

100Gbps QSFP28 to 25G SFP28 Converter

DO-QSFP28-SFP28



Overview

The 100G QSFP28 to 25G SFP28 Adapter (QSA) Module offers 25 Gigabit Ethernet connectivity for Quad Small Form-Factor Pluggable (QSFP28)-only platforms. It allows smooth and cost effective migration to 40 Gigabit Ethernet by providing an option to use lower-speed Enhanced Small Form-Factor Pluggable (SFP28) modules in empty QSFP28 ports or when the other end of the network is running at lower speeds.

QSA Module converts a QSFP28 port into an SFP28 port. With this adapter, customers have the flexibility to use any SFP28 module or cable to connect to a lower-speed port on the other end of the network. This flexibility allows a cost-effective transition to 100Gigabit Ethernet by maximizing the use of high-density 40 Gigabit Ethernet QSFP28 platforms.

This adapter supports all SFP28 optics and cable

reaches. Compatible Switch Models and SFP28 Modules.

Features

- ◆ Trouble-free installation and network bring-up
- ◆ Compliant to industry standards :QSFP MSA SFF-8436 / SFP+ MSA SFF-8431
- ◆ Precision process control for minimization of pair-to-pair skew
- ◆ 1 independent duplex channels operating at 25Gbps/10Gbps/5Gbps
- ◆ All-metal housing for superior EMI performance
- ◆ 100 ohm differential impedance system
- ◆ Operating case temperature: -20 to 85°C
- ◆ Built-in digital diagnostic functions
- ◆ Low insertion loss
- ◆ Low crosstalk
- ◆ Secure latching mechanism
- ◆ RoHS compliant

Applications

- ◆ Telecommunication and wireless infrastructure
- ◆ Low EMI radiation Switches, servers and routers
- ◆ Networked storage systems
- ◆ Data Center networking
- ◆ Test and measurement equipment
- ◆ IEEE-802.3ba
- ◆ MSA SFF-8431
- ◆ 25G Ethernet

Ordering Information

Part Number	Product Description
DO-QSFP28-SFP28	100G QSFP28 to 25G SFP28 Converter Module

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	Vcc	3.15	3.3	3.45	V
Operating Case temperature	Tca	-20		85	°C
Storage Temperature	Tst	-40		125	°C
Humidity	Rh	0		85	%

SFP28 Transceiver Modules

Part Number	Product Description
SFP28-25G-SR	25GBASE-SR SFP28 Module for Multimode Fiber
SFP28-25G-LR	25GBASE-SR SFP28 Module for Multimode Fiber
25G SFP28 Copper Cables	SFP28 Copper Cables (1m to 10m lengths)
25G SFP28 Active Optical Cables	SFP28 Active Optical Cables (1m to 10m lengths)

Pin Descriptions

Pin	Logic	Symbol	Name/Description	Ref.
1		GND	Module Ground	1
2	CML-I	Tx2-	Transmitter inverted data input	
3	CML-I	Tx2+	Transmitter non-inverted data input	
4		GND	Module Ground	1
5	CML-I	Tx4-	Transmitter inverted data input	
6	CML-I	Tx4+	Transmitter non-inverted data input	
7		GND	Module Ground	1
8	LVTTL-I	MODSEIL	Module Select	
9	LVTTL-I	ResetL	Module Reset	
10		VCCRx	+3.3v Receiver Power Supply	2
11	LVC MOS-I	SCL	2-wire Serial interface clock	
12	LVC MOS-I/O	SDA	2-wire Serial interface data	
13		GND	Module Ground	1
14	CML-O	RX3+	Receiver non-inverted data output	
15	CML-O	RX3-	Receiver inverted data output	
16		GND	Module Ground	1
17	CML-O	RX1+	Receiver non-inverted data output	
18	CML-O	RX1-	Receiver inverted data output	
19		GND	Module Ground	1
20		GND	Module Ground	1
21	CML-O	RX2-	Receiver inverted data output	
22	CML-O	RX2+	Receiver non-inverted data output	
23		GND	Module Ground	1
24	CML-O	RX4-	Receiver inverted data output	

25	CML-O	RX4+	Receiver non-inverted data output	
26		GND	Module Ground	1
27	LVTTTL-O	ModPrsL	Module Present, internal pulled down to GND	
28	LVTTTL-O	IntL	Interrupt output, should be pulled up on host board	2
29		VCCTx	+3.3v Transmitter Power Supply	2
30		VCC1	+3.3v Power Supply	
31	LVTTTL-I	LPMMode	Low Power Mode	
32		GND	Module Ground	1
33	CML-I	Tx3+	Transmitter non-inverted data input	
34	CML-I	Tx3-	Transmitter inverted data input	
35		GND	Module Ground	1
36	CML-I	Tx1+	Transmitter non-inverted data input	
37	CML-I	Tx1-	Transmitter inverted data input	
38		GND	Module Ground	1

Notes:

1. GND is the symbol for signal and supply (power) common for QSPF modules. All are common within the QSPF module and all module voltages are referenced to this potential otherwise noted. Connect these directly to the host board signal common ground plane
2. cc Rx, Vcc1 and Vcc Tx are the receiver and transmitter power suppliers and shall be applied concurrently. Recommended host board power supply filtering is shown below. Vcc Rx, Vcc1 and Vcc Tx may be internally connected within the QSPF transceiver module in any combination. The connector pins are each rated for a maximum current of 500mA.

MSA compliant Connector

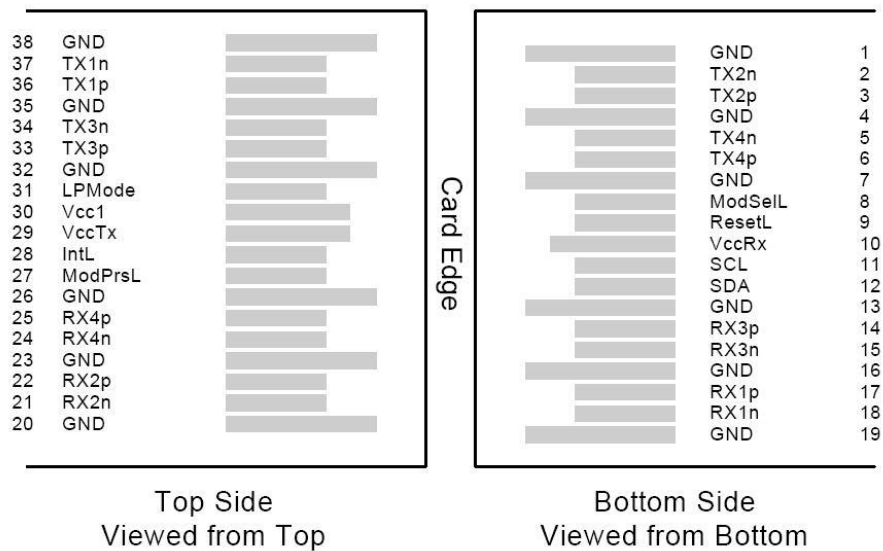


Figure1. Electrical Pin-out Details

Mechanical Dimensions

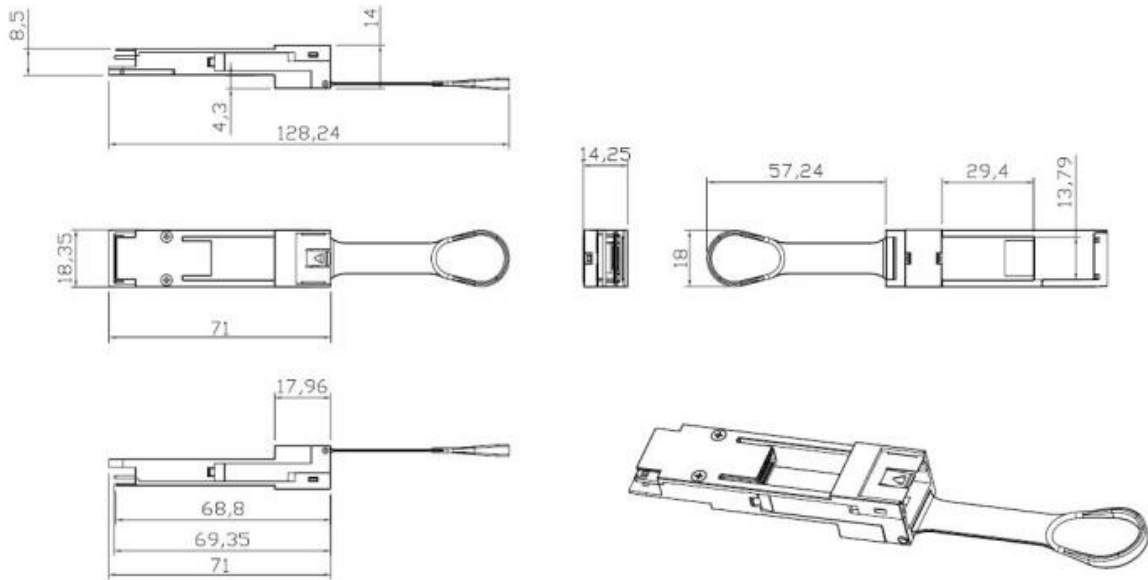


Figure2. Mechanical Specifications