



# Ruijie Optical Transceiver

## Hardware Installation and Reference Guide

## Copyright

Copyright © 2025 Ruijie Networks

All rights are reserved in this document and this statement.

Without the prior written consent of Ruijie Networks, no organization or individual is permitted to reproduce, extract, back up, modify, or distribute the content of this document in any manner or form. It is also prohibited to translate the document into other languages or use any or all parts of it for commercial purposes.

 and  trademarks are owned by Ruijie Networks.

All other trademarks or registered trademarks mentioned in this document are owned by their respective owners.

## Disclaimer

The products, services, or features that you purchase are subject to commercial contracts and terms. It is possible that some or all of the products, services, or features described in this document may not be available for purchase or use. Unless agreed upon otherwise in the contract, Ruijie Networks does not provide any explicit or implicit statements or warranties regarding the content of this document.

The names, links, descriptions, screenshots, and any other information regarding third-party software mentioned in this document are provided for your reference only. Ruijie Networks does not explicitly or implicitly endorse or recommend the use of any third-party software and does not make any assurances or guarantees concerning the applicability, security, or legality of such software. You should choose and use third-party software based on your business requirements and obtain proper authorization. Ruijie Networks assumes no liability for any risks or damages arising from your use of third-party software.

The content of this document is subject to constant change due to product version upgrades or other reasons. Thus, Ruijie Networks reserves the right to modify the content of the document without prior notice or prompt.

This manual serves solely as a user guide. While Ruijie Networks endeavors to ensure the accuracy and reliability of the content when compiling this manual, it does not guarantee that the content of the manual is free of errors or omissions. All information contained in this manual does not constitute any explicit or implicit warranties.

## Personal Data Statement

During the operation or troubleshooting of the products, services, or features you have purchased, certain personal data of users may be collected or used. Therefore, it is essential for you to establish and implement appropriate privacy policies, in compliance with the relevant laws and regulations of the applicable countries or regions, to ensure the complete protection of users' personal data.

If Ruijie Networks is involved in this process, we will strictly adhere to the relevant laws and regulations of the applicable countries or regions and take all necessary actions to safeguard users' personal data.

When discarding, reclaiming, or reusing a device, please ensure to back up or clear any stored data to avoid data leakage. For assistance, please contact our after-sales technical support.

# Preface

## Intended Audience

This document is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

## Technical Support

- Ruijie Networks website: <https://www.ruijie.com>
- Online support center: <https://www.ruijie.com/support>
- Case portal: <https://caseportal.ruijie.com>
- Community: <https://community.ruijienetworks.com>
- Email support: [support\\_dc@ruijie.com](mailto:support_dc@ruijie.com)
- Live chat: <https://www.ruijie.com/rita>
- Documentation feedback: [doc@ruijie.com.cn](mailto:doc@ruijie.com.cn)

## Conventions

### 1. Signs

The signs used in this document are described as follows:

---

#### **Warning**

An alert that calls attention to important rules and information that if not understood or followed can result in data loss or equipment damage.

---

---

#### **Caution**

An alert that calls attention to essential information that if not understood or followed can result in function failure or performance degradation.

---

---

#### **Note**

An alert that contains additional or supplementary information that if not understood or followed will not lead to serious consequences.

---

---

#### **Specification**

An alert that contains a description of product or version support.

---

### 2. Notes

The manual provides configuration information, including models, port types, and command line interfaces, for reference purposes only. In the event of any discrepancy or inconsistency between the manual and the actual version, the actual version shall take precedence.

# Contents

Preface .....	I
1 Overview .....	1
2 Naming Rules.....	2
2.1 Naming Rules for Optical Transceivers.....	2
2.2 Cable Naming Rules .....	4
3 Documentation Library .....	5
4 Preparation.....	7
5 Precautions .....	8
5.1 Installation Precautions.....	8
5.2 Removal Precautions.....	8
6 Installing and Removing Optical Transceivers and Cables .....	9
6.1 Installing and Removing the XFP Transceiver .....	9
6.1.1 Installing the XFP Transceiver .....	9
6.1.2 Removing the XFP Transceiver .....	10
6.2 Installing and Removing the SFP, SFP+, or SFP28 Transceiver .....	10
6.2.1 Installing the SFP, SFP+, or SFP28 Transceiver.....	10
6.2.2 Removing the SFP, SFP+, or SFP28 Transceiver.....	11
6.2.3 Installing the SFP, SFP+, or SFP28 Cables .....	11
6.2.4 Removing the SFP, SFP+, or SFP28 Cables .....	12
6.3 Installing and Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver .....	13
6.3.1 Installing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver.....	13
6.3.2 Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver.....	14

6.3.3 Installing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Cables .....	14
6.3.4 Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Cables .....	15
6.4 Installing and Removing the OSFP Transceiver .....	16
6.4.1 Installing the OSFP Transceiver .....	16
6.4.2 Removing the OSFP Transceiver .....	17
7 Verifying the Installation .....	19
8 Compliance Warranty .....	20

# 1 Overview

As an industry-leading ICT infrastructure and industry solution provider, Ruijie Networks offers customers a wide variety of high-density and low-power optical transceivers for optical signal transmission. For long-distance transmission, optical cables are used to ensure minimal signal loss. For short-distance transmission, Active Optical Cables (AOCs) or Direct Attach Copper Cables (DACs), which are integrated with the optical transceivers, are used.

The following types of form factors are available currently: XFP, SFP, SFP+, SFP28, QSFP+, QSFP28, QSFP-DD, QSFP56, QSFP112, and OSFP.



## Note

- Products support different types of optical transceivers. For more details, see the hardware installation instructions that come with your Ruijie device.
  - The optical transceiver information is subject to the change without prior notification. Please contact Ruijie Networks for the latest information.
-

## 2 Naming Rules

### 2.1 Naming Rules for Optical Transceivers

Item	Digit Position	Parameter	Description
Rate	1	MINI/GE/2.5G/ XG/VG/40G/10 0G/200G/400 G	<ul style="list-style-type: none"> <li>● MINI: Indicates the transmission rate of 1.25 Gbps.</li> <li>● GE: Indicates the transmission rate of 1.25 Gbps.</li> <li>● 2.5G: Indicates the transmission rate of 3.125 Gbps.</li> <li>● XG: Indicates the transmission rate of 10.3125 Gbps.</li> <li>● VG: Indicates the transmission rate of 25.78125 Gbps.</li> <li>● 40G: Indicates the transmission rate of 41.25 Gbps.</li> <li>● 100G: Indicates the transmission rate of 103.125 Gbps.</li> <li>● 200G: Indicates the transmission rate of 212.5 Gbps.</li> <li>● 400G: Indicates the transmission rate of 425 Gbps.</li> </ul>
Form factor	2	GBIC/SFP/QS FP/Q56/QDD/ Q112/OSFP	<ul style="list-style-type: none"> <li>● GBIC is the Gigabit interface converter. It is a type of large, hot-swappable optical transceiver used for fiber optic communication at a transmission rate of 1 Gbps.</li> <li>● SFP is the small form-factor pluggable transceiver.</li> </ul> <hr/> <p><b>Note</b></p> <p>The 1G and 2.5G optical transceivers use the SFP form factor, the 10G transceiver uses SFP+, and the 25G transceiver uses SFP28. Ruijie SFP, SFP+, SFP28 form factors are abbreviated as SFP and distinguished by the rate (for example, VG-SFP represents the 25G SFP28 form factor).</p> <hr/> <ul style="list-style-type: none"> <li>● QSFP, Q56, Q112 are the quad small form-factor pluggable (QSFP) transceivers. Based on the single-channel transmission rate, QSFP transceivers are classified into QSFP+ (40G), QSFP28 (100G), QSFP56 (200G), and QSFP112 (400G) transceivers.</li> </ul> <hr/> <p><b>Note</b></p> <p>Ruijie QSFP+ and QSFP28 form factors are abbreviated as QSFP, QSFP56 as Q56, and QSFP112 as Q112.</p> <hr/> <ul style="list-style-type: none"> <li>● QDD is the quad small form factor pluggable-double density transceiver, which increases the number of data channels from 4 to 8 compared with the QSFP56 transceiver, enabling a transmission rate of 400 Gbps.</li> <li>● OSFP is the octal small form-factor pluggable transceiver.</li> </ul>

Item	Digit Position	Parameter	Description
Splitting	3	Number of breakout ports	2: Two breakout ports Blank: The port is not split.
Cable distance	4	LX/LH/SR/VR/ LSR/DR/LR/ R/FR/ZR	<ul style="list-style-type: none"> <li>● LX: Indicates the transmission distance of a 1G/2.5G/10G/25G optical transceiver. For example, LX03 denotes a transmission distance of up to 3 km, and LX20 denotes up to 20 km.</li> <li>● LH: Indicates a transmission distance of up to 40 km for Gigabit data transmission over single-mode fiber (SMF).</li> <li>● VR: For a 400G optical transceiver, VR indicates a transmission distance of up to 50 m for data transmission over OM4 multi-mode fiber (MMF) or up to 30 m over OM3 MMF.</li> <li>● SR: Indicates short-distance transmission. For a 25G/100G/200G/400G optical transceiver, SR indicates a transmission distance of up to 100 m for data transmission over OM4 MMF or up to 70 m over OM3 MMF. For a 40G optical transceiver, SR indicates a transmission distance of up to 150 m for data transmission over OM4 MMF or up to 100 m over OM3 MMF.</li> <li>● LSR: For a 40G optical transceiver, LSR indicates a transmission distance of up to 400 m for data transmission over OM4 MMF or up to 300 m over OM3 MMF.</li> <li>● DR: Indicates a transmission distance of up to 500 m for data transmission over SMF.</li> <li>● FR: Indicates a transmission distance of up to 2 km for data transmission over SMF.</li> <li>● LR: Indicates a transmission distance of up to 10 km for data transmission over SMF.</li> <li>● ER: Indicates a transmission distance of up to 40 km for data transmission over SMF.</li> <li>● ZR: Indicates a transmission distance of up to 80 km for data transmission over SMF.</li> </ul>
		Value parameter, such as SR8 and SR4.	Number of optical channels
		Blank/03/10/40/80	N/A
Fiber type	5	<ul style="list-style-type: none"> <li>● MM</li> <li>● SM</li> </ul>	<ul style="list-style-type: none"> <li>● MM: Multi-mode</li> <li>● SM: Single-mode</li> </ul>
Wavelength	6	850/1310/1550	N/A
Special display (-BIDI)	7	<ul style="list-style-type: none"> <li>● Blank</li> <li>● BIDI</li> </ul>	<ul style="list-style-type: none"> <li>● Blank: Conventional optical transceiver</li> <li>● BIDI: Single-fiber bidirectional</li> </ul>



Item	Digit Position	Parameter	Description
Temperature	8	<ul style="list-style-type: none"> <li>Blank</li> <li>I</li> </ul>	<ul style="list-style-type: none"> <li>Blank: Commercial temperature transceiver</li> <li>I: Industrial temperature transceiver</li> </ul>
Whether the name contains "L"	9	<ul style="list-style-type: none"> <li>L</li> <li>Blank</li> </ul>	<ul style="list-style-type: none"> <li>L: Linear-drive Pluggable Optics (LPO)</li> <li>Blank: Digital Signal Processor (DSP)</li> </ul>

The following example uses the 40G-QSFP-LSR-MM850 module to illustrate the naming convention:

- 40G: Indicates the transmission rate of 41.25 Gbps.
- QSFP: QSFP: Indicates the octal small form-factor pluggable transceiver.
- LSR: For a 40G optical transceiver, LSR indicates a transmission distance of up to 400 m for data transmission over OM4 MMF or up to 300 m over OM3 MMF.
- MM: Multi-mode fiber.
- 850: Wavelength.

## 2.2 Cable Naming Rules

Type	Digits	Parameter	Description
Rate	1	40G/100G/400G	40G: 41.25 Gbps 100G: 103.125 Gbps 400G: 425 Gbps
Cable type	2	AOC/DAC	Active Optic Cable (AOC): An AOC is an optical cable integrated with an optical transceiver. Direct Attach Copper (DAC) Cable: A DAC cable is a copper cable integrated with an optical transceiver.
Transmission distance	3	X	X: Indicates the cable length.
Unit	4	M	M: Indicates the unit meter.

Taking the 100G-DAC-1M DAC cable model as an example, each part is described as follows:

- 100G: Indicates that the transmission rate is 103.125 Gbps.
- DAC: Indicates the direct attach copper.
- 1M: Indicates that the cable length is 1 m.

# 3 Documentation Library

Scenario	Form	Title	Description
Product Introduction	Document	<a href="#">RG 400GBASE Series Optical Transceivers Datasheet</a>	Introduces the 400G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 200GBASE Series Optical Transceivers Datasheet</a>	Introduces the 200G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 100GBASE Series Optical Transceivers Datasheet</a>	Introduces the 100G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 40GBASE Series Optical Transceivers Datasheet</a>	Introduces the 40G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 25GBASE Series Optical Transceivers Datasheet</a>	Introduces the 25G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 10GBASE Series Optical Modules Datasheet</a>	Introduces the 10G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 2.5GBASE Series Optical Modules Datasheet</a>	Introduces the 2.5G series optical transceiver models, along with their corresponding technical specifications and descriptions.
	Document	<a href="#">RG 1000BASE Series Optical Transceivers Datasheet</a>	Introduces the 1000G series optical transceiver models, along with their corresponding technical specifications and descriptions.

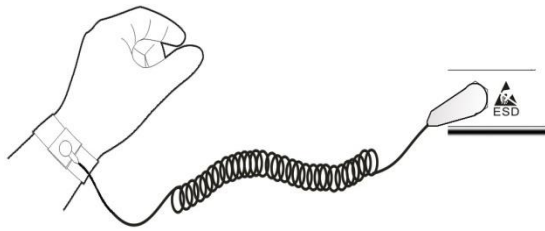
Scenario	Form	Title	Description
Deployment	Document	<a href="#">Ruijie Optical Transceiver Hardware Installation and Reference Guide</a>	Introduces the installation methods and precautions for Ruijie optical transceivers.

## 4 Preparation

To avoid static electricity damage to transceivers, cables, or electronic components, take static-preventive measures before installation. Attach a static-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.

The following figure shows the static-preventive wrist strap with a coiled cable.

**Figure 4-1 Wearing a Static-Preventive Wrist Strap with a Coiled Cable**



If you have a static-preventive glove, you are advised to wear the static-preventive glove before attaching the static-preventive wrist strap to your wrist.

# 5 Precautions

## 5.1 Installation Precautions

- Proceed with caution during installation and removal. Do not touch edge connectors with your bare hands.
- Install the optical transceiver according to the port shape. If the optical transceiver cannot be completely inserted into the port, do not force it. Instead, install it in another orientation.
- Do not stare into open apertures because invisible laser radiation may be emitted from the aperture of the optical port when no optical cable is connected.
- Line up the transceiver with the socket opening and slide it into the socket before firmly pushing it into place.
- Do not remove dust plugs from transceiver optical bores until you are ready to make a connection.
- Disconnect optical cables from transceivers before installing transceivers.
- Do not bend, twist, or push optical cables. Otherwise, system performance deterioration or data loss may occur.

## 5.2 Removal Precautions

- Disconnect optical cables from transceivers before removing transceivers.
- For the optical transceiver equipped with a bail clasp, do not release the optical transceiver with force before pivoting the bail clasp down.
- Immediately reinstall the dust plugs in the optical connectors and in the transceiver optical bores after removing transceivers.

# 6 Installing and Removing Optical Transceivers and Cables

## Caution

The installation method for LPO transceivers is the same as that for regular optical transceivers. Before installing an LPO transceiver, check the corresponding form factor of the transceiver. For example, the 400G-Q112-DR4-L transceiver corresponds to the QSFP112 form factor. For details, see 6.3 Installing and Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver.

Optical transceivers come into four types based on form factors:

- XFP transceiver: [6.1 Installing and Removing the XFP](#)
- SFP, SFP+, and SFP28 transceivers: [6.2 Installing and Removing the SFP, SFP+, or SFP28](#)
- QSFP+, QSFP28, QSFP-DD, QSFP56, and QSFP112 transceivers: [6.3 Installing and Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112](#)
- OSFP transceiver: [6.1 Installing and Removing the XFP](#)

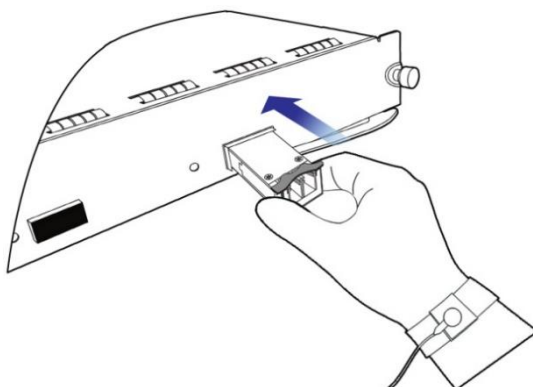
The following sections introduce installation and removal steps of each type of transceiver.

## 6.1 Installing and Removing the XFP Transceiver

### 6.1.1 Installing the XFP Transceiver

- (1) Keep the bail clasp aligned in a vertical position. Grasp the XFP transceiver between your thumb and index fingers and slide the transceiver into the slot until you feel the transceiver snap into place, as shown in the following figure.

**Figure 6-1** Installing the XFP Transceiver



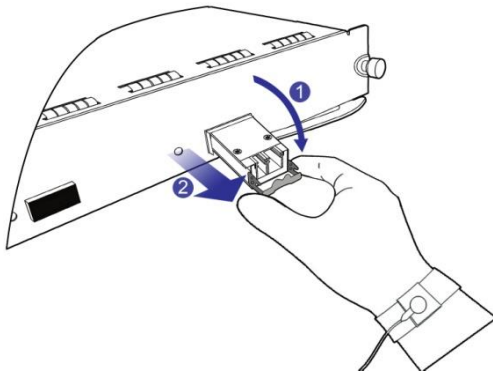
- (2) Connect the XFP transceiver to the network using an optical cable. Select the optical cable with the connector corresponding to the optical port.

- (3) After the optical cable is plugged into the transceiver, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the optical cable is properly connected.

### 6.1.2 Removing the XFP Transceiver

- (1) Disconnect the optical cable from the XFP transceiver.
- (2) Pivot the bail clasp down to the horizontal position. Grasp the XFP transceiver between your thumb and index fingers and slide the transceiver out of the socket, as shown in the following figure.

**Figure 6-2 Removing the XFP Transceiver**



## 6.2 Installing and Removing the SFP, SFP+, or SFP28 Transceiver

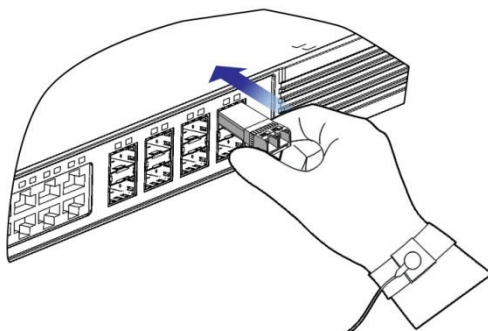
This section elaborates on how to install optical transceivers and AOC transceivers respectively.

### 6.2.1 Installing the SFP, SFP+, or SFP28 Transceiver

Follow the same steps to install the SFP, SFP+, or SFP28 transceiver. The following section takes the SFP28 transceiver as an example.

- (1) Keep the bail clasp aligned in a vertical position. Grasp the SFP28 transceiver between your thumb and index fingers and slide the transceiver into the socket until you feel the transceiver snap into place, as shown in the following figure.

**Figure 6-3 Installing the SFP28 Transceiver**



- (2) Connect the SFP28 transceiver to the network using an optical cable. Select the optical cable with the connector corresponding to the optical port.

- (3) After the optical cable is plugged into the transceiver, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the optical cable is properly connected.

---

**Caution**

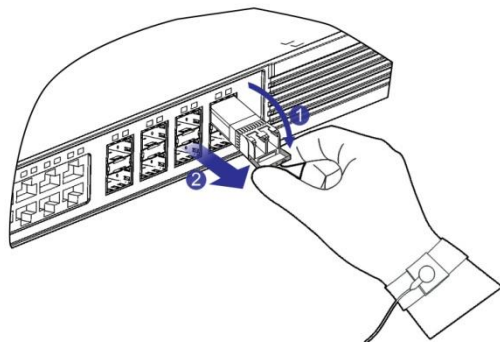
- The BIDI transceivers must be used in pairs. For example, if you install the GE-SFP-SX-SM1310-BIDI in the local port, you must install the GE-SFP-SX-SM1550-BIDI in the peer port.
  - When using the following optical transceivers with short-distance SMF cables, insert an optical attenuator at one end or the other of the link to avoid damage to the optical transceivers: GE-SFP-LH40-SM1310-BIDI & GE-SFP-LH40-SM1550-BIDI, MINI-GBIC-LH40-SM1310, MINI-GBIC-ZX80-SM1550, MINI-GBIC-ZX100-SM1550, SDH155-SFP-LH40-SM1310, and SDH155-SFP-LH80-SM1550.
  - Do not use short-distance optical cables to connect the XG-SFP-ER-SM1550 or XG-SFP-ZR-SM1550 module. Otherwise, optical receiver overload may occur. If the optical power at the receiving end of the optical transceiver is greater than or equal to  $-1$  dBm, insert an optical attenuator at the receiving end to keep the optical power smaller than  $-1$  dBm.
  - The 10G SFP+ transceiver does not support auto-negotiation to 1G.
  - The 25G SFP28 transceiver does not support auto-negotiation to 10G.
- 

## 6.2.2 Removing the SFP, SFP+, or SFP28 Transceiver

Follow the same steps to remove the SFP, SFP+, or SFP28 transceiver. The following section takes the SFP28 transceiver as an example.

- (1) Disconnect the optical cable from the SFP28 transceiver.
- (2) Pivot the bail clasp down to the horizontal position to release the SFP28 transceiver from the socket, as shown in the following figure.

**Figure 6-4 Removing the SFP28 Transceiver**

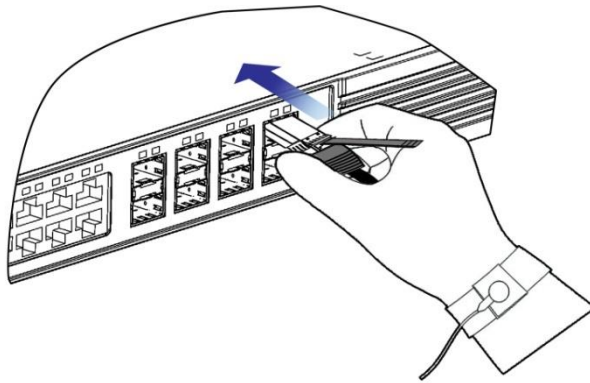


## 6.2.3 Installing the SFP, SFP+, or SFP28 Cables

The SFP, SFP+, or SFP28 transceivers use DAC and AOC cables, and the installation methods of these cables are the same. This section takes the SFP28 AOC as an example.

- (1) You can install the SFP28 AOC with power on. Hold the connector of the SFP28 transceiver with one hand and hold the cable perpendicular to the front panel of the switch with the other hand. Push the transceiver gently into the socket until you feel the transceiver snap into place, as shown in the following figure.



**Figure 6-5 Installing the SFP28 AOC**

- (2) After the transceivers on both ends of the SFP28 AOC are connected, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the transceivers on both ends of the SFP28 AOC are properly connected.

---

**Caution**

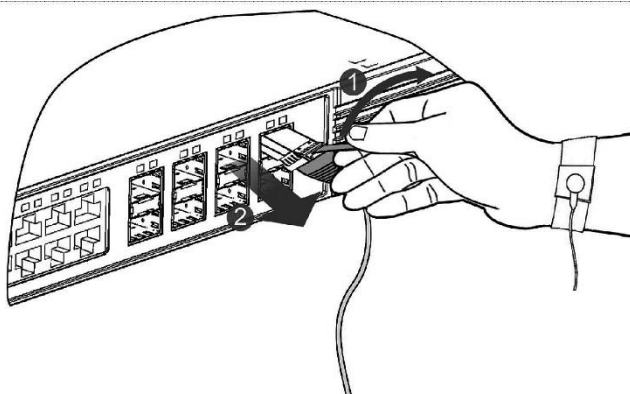
- The SFP, SFP+, and SFP28 connectors at the cable ends must not be inserted in the wrong direction. If the connector does not insert fully in one direction, do not force it; instead, try inserting it in the opposite direction for verification.
- Do not touch the edge connector of the module during installation.
- Do not squeeze, bend, or collapse the cable, which may damage the cable and result in system performance deterioration or data loss.
- After you install the DAC interface, ensure that the bend radius of the DAC is over five times greater than the outer diameter of the DAC. A too-small bend radius may result in excessive tension on the inner core wires of the DAC, potentially damaging the cable.

---

## 6.2.4 Removing the SFP, SFP+, or SFP28 Cables

Follow the same steps to remove the SFP, SFP+, or SFP28 cables. The following section takes the SFP28 AOC as an example.

Hold the cable with one hand, and grasp the pull-tab and gently pull to release the transceiver from the socket with the other hand. Slide the transceiver out of the socket, as shown in the following figure.

**Figure 6-6 Removing the SFP28 AOC Transceiver**

## 6.3 Installing and Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver

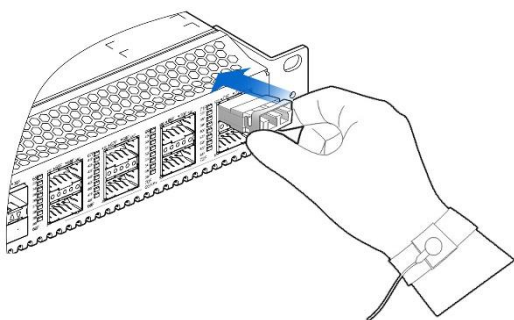
This section elaborates on how to install and remove optical transceivers and AOC transceivers respectively.

### 6.3.1 Installing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver

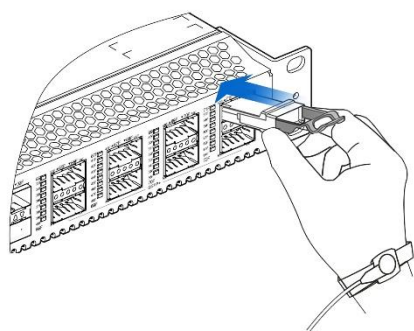
Follow the same steps to install the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 transceiver. The following section takes the QSFP+ transceiver as an example.

- (1) For the QSFP+ transceiver equipped with a bail clasp, keep the bail clasp aligned in a vertical position, grasp the transceiver between your thumb and index fingers, and slide the transceiver into the socket until you feel the transceiver snap into place. For the QSFP+ transceiver equipped with a pull-tab, grasp the pull-tab, line up the transceiver with the socket opening, and gently slide the transceiver into the socket until you feel the transceiver snap into place.

**Figure 6-7 Installing the QSFP+ Transceiver with a Bail Clasp**



**Figure 6-8 Installing the QSFP+ Transceiver with a Pull-Tab**



- (2) Connect the QSFP+ transceiver to the network using an optical cable. Select the optical cable with the connector corresponding to the optical port.
- (3) After the optical cable is plugged into the transceiver, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the optical cable is properly connected.

**Caution**

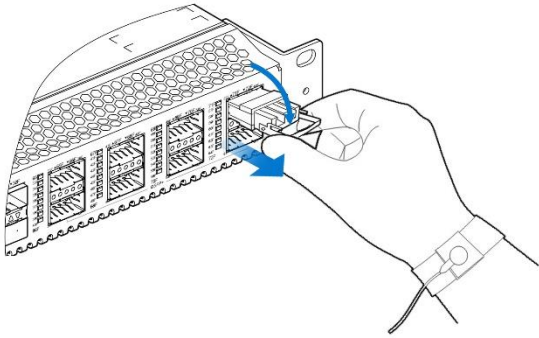
The 100G QSFP+ transceiver does not support auto-negotiation to 40G. The four 25G channels split from a 100G QSFP+ transceiver cannot be interconnected with 10G or 1G transceivers.

### 6.3.2 Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Transceiver

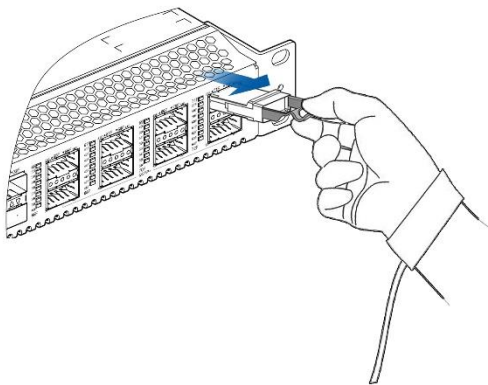
Follow the same steps to remove the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 transceiver. The following section takes the QSFP+ transceiver as an example.

- (1) Disconnect the optical cable from the QSFP+ transceiver.
- (2) For the QSFP+ transceiver equipped with a bail clasp, pivot the bail clasp down to the horizontal position to release the QSFP+ transceiver from the socket. For the QSFP+ transceiver equipped with a pull-tab, grasp the pull-tab and gently pull to release the QSFP+ transceiver from the socket.

**Figure 6-9 Removing the QSFP+ Transceiver with a Bail Clasp**



**Figure 6-10 Removing the QSFP+ Transceiver with a Pull-Tab**

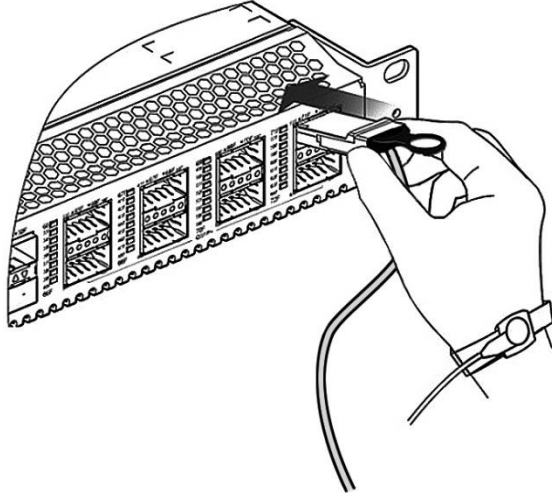


### 6.3.3 Installing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Cables

The QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 transceivers use DAC and AOC cables, and the installation methods of these cables are the same. This section takes the QSFP+ AOC as an example

- (1) You can install the QSFP+ AOC with power on. Hold the connector of the QSFP+ transceiver with one hand and hold the cable perpendicular to the front panel of the switch with the other hand. Push the transceiver gently into the socket until you feel the transceiver snap into place, as shown in the following figure.

**Figure 6-11 Installing the QSFP+ AOC Transceiver**



- (2) After the transceivers on both ends of the QSFP+ AOC transceiver are connected, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the transceivers on both ends of the QSFP+ AOC transceiver are properly connected.

---

**Caution**

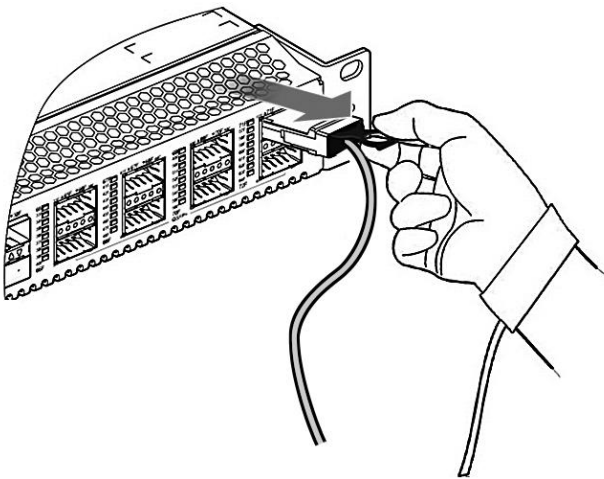
- The QSFP+, QSFP28, QSFP-DD, QSFP56, and QSFP112 connectors at the cable ends must not be inserted in the wrong direction. If the connector does not insert fully in one direction, do not force it; instead, try inserting it in the opposite direction for verification.
- Do not touch the edge connector of the module during installation.
- Do not squeeze, bend, or collapse the cable, which may damage the cable and result in system performance deterioration or data loss.
- After you install the DAC interface, ensure that the bend radius of the DAC is over five times greater than the outer diameter of the DAC. A too-small bend radius may result in excessive tension on the inner core wires of the DAC, potentially damaging the cable.

---

### 6.3.4 Removing the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 Cables

Follow the same steps to remove the QSFP+, QSFP28, QSFP-DD, QSFP56, or QSFP112 AOC. The following section takes the QSFP+ AOC as an example.

Hold the cable with one hand, and grasp the pull-tab and gently pull to release the transceiver from the socket with the other hand. Slide the transceiver out of the socket, as shown in the following figure.

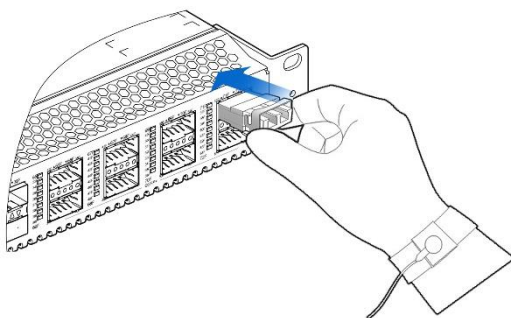
**Figure 6-12 Removing the QSFP+ AOC**

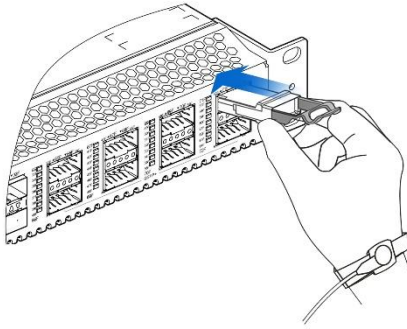
## 6.4 Installing and Removing the OSFP Transceiver

The OSFP transceiver can be installed only in the NIC slot. This section elaborates on how to install and remove the OSFP transceiver.

### 6.4.1 Installing the OSFP Transceiver

- (1) For the OSFP transceiver equipped with a bail clasp, keep the bail clasp aligned in a vertical position, grasp the transceiver between your thumb and index fingers, and slide the transceiver into the socket until you feel the transceiver snap into place. For the OSFP transceiver equipped with a pull-tab, grasp the pull-tab, line up the transceiver with the socket opening, and gently slide the transceiver into the socket until you feel the transceiver snap into place.

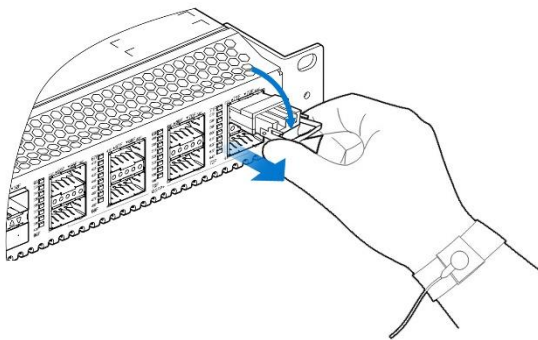
**Figure 6-13 Installing the OSFP Transceiver with a Bail Clasp**

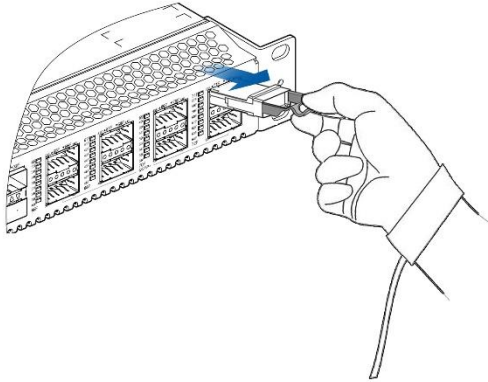
**Figure 6-14 Installing the OSFP Transceiver with a Pull-Tab**

- (2) Connect the OSFP transceiver to the network using an optical cable. Select the optical cable with the connector corresponding to the optical port.
- (3) After the optical cable is plugged into the transceiver, the **LINK/ACT** LED on the switch turns on. Otherwise, check whether the optical cable is properly connected.

### 6.4.2 Removing the OSFP Transceiver

- (1) Disconnect the optical cable from the OSFP transceiver.
- (2) For the OSFP transceiver equipped with a bail clasp, pivot the bail clasp down to the horizontal position to release the OSFP transceiver from the socket. For the OSFP transceiver equipped with a pull-tab, grasp the pull-tab and gently pull to release the OSFP transceiver from the socket.

**Figure 6-15 Removing the OSFP Transceiver with a Bail Clasp**

**Figure 6-16 Removing the OSFP Transceiver with a Pull-Tab**

# 7 Verifying the Installation

After the installation, run the **show interfaces** [ *interface-type interface-number* ] **transceiver** command to display the optical transceiver information.

- **Parameter Description**

*interface-type interface-number*: Type and number of the interface. If this parameter is not specified, the information about the optical transceivers in all interfaces is displayed.

- **Configuration Example**

The following example displays the information about the optical transceiver in interface Gigabitethernet 5/4.

```
Hostname> enable
Hostname# show interfaces gigabitethernet 5/4 transceiver
Transceiver Type:100BASE-SX-SFP
Connector Type:LC
Wavelength(nm):850
Transfer Distance:
50/125 um OM2 fiber
-- 550m
62.5/125 um OM1 fiber
-- 270m
Digital Diagnostic Monitoring: YES
Vendor Serial Number: 101680093602489
```

**Table 7-1 Output Fields of the show interface transceiver Command**

Field	Description
Transceiver Type	Indicates the type of the transmit end.
Connector Type	Indicates the type of the connector.
Wavelength (nm)	Indicates the optical wavelength.
Transfer Distance	Indicates the transmission distance.
Digital Diagnostic Monitoring	Indicates self-diagnosis monitoring.
Vendor Serial Number	Indicates the serial number of the vendor.



## 8 Compliance Warranty

### WEEE Disposal and Recycling Information



All products bearing this symbol are waste electrical and electronic equipment (WEEE as in directive 2012/19/EU) which should not be mixed with unsorted household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment, appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. Please contact the installer or local authorities for more information about the location as well as terms and conditions of such collection points.

### EU Declaration of Conformity



We declare that this equipment is in compliance with the applicable Directives and European Norms, and amendments.

Federal Communications Commission (FCC) Compliance Statement for USA.



Company Name: ENIF PEGASUS S.R.L.  
Tel No.: 0040768511765  
E-mail: dragutagss@gmail.com  
Reg Address: Str. RADOVANU, Nr. 7, Bloc 42, Scara 1, Etaj 5, Apartament 29,  
22882 București Sectorul 2, Romania

### CE DOC

CE: The manufacturer hereby, declares that this equipment is in compliance with the applicable.

Directives and European Norms, and amendments. The full text of the EU declaration of conformity is available at the following internet address: <https://www.ruijenetworks.com/resources/products/?v=EU%20DoC>



FCC: Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and 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 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC: ISSED compliance statement

CAN ICES-3 (B)/NMB-3(B)

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

UKCA compliance statement:



We declare that this equipment is in compliance with the applicable Directives and UK, and amendments.

UKCA DOC:

UKCA: The manufacturer hereby, declares that this equipment is in compliance with the applicable Directives and UK, and amendments. The full text of the UK declaration of conformity is available at the following internet address: <https://www.ruijienetworks.com/resources/products/?v=EU%20DoC>



All information mentioned in Product Label

Information on application (proper usage of product)

Characteristics and parameters

Rules and conditions of safe usage

Rules and conditions of installation, storage, transportation, selling and disposal/recycle

Information on how to repair

Name and location of manufacturer (or authorized person by manufacturer)

Importer and information on how to contact him (for after-sales service)

Manufacturing date of the technical device or how to identify it

EAC marking

Storage condition

TP TC 020/2011 Электромагнитная совместимость технических средств

TP EAЭС 037/2016 Об ограничении применения опасных веществ в изделиях электротехники и радиоэлектроники