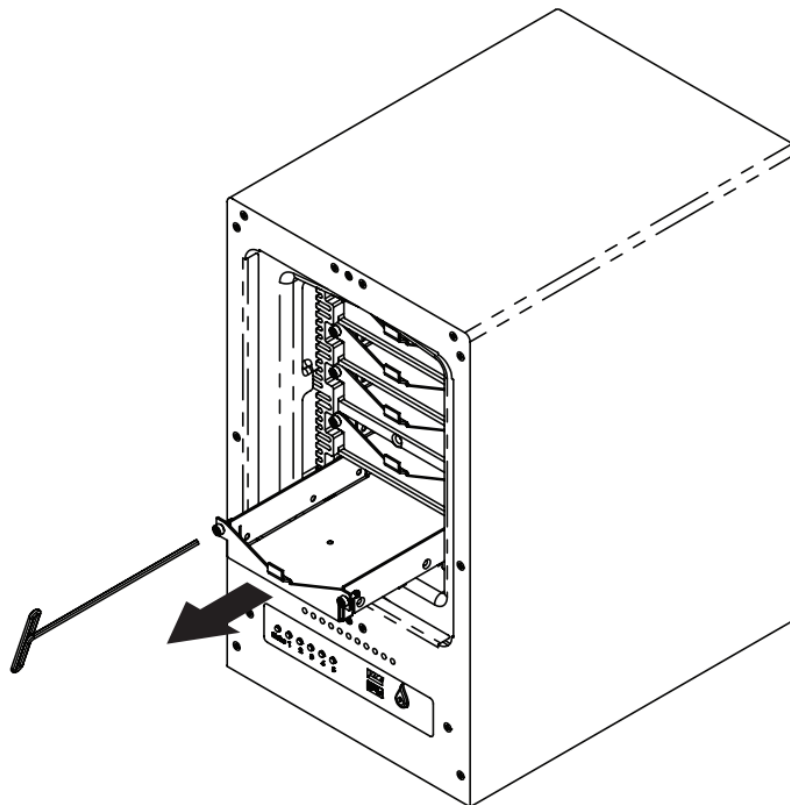
a. Use the included 3mm hex tool to remove the screws on the top and bottom of the front cover. Then remove the front cover.



b. Remove the waterproof drive cover with the 3mm hex tool.

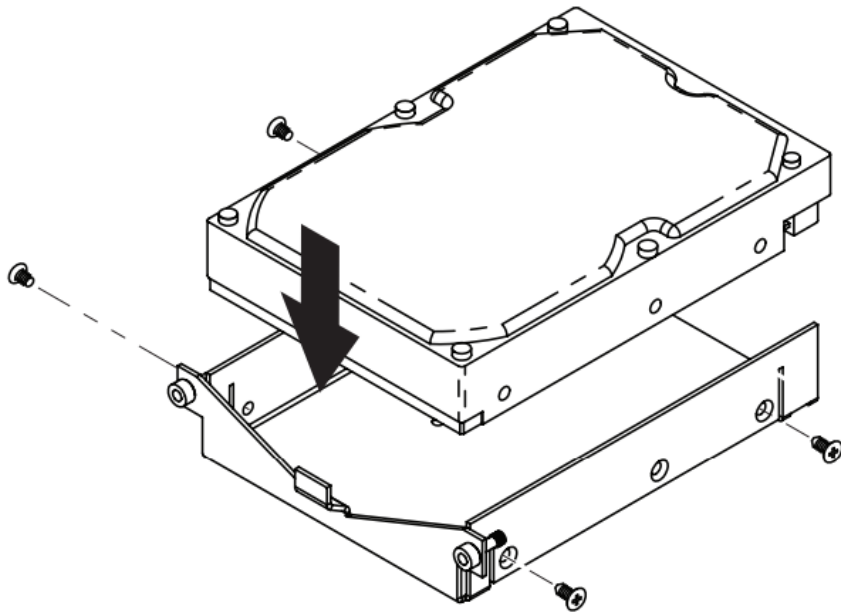


c. Remove the drive trays with the 3mm hex tool.

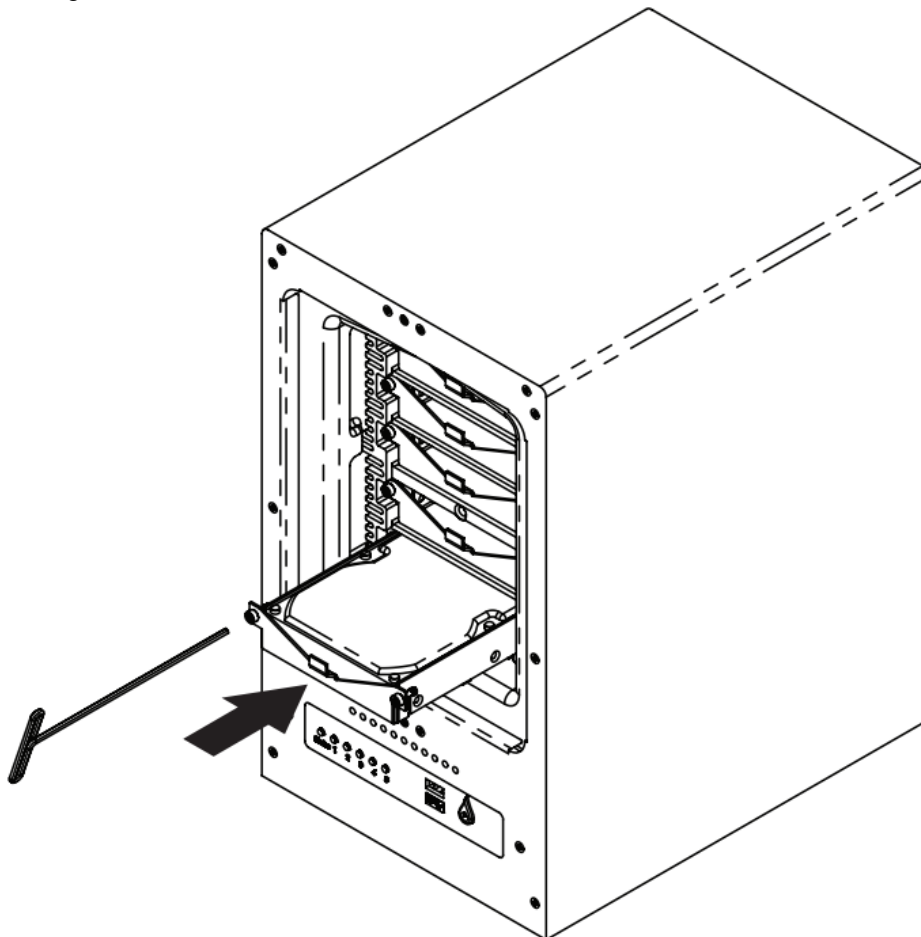


d. Install a compatible drive into each drive tray using (4x) drive screws and a Phillips screwdriver. Please visit iosafe.com for a list of qualified drive models.

NOTE When setting up a RAID set, it is recommended that all installed drives should be the same size in order to make the best use of drive capacity.

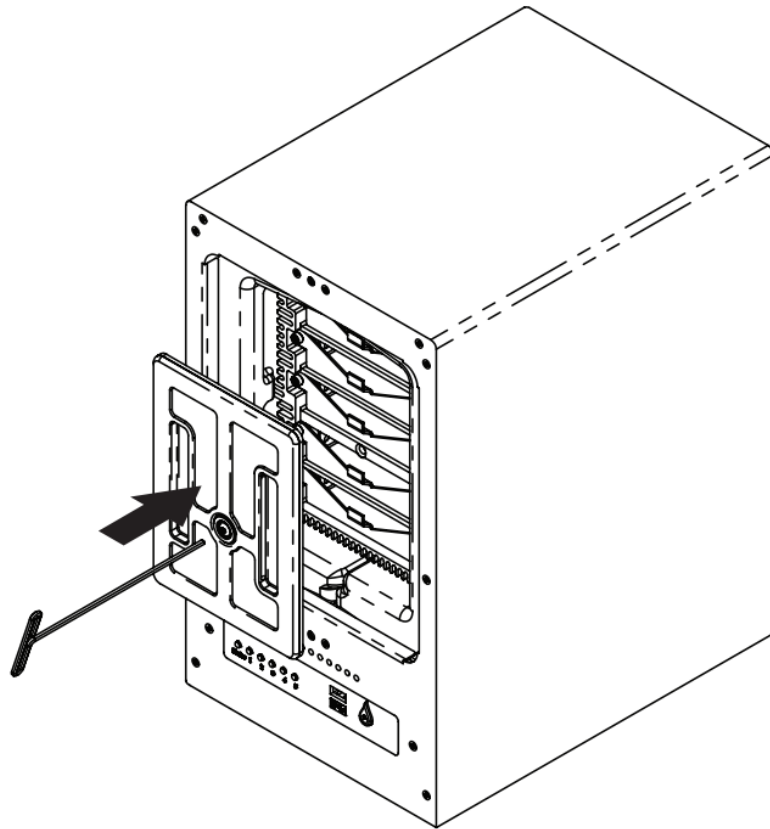


e. Insert each loaded drive tray into an empty drive bay, ensuring that each one is pushed in all the way. Then tighten the screws using the 3mm hex tool.

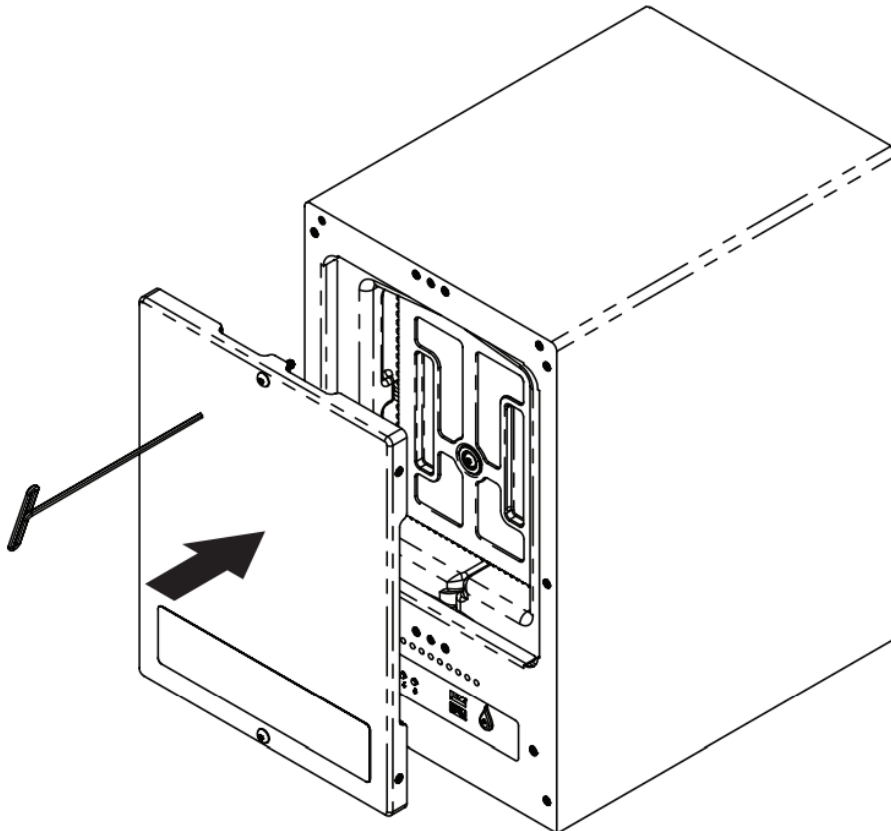


f. Replace the waterproof drive cover and securely tighten it using the 3mm hex tool.

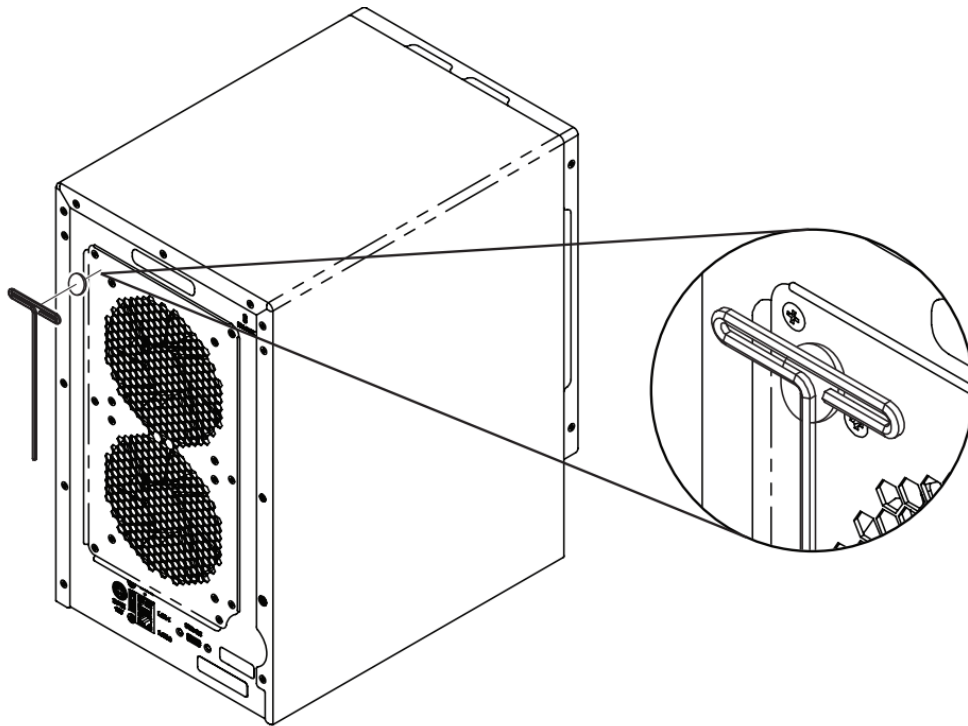
STOP Avoid using tools other than the supplied hex tool to secure the waterproof drive cover as you could under-tighten or break the screw. The hex tool has been designed to flex slightly when the screw is sufficiently tight and the waterproof gasket is properly compressed.



g. Install the front cover to finish the installation and protect the drives from fire.



h. You may optionally use the round magnet provided to attach and store the hex tool on the back of the unit.



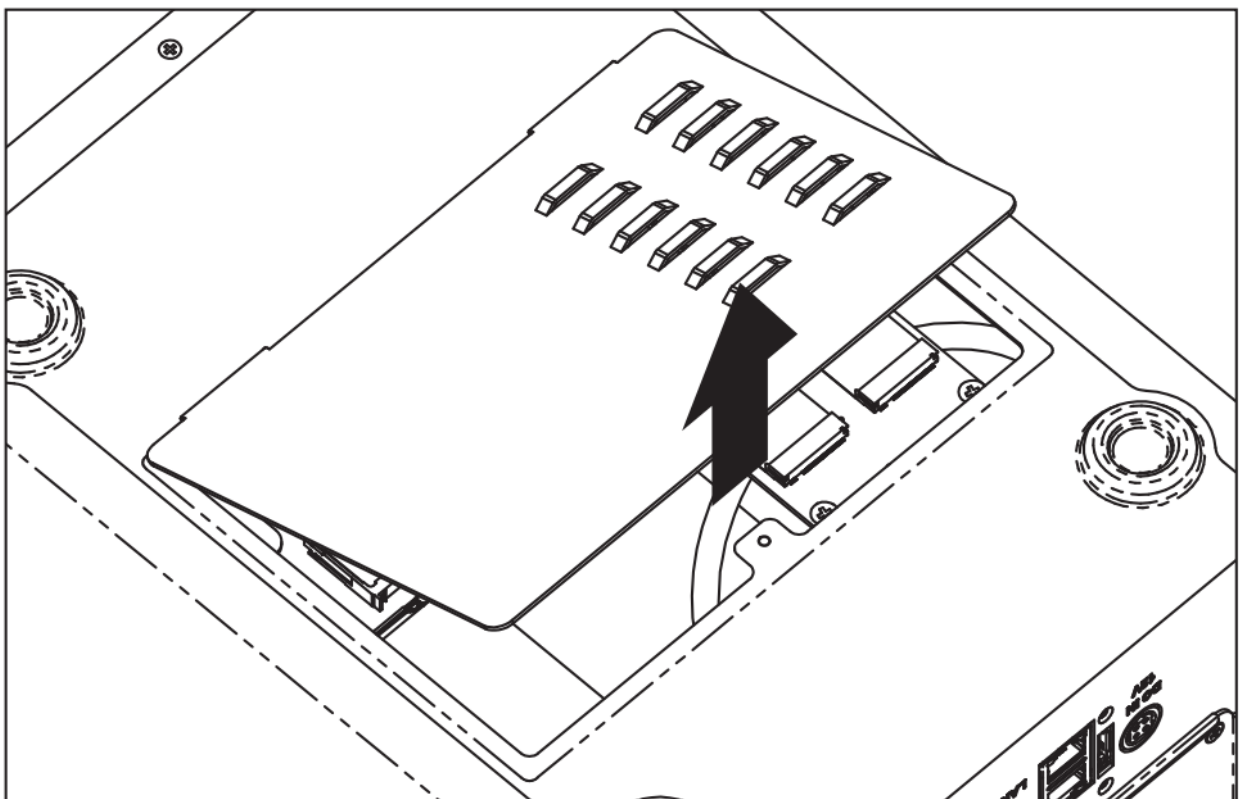
2.3 M.2 NVMe SSD Cache Installation

You may optionally install up to two M.2 NVMe SSDs into the ioSafe 1019+ to create an SSD cache volume to boost the read/write speed of a volume. You can configure the cache in read-only mode using one SSD or either read-write (RAID 1) or read-only modes (RAID 0) using two SSDs.

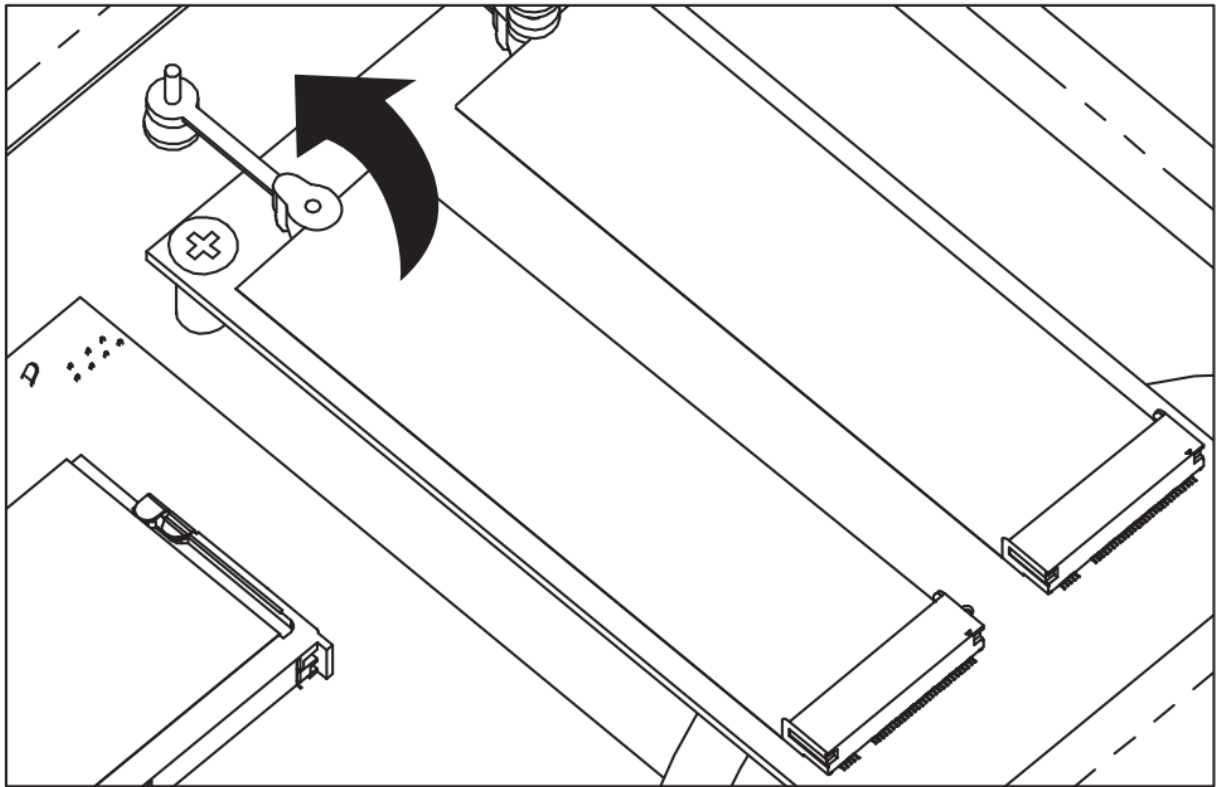
NOTE The SSD Cache must be configured in Synology DiskStation Manager (DSM). Please refer to the section for SSD Cache in the Synology NAS User's Guide at synology.com or in DSM Help on the DSM desktop.

NOTE ioSafe recommends that you configure the SSD-cache as read-only. The HDDs in a RAID 5 mode are faster than the cache at sequential read and write operations. The cache only provides a benefit with random read and write operations.

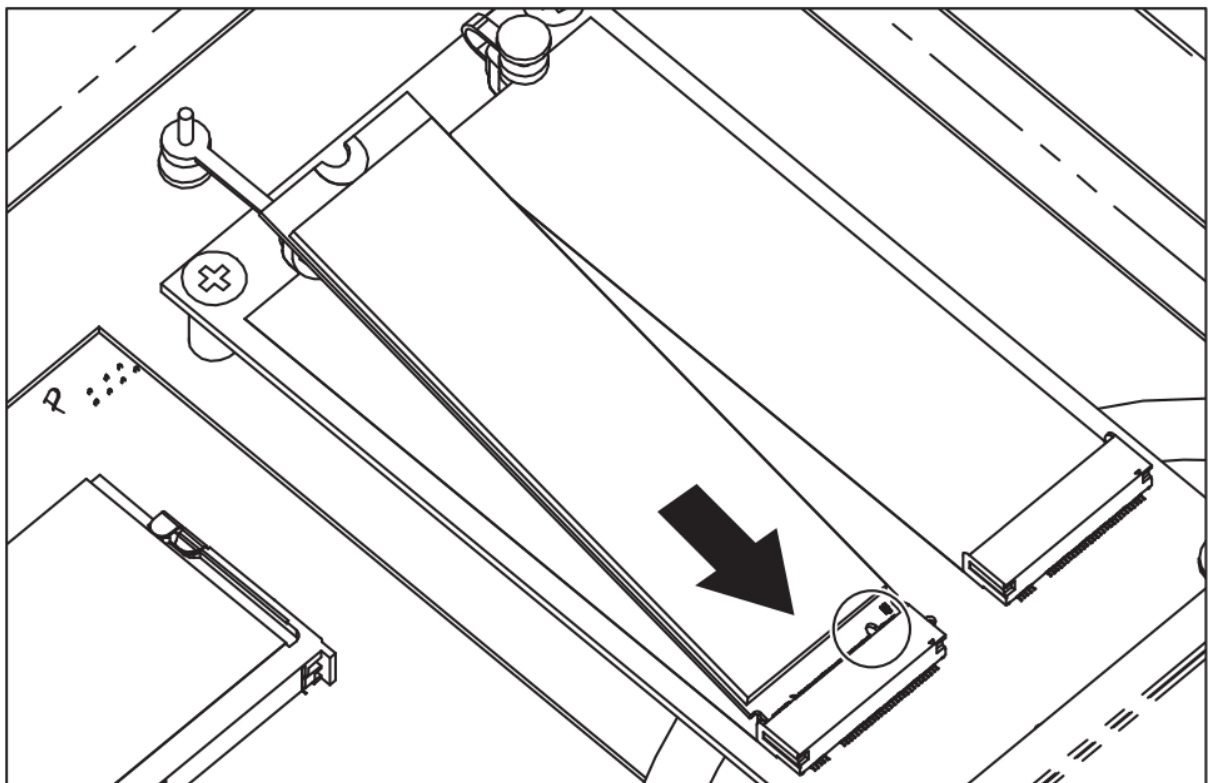
- Shut down your safe. Disconnect all cables connected to your ioSafe to prevent possible damage.
- Turn the ioSafe over so that it is upside down.
- Use a Phillips screwdriver to remove the screw securing the bottom cover and remove it. You will see four slots, two slots populated with RAM memory and two slots for SSDs.



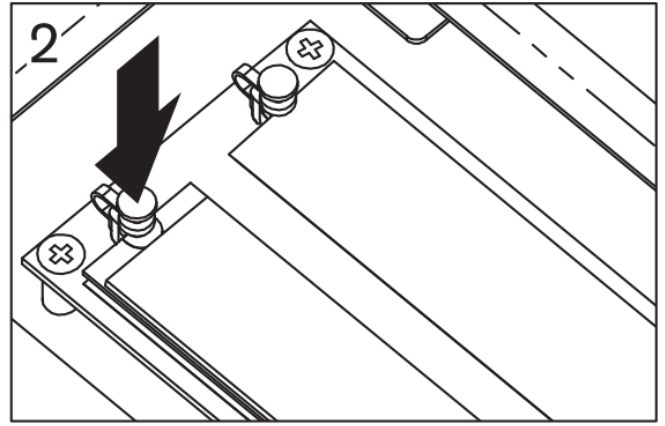
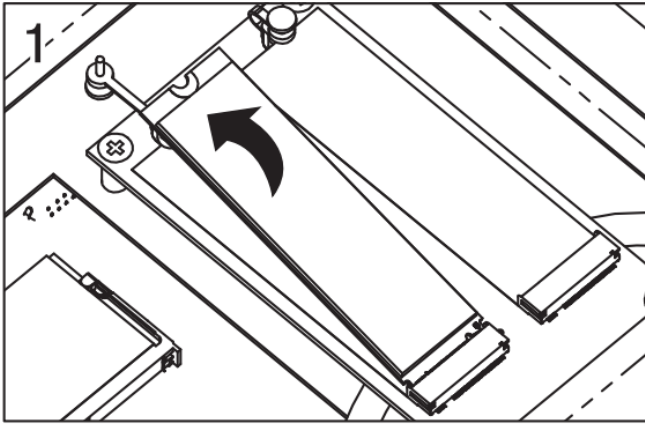
- Remove the plastic retainer clip from the rear of the SSD slot(s) you intend to use.



e. Align the notch on the gold contacts of the SSD module with the notch on the empty slot and insert the module into the slot to install it.

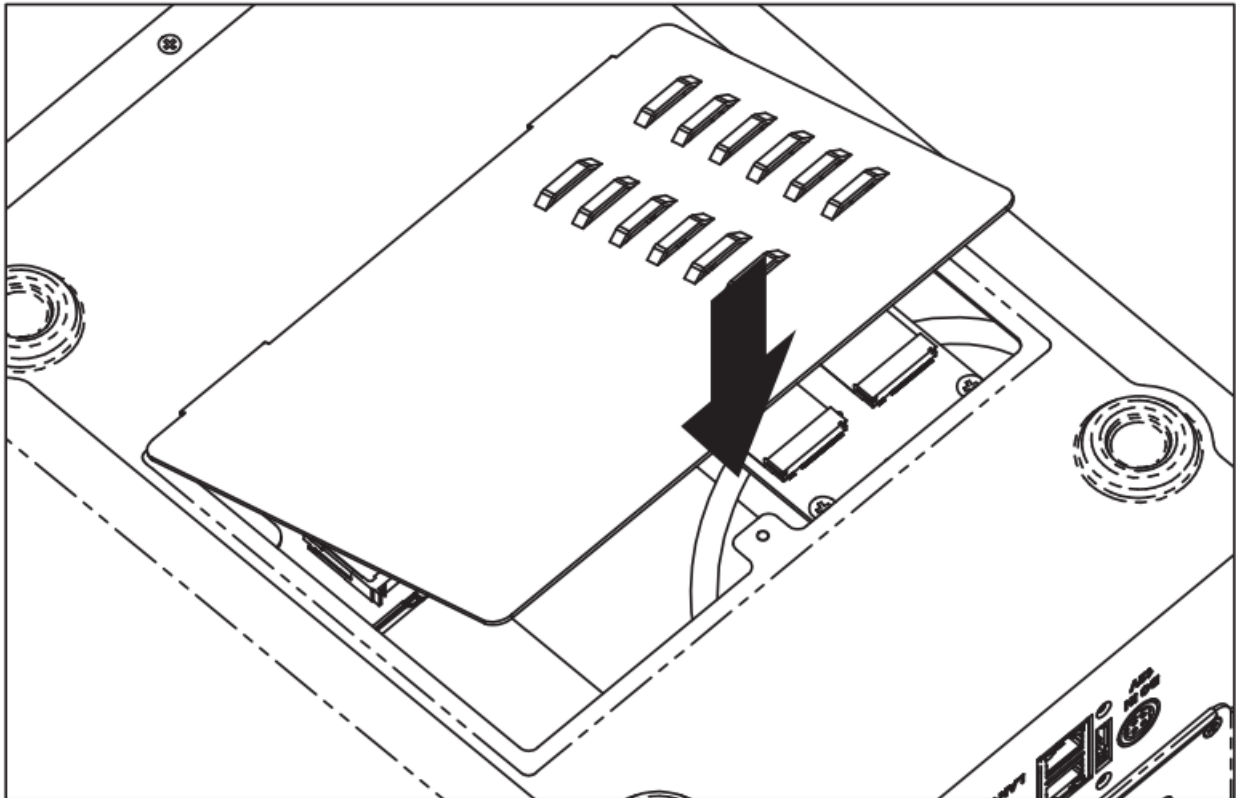


f. Hold the SSD module flat against the slot bay (Fig. 1) and reinsert the plastic retainer clip back into the rear of the slot to secure the SSD module. Press down firmly to secure the clip in place (Fig. 2).



g. Repeat the steps above to install another SSD into the second slot if needed.

i. Replace the bottom cover and secure it in place using the screw you removed in Step C .



h. Turn the ioSafe back over and reconnect the cables you removed in Step A (see Section 2.5). You may now turn your safe back on.

i. Follow the instructions for configuring your SSD Cache in the Synology NAS User's Guide at [synology.com](https://www.synology.com) or in DSM Help on the DSM desktop.

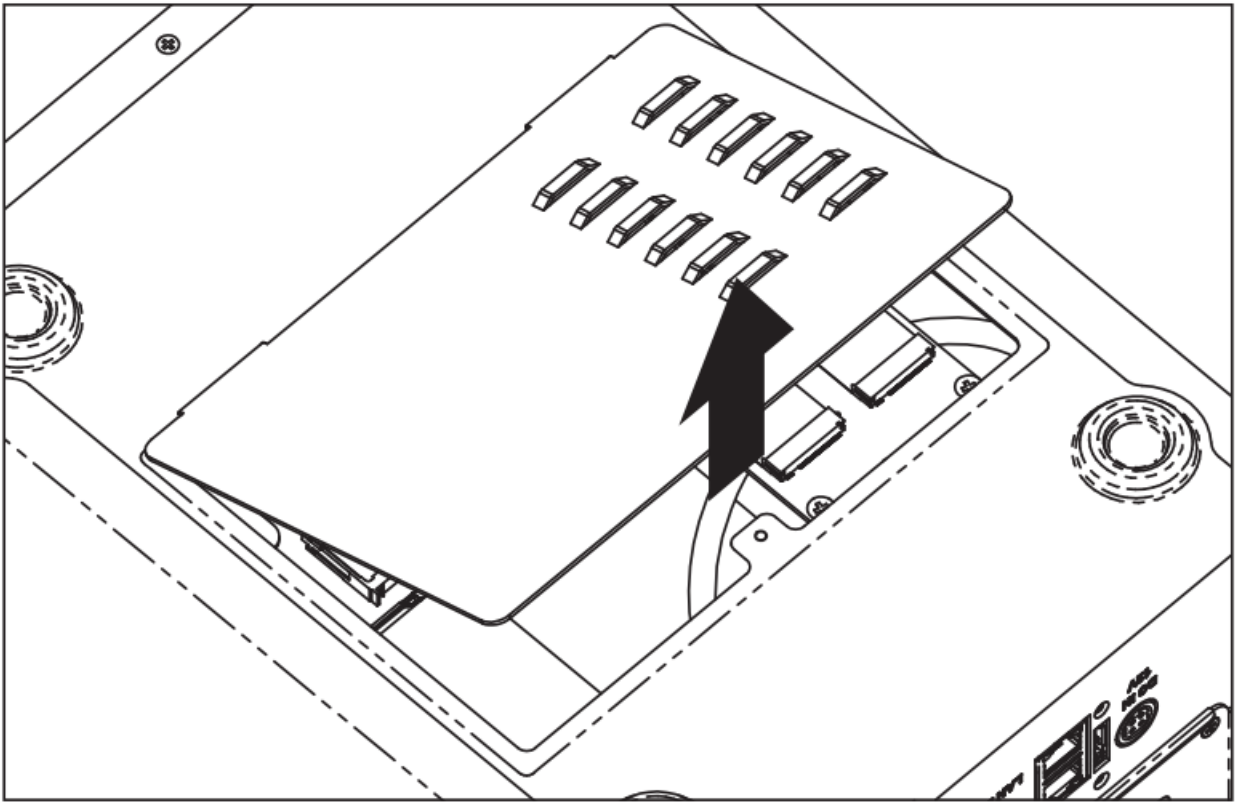
2.4 Replace Memory Modules

The ioSafe 1019+ comes with two 4GB of 204-pin SO-DIMM DDR3 RAM (8GB total) memory. This memory is not user upgradable. Follow these steps to replace the memory modules in event of a memory failure.

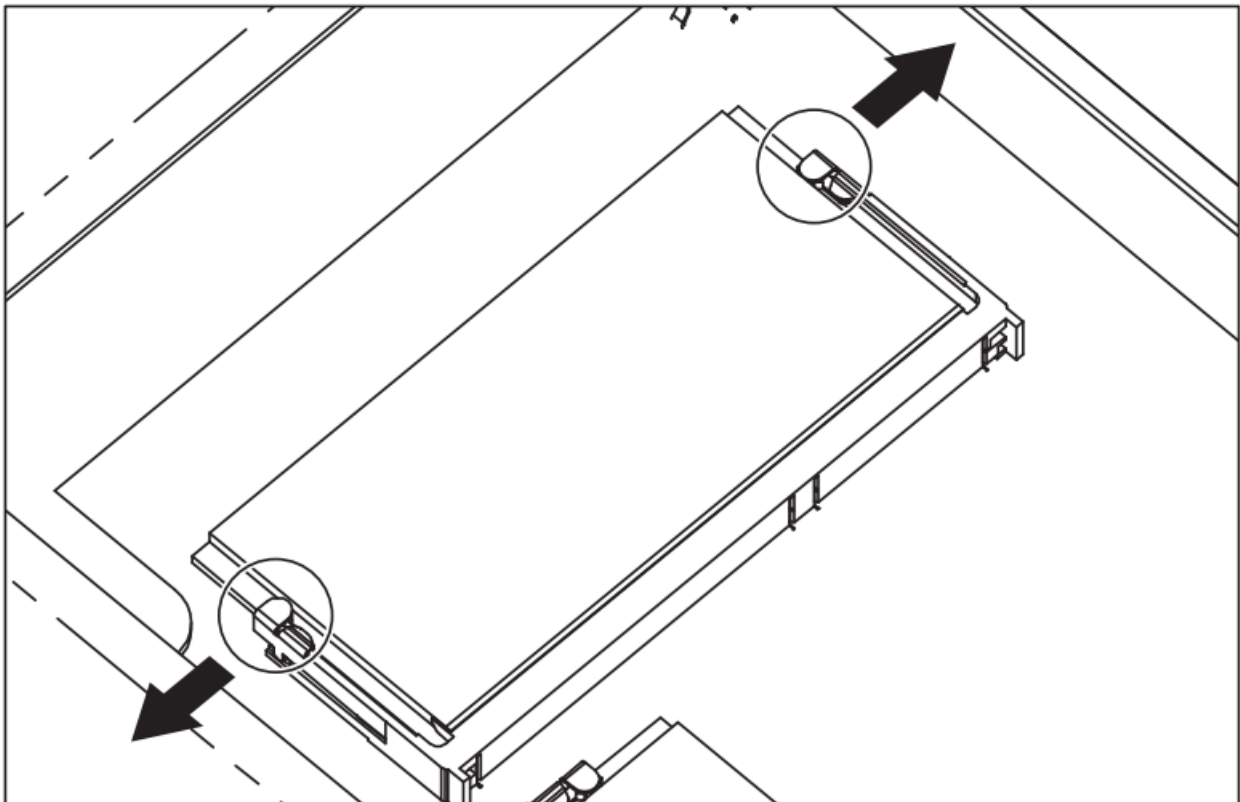
a. Shut down your safe. Disconnect all cables connected to your ioSafe to prevent possible damage.

b. Turn the ioSafe over so that it is upside down.

c. Use a Phillips screwdriver to remove the screw securing the bottom cover and remove it. You will see four slots, two slots for SSDs, and two slots populated with 204-pin SO-DIMM RAM memory.

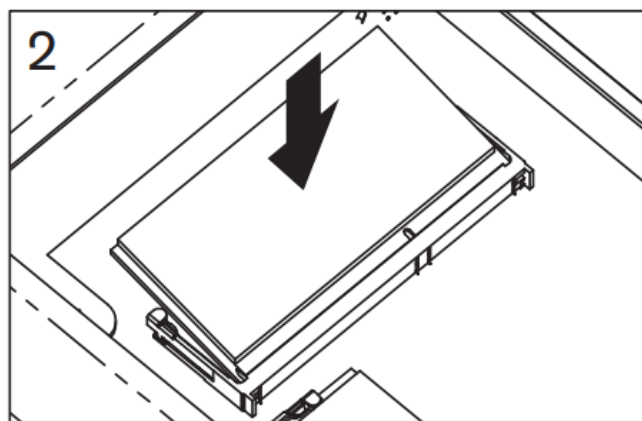
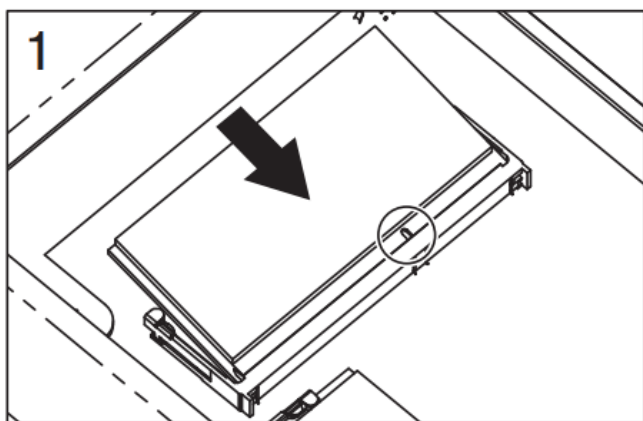


d. Pull the levers on both sides of a memory module outward to release the module from the slot.

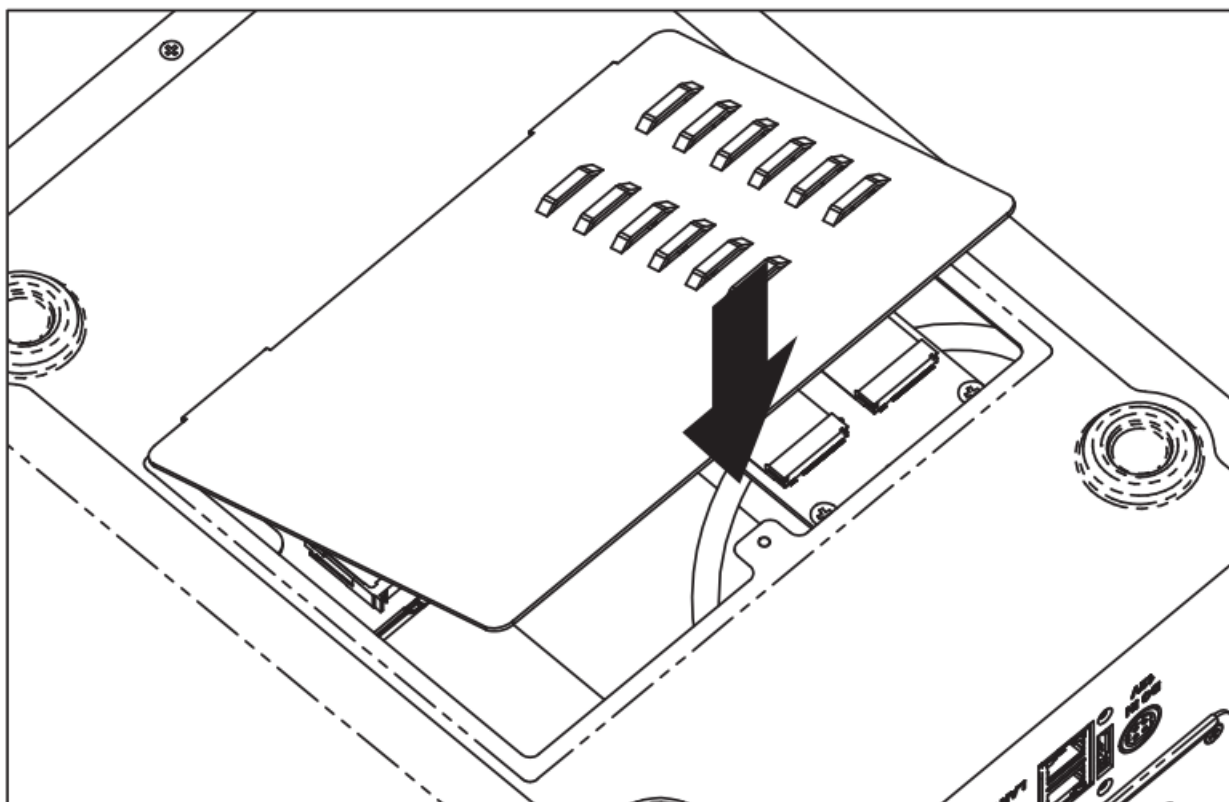


e. Remove the memory module.

f. Align the notch on the gold contacts of the memory module with the notch on the empty slot and insert the memory module into the slot (Fig. 1). Push firmly until you hear a click to secure the memory module in the slot (Fig. 2). If you encounter difficulty when pushing down, push the levers on either side of the slot outward.



- g. Repeat the steps above to install another memory module into the second slot if needed.
- h. Replace the bottom cover and secure it in place using the screw you removed in Step C.



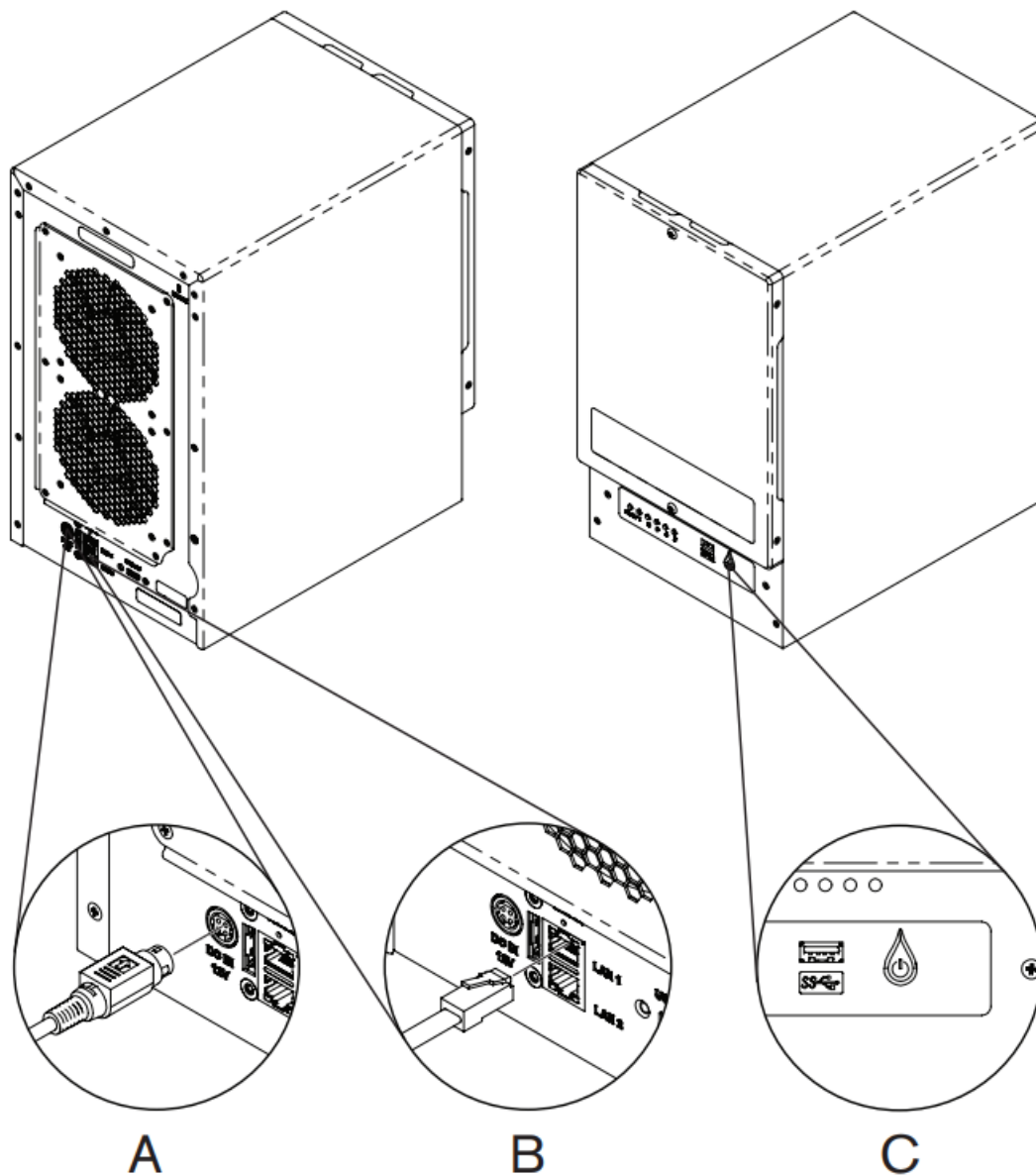
- i. Turn the ioSafe back over and reconnect the cables you removed in Step A (see Section 2.5). You may now turn your safe back on.
- j. If you haven't already, install Synology DiskStation Manager (DSM) (see Section 3).
- k. Log into DSM as an administrator (see Section 4).
- l. Go to Control Panel > Info Center and check Total Physical Memory to verify that the correct amount of RAM memory is installed.

If your ioSafe 1019+ does not recognize the memory or fails to start up, please make sure that each memory module is correctly seated in its memory slot.

2.5 Connecting the ioSafe 1019+

Do not place the ioSafe 1019+ device on a soft surface, such as a carpet, that will obstruct air flow into the vents on the underside of the product.

- a. Connect the ioSafe 1019+ to your switch/router/hub using the provided Ethernet cable.
- b. Connect the unit to power using the provided power cord.
- c. Press and hold the power button to turn on the unit.



NOTE If you purchased an ioSafe 1019+ without drives pre-installed, the fans inside the unit will spin at full speed until you install Synology DiskStation Manager (see Section 3) and Synology DiskStation Manager has booted up. This is the default behavior for the cooling fans and is intended.

Install Synology DiskStation Manager

Synology DiskStation Manager (DSM) is a browser-based operating system that provides tools to access and manage your ioSafe. When the installation is complete, you will be able to log into DSM and start enjoying all the features of your ioSafe powered by Synology. Before getting started, please check the following:

STOP Your computer and your ioSafe must be connected to the same local network.

STOP In order to download the latest version of DSM, Internet access must be available during installation.

NOTE Any ioSafe 1019+ that was shipped with hard drives pre-installed already has Synology DiskStation Manager installed. If you have drives pre-installed, continue on to Section 4.

a. Turn on the ioSafe 1019+ if it is not already powered on. It will beep once when it is ready to set up.

b. Type in one of the following addresses into a web browser to load the Synology Web Assistant. The status of your safe should read Not Installed.

NOTE Synology Web Assistant is optimized for the Chrome and Firefox browsers.

PURCHASED WITH HARD DRIVES



<http://iosafe:5000>

OR


PURCHASED WITHOUT DRIVES



http://<server_name>:5000

OR

CONNECT VIA SYNOLOGY.COM



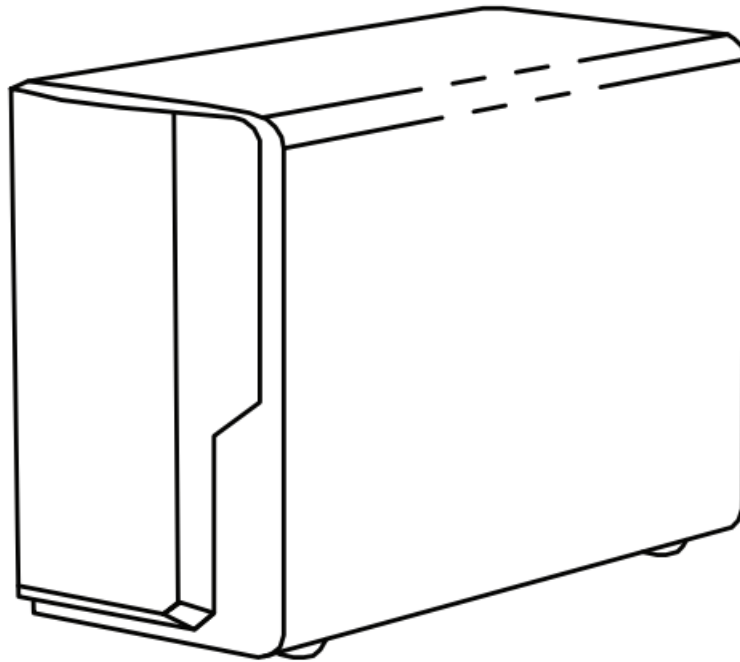
<http://find.synology.com>

CONNECT VIA [SYNOLOGY.COM](http://find.synology.com)

<http://find.synology.com>

c. Click the Connect button to begin the setup process. ioSafe

ioSafe



Connect



d. Follow the on-screen instructions to install Synology DSM. Your ioSafe will automatically restart in the middle of setup.

Connect and Log in to Synology DiskStation Manager

- a. Turn on the ioSafe 1019+ if it is not already powered on. It will beep once when it is ready to set up.
- b. Type in one of the following addresses into a web browser to load the Synology Web Assistant. The status of your ioSafe should read Ready.

PURCHASED WITH HARD DRIVES



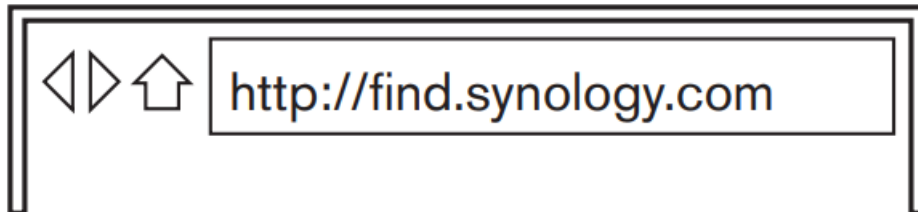
OR

PURCHASED WITHOUT DRIVES



OR

CONNECT VIA SYNOLOGY.COM

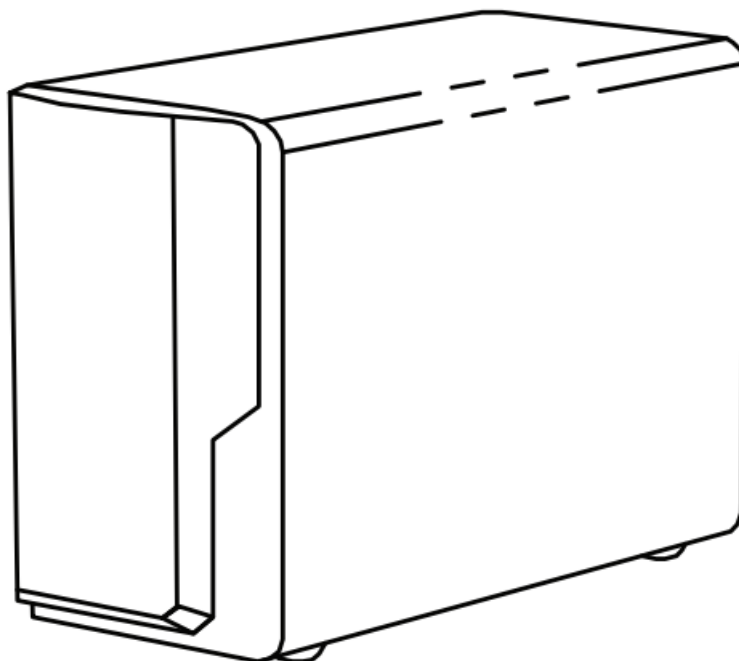


OR CONNECT VIA [SYNOLOGY.COM](http://find.synology.com)
<http://find.synology.com>

NOTE If you do not have an Internet connection and you purchased the ioSafe 1019+ without drives pre-installed, you will need to connect using the second method. Use the server name you gave your ioSafe 1019+ while installing Synology DiskStation Manager (see Section 3).



c. Click the Connect button.

ioSafe



d. The browser will display a login screen. If you purchased the ioSafe 1019+ with pre-installed drives, the default username is admin and the password is left blank. For those who purchased the ioSafe 1019+ without drives, the username and password are the ones you created while installing Synology DSM (see Section 3).

ioSafe

	<i><username></i>
	<i><password></i>
<input checked="" type="checkbox"/>	Stay signed in
<div>Sign In</div>	

NOTE You can change the username and password with the “User” Control Panel applet in the Synology

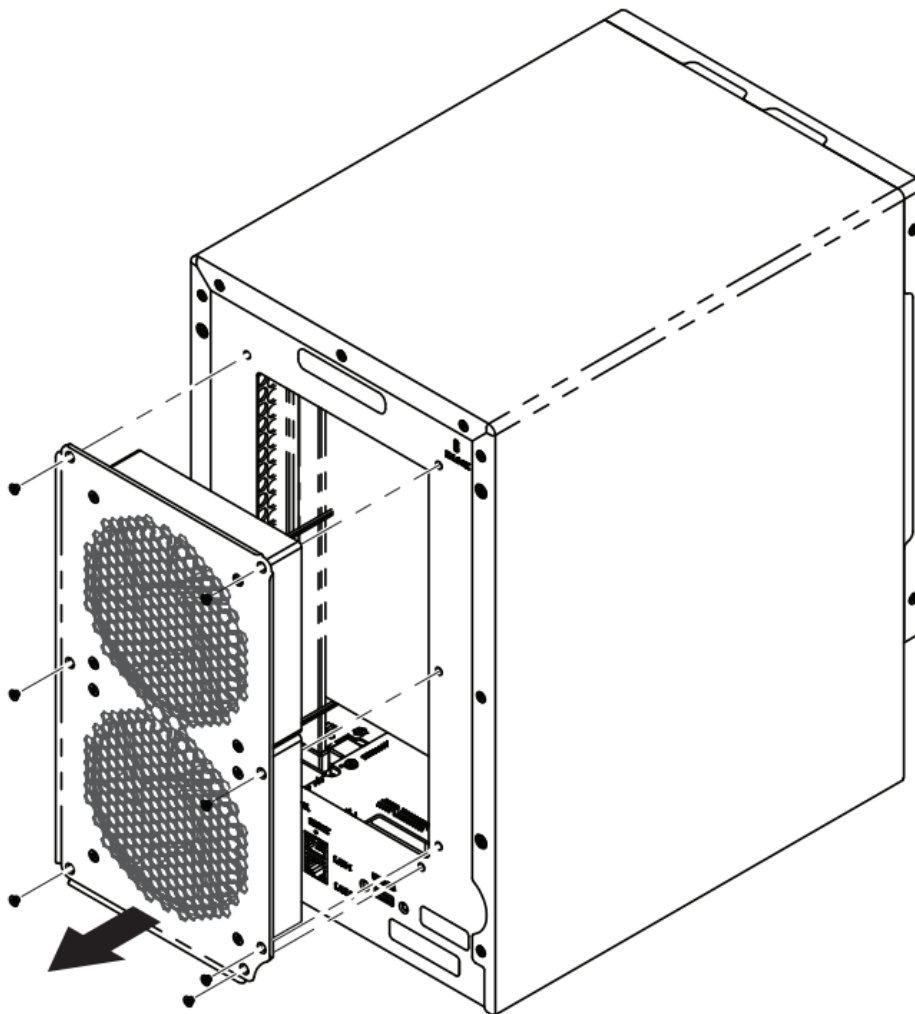
Using Synology DiskStation Manager

You can find out more about how to use Synology DiskStation Manager (DSM) by referring to DSM Help on the Synology DSM desktop, or by referring to the DSM User's Guide, available for download from the [Synology.com](https://www.synology.com) Download Center.

Replace System Fans

The ioSafe 1019+ will play beep sounds if either of the system fans is not working. Follow the steps below to replace the malfunctioning fans with a good set.

- a. Shut down your safe. Disconnect all cables connected to your ioSafe to prevent possible damage.
- b. Remove the seven (7) perimeter screws around the rear fan assembly plate.
- c. Pull the assembly from the back panel of your ioSafe to expose the fan connections.
- d. Disconnect the fan cables from the connector wires attached to the rest of the ioSafe and then remove the assembly.



- e. Install the new fan assembly or replace the existing fans. Connect the fan cables of the new fans to the fan connector wires attached to the main ioSafe unit.
- f. Replace and tighten the seven (7) screws you removed in Step B.

Product Support

Congratulations! You are now ready to manage and enjoy all the features of your ioSafe 1019+ device. For more information regarding specific features, please check out DSM Help or refer to our online resources available at [iosafe.com](https://www.iosafe.com) or [synology.com](https://www.synology.com).

7.1 Activate Data Recovery Service Protection

Register your product to activate your Data Recovery Service protection plan by visiting iosafe.com/activate.

7.2 ioSafe No-Hassle Warranty

If the ioSafe 1019+ breaks during the warranty period, we will repair or replace it.

The standard term for the warranty is two (2) years from the date of purchase. A five (5) year extended term warranty service is available for purchase upon activation of the Data Recovery Service. See the website or contact customerservice@iosafe.com for help. ioSafe reserves the right to have its representative inspect any product or part to honor any claim, and to receive a purchase receipt or other proof of original purchase before warranty service is performed.

This warranty is limited to the terms stated herein. All expressed and implied warranties including the warranties of merchantability and fitness for a particular purpose are excluded, except as stated above. ioSafe disclaims all liabilities for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may have other rights as well, which will vary from state to state.

7.3 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 extension 430 (US & Canada) or 1-530-820-3090 extension. 430 (International). You can also send an email to disastersupport@iosafe.com. 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 factory for data recovery. In any case, contacting us is the first step.

The general steps for disaster recovery are:

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

7.4 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

Technical Specifications

Fire Protection	Up to 1550° F. 30 minutes per ASTM E-119
Water Protection	Fully submersed, fresh or salt water, 10-foot depth, 72 hours

Interface Types & Speeds	Ethernet (RJ45): up to 1 Gbps (up to 2 Gbps with link aggregation enabled) eSATA: up to 6 Gbps (for ioSafe expansion unit only) USB 3.2 Gen 1: up to 5 Gbps
Supported Drive Types	35-inch SATA hard drives x5 25-inch SATA hard drives x5 25-inch SATA SSDs x5 Complete list of qualified drive models available on iosate.com
CPU	64-bit Intel Celeron J3455 2.3Ghz Quad Core Processor
Encryption	AES 256-bit
Memory	8GB DDR3L
NVMe Cache	M.2 2280 NVMe SSD x2
LAN Port	Two (2) 1 Gbps RJ-45 ports
Front Data Connectors	One (1) USB Type-A connector
Rear Data Connectors	One (1) eSATA connector (for ioSafe expansion unit only) One (1) USB Type-A connector
Max Internal Capacity	70T8 (14TB x 5) (Capacity may vary by RAID type)
Max Raw Capacity with Expansion Unit	1407E1(147B x 10) (Capacity may vary by RAID type)
Torque	2.5-inch drives, M3 screws: 4 inch-pounds max 3.5-inch drives, #6-32 screws: 6 inch-pounds max.
Supported Clients	Windows 10 and 7 Windows Server 2016, 2012 and 2008 product families macOS 10.13 ‘High Sierra’ or newer Linux distributions that support the connection type used

File Systems	Internal: Btrfs, ext4 External: Btrfs, ext3, ext4, FAT, NTFS, HFS+, exFAT
Supported RAID Types	JBOD, RAID 0, 1, 5, 6, 10 Synology Hybrid RAID (up to 2-disk fault tolerance)
Compliance	EMI Standard: FCC Part 15 Class A EMC Standard: EN55024, EN55032 CE, RoHS, RCM

HDD Hibernation	Yes
Scheduled Power On/Off	Yes
Wake on LAN	Yes
Product Weight	Unpopulated: 57 pounds (25.85 kg) Populated: 62-65 pounds (28.53-29.48 kg) (depending on drive model)
Product Dimensions	19in W x 16in L x 21in H (483mm W x 153mm L x 534mm H)
Environmental Requirements	Line voltage: 100V to 240V AC Frequency: 50/60Hz Operating Temperature: 32 to 104°F (0 to 40°C) Storage Temperature: -5 to 140°F (-20 to 60°C) Relative Humidity: 5% to 95% RH
US Patents	7291784, 7843689, 7855880, 7880097, 8605414, 9854700
International Patents	AU2005309679B2, CA2587890C, CN103155140B, EP1815727B1, JP2011509485A, WO2006058044A2, WO2009088476A1, WO2011146117A2, WO2012036731A1, WO2016195755A1

©2019 CRU Data Security Group, ALL RIGHTS RESERVED.

This User Manual contains proprietary content of CRU Data Security Group, LLC (“CDSG”) which is protected by copyright, trademark, and other intellectual property rights.

Use of this User Manual is governed by a license granted exclusively by CDSG (the “License”). Thus, except as otherwise expressly permitted by that License, no part of this User Manual may be reproduced (by photocopying or otherwise), transmitted, stored (in a database, retrieval system, or otherwise), or otherwise used through any means without the prior express written permission of CDSG.

Use of the full ioSafe 1019+ product is subject to all of the terms and conditions of this User Manual and the above-referenced License.

CRU®, ioSafe®, Protecting Your Data™, and No-Hassle™ (collectively, the “Trademarks”) are trademarks owned by CDSG and are protected under trademark law. Kensington® is a registered trademark of Kensington Computer Products Group. Synology® is a registered trademark of Synology, Inc. This User Manual does not grant any user of this document any right to use any of the Trademarks.

Product Warranty

CDSG warrants this product to be free of significant defects in material and workmanship for a period of two (2) years from the original date of purchase. A five (5) year extended warranty is available for purchase upon activation of the Data Recovery Service. CDSG’s warranty is nontransferable and is limited to the original

purchaser.

Limitation of Liability

The warranties set forth in this agreement replace all other warranties. CDSG expressly disclaims all other warranties, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose and non-infringement of third-party rights with respect to the documentation and hardware. No CDSG dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty. In no event will CDSG or its suppliers be liable for any costs of procurement of substitute products or services, lost profits, loss of information or data, computer malfunction, or any other special, indirect, consequential, or incidental damages arising in any way out of the sale of, use of, or inability to use any CDSG product or service, even if CDSG has been advised of the possibility of such damages. In no case shall CDSG's liability exceed the actual money paid for the products at issue. CDSG reserves the right to make modifications and additions to this product without notice or taking on additional liability.


FCC Compliance Statement:

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





This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. In the event that you experience Radio Frequency Interference, you should take the following steps to resolve the problem:

1. Ensure that the case of your attached drive is grounded.
2. Use a data cable with RFI reducing ferrites on each end.
3. Use a power supply with an RFI reducing ferrite approximately 5 inches from the DC plug.
4. Reorient or relocate the receiving antenna.

Documents / Resources

	<p>ioSafe 1019+ Network Attached Storage Device [pdf] User Manual 1019, Network Attached Storage Device, Attached Storage Device, 1019, Attached Storage</p>
---	--

References

-  [Synology Web Assistant](#)
-  [Data Protection and Storage: Fireproof, Waterproof, Disasterproof - ioSafe](#)
-  [Product Registration + Warranty - Register Your ioSafe Device - ioSafe](#)
-  [Synology Inc.](#)