



FLEX 1U4

4-Bay Thunderbolt Storage, Docking, and PCIe
Expansion Rackmount Solution



TABLE OF CONTENTS

INTRODUCTION

1.1 System Requirements..... 3

1.2 Package Contents..... 3

1.3 About This Manual 3

1.4 Front View..... 4

1.5 Rear View..... 4

1.6 Usage Notes..... 5

1.7 Dock Ejector..... 5

INSTALLATION

2.1 Assembly 7

2.2 Formatting..... 8

SUPPORT RESOURCES

3.1 Troubleshooting..... 7

3.2 Online Resources 7

3.3 About Data Backup..... 7

3.4 Contacting Technical Support 7



INTRODUCTION

1.1 SYSTEM REQUIREMENTS

Hardware:

- Works on any Mac with Thunderbolt 3, Thunderbolt 4, or USB4/Thunderbolt (USB-C)
- Rack Mount: 19-inch to 26-inch rack mount case with available 1U slot

Operating System

- macOS 10.15.1 or later

Supported Drives and Expansion Cards:

- (4) U.2/SATA bays
- (4) 2.5-inch or 3.5-inch SATA drives or U.2 drives
- (1) PCIe x16 slot (at PCIe 3.0 x4 speed):
- (1) PCIe card up to half-length, full-height and single slot
- PCIe card must operate with no driver or have a Thunderbolt-aware driver
- GPUs are not supported

1.2 PACKAGE CONTENTS



OWC Flex 1U4



Thunderbolt 4 Cable



19-inch to 26-inch rack
mounting hardware



Quick Start Guide



SoftRAID software
(with select solutions)

Not shown:
Power supply cable

1.3 ABOUT THIS MANUAL

The images and descriptions may vary slightly between this manual and the unit shipped. Functions and features may change depending on the firmware version. The latest product details and warranty information can be found on the product web page. OWC's Limited Warranty is not transferable and subject to limitations.

1.4 FRONT VIEW

Power and activity LED

A. Solid White = Power on and data connection established

B. Blue = Slow blinking when mounting, solid when mounted (idle/no disk activity), and fast blinking when writing or reading data on U.2

C. Green = Off when mounted (idle/no disk activity), and fast blinking when writing or reading data on SATA

- LED function may be disabled if not supported by drive manufacture



1.5 REAR VIEW

D. PCIe slot cover – any available I/O ports on installed PCIe cards will be available here.

Supports: PCIe x16 slot (x16 physical, x4 electrical) for half-length, full-height, and single-width cards

E. (2) USB 3.2 Gen 2 (10Gb/s) Type-C ports – connect compatible USB devices with a Type-C connection here.

F. (3) USB 3.2 Gen 2 (10Gb/s) Type-A ports – connect compatible USB devices with a Type-A connection here.

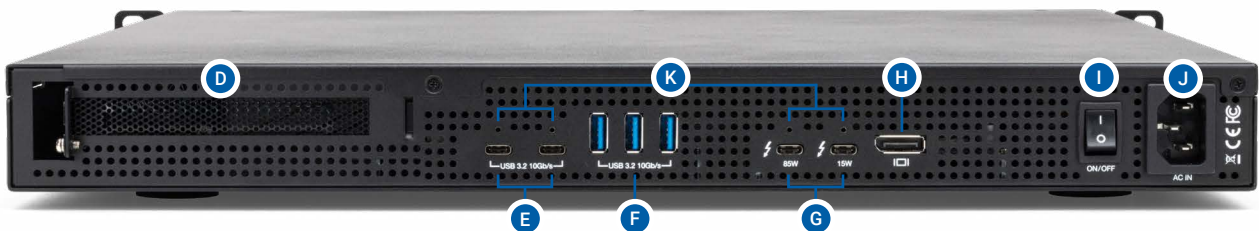
G. (2) Thunderbolt 3 (USB-C) ports – connect a compatible host to the 85W port and chain additional Thunderbolt, USB Type-C, or display devices to the 15W port.

H. (1) DisplayPort 1.4 – connect a displayPort device. Compatible with HDMI, DVI, or VGA via an adapter (not included)

I. Power switch – power the device on or off with this switch.

J. Power input – connect power cable here.

K. OWC ClingOn-ready cable stabilizer mount – affix ClingOn to help prevent accidental cable disconnections (sold separately)



1.6 USAGE NOTES

- The OWC Flex 1U4 comes with two rack handles to enable rack-mounted configurations.
- The two bays on the left provide x4 PCIe lanes for maximum performance; the remaining two provide x1 lane each.
- Thunderbolt device chains can support up to six Thunderbolt devices.
- By using the DisplayPort feature, the overall performance of the drive may decrease somewhat, as the DisplayPort shares bandwidth with the Thunderbolt ports. The same is true if you connect a display to one of the available Thunderbolt ports.
- SAS drives – Use of SAS drives requires the installation of a PCIe SAS controller (sold separately).
- The OWC Flex 1U4 supports hot-swapping, allowing the removal of drives while the unit has power. Unmounting the device is recommended before swapping drives.
- Full DisplayPort 1.4 capabilities depends on host computer support of DisplayPort 1.4 specification through its Thunderbolt 3 connection, host computer GPU capabilities, and connecting cable capabilities.
- To ensure no data is lost during normal use, always eject or unmount the corresponding disk(s) from your operating system before powering off the device. Several options are provided below for Mac.
 - Drag the icon for the disk you wish to unmount to the trash can; OR
 - Right-click the disk icon on the desktop, then click "Eject"; OR
 - Highlight the disk on your Desktop and press Command-E.
- The OWC 1U4 may take longer to power down and sleep when connected to certain hosts.

1.7 DOCK EJECTOR

This application safely ejects all drives connected to the OWC Flex 1U4 with a single click, adding peace of mind to fast-paced workflows. Drives connected to an installed PCIe are not effected by Dock Ejector. To install this app, please follow the steps below.

Download the installer file: download.owcdigital.com/dockejector/mac

1. Launch the installer and follow the prompts. No restart is required.
2. Once the app is running an icon like the one shown below will appear in the macOS menubar



To learn more about OWC Dock Ejector please visit: go.owcdigital.com/dockejector



General Use Precautions

To avoid damage, do not expose the device to temperatures outside the following ranges:

Environmental (Operating)

- Temperature (°F): 50° – 95°
- Temperature (°C): 10° – 35°

Environmental (Non-Operating)

- Temperature (°F): -40° – 149°
- Temperature (°C): -40° – 65°

Always unplug the device from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.

Do not use the device near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.

Do not place the device near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of hard drives.

Do not place objects on top of the device.

Protect your device from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.

Do not block any ventilation openings on the device. These help to keep the device cool during operation. Blocking the ventilation openings may cause damage to the device and cause an increased risk of short-circuiting or fire.



Safety Precautions

Read this user guide carefully and follow the recommended steps for assembly.

Use proper anti-static precautions while installing drives into this enclosure. Failure to do so can cause damage to your drive mechanisms and/or the enclosure.

Do not attempt to disassemble or modify the device. To avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions, never insert any metallic object into the device. If it appears to be malfunctioning, please contact technical support.

Never expose your device to rain, or use it near water or in damp or wet conditions. Never place objects containing liquids on the drive, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.

INSTALLATION

2.1 ASSEMBLY

This section describes the process of installing drives and a PCIe card into the OWC Flex 1U4. If you purchased the OWC Flex 1U4 with drives pre-installed, please proceed to section 2.2 Mac Formatting. The installation video can be watched by visiting go.owc.com/flex1u4/install or by scanning the Install Video QR Code:

Required Tools: Philips PH02 Driver

INSTALLING DRIVES

1. Disengage the drive tray by pushing the tray tab to the right. Remove the drive tray and place on a flat surface. **NOTE:** The drive trays have locking mechanisms. Ensure the locks are not engaged before pushing the tray tabs to the right. The lock is disengaged when the tab is in the up position.
2. Place a 3.5-inch drive into the drive tray with the label facing upwards, connector facing the open end of the tray, and flush with edge of the open end. **NOTE:** 2.5-inch drives need to be installed with a drive spacer (included with install hardware).
3. Align the drive and tray holes, then secure with drive screws.
4. Install the drive with tray back into the chassis. Repeat to install up to three additional drives.
 - Resistance will be felt once the drive and back drive board connections make contact. Additional force will be needed to fully seat or connect the drive and back drive board. This will allow the drive tray latch to engage properly.



3.5-inch drives



2.5-inch drives



3.5-inch drives



2.5-inch drives



INSTALLING A PCIE CARD

1. Remove the five screws securing the chassis lid. There are three screws to remove from the top and two screws to remove from the back. Once removed, the lid can be slid to the side and taken off the body.
2. Remove the screw holding the PCIe slot cover. NOTE: Keep the slot cover in case an authorized return is needed. Place the PCIe card inside the chassis. Align the PCIe connector on the card with the PCIe slot of the OWC Flex 1U4. If there is resistance, do not force the card into the slot. Remove it, re-align the card's connector and try again.
 - Be aware that installing larger cards can be difficult due to the available maneuver room.
 - Heavier cards may require a magnetic Phillips driver. The card may need to be held up so the card and bracket align. Using a magnetic Phillips with your other hand allows for easier installation of the mounting screw.
3. Once the card is fully seated, reattach the screw to the bracket as highlighted. Place the lid back onto the chassis and secure the five screws that were removed. Three screws secure the top, and two screws secure the back.



2.2 FORMATTING

If you purchased the OWC Flex 1U4 with drives pre-installed, they were formatted as a RAID volume for Mac using SoftRAID. HDD assemblies will arrive as a RAID 5 volume. SSD assemblies will arrive as a RAID 0 volume. We recommend you download the latest version of SoftRAID by visiting <https://www.softraid.com/support/download-latest-version/> and install the application to get the best performance. Note: The SoftRAID serial number is on the device.

- The OWC Flex 1U4 is capable of managing and protecting your data with our advanced SoftRAID engine. SoftRAID offers multiple RAID options (0, 1, 4, 5, 1+0), giving you the ability to set up your storage for speed, data security or the best of both worlds. Packed with features from active predictive disk failure monitoring, to multiple array volume spanning, SoftRAID from OWC brings technology typically found only in data centers to your workstation or editing bay. To learn more about SoftRAID, please visit: www.softraid.com

SUPPORT RESOURCES

3.1 TROUBLESHOOTING

- Begin troubleshooting by verifying that the power cable is connected to the OWC Flex 1U4 and to a power source. If the power cable is connected to a power strip, make sure that the power switch on the strip is turned on. Then, verify that the Thunderbolt 4 cable is properly plugged into the computer and the OWC Flex 1U4.
- If the OWC Flex 1U4 is still not working properly, try connecting to another computer or using another Thunderbolt 4 cable. When the computer goes to sleep, the OWC Flex 1U4 will go to sleep. If you are still experiencing problems, consult Section 3.4 for OWC technical support contact information.

3.2 ONLINE RESOURCES

- Installation Video: go.owc.com/flex1u4/install
- SoftRAID User Guide: softraid.com/using-softraid
- Additional SoftRAID Resources: softraid.com/support
- Product Overview Page: <https://eshop.macsales.com/shop/owc-flex-1u4>

3.3 ABOUT DATA BACKUP

To ensure that your files are protected and to prevent data loss, we strongly suggest that you keep two copies of your data on another storage medium, such as an optical backup, or on a second external storage unit. Any data loss or corruption while using the OWC Flex 1U4 is the sole responsibility of the user, and under no circumstances may OWC, its parent, partners, affiliates, officers, employees, or agents be held liable for loss of the use of data including compensation of any kind or recovery of the data.

3.4 CONTACTING TECHNICAL SUPPORT



Phone: M–F, 8am–6pm CT
1.866.692.7100 (N. America) | +1.815.338.475v (Int'l)



Chat: M–F, 8am–6pm, Sat 9am–5pm CT
www.owc.com/support



Email: Answered within 48 hours
www.owc.com/support



CHANGES:

The material in this document is for information purposes only and subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, OWC, its parent, partners, affiliates, officers, employees, and agents assume no liability resulting from errors or omissions in this document, or from the use of the information contained herein. OWC reserves the right to make changes or revisions in the product design or the product manual without reservation and without obligation to notify any person of such revisions and changes.

FCC STATEMENT:

Warning! Modifications not authorized by the manufacturer may void the user's authority to operate this device.

NOTE: 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 with 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 his own expense.

WARRANTY:

The OWC Flex 1U4 has a [3 Year OWC Limited Warranty](#) if it was bundled with a drive. OWC Flex 1U4 enclosures that do not ship with a drive have a [1 Year OWC Limited Warranty](#). For up-to-date product and warranty information, please visit the [product web page](#).

COPYRIGHTS AND TRADEMARKS:

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of OWC.

© 2022 Other World Computing, Inc. All rights reserved. OWC, and the OWC logo are trademarks of New Concepts Development Corporation, registered in the U.S. and/or other countries. Mac and macOS are trademarks of Apple Inc. Thunderbolt and the Thunderbolt logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. All other marks may be the trademark or registered trademark property of their owners.