

# Extreme Networks LRM/MACsec Adapter Quick Reference

Part no. 10965



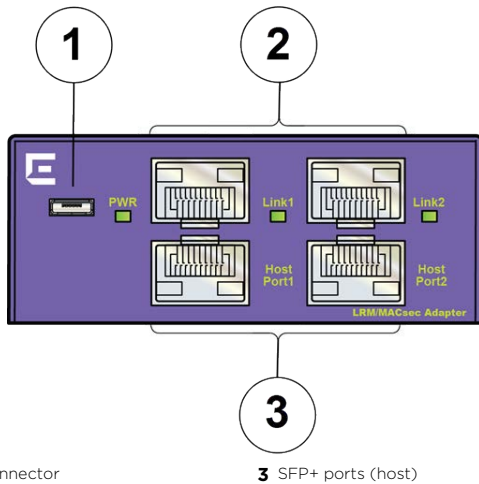
**Electrical Hazard:** Only qualified personnel should perform installation procedures.

**Risques d'électrocution:** Seul un personnel qualifié doit effectuer les procédures d'installation.

## Hardware Components

Figure 1 shows the ports, LEDs, and connections on the LRM/MACsec Adapter.

Figure 1 LRM/MACsec Adapter Converter: Front Panel



1 USB connector

2 SFP+ ports (link)

3 SFP+ ports (host)

## Installation Site Requirements

The installation site must meet the following requirements:

- Located within 50 cm (19.7 in) of the host switch to which it will be attached
- A temperature between 0°C (32°F) and 45°C (113°F), with fluctuations of less than 10°C (18°F) per hour

## Handling the Equipment



**Caution:** Failure to follow proper ESD handling procedures may result in damage to the equipment.

To minimize the risk of ESD damage, follow appropriate ESD procedures when unpacking and handling the LRM/MACsec Adapter. These include unpacking the equipment in an ESD safe environment and wearing appropriate ESD protective gear, such as ESD-safe footwear and ESD wrist straps where appropriate.

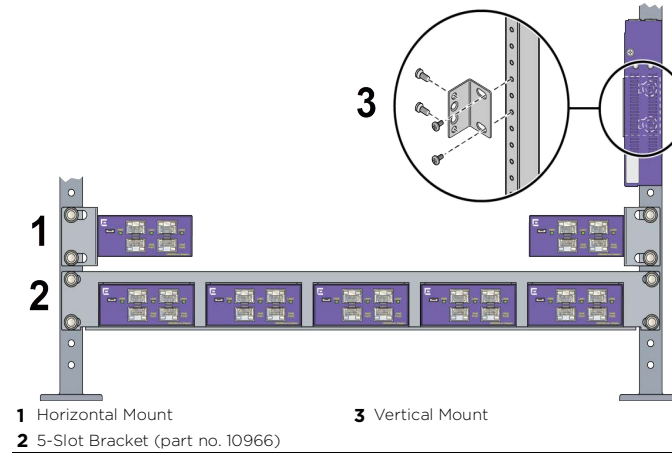
Unpack the equipment as follows:

- 1 Remove the packing material protecting the equipment.
- 2 Remove the tape seal on the non-conductive bag to remove the equipment.
- 3 Perform a visual inspection of the equipment for any signs of physical damage. Contact Extreme Networks if there are any signs of damage. See "Getting Help" for more information on contacting Extreme Networks.

## Installing the LRM/MACsec Adapter

You can install the LRM/MACsec Adapter converter in a standard equipment rack, in any of three ways shown in Figure 2.

Figure 2 Mounting Options for the LRM/MACsec Adapter



1 Horizontal Mount

3 Vertical Mount

2 5-Slot Bracket (part no. 10966)

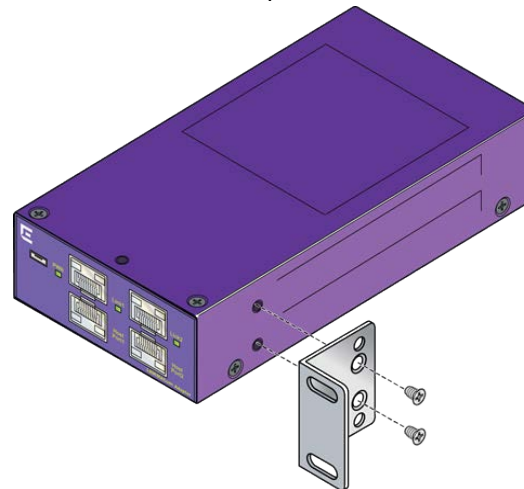
## Mounting Option 1: Horizontal

To mount the LRM/MACsec Adapter vertically on the rack

- 1 Using two small M4x6.5mm screws (included), attach the bracket to the holes in one side of the adapter so that the mounting ear extends away from the adapter.

Figure 3 shows the bracket attached to the adapter.

Figure 3 Bracket Attached to Adapter for Horizontal Mounting



- 2 Using two rack mounting screws (not included) attach the mounting ear to the rack. The adapter ports should face toward the front.
- 3 Connect the adapter to the switch, following the instructions in "Connecting the LRM/MACsec Adapter to the Host Switch".

## Mounting Option 2: In the 5-Slot Bracket

To mount the LRM/MACsec Adapter in the 5-slot bracket:

- 1 Using standard rack mounting screws (not included), secure the bracket to the rack.
- 2 Set the adapter in one of the bracket slots.
- 3 Secure the adapter to the bracket using one of the M4x6.5mm screws provided with the bracket.
- 4 Mount up to four additional LRM/MACsec Adapter units on the bracket, as described in steps 2 and 3.
- 5 Connect the adapters to the switch, following the instructions in "Connecting the LRM/MACsec Adapter to the Host Switch".

## Mounting Option 3: Vertical

To mount the LRM/MACsec Adapter vertically on the rack:

- 1 Using two rack mounting screws (not included), attach the vertical mounting bracket to the rack so that the mounting ear extends outward from the front of the rack.
- 2 Using two small M4x6.5mm screws (included), attach the bracket to the holes in the bottom of the adapter. The adapter ports can face upward or downward as needed.
- 3 Connect the adapter to the switch, following the instructions in "Connecting the LRM/MACsec Adapter to the Host Switch".

## Connecting the LRM/MACsec Adapter to the Host Switch

After mounting the LRM/MACsec Adapter in the rack, attach it to the host switch by doing the following:

- 1 Insert one of the 50 cm SFP cables, included with the adapter, into Host Port1 on the front of the LRM/MACsec Adapter. **This SFP cable is provided especially for use with the LRM/MACsec Adapter.** It is not a standard SFP cable.
- 2 Insert the other end of the cable into an SFP port on the switch.
- 3 Repeat steps 1 and 2 to connect Host Port2 to the switch. Both Host Port1 and Host Port2 must be connected to the same host switch.

The LRM/MACsec Adapter receives power through its connection to the host switch's SFP port. Optionally, in addition to the power it receives from the switch, it can receive power through the USB connector on the front panel.

When the LRM/MACsec Adapter is connected to the host switch, verify that the adapter's power LED turns on. If the power LED does not turn on, recheck the connection between the adapter and the power source(s).

## Specifications

### LRM/MACsec Adapter

**Part number:** 10965

**Unpackaged Weight:** 300 g (0.66 lb)

**Dimensions:**

3.00 cm (1.18 in) H

7.60 cm (2.99 in) W

12.35 cm (4.86 in) L

**Operating Temperature:**

0°C to 40°C (32°F to 104°F) when used with Tunable DWDM SFP+,

ER SFP+, ZR SFP+, and Bidirectional 120 km SFP optics modules

0°C to 45°C (32°F to 113°F) when used with all other optics modules

**Storage Temperature:** -40°C to 70°C (-40°F to 158°F)

**Operating Relative Humidity:** 10% to 95% (non-condensing)

### Five-Slot Bracket

**Part number:** 10966

**Unpackaged Weight:** 487 g (1.07 lb)

**Dimensions:**

4.32 cm (1.70 in) H

5.0 cm (1.97 in) L

48.26 cm (19.00 in) W

## Getting Help

For additional support related to your equipment or this document, contact Extreme Networks using one of the following methods:

<b>Product Documentation</b>	<a href="https://www.extremenetworks.com/documentation/">https://www.extremenetworks.com/documentation/</a>
<b>Global Technical Assistance Center (GTAC)</b>	Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1-408-579-2826. For the support phone number in your country, visit: <a href="http://www.extremenetworks.com/support/contact/">http://www.extremenetworks.com/support/contact/</a>
<b>GTAC Knowledge</b>	Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance. Visit: <a href="https://gtacknowledge.extremenetworks.com/">https://gtacknowledge.extremenetworks.com/</a>
<b>The Hub</b>	A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. The community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC. Visit: <a href="https://community.extremenetworks.com">https://community.extremenetworks.com</a>
<b>Support Portal</b>	Manage cases, downloads, service contracts, product licensing, and training and certifications. Visit: <a href="http://support.extremenetworks.com/">http://support.extremenetworks.com/</a>

## Legal Notices

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made. The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

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### Warranty

Warranty information for LRM/MACsec Adapter equipment is located online at: [www.extremenetworks.com/go/warranty](http://www.extremenetworks.com/go/warranty)

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Part no. 121211-00 Rev. 04



## Regulatory and Compliance Information

### Federal Communications Commission (FCC) Notice

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.

**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 uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

**WARNING:** Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### Industry Canada Notice CAN ICES-003 (A)/NMB-003(A)

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

### Product Safety

This product complies with the following international safety standards:

- UL 62368-1:2014
- UL 60950-1 2nd edition, A2:2014
- CAN/CSA-C22.2 No.62368-1-14:2014
- IEC 62368-1:2014
- EN 62368-1:2014
- IEC 60950-1:2005 2nd+A1:2009+A2:2013
- EN 60950-1:2006+A11+A1+A12+A2
- 2014/35/EU



**Warning:** The LRM/MACsec Adapter converter is designed for installation in restricted access locations.

**Avertissement:** Le convertisseur est conçu pour une installation dans des endroits à accès restreint.

### Korea EMC Statement (KCC)

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

### Electromagnetic Compatibility (EMC)

This product complies with the following: FCC 47 CFR Part 15 Subpart B Class A (US), ICES-003 (Canada), EN 55032 (ITE Emissions), EN 55035 (ITE Immunity), EN 61000-3-2 (Harmonics), EN 61000-3-3 (Flicker), 2014/30/EU (EMC Directive).

### VCCI Notice

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。  
VCCI - A

### Hazardous Substances- China and Taiwan BSMI RoHS

Guidance concerning the China and Taiwan BSMI RoHS (Restriction of Hazardous Substances) directive for this Extreme Networks® product can be found on the following web page:

[www.extremenetworks.com/support/documentation/restriction-hazardous-substances/](http://www.extremenetworks.com/support/documentation/restriction-hazardous-substances/)

The page contains tables detailing the presence of 10 substances defined by the RoHS directive.

### Hazardous Substances

This product complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

### European Waste Electrical and Electronic Equipment (WEEE) Notice



In accordance with Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE):

- 1 The symbol above indicates that separate collection of electrical and electronic equipment is required.
- 2 When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
- 3 It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
- 4 It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated.

For information about the available collection system, please contact Extreme Customer Support at +353 61 705500 (Ireland).