



100G QSFP28 / QSFP+ to SFP28 / SFP+ Adapter

Part Number: FQ28-KV-SPP-01



Overview

FQ28-KV-SPP-01 is a QSFP28 / QSFP+ to SFP28 / SFP+ Adapter (QSA) module offering 25G / 10G Ethernet connectivity for Quad Small Form-Factor Pluggable platforms. It allows smooth and cost-effective migration to 100G / 40G Ethernet by providing an option to use lower-speed Enhanced Small Form-Factor Pluggable (25G SFP28 / 10G SFP+) modules in empty 100G QSFP28 / 40G QSFP+ ports when the other end of the network is running at lower speeds.

Applications

- Data Servers, Routers, Switches
- Data Center Networking
- Network Storage Systems
- InfiniBand Trade Association (IBTA)

Features

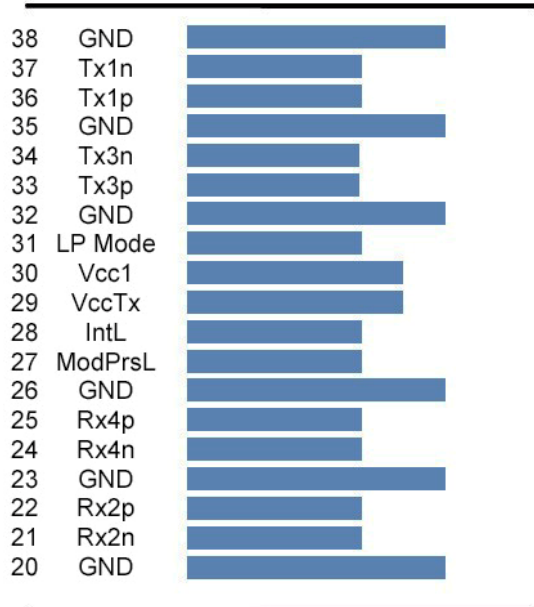
- Compliant with SFF-8436 QSFP+ and SFF-8636 QSFP28 MSA
- Compliant with SFF-8431 SFP+ and SFF-8402 SFP28 MSA
- 1 independent duplex channel (CH01) operating at 25Gbps, also support for 2.5Gbps, 5Gbps and 10Gbps data rates
- Trouble-free installation and network bring-up
- Low insertion loss
- Low crosstalk
- Secure latching mechanism
- All-metal housing for superior EMI performance
- RoHS compliant

Recommended Operating Conditions

Parameters	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	T _{OP}	-40	-	+85	°C
Case Operating Temperature	T _{OP}	-40	-	+85	°C
Relative Humidity (non-condensation)	RS			85	%
Supply Voltage	V _{CC}	+3.13	+3.3	+3.47	V

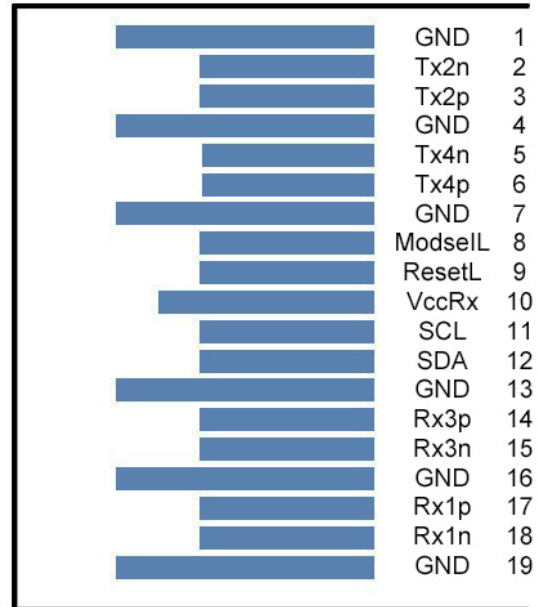


QSFP+/QSFP28 Pin Assignment



Top Side
Viewed From Top

Module Card Edge



Bottom Side
Viewed From Bottom

QSFP+/QSFP28 Pin Description

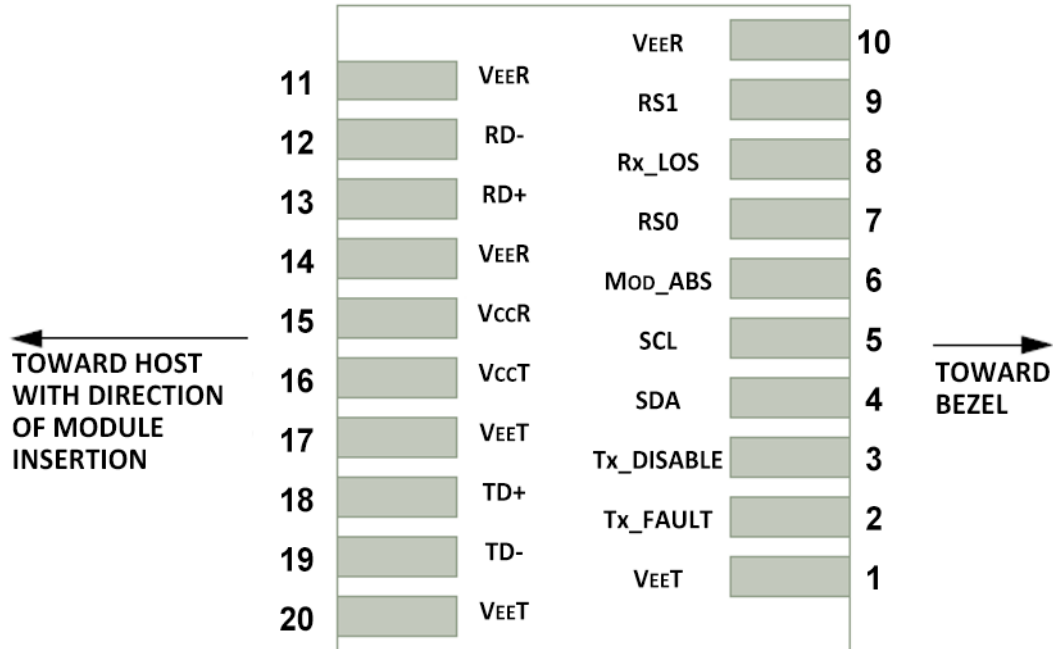
Pin	Logic	Name	Function / Description
1		GND	Module Ground
2	CML-I	Tx2n	Transmitter Inverted Data Input
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input
4		GND	Module Ground
5	CML-I	Tx4n	Transmitter Inverted Data Input
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input
7		GND	Module Ground
8	LVTLL-I	ModSelL	Module Select
9	LVTLL-I	ResetL	Module Reset
10		VccRx	+3.3V Power Supply Receiver
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data



13		GND	Module Ground
14	CML-O	Rx3p	Receiver Non-Inverted Data Output
15	CML-O	Rx3n	Receiver Inverted Data Output
16		GND	Module Ground
17	CML-O	Rx1p	Receiver Non-Inverted Data Output
18	CML-O	Rx1n	Receiver Inverted Data Output
19		GND	Module Ground
20		GND	Module Ground
21	CML-O	Rx2n	Receiver Inverted Data Output
22	CML-O	Rx2p	Receiver Non-Inverted Data Output
23		GND	Module Ground
24	CML-O	Rx4n	Receiver Inverted Data Output
25	CML-O	Rx4p	Receiver Non-Inverted Data Output
26		GND	Module Ground
27	LVTLL-O	ModPrsL	Module Present
28	LVTLL-O	IntL	Interrupt
29		VccTx	+3.3V Power Supply Transmitter
30		Vcc1	+3.3V Power Supply
31	LVTLL-I	LPMode	Low Power Mode
32		GND	Module Ground
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input
34	CML-I	Tx3n	Transmitter Inverted Data Input
35		GND	Module Ground
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input
37	CML-I	Tx1n	Transmitter Inverted Data Input
38		GND	Module Ground



SFP+/SFP28 Pin Assignment



Host PCB SFP+ pad assignment top view

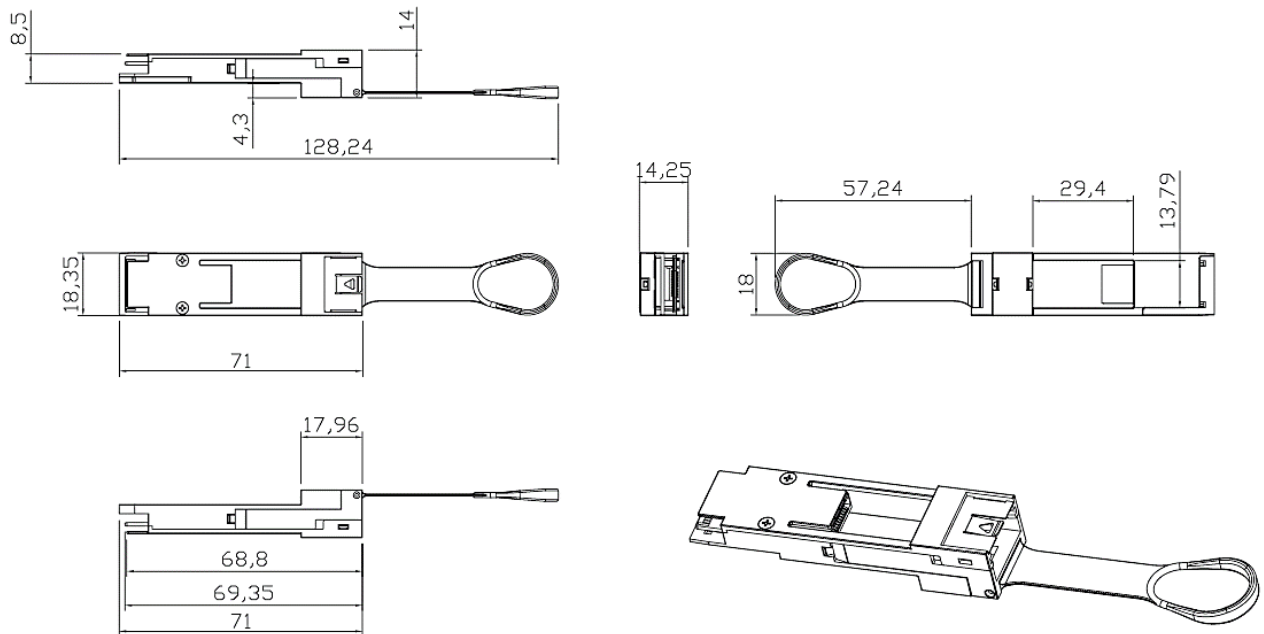
SFP+/SFP28 Pin Description

Pin	Name	Function / Description
1	VEET	Transmitter Ground
2	Tx_FAULT	Transmitter Fault Indication
3	Tx_DISABLE	Transmitter Disable – Turns off transmitter laser output
4	SDA	2-wire Serial Interface Data Line (SDA: Serial Data Signal)
5	SCL	2-wire Serial Interface Clock (SCL: Serial Clock Signal)
6	MOD_ABS	Module Absent, connected to VeeT or VeeR in the module
7	RS0	Rate Select 0, optionally controls SFP+ module receiver
8	Rx_LOS	Receiver Loss of Signal Indication
9	RS1	Rate Select 1, optionally controls SFP+ module transmitter
10	VEER	Receiver Ground
11	VEER	Receiver Ground
12	RD-	Receiver Inverted Data output, AC coupled



13	RD+	Receiver Non-Inverted Data output, AC coupled
14	VEER	Receiver Ground
15	VCCR	Receiver 3.3V Power Supply
16	VcCT	Transmitter 3.3V Power Supply
17	VEET	Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input, AC coupled
19	TD-	Transmitter Inverted Data Input, AC coupled
20	VEET	Transmitter Ground

Mechanical Dimensions



(All Dimensions are ± 0.20 mm Unless Otherwise Specified, Unit: mm)

Ordering Information

Part No.	DDM	Temp.
FQ28-KV-SPP-01	Supported by Transceiver	-40~85°C