

Passive and Active Copper Cables

200G PAM4 QSFP56 Straight Throughs and Breakouts

Regional Availability – Global



Siemon's 200G (50G per lane) PAM4 Ethernet or InfiniBand™ QSFP56 passive and active copper cable DAC¹ assemblies are designed to exceed industry standard performance offering a cost-effective, low latency, low-power option for high-speed data center network equipment direct connections. The Industry's smallest minimum bend radius is achieved with our mesh sleeves.

Passive DACs are available with the lowest power consumption up to 2 meters for Ethernet applications and 3 meters for InfiniBand. ACCs² offer lengths up to 5 meters. Both are available in 0.5 meter increments in 1:1 straight throughs and 1:2 and 1:4 breakouts.

1: DAC – Direct Attach Copper *Passive cable assembly with limited lengths and lowest power consumption requirement.*

2: ACC – Active Copper Cable *Analog re-driver based active cable assembly with longer lengths than DACs.*



- 1. **LSZH Compliant UL94 VW-1 Mesh Available for Global use**
- 2. **Ultra-Low Crosstalk for Enhanced Performance**
- 3. **Positive Retention Pull-Release Latch System**
- 4. **MSA Compliant Connectors**



Breakout Options Available



Mesh Sleeve Provides Best-in-Class Cable Routing

Applications

- Ethernet 200GBASE CR4
- InfiniBand HDR 200G
- Top-of-Rack
- Rack-to-Rack
- Switch-to-Switch
- Switch-to-Server
- Network Interface Adapter
- Accelerator Cards
- Storage
- Routers

Standards Compliance

QSFP

- IEEE 802.3cd
- SFF-8636
- SFF-8661
- SFF-8672
- SFF-8679

OSFP-RHS

- IEEE 802.3cd
- OSFP MSA
- CMIS

SFP-DD

- IEEE 802.3cd
- SFP-DD MSA
- SFP-DD MIS

SFP

- IEEE 802.3cd
- SFF-8402
- SFF-8071
- SFF-8419
- SFF-8472

PHYSICAL PROPERTIES – CONNECTOR

CONNECTOR TYPE		QSFP56	OSFP-RHS	QSFP56	OSFP-RHS	SFP-DD	SFP56
LANES UTILIZED		CR4	CR4	CR2	CR2	CR2	CR1
CONNECTOR SIDE(S)		A/B	B	B	B	B	B
CABLE ASSEMBLY TYPE		1:1	1:1	1:2	1:2	1:2	1:4
POWER CONSUMPTION PER END (Max)	DAC ETHERNET	0.1 W	0.1 W	0.1 W	0.1 W	0.1 W	0.1 W
	DAC INFINIBAND	0.1 W	0.1 W	0.1 W	0.1 W		
	ACC ETHERNET	0.85 W	0.85 W	0.6 W	0.6 W	0.6 W	0.3 W
	ACC INFINIBAND	0.85 W	0.85 W	0.6 W	0.6 W		
SUPPLY VOLTAGE		3.3VDC	3.3VDC	3.3VDC	3.3VDC	3.3VDC	3.3VDC
INSERTION FORCE (Max)		60N	55N	60N	55N	40N	18N
EXTRACTION FORCE (Max)		30N	45N	30N	45N	30N	12.5N
RETENTION FORCE (Max)		90N	125N	90N	125N	90N	90N
DURABILITY (Min)		250 cycles	50 cycles	250 cycles	50 cycles	50 cycles	250 cycles
OPERATING TEMPERATURE		0 to 70°C (32 to 158°F)					
STORAGE TEMPERATURE		-40 to 85°C (-40 to 185°F)					

PHYSICAL PROPERTIES – CABLE

JACKET TYPE		MESH/VW-1		LSZH/AWM		
JACKET MATERIAL		PET Plastic Mesh		LSZH		
FLAMMABILITY RATING		UL94 VW-1		UL94 V-0 (AWM)		
TWINAX PAIRS PER CABLE		8	4	8	4	2
CABLE ASSEMBLY CONFIGURATION		1:1	1:2	1:1	1:2	1:4
CABLE CONFIGURATION		CR4/CR4	CR4/CR2	CR4/CR4	CR4/CR2	CR4/CR1
CABLE O.D. PER AWG	30AWG	5.7 mm	5.1 mm	7.5 mm	6.0 mm	4.6 mm
	27AWG	7.6 mm	6.3 mm	-	-	-
	26AWG	8.3 mm	6.8 mm	9.8 mm	7.4 mm	5.6 mm
MINIMUM BEND RADIUS		2.2X O.D		7X O.D		
JACKET MATERIAL		PET Plastic Mesh		LSZH		
FLAMMABILITY RATING		UL94 VW-1		UL94 V-0 (AWM)		
CONSTRUCTION		Twinaxial		Twinaxial		
SHIELD		Braid/Foil		Braid/Foil		
CONDUCTOR		Solid		Solid		
IMPEDANCE		100± 5 ohms		100± 5 ohms		
GREEN FEATURES		RoHS, Lead-Free and REACH		RoHS, Lead-Free and REACH		

		DAC MAX LENGTH				ACC MAX LENGTH			
		MESH/VW-1		LSZH/AWM		MESH/VW-1		LSZH/AWM	
		Ethernet	InfiniBand	Ethernet	InfiniBand	Ethernet	InfiniBand	Ethernet	InfiniBand
MAX LENGTH	30AWG	2 m	2 m	2m	2 m	4 m	4 m	4 m	4 m
	27AWG		2.5 m	-	-	5 m	5 m	-	-
	26AWG	3 m	3 m	3 m	3 m	*	*	5 m*	5 m*

*Longer ACC lengths available upon request for specific applications

Ordering Information

200G PAM4 QSFP56

(XXX) (XXX) (X) (XX.X) -8 (X) (X)

CONNECTOR TYPE	Side A	Side B	PROTOCOL	CABLE TYPE	LENGTH*	JACKET TYPE	JACKET COLOR
Q1Q	QSFP (CR4)	QSFP (CR4)	-56 = 50G/Lane PAM4 Ethernet	P = DAC <i>Direct Attach Copper</i>	00.5 = 0.5 m	Z = Mesh/VW-1	B = Black
Q2Q	QSFP (CR4)	2QSFP (CR2)	-H = 50G/Lane HDR Infiniband	A = ACC <i>Active Copper Cable</i>	01.0 = 1.0 m		W = White
Q1R	QSFP (CR4)	OSFP-RHS (CR4)			01.5 = 1.5 m		R = Red
QSD	QSFP (CR4)	2SFP-DD (CR2)			02.0 = 2.0 m		U = Blue
Q2R	QSFP (CR4)	2OSFP-RHS (CR2)			02.5 = 2.5 m		S = Silver
Q4S	QSFP (CR4)	4SFP (CR1)			03.0 = 3.0 m		N = Orange
					03.5 = 3.5 m		
					04.0 = 4.0 m		
					04.5 = 4.5 m	L = LSZH/AWM	B = Black
					05.0 = 5.0 m		

*See Max Lengths Table for appropriate lengths per cable configuration.

Please contact our Technical Sales Group if you require connectivity or cable configurations that are not listed above.

Please contact our Technical Sales Group if you require connectivity solutions specifically for NVIDIA or Mellanox active equipment to ensure proper product selection.

Siemon is a provider of InfiniBand™ compliant cabling solutions and is a member of the InfiniBand Trade Association (IBTA).

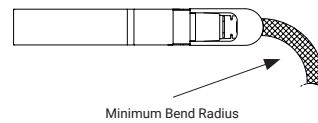
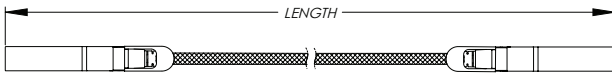
Part Number Examples:	
Part Number	Description
Q1Q-56P01.0-8ZB	DAC, 200G PAM4, CR4/CR4, QSFP56, 1m, Mesh/VW-1, Black
Q4S-56P01.5-8LB	DAC, 200G PAM4, CR4/CR1, QSFP56/4SFP56, 1.5m, LSZH/AWM, Black
Q1Q-H-A05.0-8ZU	ACC, 200G HDR, CR4/CR4, QSFP56, 5m, Mesh/VW-1, Blue
Q2R-H-P03.0-8ZR	DAC, 200G HDR, CR4/CR2, QSFP56/2OSFP-RHS, 3m, Mesh/VW-1, Red

Notes:

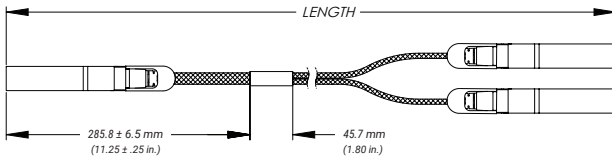
SFP and SFP-DD are not supported by InfiniBand™

RS-FEC is always on.

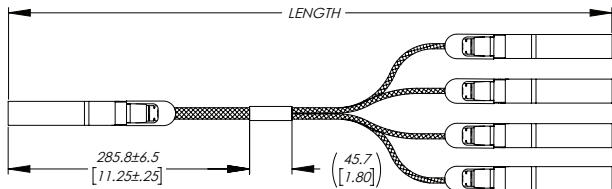
Straight Through



1:2 Breakout



1:4 Breakout



SCAN TO DOWNLOAD SPEC SHEET

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

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