



Data-Sheet

QSFP+ 40G Base Optical Transceiver

JTOPTICS® 40GBASE-SR4 150m QSFP+ designed for use in 40 Gigabit per second links over multimode fiber. They are compliant with the QSFP+ MSA and IEEE 802.3ba 40GBASE-SR4 and breakout to 4 10GBASE-SR. Digital diagnostics functions are available via an I2C interface, including Tx and Rx power monitoring. The optical transceiver is compliant per the RoHS-6 Directive 2011/65/EU. 40G QSFP+ Transceiver adopts 12 Fibers MTP/MPO Male connectors, reaching a link up to 150m over OM4 MMF (100m over OM3).

- Four-channel full-duplex transceiver module
- Hot Pluggable QSFP+ form factor
- Maximum link length of 100m on OM3 & 150m on OM4 MMF
- Maximum power dissipation < 1.5W
- Reliable VCSEL array technology
- Built-in digital diagnostic functions
- Commercial temperature range 0°C to 70°C
- Single 1x12 MPO receptacle
- RoHS-6 compliant



40G QSFP+ Transceiver 40GBASE-SR4,
850nm, MPO-12, MMF
JT-40G-QSFPP-MPO-SR4



40G QSFP+ Transceiver 40GBASE-LR4
1310nm, 10KM, LC, SMF
JT-40G-QSFPP-MPO-LR4

JTOPTICS® QSFP+ 40GBASE-LR4 is designed for use in 40GBASE Ethernet throughput up to 20km over single mode fiber (SMF) using a wavelength of 1310nm via duplex LC connectors. This transceiver is compliant with SFF-8436 QSFP+ MSA and RoHS standards. Digital diagnostics functions are available via the I2C interface as specified by CMIS4.0. The transceiver is RoHS 2.0 compliant and lead-free per Directive 2011/65/EU. 40GBASE Ethernet throughput up to 10km over single mode fiber (SMF) using a wavelength of 1310nm via duplex LC connectors. This easy to install, hot swappable transceiver is suitable to be used in various applications.

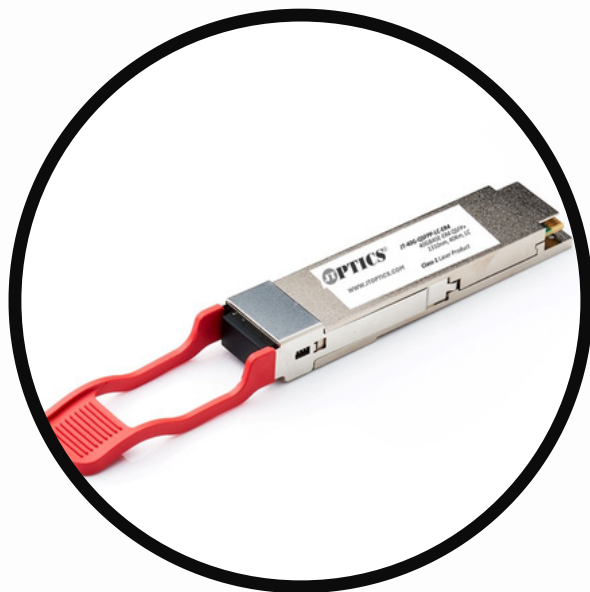
- Hot-pluggable QSFP+ form factor
- Supports 41.2 Gb/s aggregate bit rates
- Power dissipation < 3.5W
- RoHS-6 compliant (lead-free)
- Commercial temperature range 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 10km on Single Mode Fiber (SMF)
- Uncooled 4x10Gb/s CWDM transmitter
- XLPPI electrical interface
- Duplex LC receptacles
- Built-in digital diagnostic functions

JTOPTICS® 40G SR4 QSFP+ transceiver is a high performance module for short-range multi-lane data communication and interconnection applications with digital diagnostics functions. The transceiver integrates four data lanes in each direction with 4x10.3125Gbps bandwidth. Each lane can operate at 10.3125Gbps up to 100 m using OM3 fiber or 150 m using OM4 fiber. These modules are designed to operate over multimode fiber systems using a nominal wavelength of 850nm.

- 4 Channels Full-Duplex Transceiver Modules
- Transmission Data Rate Up to 10.3125Gbps per Channel
- Max. Link Length of 100m on OM3 Multimode & 150m OM4
- MPO12 Connector Receptacle
- Hot Pluggable QSFP form Factor
- Compliant with QSFP+ Electrical MSA SFF- 8436
- Low Power Consumption <1.5W
- Built-in Digital Diagnostic Functions
- 3.3V Power Supply
- Operating Case Temperature -40 °C to +8
- RoHS Compliant (lead Free)



40G QSFP+ Transceiver 40GBASE-LR4
850nm, 150m, MPO, SMF
JT-40G-QSFP-MPO-LR4



40G QSFP+ Transceiver 40GBASE-ER4
1310nm, 40km, DOM, LC, SMF
JT-40G-QSFP-LC-ER4

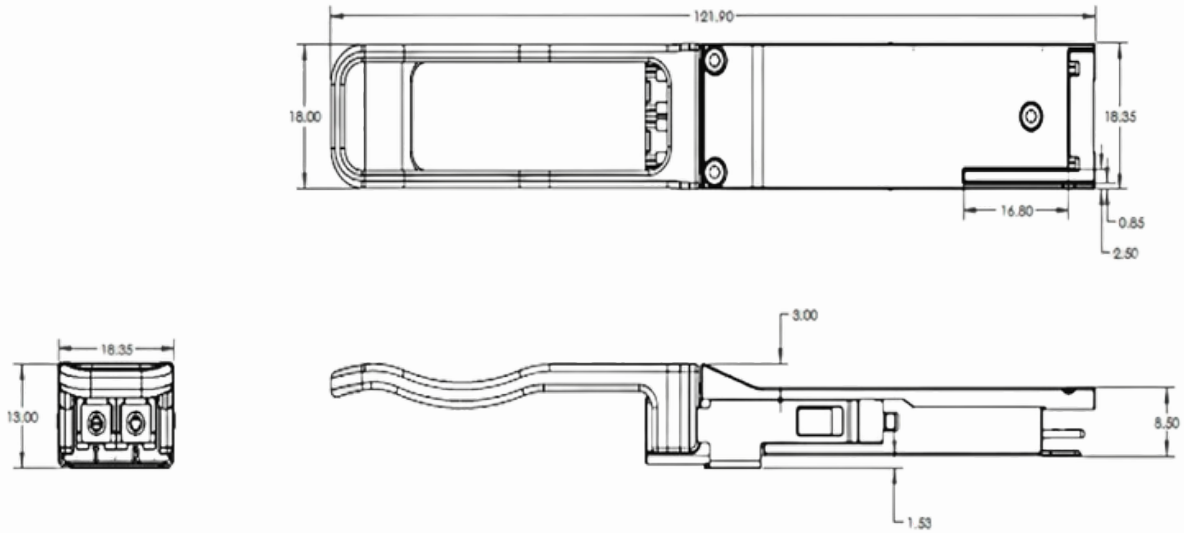
JTOPTICS® 40Gbps transceiver module is for use in 40 Gigabit Ethernet links and 4x10G OTN client interfaces over single mode fiber. They are compliant with the QSFP+ MSA, IEEE 802.3bm 40GBASE-ER4 and OTU3 requirements specified in ITU-T Recommendation G.695 as adapted to a 40km interface. Digital diagnostics functions are available via an I2C interface, as specified by the QSFP+ MSA. The optical transceiver is RoHS compliant per Directive 2011/65/EU. JTOPTICS QSFP+ Optical Transceiver Module is designed for use in 40GBASE Ethernet throughput up to 40km over single mode fiber (SMF) using a wavelength of 1310nm via duplex LC connectors.

- Hot-pluggable QSFP+ form factor
- Supports 41.3 Gb/s aggregate bit rates
- Power dissipation < 3.5W
- 18.5 dB link insertion loss budget
- RoHS-6 compliant
- Commercial case temperature range 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 40km over SMF
- Uncooled 4x10Gb/s CWDM transmitter and APD Receiver
- XLPP electrical interface
- Duplex LC receptacles
- Built-in digital diagnostic functions, including Tx/Rx power monitoring.

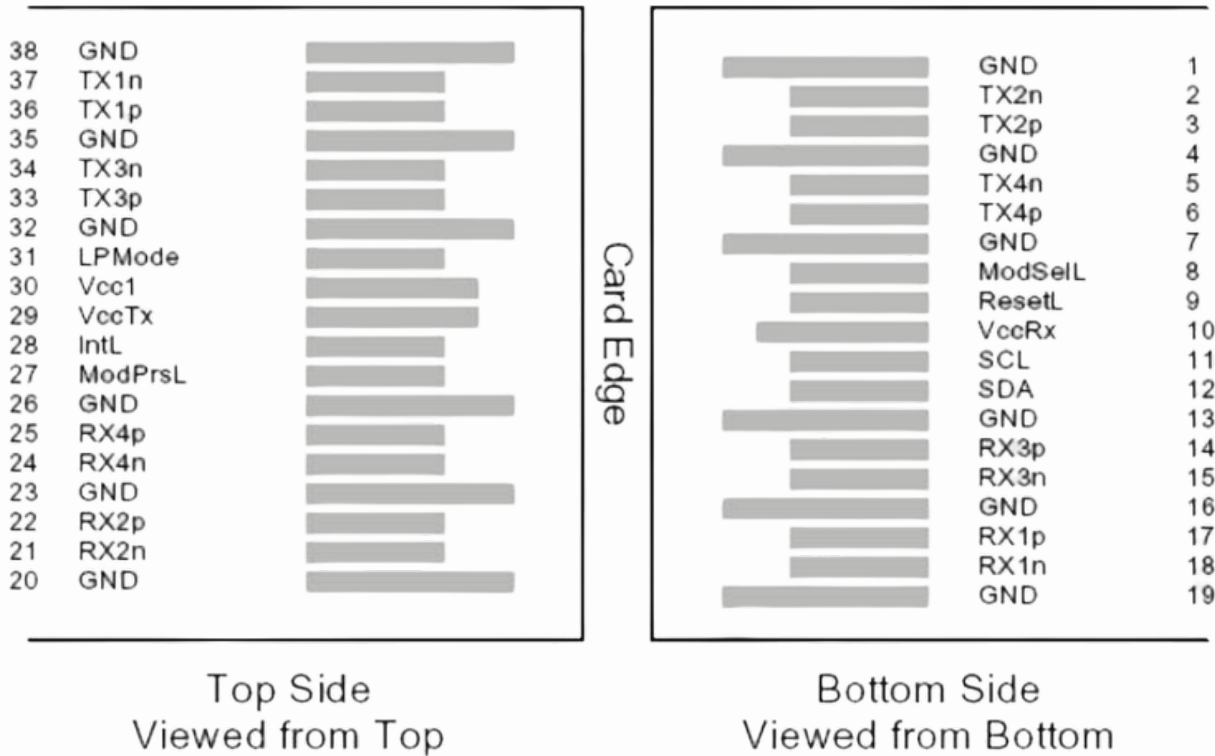
Technical Specifications

Part No	JT-40G-QSFPP-MPO-SR4	JT-40G-QSFPP-MPO-LR4	JT-40G-QSFPP-LC-LR4	JT-40G-QSFPP-LC-ER4
Description	40GBASE-SR4 QSFP+ 850nm 150m	40G QSFP+ Transceiver 4 x 10GBASE-LR QSFP+ 1310nm 10km	40GBASE-LR4 QSFP+ 1310nm 10km	40GBASE-ER4 QSFP+ 1310nm 40km
Form Factor	QSFP+	QSFP+	QSFP+	QSFP+
Max Data Rate	41.25Gbps	41.25Gbps	41.25Gbps	41.25Gbps
Connector	MTP/MPO-12	MTP/MPO-12	Duplex LC	Duplex LC
Wavelength	850nm	1310nm	1310nm	1310nm
Transceiver Type	VCSEL	DFB	DFB CWDM	DFB CWDM
Receiver Type	PIN	PIN	PIN	APD
Tx Power (Average)	-7.1 ~ 1.9dBm	-6 ~ -1dBm	-7.0 ~ +2.3	-2.7 ~ +4.5
Receiver Sensitivity (Average)	≤-10.3	≤-14.4	≤-11.0	≤-21.2
Operating Temperature	0 to 70°C (32 to 158°F)	0 to 70°C (32 to 158°F)	0 to 70°C (32 to 158°F)	0 to 70°C (32 to 158°F)
Power Consumption	<1.5W	≤2.5W	≤3.5W	≤3.5W
Modulation Format	NRZ	NRZ	NRZ	NRZ
Receiver Overload	2.4dBm	0.5dBm	2.3dBm	-4.5dBm
Extinction Ratio	>3dB	>4.5dB	>3.5dB	>5.5dB
Protocols	IEEE 802.3ba, QSFP+ MSA, SFF-8436, SFF-8636	IEEE 802.3ba, QSFP+ MSA, SFF-8436, SFF-8636	IEEE 802.3ba, QSFP+ MSA, SFF-8436, SFF-8636	IEEE 802.3ba, QSFP+ MSA, SFF-8436, SFF-8636
DDM/DOM	Supported	Supported	Supported	Supported
Media	MMF	MMF	SMF	SMF
Max Cable Distance	150m@OM4 100m@OM3	10km	10km	40km
Applications	40GBASE-SR4 40G Ethernet Breakout to 4 x 10GBASE-SR Ethernet Proprietary interconnect	IEEE 802.3ba 40G Ethernet InfiniBand Transmission at 4ch SDR, DDR and QDR	40GBASE-LR4 40G Ethernet	40GBASE-ER4 40G Ethernet OTN
warranty	3 Years	3 Years	3 Years	3 Years

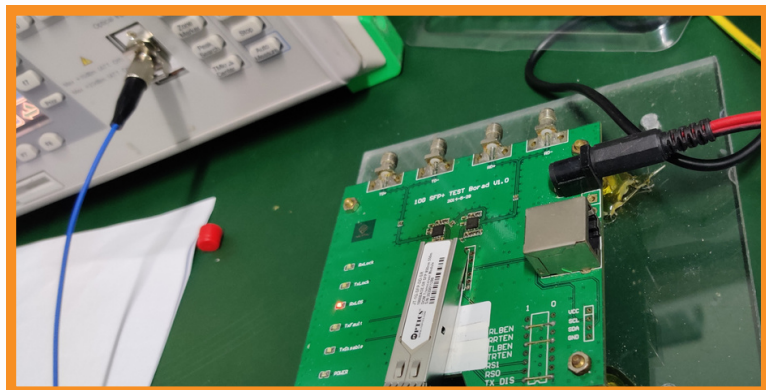
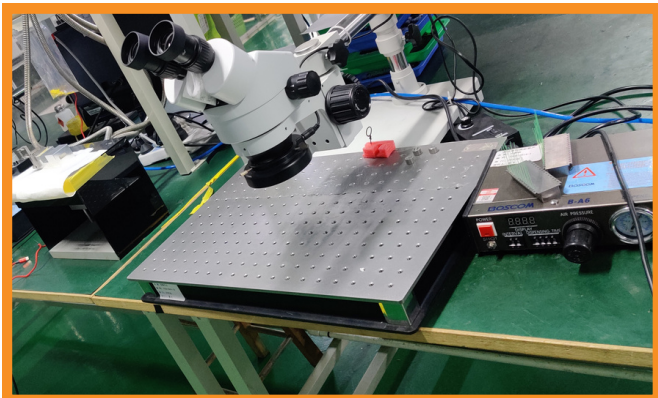
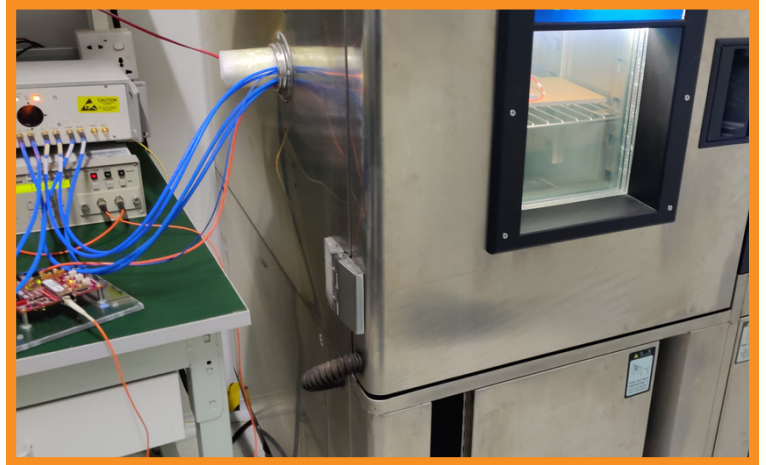
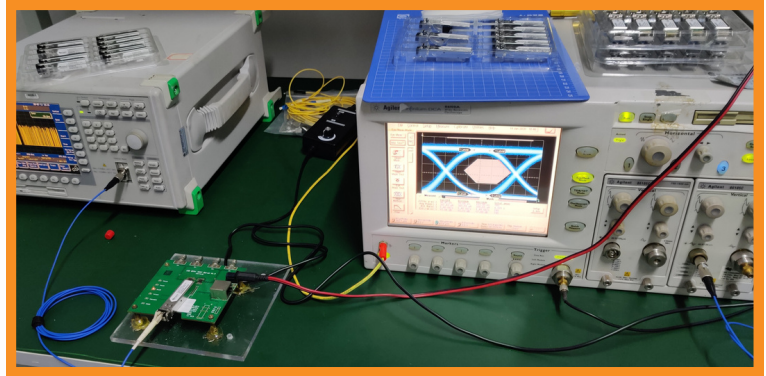
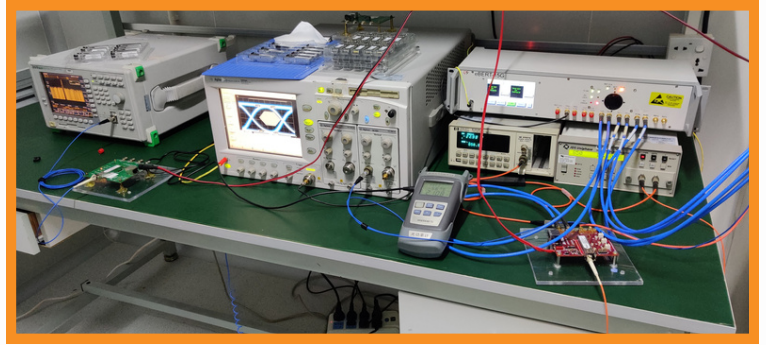
Mechanical Dimension



Electrical Pin Configuration



Testing



About JT

In the dynamic realm of technology and innovation, the emergence of **Jayani Technologies Limited** has been nothing short of a saga marked by ingenuity, resilience, and a steadfast commitment to excellence. Originating as Jayani Technologies LLP in 2011 in the vibrant city of Mumbai, India, the company has evolved into a trailblazer in its domain. This narrative unfolds against the backdrop of the company's expansion into Hong Kong, a strategic move signaling its intent to conquer new horizons.

Established in 2011, Jayani Technologies (**JTOPTICS**[®]) was conceived as a response to the evolving technological landscape, recognizing the need for cutting-edge solutions that marry innovation with reliability. The Mumbai headquarters became the crucible for the company's early endeavor, a melting pot of talent and vision that propelled Jayani Technologies into the forefront of its industry and emerged as a leading manufacturer and supplier of cutting-edge solutions in the fields of optical Fiber, data center, networking, and electric vehicle components.

From its inception, the company distinguished itself by its unwavering commitment to client satisfaction, a commitment that became the cornerstone of its success. Jayani Technologies quickly became synonymous with technological prowess and an unwavering dedication to delivering solutions that transcended conventional boundaries.

JTOPTICS[®] has developed and produced many active and passive interconnection and connectivity products suitable for different networks, aiming to become a one-stop device integration solution provider in the open optical network field, products include MPO Cables, AOC cable, passive DAC cable, optical transceivers, optical modules & subsystems, active & passive optical components, and high-density cabling products.

Vision

Our vision is to be recognized by clients as trustful a trusted business partner whose mission is to help our clients by offering state-of-the-art products and services.

Mission

Our mission is to catalyze the success of its clients by providing unparalleled technological solutions. The company envisions itself as a catalyst for positive change, aiming to reshape industries through innovation, integrity, and a relentless pursuit of excellence.

Our Clients



ciena

ADVA[™]
Optical Networking

colt

CISCO

Coriant

MAVENIR



इसरो isro

JUNIPER
NETWORKS

TEJAS[®]
NETWORKS

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

HITACHI

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