

HIGH-SPEED OPTICAL TRANSCEIVERS

200G PAM4 QSFP56 SR4

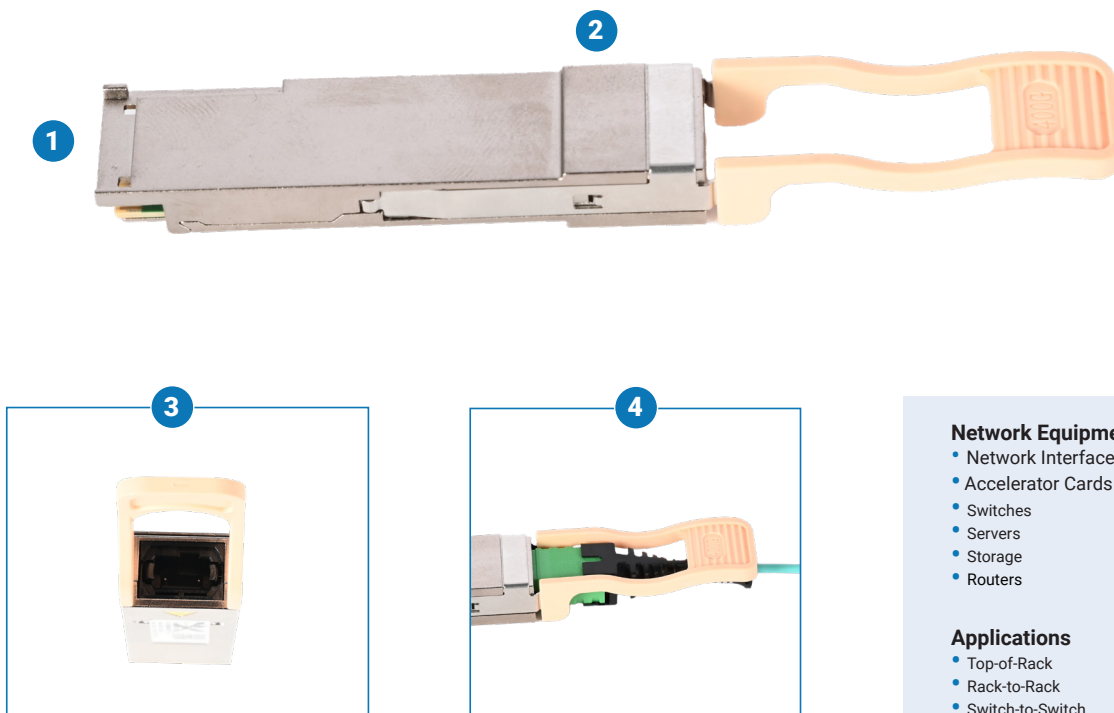
Regional Availability – Global



Siemon's 200G PAM4 DSP¹ transceivers are designed to meet and exceed industry performance standards. Each transceiver supports 50G per lane and is offered in a QSFP56 form factor. Our DSP-based design is optimized for a significantly lower pre-FEC² BER³, achieving error-free post-FEC performance. These transceivers support either Ethernet or InfiniBand™ HDR protocols and a data center reaches of SR4 (Multimode).

Siemon PAM4 transceivers complement Siemon's portfolio of high-speed fiber and copper connectivity solutions in addition to our End-to-End fiber solutions. Our transceivers are supported by expert technical resources, ensuring reliable connectivity for today's most demanding networks.

1: DSP – Digital Signal Processor
2: FEC – Forward Error Correction
3: BER – Bit Error Rate



1. Error-Free Post-FEC Performance

2. MSA Compliant Connectors

3. Base-8 MPO-12 APC

4. Multimode Fiber

Network Equipment

- Network Interface Card (NIC)
- Accelerator Cards
- Switches
- Servers
- Storage
- Routers

Applications

- Top-of-Rack
- Rack-to-Rack
- Switch-to-Switch
- Switch-to-Server
- AI/ML Clusters

Protocol Support

- Ethernet 200GbE
 - 200GAUI-4
 - 100GAUI-2
- InfiniBand HDR

Standards Compliance

- IEEE 802.3cd
- SFF-8636
- SFF-8661
- SFF-8679
- IEC 60825-1
- Class 1 Laser 21 CFR 1040.10 & 1040.11
- RoHS / REACH

QSFP56 Transceiver Product Information

ABSOLUTE RATINGS

REACH TYPE	SYMBOL	SR4
STORAGE TEMPERATURE	T _c	-40 to 85°C (-40 to 185°F)
RELATIVE HUMIDITY	RH	5 to 85%
SUPPLY VOLTAGE (MAX)	V _{cc}	3.6 V

OPERATIONAL SPECIFICATIONS

REACH TYPE	SYMBOL	SR4
OPERATING CASE TEMPERATURE	T _{opr}	0 to 70°C (32 to 158°F)
SUPPLY VOLTAGE (TYP)	V _{cc}	3.3 V
POWER CONSUMPTION (MAX)	P _{MAX}	3.5 W (4-Lanes) 2.5 W (2-Lanes)
DATA RATE PER ELECTRICAL LANE	-	50G
SIGNALING RATE PER ELECTRICAL LANE	SRL _{EL}	26.5625 GBd
DATA RATE PER OPTICAL LANE	-	50G
SIGNALING RATE PER OPTICAL LANE	SRL _{OP}	26.5625 GBd
WAVELENGTH	λ _c	850 nm
POWER BUDGET ¹ (MIN)	PB	2.0 dB
TRANSMIT OUTER OPTICAL MODULATION AMPLITUDE (OMA _{OUTER}) PER LANE	T _{OMA}	-4.5 to 3.0 dBm
RECEIVER SENSITIVITY (OMA _{OUTER}) PER LANE (MAX)	S _{OMA}	-6.5 dBm
TRANSMITTER AND DISPERSION EYE CLOSURE (TDECQ) PER LANE (MAX)	TDECQ	4.5 dB
DAMAGE THRESHOLD / RECEIVER OVERLOAD (MIN)	DT	5.0 dBm
EXTINCTION RATIO (MIN)	ER	3.0 dB
BIT ERROR RATIO (BER)	BER	Pre-FEC BER = 1E-8 Post-FEC BER = 1E-15
OPERATING DISTANCE (MAX)	L _{MAX}	70m (OM3) 100m (OM4)

1. Power Budget (MIN) is calculated using the minimum value from the following equation for each end of a given channel. Optical Channel Loss should not exceed this value.

$$\text{Minimum Power Budget} = \left(\text{Minimum Transmit } OMA_{OUTER \text{ per Lane}} \right) - \left(\text{Maximum Receiver Sensitivity } OMA_{OUTER \text{ per Lane}} \right)$$

MECHANICAL PROPERTIES

CONNECTOR TYPE	QSFP56
INSERTION FORCE (MAX)	60N
EXTRACTION FORCE (MAX)	30N
RETENTION FORCE (MAX)	90N
DURABILITY (MIN)	250 Cycles

Additional information available upon request. Please contact our Technical Sales Group if you require further information.

Ordering Information

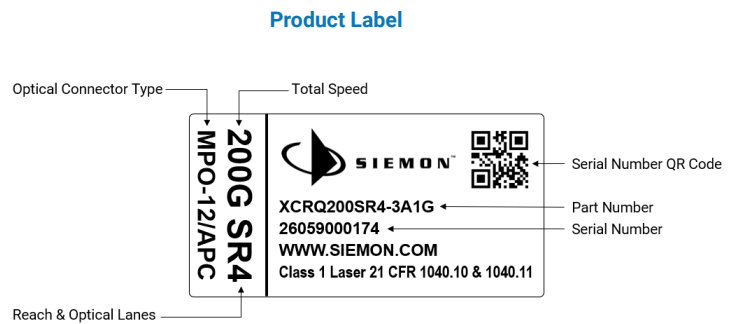
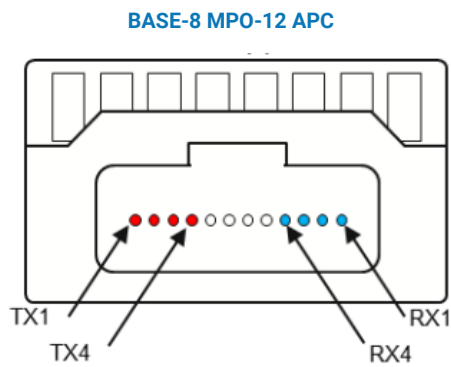
200G PAM4 Ethernet

Multimode Part Number	Connector Type	Reach Type	Max Length	Optical Interface
XCRQ200SR4-3A1G	QSFP56	SR4	70m (OM3) 100m (OM4)	MPO-12/APC BASE-8

200G InfiniBand HDR

Multimode Part Number	Connector Type	Reach Type	Max Length	Optical Interface
XCRQ200SR4M3A1G	QSFP56	SR4	70m (OM3) 100m (OM4)	MPO-12/APC BASE-8

Please contact our Technical Sales Group if you require connectivity or cable configurations that are not listed above
 All transceivers have pinned optical connectors and require unpinned mating fiber connectors unless otherwise specified



SCAN TO DOWNLOAD
SPEC SHEET

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

North America
P: (1) 860 945 4200

Mexico
P: (521) 556 387 7708/09/10

Latin America
P: (571) 657 1950/51/52

Europe
P: (44) 0 1932 571771

Asia Pacific
P: (61) 2 8977 7500

Siemon OEM Technologies
P: (1) 860 945 4213
www.siemon.com/OEM

China
P: (86) 215385 0303

India, Middle East & Africa
P: (971) 4 3689743