

The background of the entire page is a dark, high-contrast photograph of a server room. Rows of server racks with glass doors are visible, receding into the distance. The ceiling has a complex network of pipes and several industrial-style pendant lights hanging from it. The overall tone is dark and technical.

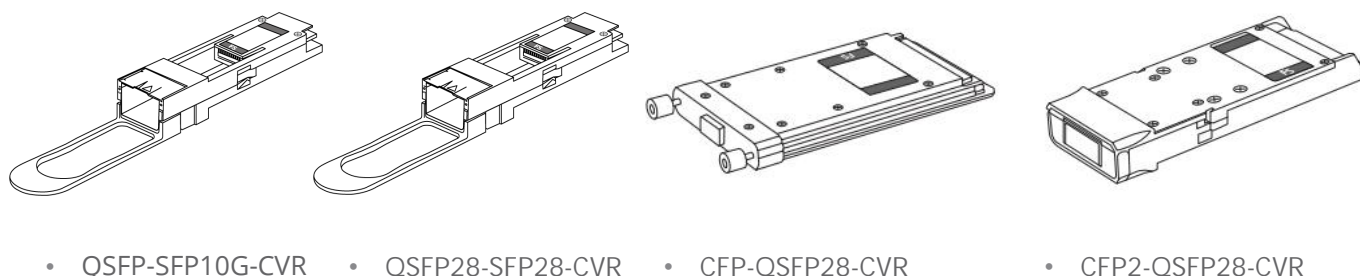
# 10G/40G/100G Converter Transceiver Modules Data Sheet

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## Product overview

10G/40G/100G Converter Module (QSFP28 to SFP28, QSFP+ to SFP+, CFP2 to QSFP28, CFP to QSFP28), enables a smooth cost-effective connection between a single lane transceiver/cable and a quad lane port. (See Figure 1).



**Figure 1.**  
10G/40G/100G Converter Optical modules

## Features and benefits

- Adapter Converter Module
- Low Insertion Loss and Low Crosstalk
- For Data Center and Ethernet Applications
- Hot Pluggable MSA Compliant
- Tested in Targeted Switches for Superior Performance, Quality, and Reliability

**Table 1 Optical transmit and receive specifications**

Product	Description	Architecture	Form Factor	Data Rate	Compliance
QSFP-SFP10G-CVR	40G QSFP+ to 10G SFP+ Adapter Converter Module	4x10	QSFP28 to SFP28	10Gbps	QSFP+ MSA SFF-8436, SFP+ MSA SFF-8431
QSFP28-SFP28-CVR	100G QSFP28 to 25G SFP28 Adapter Converter Module	4x25	QSFP+ to SFP+	25Gbps	QSFP28 MSA SFF-8665, SFP28 MSA SFF-8432
CFP-QSFP28-CVR	100G CFP to QSFP28 Adapter Converter Module	1x100	CFP2 to QSFP28	100Gbps	IEEE802.3ba, CFP MSA Compliant
CFP2-QSFP28-CVR	100G CFP2 to QSFP28 Adapter Converter Module	1x100	CFP to QSFP28	100Gbps	IEEE802.3bm, CFP MSA Compliant

## QSFP-SFP10G-CVR

The QSFP-SFP10G-CVR adapter converter module provides 10G Ethernet connectivity for QSFP+ 40G ports. This module is compliant with QSFP+ MSA SFF-8436 and SFP+ MSA SFF-8431. The built-in MCU enables I2C reading of SFP+ registers by reading QSA registers. The SFP+ receptacle is connected to lane 1 of the QSFP+ connector. The other three channels on the QSFP+ connector are not connected.

## QSFP28-SFP28-CVR

The QSFP28-SFP28-CVR adapter converter module provides 25G Ethernet connectivity for QSFP28 100G ports. This module is compliant with QSFP28 MSA SFF-8665 and SFP28 MSA SFF-8432. The built-in MCU enables I2C reading of SFP28 registers by reading QSA registers. The high-speed data channel of the SFP28 receptacle is connected to lane 1 of the QSFP28 connector. The other three channels on the QSFP28 connector are not connected.

## CFP-QSFP28-CVR

The CFP-QSFP28-CVR adapter converter module provides conversion from CFP to QSFP28 form factors. This module is compliant with IEEE802.3bm and CFP MSA standards. It is suitable for 100G Ethernet, Data aggregation and backplane applications.

## CFP2-QSFP28-CVR

The CFP2-QSFP28-CVR adapter converter module provides conversion from CFP2 to QSFP28 form factors. This module is compliant with IEEE802.3bm and MSA standards. It is suitable for 100G Ethernet, Data aggregation and backplane applications.

## Product Specifications

**Table 2 Adapter with power supply requirements**

Product	Supply voltage	Power consumption	Application
QSFP-SFP10G-CVR	3.13~3.47 V	1.5W without Module	Data Center 10G Ethernet
QSFP28-SFP28-CVR	3.13~3.47 V	1.5W without Module	Data Center 25G Ethernet
CFP-QSFP28-CVR	3.3V	2W	Data Center 100G Ethernet
CFP2-QSFP28-CVR	--	--	Data Center 100G Ethernet

**Table 3 Adapter operating conditions**

Product	Operating case temperature	Operating relative humidity	Storage temperature
QSFP28-SFP28-CVR	-20~85°C	≤85%	-40~85°C
QSFP-SFP10G-CVR	-20~85°C	≤85%	-40~85°C
CFP2-QSFP28-CVR	0~70°C	5~85%	-20~85°C
CFP-QSFP28-CVR	0~70°C	--	--

**Table 4 Mechanical specifications**

Parameter	Product	Weight
Module weight (Max)	QSFP-SFP10G-CVR	640g
	QSFP28-SFP28-CVR	120g
	CFP-QSFP28-CVR	152g
	CFP2-QSFP28-CVR	344.96g

## Warranty

- Standard warranty: 5 years
- For more information for FS Returns & Refunds policy, visit <https://www.fs.com/policies/warranty.html> or [https://www.fs.com/policies/day\\_return\\_policy.html](https://www.fs.com/policies/day_return_policy.html)

## Ordering information

**Table 5 Ordering information**

Part number	Description
QSFP-SFP10G-CVR	40G QSFP+ to 10G SFP+ Adapter Converter Module
QSFP28-SFP28-CVR	100G QSFP28 to 25G SFP28 Adapter Converter Module
CFP-QSFP28-CVR	100G CFP to QSFP28 Adapter Converter Module
CFP2-QSFP28-CVR	100G CFP2 to QSFP28 Adapter Converter Module
CVR-X2-SFP10G	10G X2 to SFP+ Adapter Converter Module

## **| Regulatory and standards compliance**

### **Standards**

- SFF-8436
- SFF-8431
- SFF-8665
- SFF-8432
- IEEE 802.3ba Amendment of IEEE Std 802.3
- IEEE 802.3bm Amendment of IEEE Std 802.3

### **Safety**

- IEC 60825-2 and Comply with 21 CFR 1040.10 and 1040.11

## **| Additional information**

For more information about 100GBASE QSFP28 optics and copper modules, contact your account manager or visit <https://www.fs.com/c/fiber-optic-transceivers-9>

## **| Document history**

New or revised topic	Described in	Date
10G/40G/100G Converter Transceiver Modules Data Sheet	Updated all	3/10/2023

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