



# **QX118 Receiving Frame**

**User Manual**

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### **Product Warranty**

CDSG warrants this product to be free of significant defects in material and workmanship for a period of three (3) years from the original date of purchase. CDSG's warranty is nontransferable and is limited to the original purchaser.

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**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 in a residential installation. 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.

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# 1. GENERAL INFORMATION

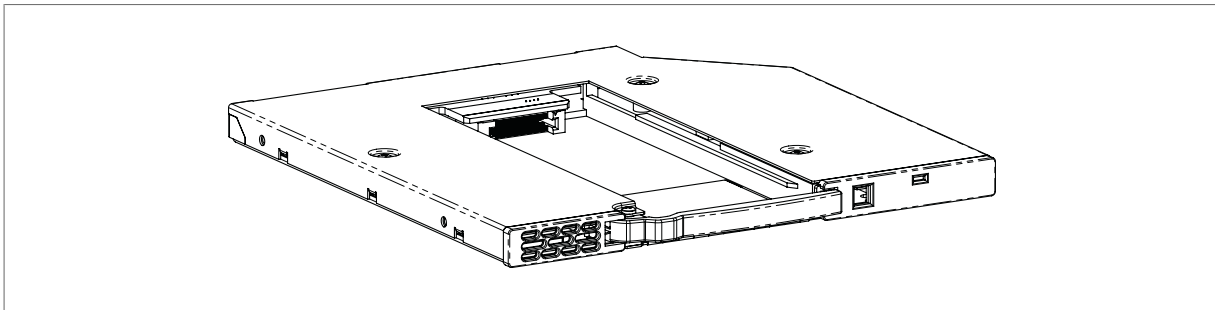
## 1.1. INTRODUCTION

Congratulations on the purchase of your QX118 receiving frame! The QX118 allows you to transfer massive amounts of data quickly via a SHIPS Module or SHIPS Rugged Module, which contains an M.2 NVMe SSD. The QX118 receiving frame takes full advantage of the 32 Gbps data transfer speeds available via PCIe 4.0 over an OcuLink interface and fits into a single 9mm optical drive bay. A single keylock controls physical access to the SHIPS module it holds.

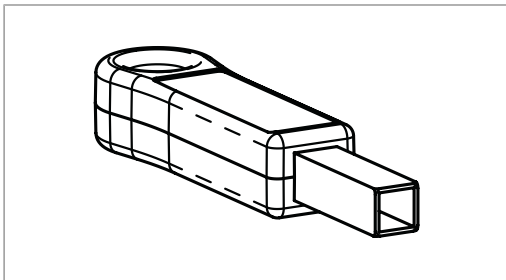
This User Manual will show you how to install and properly set up the QX118 receiving frame, how to install and remove SHIPS modules, and provide other operational information you will need to get the most out of your product.

## 1.2. PACKAGE CONTENTS

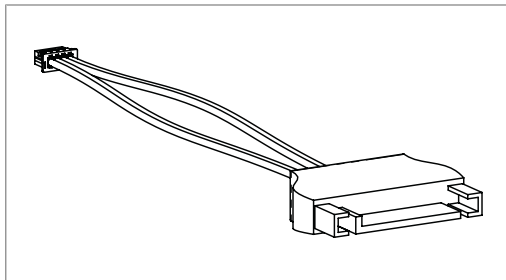
Check the package contents to verify that you have received the items below. Please contact CRU if any items are missing or damaged.



QX118 Receiving Frame	Qty. 1
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Key	Qty. 1
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SATA Power Adapter Cable	Qty. 1
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## 1.3. SAFETY INFORMATION

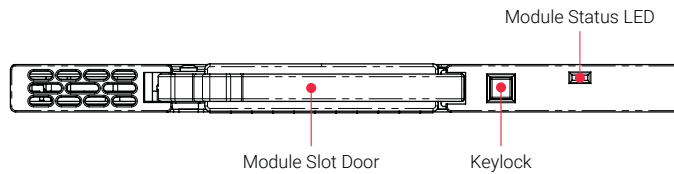
Please read the following before handling this product.

1. Do not drop the product, submit it to impact, or pierce it.
2. The circuit boards within this 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.

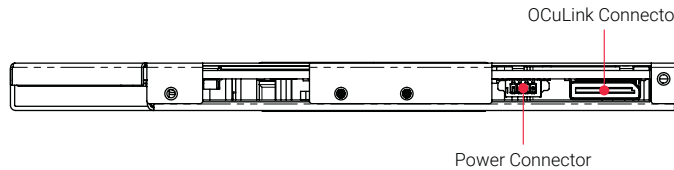
3. Avoid placing this product close to magnetic devices, high voltage devices, or in an area exposed to heat, flame, direct sunlight, dampness, moisture, or rain.
4. To avoid overheating, this product should be operated in a well-ventilated area.
5. Before starting any type of hardware installation, 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.
6. A damaged cable or device may malfunction and/or overheat and become a fire hazard.

## 1.4. IDENTIFYING PARTS

### Front



### Rear



## 1.5. LED BEHAVIOR

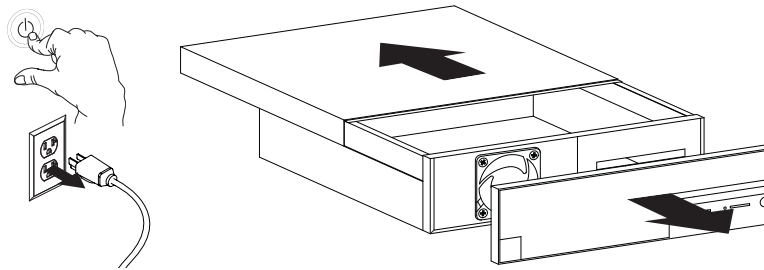
LED Name	Color	State	Description
Module Status	Green	Solid	The SHIPS module inside the slot is powered on.
		Flickering	The module inside the slot is being accessed by your computer.
	Amber	Solid	The SHIPS module inside the slot is powered on, but the module is at risk of data throttling due to high temperatures.
		Flickering	The module inside the slot is being accessed by your computer, but the module is at risk of data throttling due to high temperatures.
	Red	Solid	The fan inside of the QX118 has failed. Contact Technical Support for a replacement.

LED Name	Color	State	Description
		Flickering	The module inside the slot is being accessed by your computer, but the inside the QX118 has failed. Contact Technical Support for a replacement.

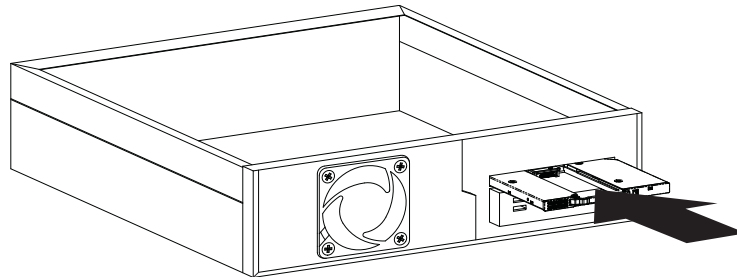
## 2. SETUP

### 2.1. RECEIVING FRAME INSTALLATION

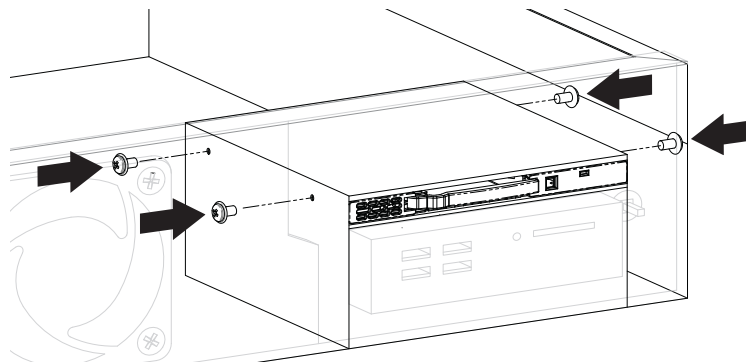
1. Turn off your computer. Disconnect the power cord, and remove the computer cover.



2. Slide the QX118 receiving frame into a vacant 9mm or 9.5mm optical drive bay.



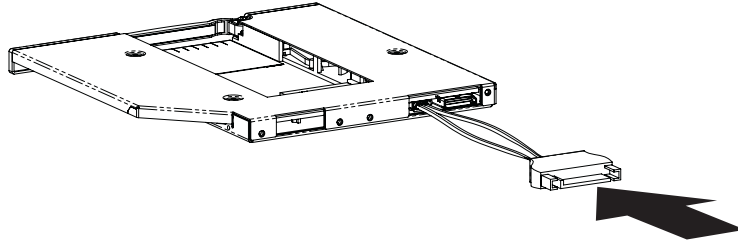
3. If necessary, secure the QX118 to the drive bay with M2 screws of your own.



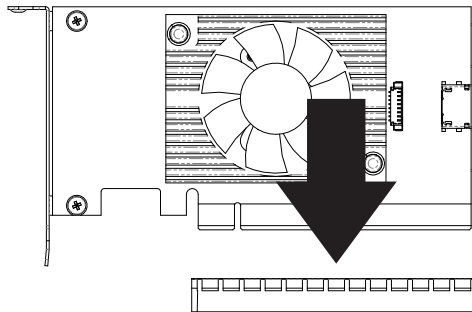
**IMPORTANT**

If you are installing the QX118 into a 9.5mm optical drive bay, please note that the forward screw holes on the QX118 will not line up with the screw holes on a 9.5mm bay, but the rear screw holes will.

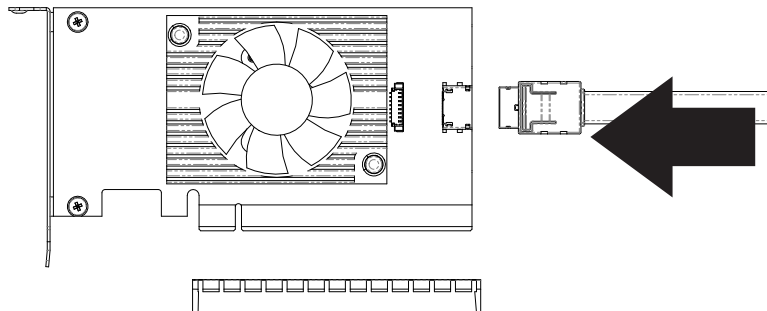
4. Connect the included SATA power adapter cable to the rear of the QX118. Then connect SATA power from your computer to the adapter cable.



5. If necessary, install a host bus adapter card (HBA) with at least one (1) OCUlink port into your computer. Refer to the HBA's user manual for installation instructions.

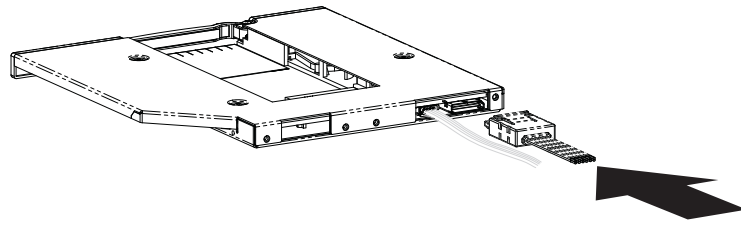


6. Connect an OCUlink SFF-8611 cable (sold separately) to your HBA.

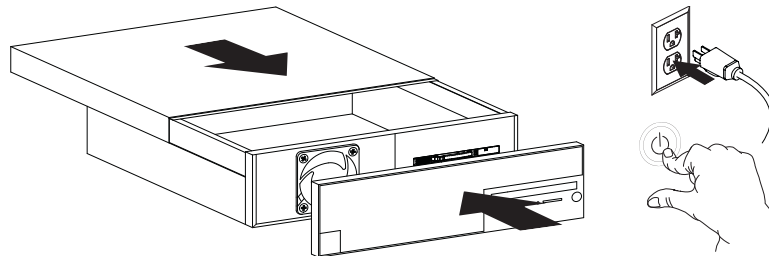


7. Connect the other end of the OCUlink cable to the OCUlink port on the rear of the QX118.





8. Replace the computer cover, reconnect the power cord, and turn on your computer.



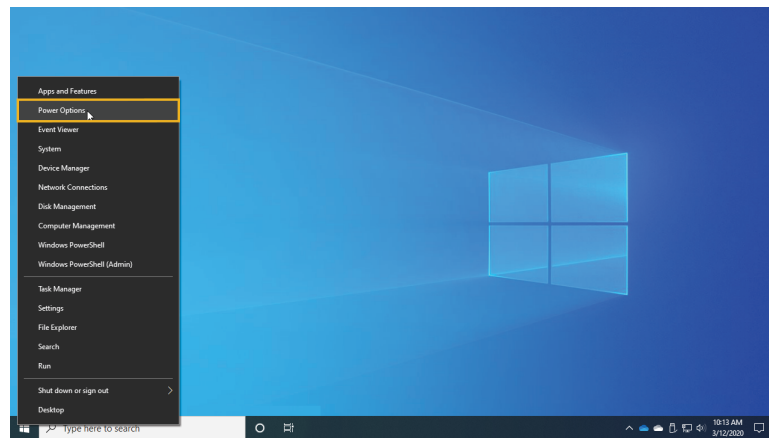
**NOTE**

Compatible adapter cards and cables are available for purchase on the QX118 product page at [cru-inc.com](http://cru-inc.com).

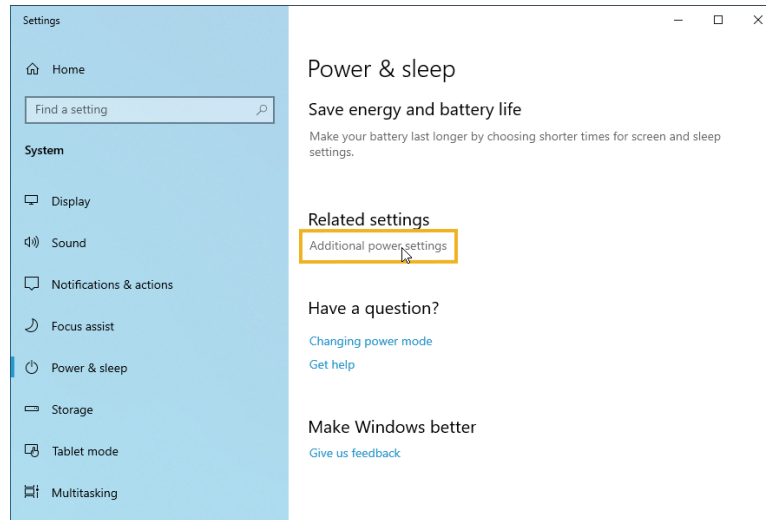
## 2.2. DISABLE WINDOWS FAST STARTUP

“Fast startup” must be disabled in Windows 10 and Windows 8.1 to ensure that data from the QX118 is read properly. Here are the instructions for how to do so with Windows 10.

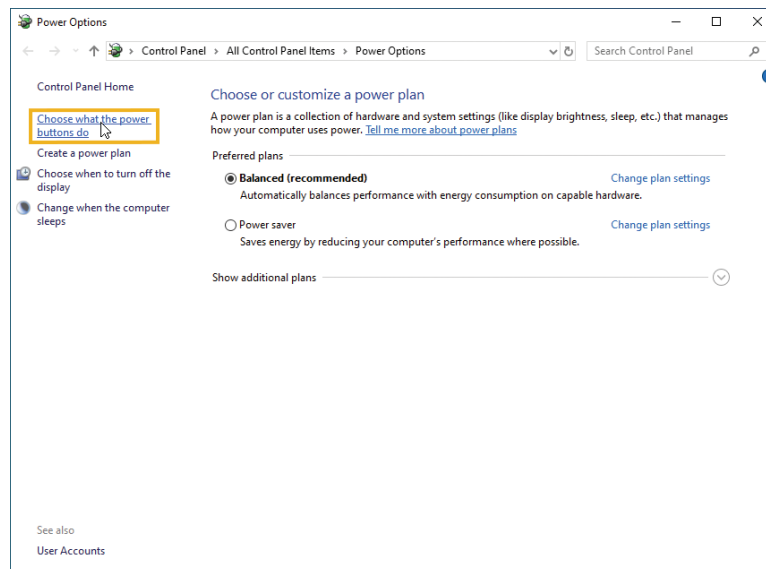
1. Right click on the **Start Button** and select **Power Options**.



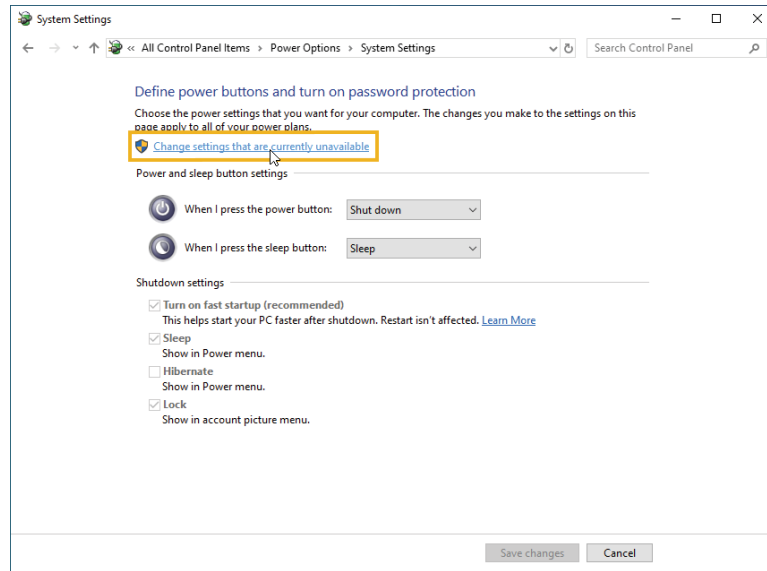
2. Under Related Power Settings in the right column, select **Additional power settings**.



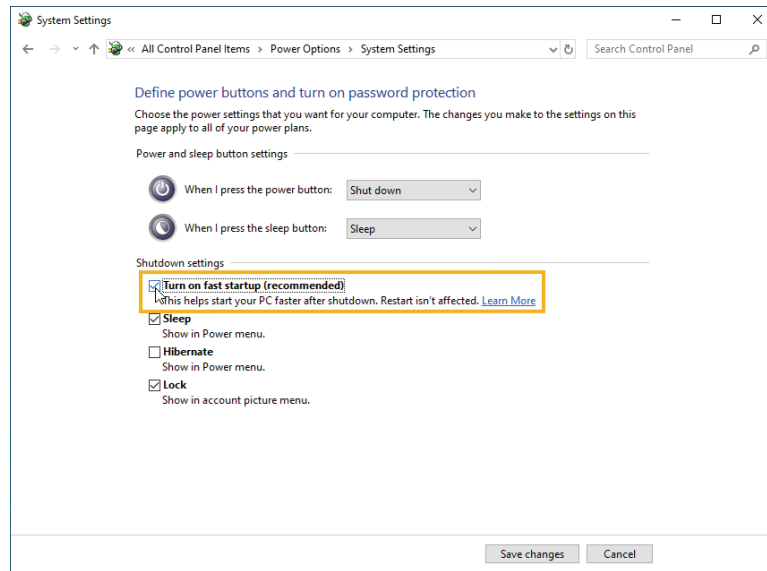
3. On the left column of the new window, select **Choose what the power buttons do**.



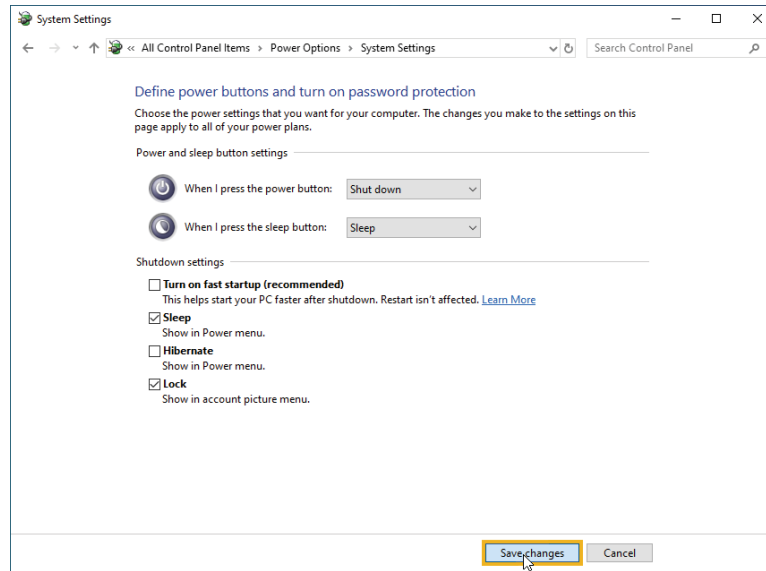
4. Select **Change settings that are currently unavailable**.



5. Uncheck **Turn on fast startup (recommended)**.



6. Click the **Save changes** button.



## 3. OPERATION

### 3.1. SHIPS MODULE INSTALLATION



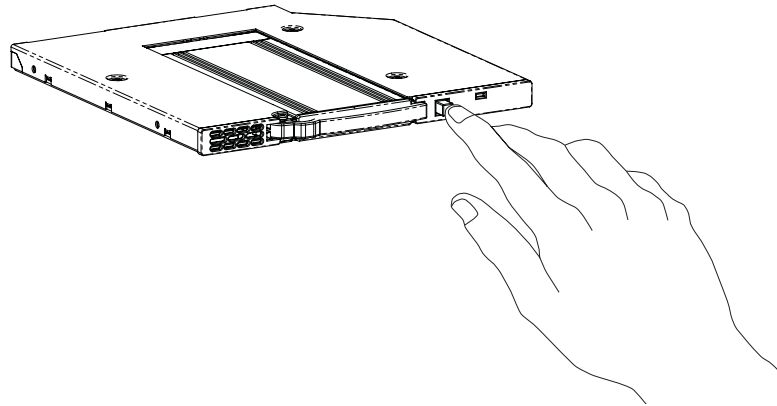
#### CAUTION

If hot swapping is not available, then failure to turn off your computer before removing or installing a SHIPS module may result in data loss.

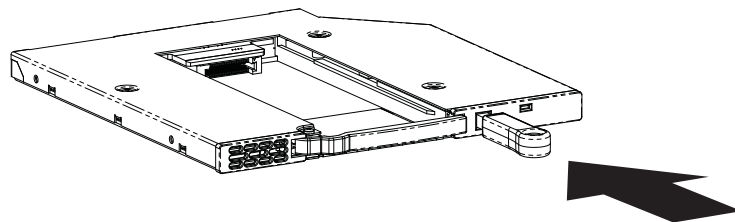
CRU has designed the QX118 to support hot swapping. However, your entire system must support hot swapping, including your motherboard, BIOS/UEFI, CPU, operating system, and host bus adapter. CRU sells hot-swap-capable HBAs and cables to help simplify your installation needs. They are available on the QX118 product page at [cru-inc.com](http://cru-inc.com).

1. Power off your computer. If you have hot swapping capability, then you may ignore this step.
2. Unlock the module slot door.

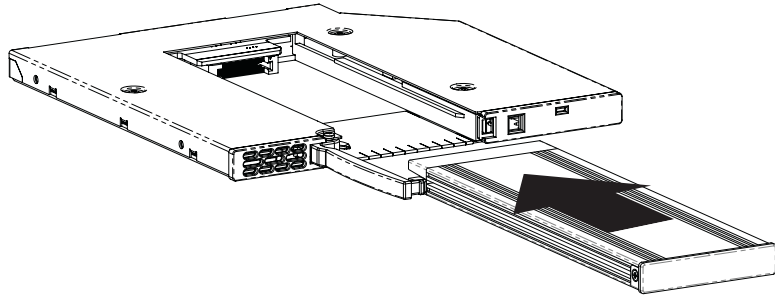
**If you have the Push-Button Version:** Push the button located on the right side of the QX118 to release the module slot door. Then move the door out of the way.



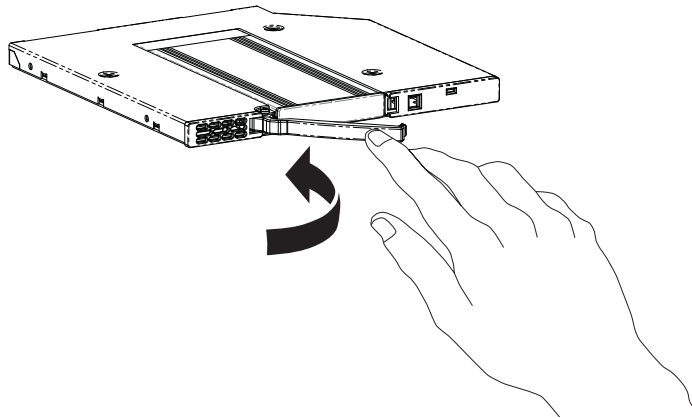
**If you have the Lock Version:** Firmly place the included key into the square keyhole on the right side of the QX118 to release the module slot door. Then move the door out of the way.



3. Orient a SHIPS Module or SHIPS Rugged Module so that its pins are downward and facing the QX118. Insert it into the open slot on the QX118 receiving frame.



4. Close the module slot door. It will snap into place. The module will automatically power on when the computer is turned on.



5. Power on the computer if it is powered off.

## 3.2. SAFE SHIPS MODULE REMOVAL



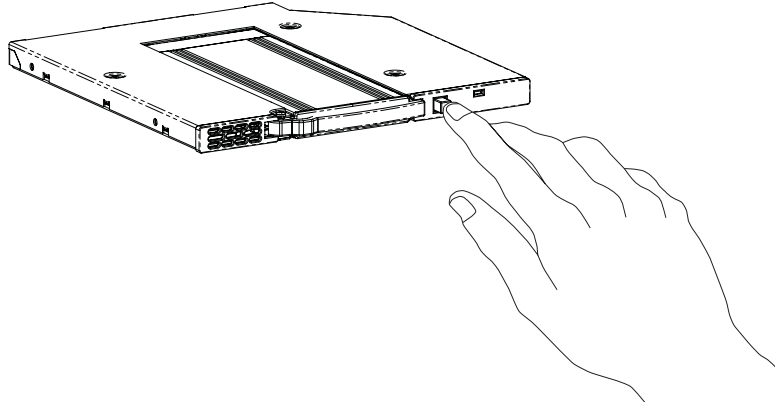
### CAUTION

If hot swapping is not available, then failure to turn off your computer before removing or installing a SHIPS module may result in data loss.

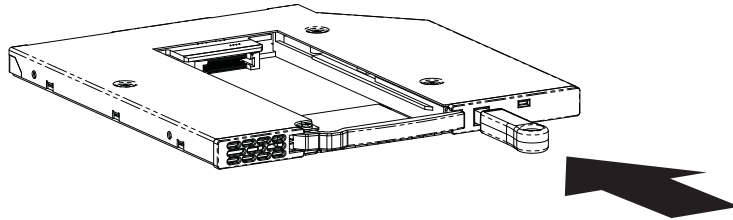
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1. Power off your computer. If you have hot swapping capability, then you do not need to turn the computer off, but you must make sure that data on the module you wish to remove is not being accessed by your computer.
2. Unlock the module slot door.

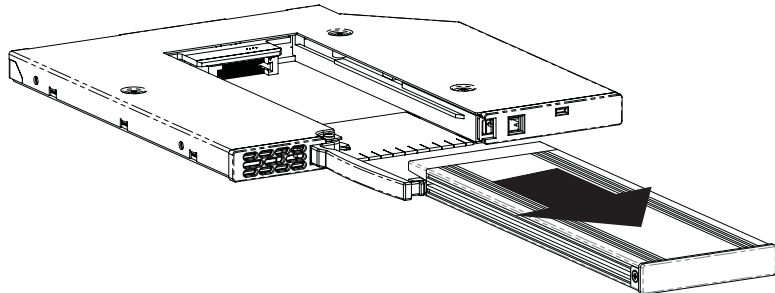
**If you have the Push-Button Version:** Push the button located on the right side of the QX118 to release the module slot door. Then move the door out of the way.



**If you have the Lock Version:** Firmly place the included key into the square keyhole on the right side of the QX118 to release the module slot door. Then move the door out of the way.



3. Remove the module from the receiving frame.



## 4. 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](http://cru-inc.com/support) or call us at 1-800-260-9800 or +1-360-816-1800.



## APPENDIX A. TABLE OF SPECIFICATIONS

Product Name	QX118
QX118 Interface Types & Speeds	OCuLink SFF-8612: up to ~32 Gbps (32 GT/s)
Host Bus Interface	PCIe 3.1
Supported Storage Media	One (1) CRU SHIPS Module or SHIPS Rugged Module <sup>1</sup>
Data Connectors	One (1) OCUlink SFF-8612 connector <sup>2</sup>
Power Connectors	One (1) four-pin optical power connector
Form Factor	9mm optical drive bay (USM Slim)
Torque	M2x3 or M2x5 screws: 2.2 inch-pounds max
Fans	One (1) variable speed fan (controlled by drive temp)
Modern Standby Support	No
Supported Operating Systems	<ul style="list-style-type: none"> <li>• Windows 11, 10, and 8.1</li> <li>• Windows Server 2022, 2019, 2016, and 2012 product families</li> <li>• Red Hat Enterprise Linux and Ubuntu LTS</li> </ul>
Weight	167.82 g
Dimensions	<ul style="list-style-type: none"> <li>• Width: 128.0 mm</li> <li>• Length: 128.7 mm</li> <li>• Height: 9.0 mm</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• EMI Standard: FCC Part 15 Class B</li> <li>• EMC Standard: EN55024, EN55032</li> <li>• CE, RoHS, RCM</li> <li>• The QX118 with its supporting accessories have been tested to be PCIe Gen3 compliant per the Add in Card criteria of the PCIe Specification 3.1.</li> </ul>

<sup>1</sup>Each CRU SHIPS Module ships with an M.2 NVMe SSD preinstalled. Documentation for the SHIPS module is provided in the SHIPS Documentation, available by request.

<sup>2</sup>OCuLink SFF-8612 connectors require an OCUlink SFF-8611 cable to mate

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