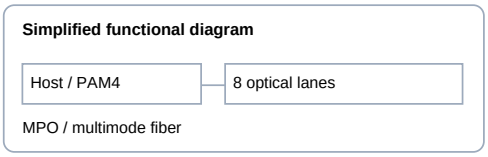
OSFP-SR8-400G-Flat Top

OSFP, 400GBASE-SR8, 850 nm, 100 m, MTP/MPO-16

1. Product overview

400GBASE-SR8 OSFP transceiver for up to 100 m on OM4 multimode fiber with host FEC and MTP/MPO-16 connector. Eight 53.125 Gb/s PAM4 channels form a 400GAUI-8 electrical interface.

Simplified functional diagram



2. Key features

OSFP MSA; IEEE 802.3cd; 8 parallel lanes centered on 850 nm; 8x53.125 Gb/s PAM4 / 400GAUI-8; 10 W max; MPO-16; RoHS; 0 to 70°C.

3. Applications

Data Center Interconnect; 400G Ethernet; Enterprise Networking; Cloud Networks.

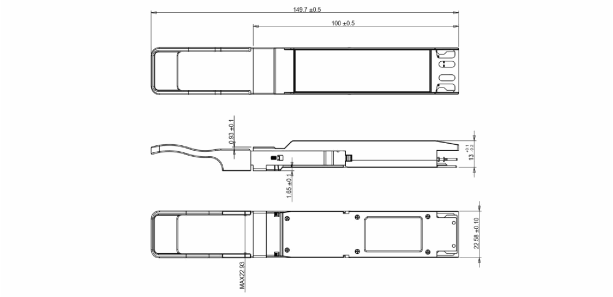
4. Technical data

Parameter	Specification	Parameter	Specification
Storage / absolute case	-40 to +85°C / 0-70°C	Absolute supply / humidity	-0.5 to 3.6 V / 0-85%
Power / supply current	10 W / 3.63 A max	Electrical lanes	8x53.125 Gb/s PAM4

Electrical characteristics, per lane - TX input TP1/TP1a; RX output TP4.

TX input	Specification	RX output	Specification
Signaling rate	26.5625 ±100 ppm GBd	Signaling rate	26.5625 ±100 ppm GBd
Differential p-p tolerance	900 mVpp min	Differential p-p output	900 mVpp max
Termination mismatch	10% max	Termination mismatch	10% max
Differential return loss	IEEE802.3-2015 Eq.83E-5, dB	Differential return loss	IEEE802.3-2015 Eq.83E-2
Differential-to-common return loss	IEEE802.3-2015 Eq.83E-6, dB	Common-to-differential return loss	IEEE802.3-2015 Eq.83E-3
Stressed input test	IEEE802.3cd 120E.3.4.1	AC common-mode RMS	17.5 mV max
Single-ended tolerance	-0.4 to 3.3 V	Transition (20%-80%)	9.5 ps min
DC common-mode	-350 to 2850 mV	DC common-mode	-350 to 2850 mV
Near/far ESMW	0.265 / 0.2 UI min (RX)	Near/far eye height	70 / 30 mV min
Far-end pre-cursor ISI ratio	-4.5 to +2.5% (RX)	Test notes	PRBS31Q or scrambled idle; BER per 120E.1.1

Mechanical drawing from source



5. Recommended operating conditions

Parameter	Specification	Parameter	Specification
Case temperature	0 to +70°C	Supply min/typ/max	3.135 / 3.3 / 3.465 V
Lane rate / accuracy	26.5625 GBd typ; -100 to +100 ppm	Pre-/post-FEC BER max	$2.4x10^{-4}$ / $1x10^{-12}$
OM4 reach	0.5-100 m	Host FEC	Required for maximum reach

OSFP-SR8-400G

6. Optical characteristics

Transmitter, each lane	Specification
Signaling rate / format	26.5625 ±100 ppm GBd / PAM4
Wavelength	840-860 nm; 850 nm typ
RMS spectral width	0.6 nm max
Average launch power	-6.5 to +4 dBm
OMAouter	-4.5 to +3 dBm
Launch OMAouter minus TDECQ	-5.9 dB min
TDECQ	4.5 dB max
Extinction ratio	3 dB min
Optical return loss tolerance	12 dB max
Average launch power, TX off	-30 dBm max
Encircled flux	≥86% at 19 µm; ≤30% at 4.5 µm

Receiver, each lane	Specification
Signaling rate / format	26.5625 ±100 ppm GBd / PAM4
Wavelength	840-860 nm; 850 nm typ
Damage threshold	5 dBm min
Average receive power	-7.9 to +4 dBm
Receive OMAouter	3 dBm max
Receiver reflectance	-12 dB max
Sensitivity OMAouter	-6.5 dBm max
Stressed sensitivity OMAouter	-3 dBm max
LOS Assert / De-assert	-30 dBm min / -12 dBm max
LOS hysteresis	0.5 dB min

Optical notes: minimum average TX/RX powers are informative; below them cannot comply, above does not ensure compliance. OMA minimum must be exceeded even for TDECQ<1 dB. Damage threshold tolerates continuous exposure. RX sensitivity is informative at BER 2.4x10-4; stressed sensitivity uses conformance signal at receiver input at the same BER. Source note 7 says stress conditions are not RX characteristics; no stress-condition table is supplied.

7. Digital diagnostics and management

Parameter	Specification
Monitor absolute error	Temperature -3 to +3°C over operating range; Vcc -0.1 to +0.1 V over full range. Per-channel RX/TX power -2 to +2 dB. Bias -10% to +10% (source unit mA). Fiber variation can add ±1 dB, giving ±3 dB total power accuracy.
Control pins	SCL14 / SDA47: two-wire clock/data, bidirectional. LPWn/PRSn17: low-power/presence. INT/RSTn44: interrupt/reset, multilevel. LVCMOS-I/O serial pins; TX CML-I host input, RX CML-O host output.
60-contact pin map	TX p/n lanes 1-8: 59/58,2/3,56/55,5/6,53/52,8/9,50/49,11/12. RX p/n lanes 1-8: 29/28,32/33,26/25,35/36,23/22,38/39,20/19,41/42. Vcc:15,16,45,46 (+3.3 V). GND:1,4,7,10,13,18,21,24,27,30,31,34,37,40,43,48,51,54,57,60.
Plug sequence	GND 1; Vcc 2; other pins 3.

8. Safety and regulatory

RoHS; OSFP MSA and IEEE802.3cd stated. No laser class specified.

9. Ordering information

Ordering number	Description
OSFP-400G-SR8	OSFP, 400GBASE-SR8 Flat Top 8x50Gbps , 850 nm, 100 m, MTP/MPO-16