Sourcelight | Your Total Optical Solution

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SHENZHEN SOURCELIGHT TECHNOLOGY CO.,LTD.

Datasheet

40Gbps QSFP to 10G SFP+ Converter

SL-QSFP-SFP10G

high-density 40 Gigabit Ethernet QSFP platforms. This adapter supports all SFP+ optics and cable reaches. Compatible Switch Models and SFP+ 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 10Gbps/2.5Gbps/5Gbps
♦ All-metal housing for superior EMI performance
♦ 100 ohm differential impedance system
♦ Operating case temperature: -20 to 85℃
♦ Built-in digital diagnostic functions
♦ Low insertion loss
♦ Low crosstalk
♦ Secure latching mechanism
♦ RoHS compliant

Overview

The Sourcelight QSFP+ to SFP+ Adapter (QSA) Module offers 10 Gigabit Ethernet connectivity for Quad Small Form-Factor Pluggable (QSFP)-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 (SFP+) modules in empty QSFP ports or when the other end of the network is running at lower speeds.

QSA Module converts a QSFP port into an SFP+ port. With this adapter, customers have the flexibility to use any SFP+ 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 40Gigabit Ethernet by maximizing the use of

Applications

♦ Data Servers/Routers/Switches
♦ Networked storage systems
♦ Data Center networking
♦ InfiniBand Trade Association (IBTA)
♦ IEEE-802.3ba
♦ MSA SFF-8431

Ordering Information

Part Number	Product Description
SL-QSFP-SFP10G	40G QSFP+ to 10G SFP+ Converter Module

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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	ºC
Storage Temperature	Tst	-40		125	ºC
Humidity	Rh	0		85	%

SFP+ Transceiver Modules

Part Number	Product Description
SFP-10G-SR	10GBASE-SR SFP+ Module for Multimode Fiber
SFP-10G-LR	10GBASE-SR SFP+ Module for Multimode Fiber
SFP-10G-ER	10GBASE-LR SFP+ Module for Single-Mode Fiber
SFP-10G-ZR	10GBASE-ZR SFP+ Module for Single-Mode Fiber
10G SFP+ Copper Cables	SFP+ Copper Cables (1m to 10m lengths)
10G SFP+ Active Optical Cables	SFP+ 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	2
9	LVTTL-I	ResetL	Module Reset	2
10		VCCRx	+3.3v Receiver Power Supply	
11	LVCMOS-I	SCL	2-wire Serial interface clock	2
12	LVCMOS-I/O	SDA	2-wire Serial interface data	2
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	LVTTL-O	ModPrsL	Module Present, internal pulled down to GND	
28	LVTTL-O	IntL	Interrupt output, should be pulled up on host board	2
29		VCCTx	+3.3v Transmitter Power Supply	
30		VCC1	+3.3v Power Supply	
31	LVTTL-I	LPMode	Low Power Mode	2
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. Module circuit ground is isolated from module chassis ground within the module.
2. Open collector; should be pulled up with 4.7k – 10k ohms on host board to a voltage between 3.15Vand 3.6V.
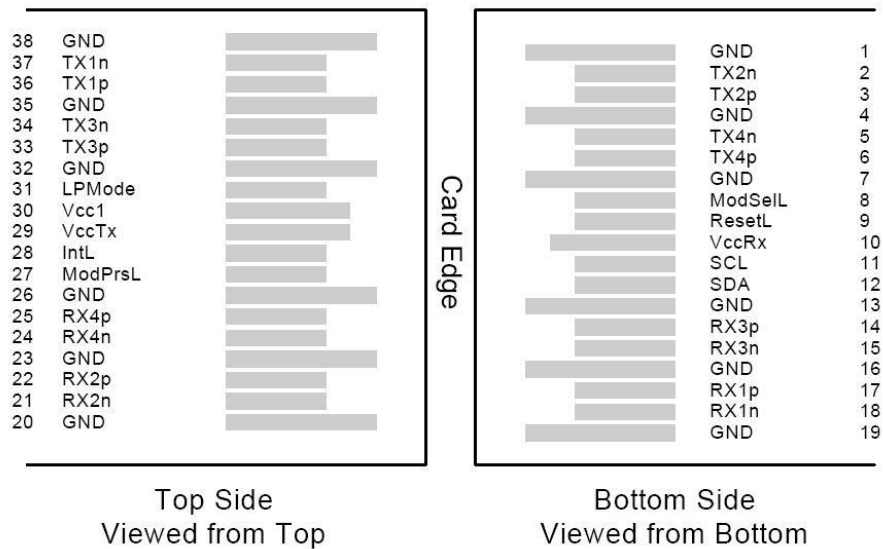
MSA compliant Connector

38 GND	GND 1
37 TX1n	TX2n 2
36 TX1p	TX2p 3
35 GND	GND 4
34 TX3n	TX4n 5
33 TX3p	TX4p 6
32 GND	GND 7
31 LPMode	ModSelL 8
30 Vcc1	ResetL 9
29 VccTx	VccRx 10
28 IntL	SCL 11
27 ModPrsL	SDA 12
26 GND	GND 13
25 RX4p	RX3p 14
24 RX4n	RX3n 15
23 GND	GND 16
22 RX2p	RX1p 17
21 RX2n	RX1n 18
20 GND	GND 19

Card Edge

Top Side
Viewed from Top

Bottom Side
Viewed from Bottom

Figure1. Electrical Pin-out Details
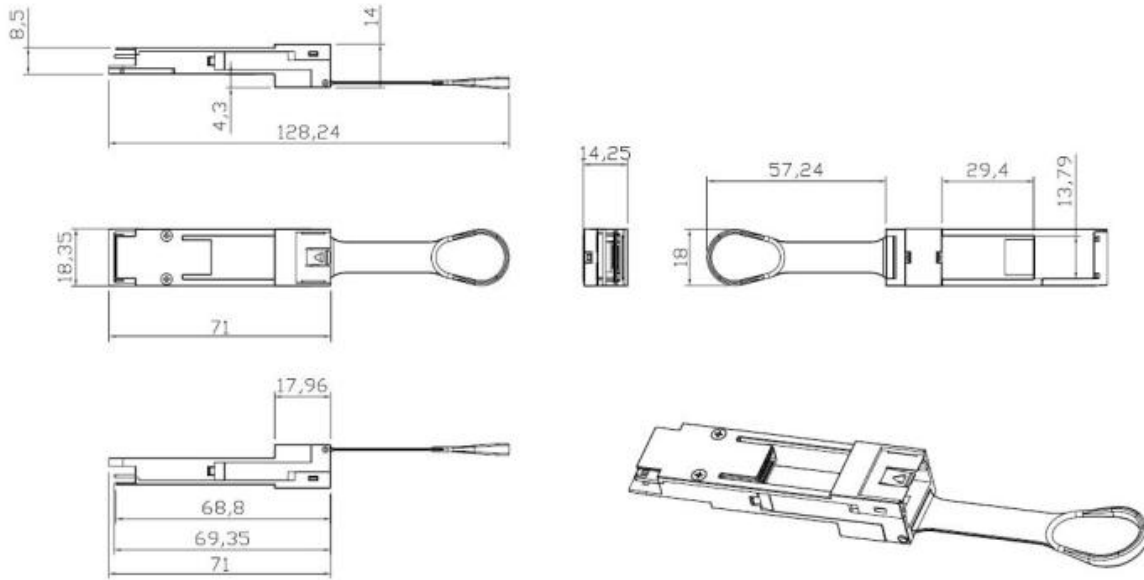
Mechanical Dimensions

Figure2. Mechanical Specifications

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