

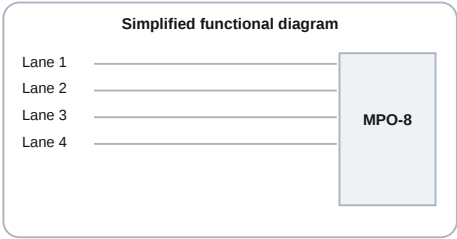
QSFP-PSM4-40G

QSFP+, 40GbE-PSM4, (4x 11.2Gbps), 10km, MPO-8

QSFP-PSM4-40G

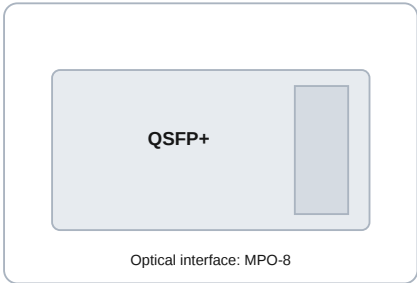
1. Product overview

The QSFP-PSM4-40G is a 40GbE QSFP+ transceiver with four independent optical lanes over single-mode fiber. The module uses an MPO/MTP interface and supports transmission up to 10 km, with digital diagnostic monitoring through the QSFP management interface.



2. Key features

- 4 independent full-duplex channels
- Up to 11.2 Gb/s per channel; aggregate bandwidth >40 Gb/s
- MTP/MPO optical connector over single-mode fiber
- Up to 10 km transmission
- QSFP MSA compliant with built-in digital diagnostics
- Single +3.3 V supply; 0°C to +70°C



3. Applications

- 40GbE PSM4 links
- Data center switches and routers
- Metro/access interconnects
- Rack-to-rack

4. Technical data

Parameter	Value	Parameter	Value
Technology	40G QSFP+ PSM4	Transmission media	SMF, MPO-8
Typical reach	10 km	Nominal wavelength	1310 nm
Host interface	4 x 10.3125 Gb/s NRZ	Protocol support	40GbE / InfiniBand
Optical budget	6 dB	Operating temperature	0°C to +70°C
Power consumption	3.5 W max	Digital diagnostics	Yes

5. Recommended operating conditions

Parameter	Symbol	Min	Typical	Max	Units
Operating case temperature	Tcase	0		70	°C
Supply voltage	Vcc	3.13	3.3	3.47	V
Data rate, each lane		10.3125		11.2	Gb/s
Link distance	D			10	km

QSFP-PSM4-40G

6. Optical characteristics

Parameter	Symbol	Min	Typical	Max	Units
Wavelength range		1300	1311	1320	nm
Side-mode suppression ratio	SMSR	30			dB
Average optical power, each lane		-5		+1	dBm
TDP, each lane	TDP			2.3	dB
Extinction ratio	ER	3.5			dB
Receiver input power, each lane	R	-12.6		0	dBm
LOS de-assert	LOSD	-13			dBm
LOS assert	LOSA	-25			dBm

7. Digital diagnostics and management

Figure 3. QSFP+ mechanical form factor

Parameter	Value
Digital diagnostic monitoring	Supported
Management interface	2-wire serial / I2C via QSFP+ MSA
Monitored parameters	Temperature, supply voltage, TX bias/power and RX power
Module controls	Module select, reset, interrupt and low-power mode

QSFP+ MSA

8. Safety, regulatory and ESD

RoHS compliant. Normal ESD precautions are recommended when handling optical transceivers and host equipment.

9. Ordering information

Ordering number	Product description
Q40G-PSM4	QSFP+, 40GbE-PSM4, (4x 11.2Gbps), 10km; 1310nm, 6dB, SM, MPO-8

10. General definitions

Parameter	Description
Technology	Optical transceiver type and optical application, e.g. SR, LR, CWDM, DWDM or parallel optics.
Transmission media	Fiber type and connector type, e.g. single-mode or multimode fiber with LC or MPO connector.
Typical reach	Nominal distance stated in the product specification and dependent on link loss and operating conditions.
Power consumption	Maximum or worst-case operating power stated in the source specification.
DDM / DMI	Digital Diagnostic Monitoring via the module management interface.