

100G QSFP28 to 4X 25G SFP28 breakout Active Optical Cables P/N: WQ8-MDO101-XXXX

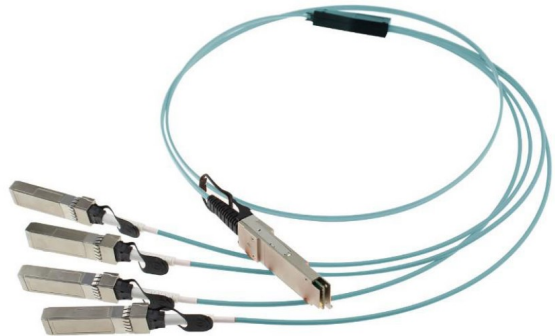
Description

QSFP28 to 4x SFP28 breakout Active Optical Cable offers IT professionals a cost-effective interconnect solution for merging 100G QSFP28 and 25G SFP28 enabled host adapters, switches and servers.

For typical applications, users can install this splitter Active Optical cable between an available QSFP28 port on their 100Gbps rated switch and feed up to four upstream 25GbE-SFP28 enabled switches. Each QSFP28-SFP28 splitter Active Optical cable features a single QSFP28 connector (SFF-8436) rated for 100Gbps on one end and (4) SFP28 connectors (SFF-8431), each rated for 25Gb/s, on the other.

Features

- ◆ Electrical interface compliant to SFF-8436 and SFF-8431
- ◆ Hot Pluggable
- ◆ 850nm VCSEL laser and PIN photo-detector
- ◆ Maximum link length of 70m on OM3 MMF and 100m on OM4 MMF
- ◆ Operating case temperature: 0 to 70°C
- ◆ Internal CDR on both Transmitter and Receiver channel
- ◆ Digital diagnostics functions are available via the I2C interface
- ◆ All-metal housing for superior EMI performance
- ◆ RoHS 6 compliant



Applications

- ◆ 100 Gigabit Ethernet
- ◆ 25GBASE-SR Ethernet
- ◆ Fiber Channel Applications
- ◆ InfiniBand QDR, SDR, DDR
- ◆ High-performance computing clusters
- ◆ Servers, switches, storage and host card adapters

QSFP28 interface Specifications

Parameter	Description
Module Form Factor	QSFP28 (Supports SFF8436)
Data Rate, Each lane	25.78125Gbps
BER	$<10^{-12}$
Operating Case Temperature	0 to + 70°C
Storage Temperature	-20 to + 85°C
Supply Voltage	3.3V
Supply Current	Typical 560mA
Power Dissipation	$<2.5W$, Level 2
Management Interface Serial	I ² C (Supports SFF8436)

Optical and Electrical Characteristics

The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ_c	840	850	860	nm	-
RMS spectral width	$\Delta\lambda$	-	-	0.60	nm	-
Average launch power, each lane	P _{out}	-8.4	-	2.4	dBm	-
Optical Modulation Amplitude (OMA),each lane	OMA	-6.4		3	dBm	-
Transmitter and dispersion eye closure(TDEC),each lane	TDEC			4.3	dB	
Extinction Ratio	ER	3	-	-	dB	-
Average launch power of OFF transmitter, each lane				-30	dBm	-
Eye Mask coordinates: X1, X2, X3, Y1, Y2, Y3		SPECIFICATION VALUES 0.3,0.38,0.45,0.35,0.41,0.5				Hit Ratio = 5x10 ⁻⁵
Differential data input swing	V _{IN,PP}	40		1000	mV	
Receiver						

Centre Wavelength	λ_c	840	850	860	nm	-
Stressed receiver sensitivity in OMA, each lane				-5.2	dBm	1
Maximum Average power at receiver input, each lane				2.4	dBm	-
Minimum Average power at receiver, each lane		-10.3			dBm	
Receiver Reflectance				-12	dB	-
LOS Assert		-30			dBm	-
LOS Deassert				-7.5	dBm	-
LOS Hysteresis		0.5			dB	-
Receive Eye Amplitude		300		800	mV	
Receive Eye Width		25			Ps	
Receive Eye Height		250			mV	

Note:

1. Measured with conformance test signal at TP3 for BER = 10e-12

SFP28 interface Specifications

Parameter	Description
Module Form Factor	SFP28 (Supports SFF8431/SFF8432/SFF8472)
Channel Data Rate	25.78125Gbps
BER	<10 ⁻¹²
Operating Case Temperature	0 to + 70°C
Storage Temperature	-20 to + 85°C
Supply Voltage	3.3V
Supply current	Typical 180mA
Power Dissipation	<1W, Level I
Management Interface Serial	I ² C (Supports SFF8472)

Optical and Electrical Characteristics

The following optical characteristics are defined over the Recommended Operating Environment unless otherwise specified.

Parameter	Symbol	Min.	Typical	Max	Unit	Notes
Transmitter						

Center Wavelength	λ_t	840	850	860	nm	
RMS spectral width	P_m	-	-	0.6	nm	
Average Optical Power	P_{avg}	-8.4	-	2.4	dBm	
Optical Power OMA	P_{OMA}	-6.4		3	dBm	
Transmitter and dispersion eye closure(TDEC),each lane	TDEC			4.3	dB	
Extinction Ratio	ER	2	-	-	dB	3
Eye Mask coordinates: X1, X2, X3, Y1, Y2, Y3	SPECIFICATION VALUES 0.3,0.38,0.45,0.35,0.41,0.5					Hit Ratio = 5x10-5
Differential data input swing	VIN,PP	40		1000	mV	
Receiver						
Center Wavelength	λ_r	840	850	860	nm	
Stressed receiver sensitivity in OMA, each lane				-5.2	dBm	
Maximum Average power at receiver input, each lane				2.4	dBm	
Minimum Average power at receiver , each lane		-10.3			dBm	
Receiver Reflectance		-	-	-12	dB	
LOS De-Assert	LOS _D			-7.5	dBm	
LOS Assert	LOS _A	-30			dBm	
LOS Hysteresis		0.5			dB	
Receive Eye Amplitude		500		1300	mV	
Receive Eye Width		25			Ps	
Receive Eye Height		250			mV	

Note:

1. Measured with conformance test signal at TP3 for BER = 10e-12

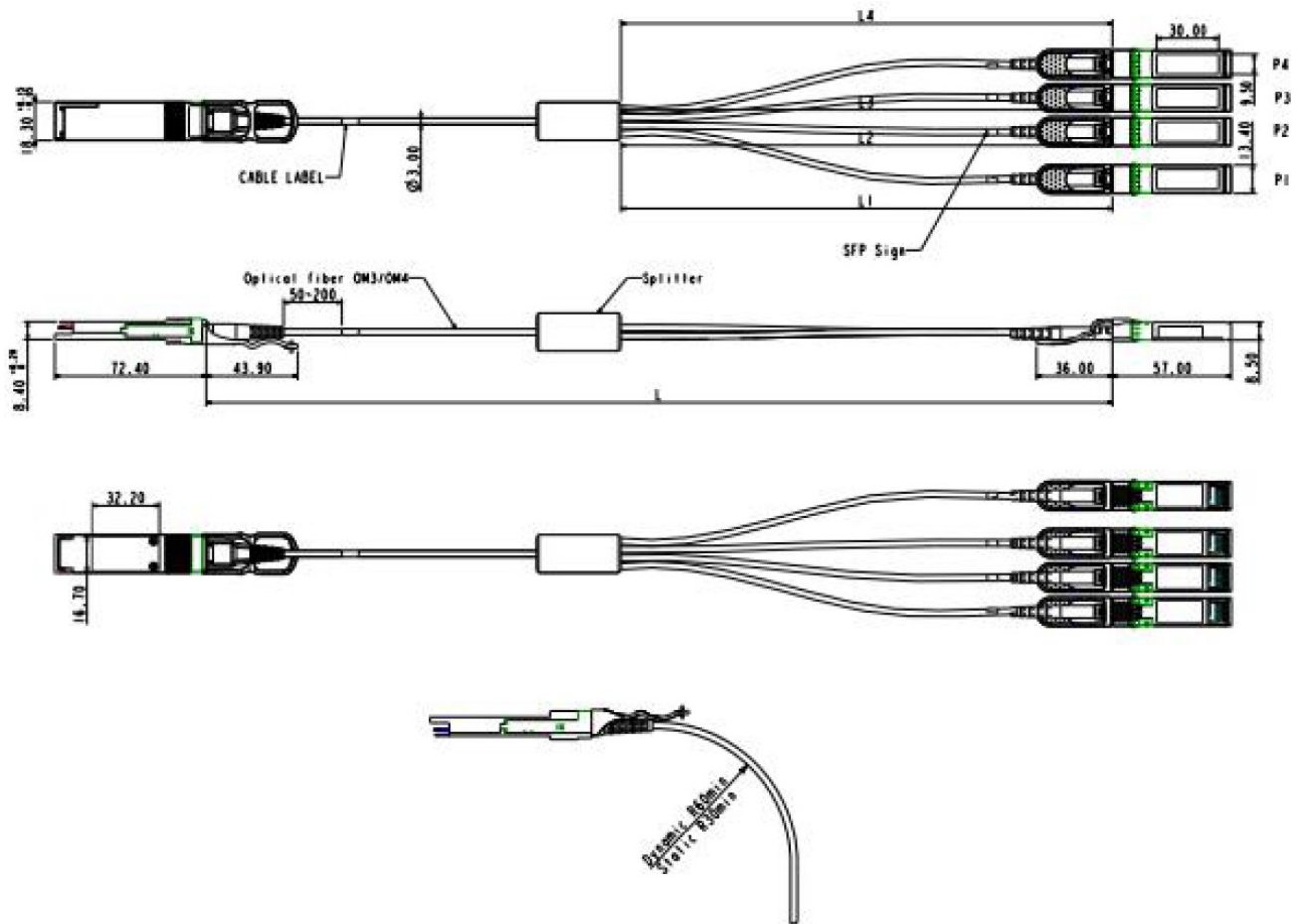


Figure1. Mechanical Specifications

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Ordering information

Part Number	Product Description
WQ8-MDO101-xxxC	100G QSFP28 to 4x 25G SFP28 Active Optical Cable
xxx :001~100,1~100 Length in meters. (OM4fiber is available)	

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