



Data-Sheet

QSFP56 200G Base Optical Transceiver

JTOPTICS® 200GBASE-SR4 100m QSFP56 optical transceivers are specifically crafted for deployment in 200Gigabit Ethernet connections across OM3/OM4/OM5 multimode fiber environments. These transceivers adhere to the QSFP MSA standards and comply with the IEEE 802.3cd 200GBASE-SR4 specifications. Digital diagnostics functionalities can be accessed through the I2C interface, following the CMIS V4.0 specifications.

- Hot-pluggable QSFP56 form factor
- Built-in 200G PAM4 DSP
- Supports 212.5Gb/s aggregate bit rates
- Supports 103.125Gb/s aggregate bit rates if required
- Low power dissipation <5W
- RoHS-6 compliant (lead-free)
- Commercial case temperature range of 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 70m over OM4 & 100m over OM5 MMF
- Uncooled 4 channels 850nm VCSEL array
- 4 channels PIN photo detector array
- 200GAUI-4 electrical interface
- MPO-12 Connector receptacle
- CMIS V4.0 compliant
- Built-in digital diagnostic functionality



200G QSFP-56 Transceiver 200GBASE-SR4, 850nm, MPO-12, MMF
JT-200G-QSFP56-SR4



200G QSFP-56 Transceiver 200GBASE-DR4 1310nm, 500M, MPO-12, SMF
JT-200G-QSFP56-DR4

JTOPTICS® 200Gbps-DR4 QSFP56 Optical Transceiver modules are specifically engineered for deployment in 200 Gigabit Ethernet connections over single-mode fiber. These modules adhere to the standards set by the QSFP MSA and comply with the IEEE 802.3bs 200GBASE-DR4 specification. Digital diagnostics functions are accessible through the I2C interface in accordance with CMIS V4.0 specifications.

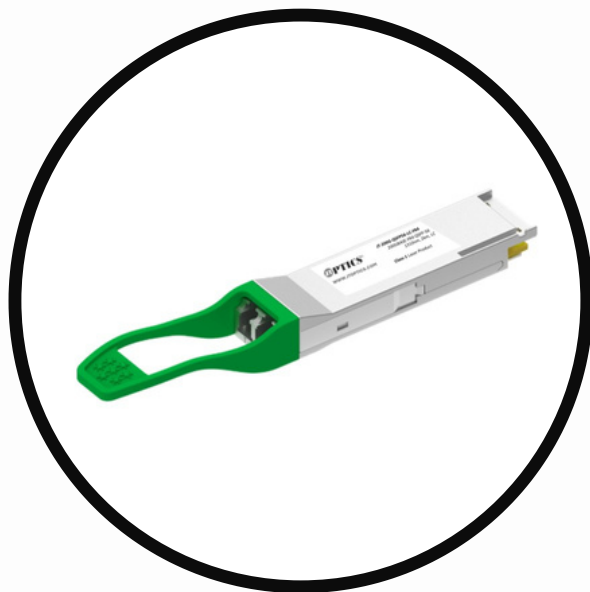
- Hot-pluggable QSFP56 form factor
- Built-in 200G PAM4 DSP
- Supports 212.5Gb/s aggregate bit rates
- Low power dissipation < 5.5W
- RoHS 2.0 compliant (lead-free)
- Commercial case temperature range of 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 500m over SMF
- Uncooled 4 channels 1310nm DML
- MPO-12/APC connector receptacle
- 4 channels PIN photo detector array
- 200GAUI-4 electrical interface
- CMIS V4.0 compliant
- Built-in digital diagnostic functionality

JTOPTICS® 200Gb/s-LR4 transceiver module is meticulously crafted for deployment in 200 Gigabit Ethernet connections over SMF28 single-mode fiber. Compliant with the QSFP MSA and IEEE 802.3bs 200GBASE-LR4 specifications, each lane operates at a bit rate of 53.125 Gb/s, contributing to an aggregate data rate of 212.3 Gb/s. Utilizing Wavelength Division Multiplexing (WDM), the transceiver efficiently channels data to the transmit port of the LC connectors.

- Hot-pluggable QSFP56 form factor
- Built-in 200G PAM4 DSP
- Supports 212.5Gb/s aggregate bit rates
- Supports 103.1Gb/s aggregate bit rates if required
- Maximum power dissipation < 7.5W
- RoHS2.0 compliant (lead-free)
- Commercial case temperature range of 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 10km on SMF
- Cooled 4 channels EA-DFB TOSA
- 4 channels PIN ROSA
- 200GAUI-4 electrical interface
- Compliant with CMIS V4.0 Note1
- Built-in digital diagnostic functionality



200G QSFP56 Transceiver 200GBASE-LR4 1310nm, 20km, DOM, LC, SMF
JT-200G-QSFP56-LR4



200G QSFP56 Transceiver 200GBASE-DR4 1310nm, 2km, LC, SMF
JT-200G-QSFP56-FR4

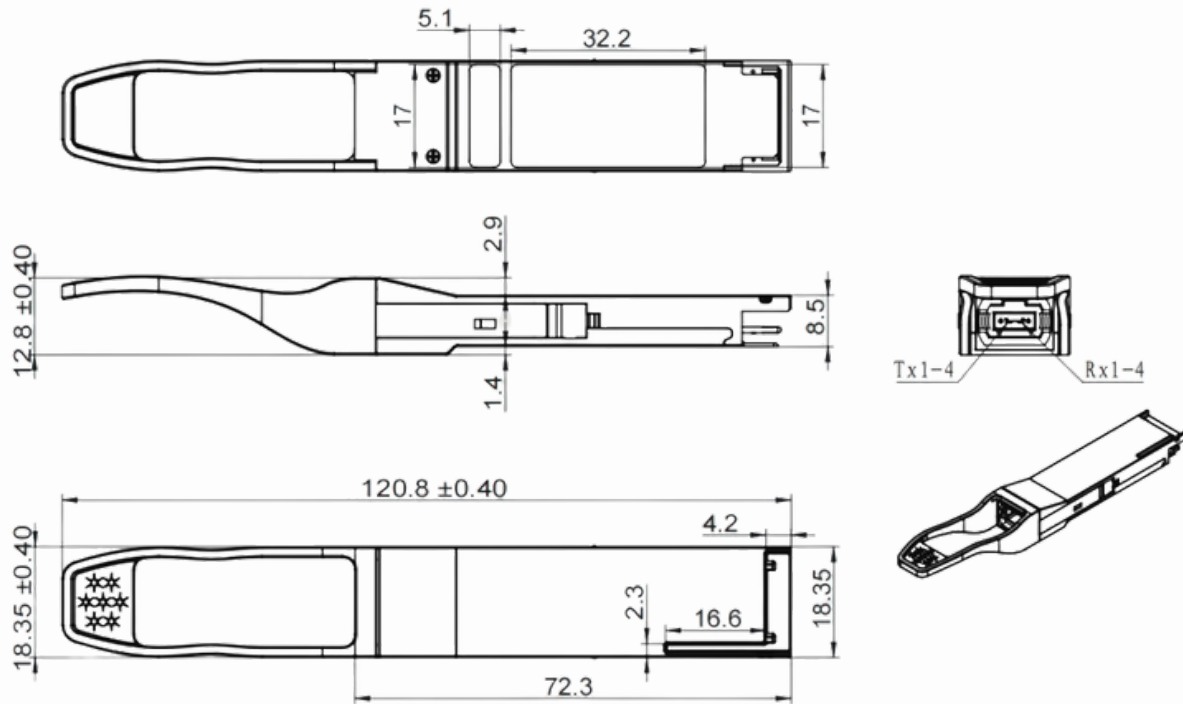
JTOPTICS® QSPFDD 200GBASE-FR4 is engineered for utilization in 200 Gigabit Ethernet connections across single-mode fiber networks. This module is capable of converting 4-channel 53.125 Gbps electrical data into 4-channel optical signals, subsequently multiplexing them into a single channel for 212.5 Gbps optical transmission. On the receiving end, it performs optical de-multiplexing of a 212.5 Gbps input into 4-channel signals, converting them back to 4-channel output electrical data.

- Hot-pluggable QSFP56 form factor
- Built-in 200G PAM4 DSP
- Supports 212.5Gb/s aggregate bit rates
- Low power dissipation < 6W
- Commercial case temperature range of 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 2km on SMF
- 4 channels DML TOSA (uncooled)
- 4 channels PIN ROSA
- 4 CWDM lanes MUX/DEMUX design
- LC duplex connector
- 200GAUI-4 electrical interface
- Compliant with CMIS 4.0
- I2C management interface
- Built-in digital diagnostic functionality
- RoHS(lead free)

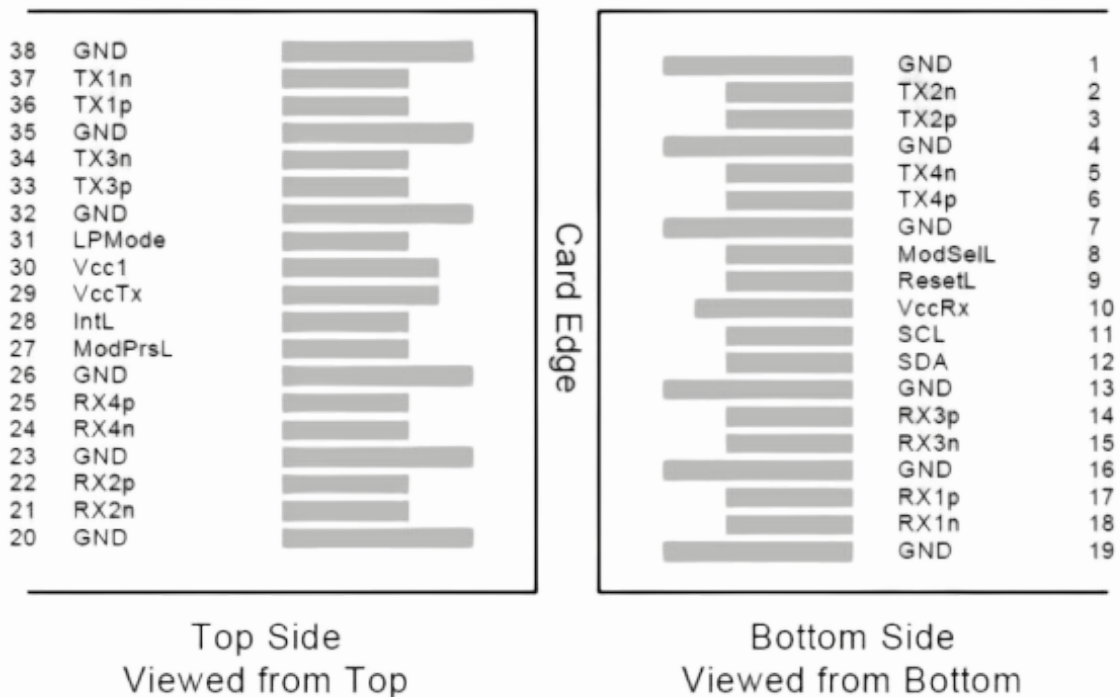
Technical Specifications

Part No	JT-200G-QSFP56-MPO-SR4	JT-200G-QSFP56-MPO-DR4	JT-200G-QSFP56-LC-FR4	JT-200G-QSFP56-LC-LR4
Description	200GBASE-SR4 QSFP56 850nm 100m	200GBASE-DR4 QSFP56 1310nm 2km	200GBASE-FR4 QSFP56 1310nm 2km	200GBASE-LR4 QSFP56 1310nm 10km
Form Factor	QSFP56	QSFP56	QSFP56	QSFP56
Max Data Rate	200Gbps	200Gbps	200Gbps	200Gbps
Connector	MTP/MPO-12 UPC	MTP/MPO-12 APC	Duplex LC	Duplex LC
Wavelength	850nm	1310nm	1310nm	1310nm
Transceiver Type	VCSEL	DML	DML	DFB
Receiver Type	PIN	PIN	PIN	PIN
Tx Power (Average Each lane)	-6.0 ~ +4.0 dBm	-5.1 ~ 3.0 dBm	-4.2 ~ 4.7 dBm	-3.4 ~ 5.3 dBm
Receiver Sensitivity (Average each Lane)	-7 dBm	-6.6 dBm	-6.6 dBm	-7.7 dBm
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	≤5W	≤5.3W	≤7W	≤8W
Modulation Format	PAM4	PAM4	PAM4	PAM4
Receiver Overload	4 dBm	4 dBm	5.7 dBm	6.3 dBm
Extinction Ratio	>3.5dB	>3.5dB	>3.5dB	>3.5dB
Protocols	IEEE 802.3bs, QSFP56 MSA, SFF-8665, SFF-8636	IEEE 802.3bs, QSFP56 MSA, SFF-8661	IEEE 802.3cd, IEEE 802.3bs, QSFP56 MSA, SFF-8665, SFF-8024, SFF-8679	IEEE 802.3bs, QSFP56 MSA, SFF-8661
DDM/DOM	Supported	Supported	Supported	Supported
Media	MMF	SMF	SMF	SMF
Max Cable Distance	70m@OM3/100m@OM4	500m	2km	10km
Applications	IEEE 802.3cd 200GBASE-SR4 Ethernet (PAM4) IEEE 802.3bm 100GBASE-SR4 Ethernet	IEEE 802.3bs 200GBASE-LR4 Ethernet (PAM4) 5G Back-haul Data center	200GBASE-FR4 Ethernet (PAM4) Data Center Network	IEEE 802.3bs 200GBASE-LR4 Ethernet (PAM4) 5G Back-haul Data center
Warranty	3 Years	3 Years	3 Years	3 Years

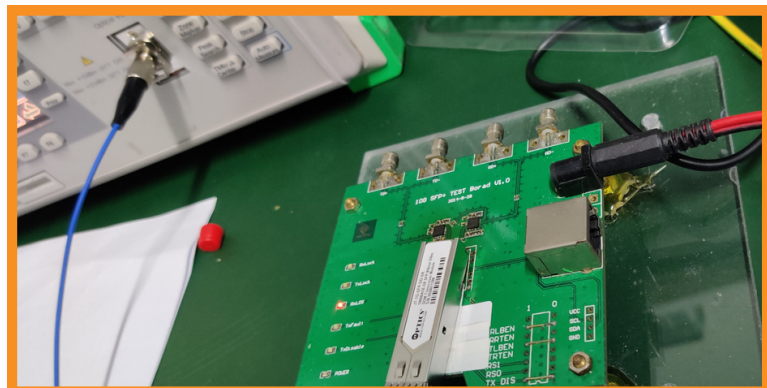
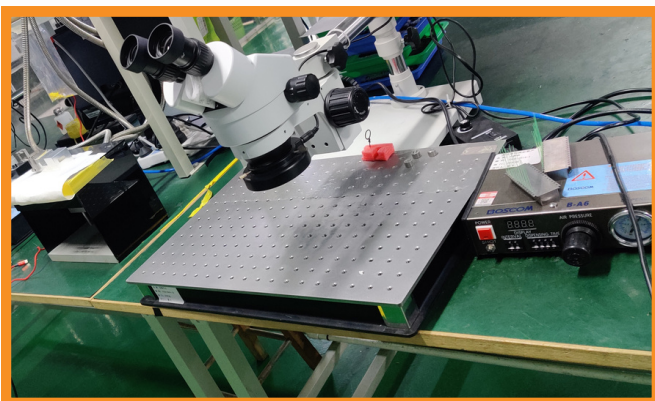
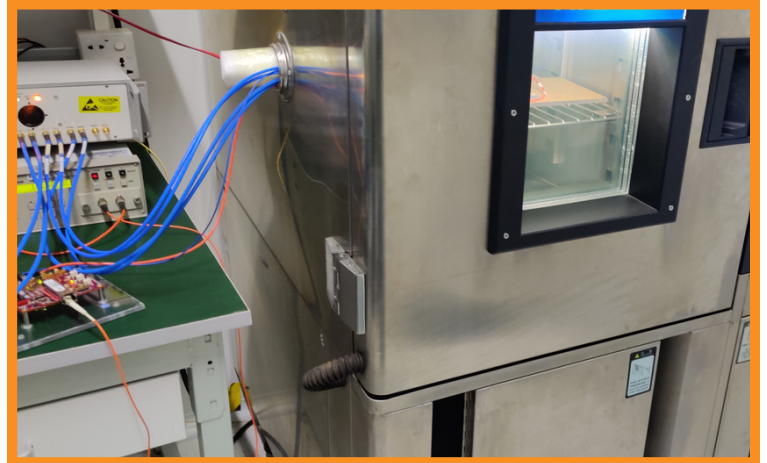
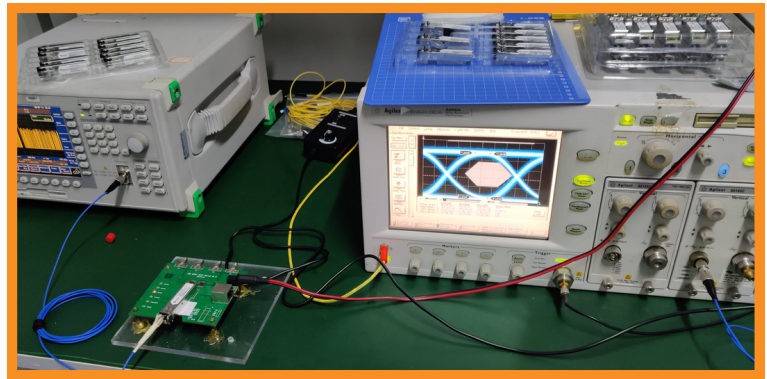
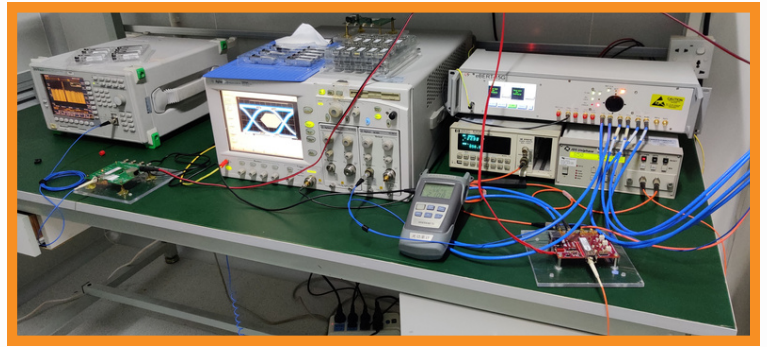
Mechanical Dimension



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

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NETWORKS

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NETWORKS

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

HITACHI

एनटीपीसी
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