





#### QSFP-SFP+28

### 40Gbps QSFP+ to 10G SFP+ Adapter

- > Trouble-free installation and network bring-up
- Compliant to industry standards: SFF-8665/ SFF-8432
- > Precision process control for minimization of pair-to-pair skew
- ➤ 1 independent duplex channels operating at 25Gbps and 10Gbps
- Good EMI performance
- > 100ohm differential impedance system
- ➤ Operating case temperature: -40 to 85°C
- Low insertion loss, Low crosstalk
- > RoHS compliant





## **Applications**

- > Low EMI radiation Switches, servers and routers
- Telecommunication and wireless infrastructure
- > Test and measurement equipment
- Networked storage systems
- Data Center networks
- > Storage area networks

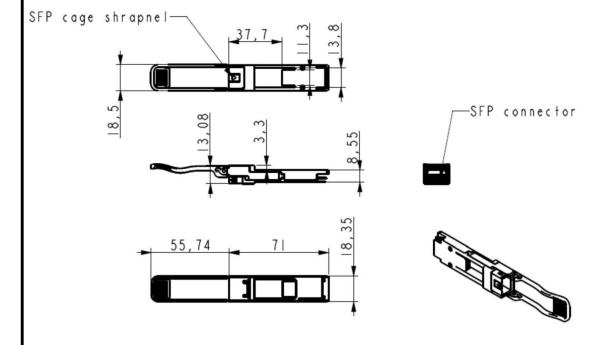
### **General Description**

The QSFP formfactor to SFP formfactor Adapter (QTSA) Module offers 25Gigabit or 10 Gigabit Ethernet connectivity for Quad Small Form-Factor Pluggable (QSFP)-only platforms. It allows smooth and cost-effective migration to 100 Gigabit Ethernet or 40 Gigabit Ethernet by providing an option to use lower-speed Small Form-Factor Pluggable (SFP) or Enhanced Small Form-Factor Pluggable (SFP+) modules in empty QSFP ports or when the other end of the network is running at lower speeds.

A list of SFP+ or SFP28 transceiver modules that can be plugged into the QTSA module is provided in Table 1.

Item	Product name	Product description
1	SFP+ SR	SFP+ SR Module for Multimode Fiber
2	SFP+ LR	SFP+ LR Module for Single-Mode Fiber
3	SFP28 SR	25GBASE-SR SFP28 Module for Multimode Fiber
4	SFP28 LR	25GBASE-LR SFP28 Module for Single-Mode Fiber
5	AOC	SFP28 and SFP+ AOC Optical Cables
6	DAC	SFP28 and SFP+ Copper Cables (1-m to 5-m lengths)

# **Mechanical Dimensions**



# **Pin Descriptions**

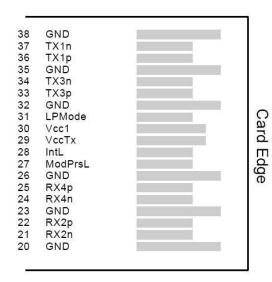
Pin	Logic	Symbol	Name/Description	Ref.
1		GND	Module Ground	1
2	CML-I	Tx2-	Transmitter inverted data input	
3	CML-I	Tx2+	Transmitter non-inverted data input	
4		GND	Module Ground	1
5	CML-I	Tx4-	Transmitter inverted data input	
6	CML-I	Tx4+	Transmitter non-inverted data input	
7		GND	Module Ground	1
8	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

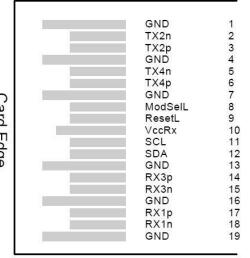
#### Notes:

- 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



Top Side Viewed from Top

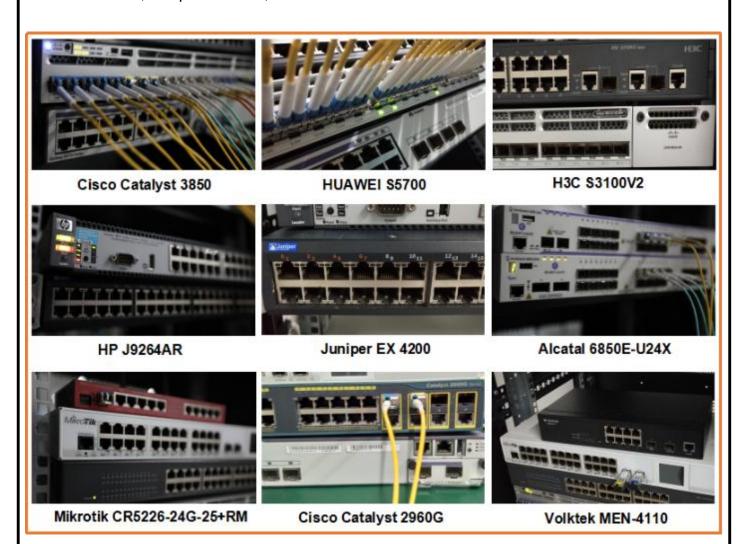


Bottom Side Viewed from Bottom

### **Compatibility Test**

In order to ensure the product compatibility, our products will be tested on the switch before shipment. Our modules can compatible with many mainstream brand switches, such as Cisco, Juniper, Extreme, Brocade, IBM, H3C, HP, Huawei, D-Link, Mikrotik, ZTE, TP-Link...

Our test equipment: VOLKTEK MEN-4110, HP 2530-8G, CRS226-24G-25+RM, Catalyst 2960G Series, Catalyst 3850 XS 10G SFP+, Catalyst 3750-E Series, HUAWEI S5700Series, H3C S3100V2 Series, Juniper-EX4200, etc.



### **Product Production Process**

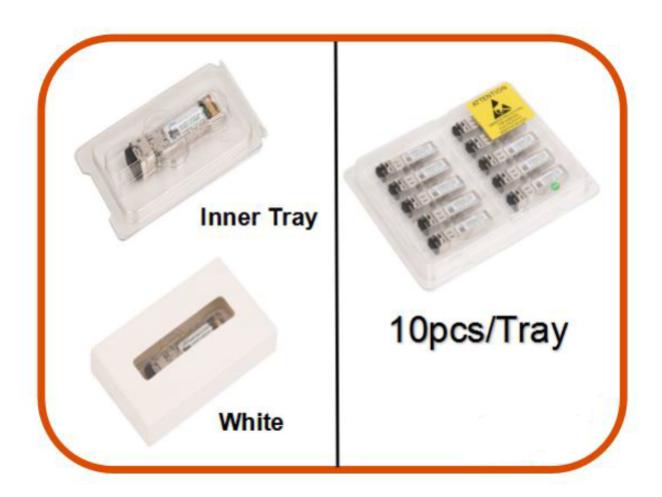
# **Quality Assurance**

Continuous introduction of new equipment, produced by strict standards, strict quality inspection, to guarantee the high quality standard of each product.



## **Packaging**

LIGHTX provides two kinds of packaging, 10pcs/Tray and individual package.



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