



CRU[®] QX310 v2

User Manual



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1 General Information

1.1 Introduction

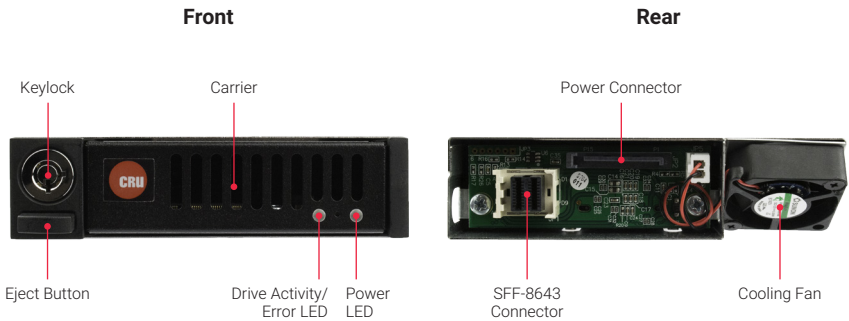
Thank you for purchasing the CRU QX310 v2! The QX310 v2 allows you to easily remove M.2 and U.2 NVMe SSDs from a 3.5-inch drive bay. This increases the flexibility of your data storage by letting you eject, swap, transport, or secure data stored on PCIe/NVMe SSDs.

1.2 Package Contents

Check the package contents to verify that you have received the items below. Please contact CRU if any items are missing or damaged.

Item	Quantity
QX310 v2 Frame*	1
Drive Carrier**	1
Drive Screws	4
Keys	3
Quick Start Guide	1

1.3 Identifying Parts



*Frame is only included with SKUs that include a frame.

**Carrier is only included with SKUs that include a carrier, and will be either an M.2 or U.2 carrier, depending on the SKU purchased.



1.4 LED Behavior

LED	Color	State	Description
Drive Power	Green	Blinking	The QX310 v2 is powering on.
		Solid	The QX310 v2 is on.
	Green/ Red	Alternating Color	The fan inside the QX310 v2 has failed. Contact Technical Support for a replacement.
Drive Activity/ Error	Amber	Blinking	The device inside the QX310 v2 is being accessed by your computer.
		Off	M.2 drive only: The device inside the QX310 v2 is idle.
		Solid	U.2 drive only: The device inside the QX310 v2 is idle.

1.5 Warnings and Notices

- The circuit boards within the product are susceptible to static electricity. Proper grounding is strongly recommended to prevent electrical damage to the product or other connected devices, including the computer host.
- Avoid placing the drive carrier close to magnetic devices, high voltage devices, or near a heat source. This includes any place where the product will be subject to direct sunlight. Do not allow water to make contact with the carrier or receiving frame.
- Before starting any type of hardware installation, please 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.
- To avoid overheating, the QX310 v2 should be operated in a well-ventilated area.
- When unplugging cables, **always** squeeze the cable's overmold (if it has one) to release the connector latches before unplugging the cable. Failure to do so may result in damage the latches on the cable and prevent it from latching securely in the future.
- SFF-8643 cables require 85Ω impedance for PCIe/NVMe compatibility when used with the QX310 v2. Compatible adapter cards and cables, as well as a 5.25-inch bay adapter and an M.2 adapter are available for purchase on the QX310 product page at cru-inc.com.
- An M.2 slot (with CRU OCuLink to M.2 Slot Adapter) or a PCIe 3.0 slot on your computer is required for full performance. However, older PCIe slots will also work with reduced performance.

2 Installation and Setup

2.1 Frame Installation

- a. Install an OcuLink (SFF-8612) or SFF-8643 adapter card into your computer.
- b. If the QX310 v2 carrier is locked into the frame, insert the included key into the lock and turn it 90 degrees counterclockwise. Push in the ejection button to pop the carrier out and remove it from the frame.
- c. Insert the frame into a 3.5-inch bay opening and secure it using the supplied screws.
- d. Connect a compatible cable to the card adapter and connect the other end to the QX310 v2 receiving frame.

NOTE

SFF-8643 cables require 85Ω impedance for PCIe/NVMe compatibility when used with the QX310 v2. Compatible adapter cards and cables, as well as a 5.25-inch bay adapter and an M.2 adapter are available for purchase on the QX310 product page at [cru-inc.com](https://www.cru-inc.com).

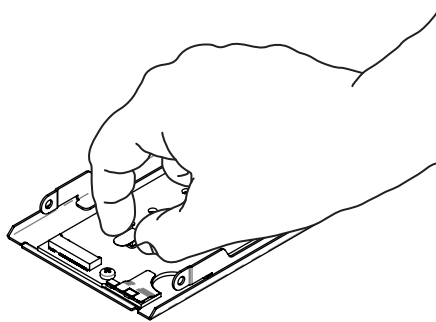
STOP!

An M.2 slot (with CRU OcuLink to M.2 Slot Adapter) or a PCIe 3.0 slot on your computer is required for full performance. However, older PCIe slots will also work with reduced performance.

2.2 SSD Installation

2.2.1 M.2 SSD Installation

- a. Use a Phillips screwdriver to remove two screws from the rear of the carrier. Then remove the cover from the carrier.
- b. Remove the protective covering from the thermal sensor located in the middle of the carrier board.

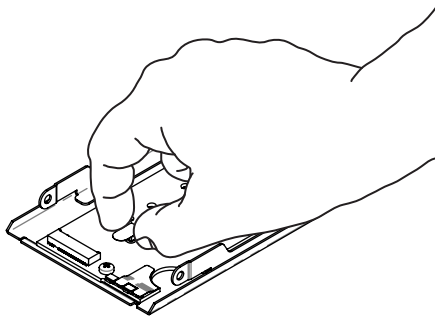


- c. Install your M.2 SSD using the provided washer and screw.
- d. Replace the carrier cover and refasten with the two screws you removed in Step A.



2.2.2 U.2 SSD Installation

- a. Use a Phillips screwdriver to remove two screws from the rear of the carrier. Then remove the cover from the carrier.
- b. Remove the protective covering from the thermal sensor located in the middle of the carrier board.



- c. Install your U.2 SSD using the provided screws.
- d. Replace the carrier cover and refasten with the two screws you removed in Step A.

2.3 Windows Configuration

STOP!

"Fast startup" must be disabled in Windows 10 and Windows 8.1 to ensure that drives inside the QX310 are read properly. Here are the instructions for how to do so with Windows 10.

- a. Right click on the **Start Button** and select **Power Options**.
- b. Under Related Power Settings in the right column, select **Additional power settings**.
- c. On the left column of the new window, select **Choose what the power buttons do**.
- d. Select **Change settings that are currently unavailable**.
- e. Uncheck **Turn on fast startup (recommended)**.
- f. Click the **Save changes button**.



3 Operating Your QX310 v2

3.1 Basic Operation

- a. Insert the carrier into the receiving frame.
- b. You may optionally lock the carrier into the frame for added security or to prevent accidental ejection from the frame. Insert the included key into the keylock and rotate it 90 degrees clockwise to lock the carrier.
- c. Power on the computer if you have not already done so.

Your CRU QX310 v2 is now ready to use! If the media inside is already formatted, it can be used right away. If the media is brand new or its format is not compatible with your computer, the media will need to be formatted before being used.

3.2 Safe Carrier Removal

- a. Turn off the computer.
- b. If the carrier is locked into the frame, insert the included key into the lock and turn it 90 degrees counterclockwise.
- c. Press the eject button to remove the carrier from the frame.



4 Dual-Speed Fan

The QX310 v2 comes equipped with a dual-speed cooling fan located on the rear of the device. The fan spins at a constant rotation until the drive temperature reaches 60° C (140° F). Then the drive automatically switches into a high-speed mode until the temperature falls below the threshold again.



5 Product Support

Your investment in CRU products is backed up by our free technical support for the lifetime of the product. Contact us through our website, cru-inc.com/support or call us at 1-800-260-9800 or +1-360-816-1800.



Appendix A: Technical Specifications

Product Models	QX310 v2
Frame Interface Types & Speeds	SFF-8643: up to ~31.5 Gbps (32 GT/s)
Supported Device Types	2230, 2242, 2260, 2280, and 22110 M.2 NVMe devices U.2 NVMe devices
Data Connectors and Cables	One (1) SFF-8643 connector (cable requires 85Ω impedance for PCIe/NVMe compatibility)
Power Connector	One (1) 15-pin SATA connector
Torque	M.2 SSD, M3 screws: 4 inch-pounds max. U.2 SSD, M3 screws: 4 inch-pounds max.
Fan	Dual-speed fan controlled by drive temperature
Supported Operating Systems	Windows 10 and 8.1 macOS 10.13 "High Sierra" or newer Linux distributions that support the connection type used
Compliance	FCC Part 15 Class B EMC Standard: EN55024, EN55032
Product Weight	1.00 pounds (0.45 kg)
Product Dimensions	3.94in W x 5.91in L x 0.98in H (100mm W x 150mm L x 25mm H)



Product Warranty

CDSG warrants this product to be free of significant defects in material and workmanship for a period of three years from the original date of purchase. 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 B 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 home or 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.

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.

