

ET7402-LR4

Single-Mode 100GBASE-LR4 QSFP28 Transceiver

RoHS6 Compliant



Key Features and Benefits

- Supports 103 Gbps
- Single 3.3 V power supply and power dissipation < 3.5 W
- Up to 10 km over SMF
- RoHS-6 compliant (lead-free)
- Commercial case temperature range of 0°C to 70°C
- Four 25Gbps DML LAN-WDM channels on transmitter side
- PIN and TIA array on the receiver side
- 4 x 25G electrical interface
- Duplex LC receptacles
- I2C interface with integrated Digital Diagnostic Monitoring

Applications

- 100GBASE-LR4 100G Ethernet

Regulatory Compliance*

Product Certificate	Certificate Number	Applicable Standard
TUV	R50135086	EN 60950-1:2006+A11+A1+A12+A2
		EN 60825-1:2014
		EN 60825-2:2004+A1+A2
UL	E317337	UL 60950-1
		CSA C22.2 No. 60950-1-07
EMC CE	AE 50285865 0001	EN 55022:2010
		EN 55024:2010
FCC	WTF14F0514417E	47 CFR PART 15 OCT, 2013
FDA		CDRH 1040.10
RoHS		2011/65/EU

*The above certificate number updated to June 2014, because some certificate will be updated every year, such as FDA and ROHS. For the latest certification information, please check with JSTT.

Optical Transceiver

Specifications

Product Description

JSTT's QSFP28 transceiver module is designed for 103 Gigabit Ethernet links over 10 Km single mode fiber. It is compliant with IEEE 802.3ba 100GBASE-LR4. Digital diagnostics functions are available via an I2C interface, as specified by the QSFP+MSA.

Absolute Maximum Ratings

Parameter	Minimum	Maximum	Unit
Storage Temperature	-40	+85	°C
Supply Voltage	-0.5	3.6	V
Operating Relative Humidity	5	85	%

*Exceeding any of these values may destroy the device immediately.

Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Operating Case Temperature	0		70	°C
Power Supply Voltage	3.135	3.3	3.465	V
Power Dissipation			3.5	W

Transmitter Performance Specifications - Electrical

Parameter	Minimum	Typical	Maximum	Unit
Differential Input Amplitude	50		1200	mv _{p-p}
Input Impedance (Differential)	90	100	110	ohms

Receiver Performance Specifications - Electrical

Parameter	Minimum	Typical	Maximum	Unit
Differential output Amplitude	300		850	mv _{p-p}
Output Impedance (Differential)	90	100	110	ohms

Specifications

Transmitter Optical Characteristics

100GBASE-LR4 Operation

Parameter	Minimum	Typical	Maximum	Unit
Signaling Speed per Lane		25.78		Gbps
Data Rate Variation	-100		+100	ppm
Lane_0 Center Wavelength	1294.53	1295.56	1296.59	nm
Lane_1 Center Wavelength	1299.02	1300.05	1301.09	nm
Lane_2 Center Wavelength	1303.54	1304.58	1305.63	nm
Lane_3 Center Wavelength	1308.09	1309.14	1310.19	nm
Total Average Output Power			10.5	dBm
Average Launch Power per Lane	-4.3		4.5	dBm
Average Launch Power of OFF Transmitter per Lane			-30	dBm
Optical Modulation Amplitude	-1.3		4.5	dBm
Optical Return Loss Tolerance			20	dB
Extinction Ratio	4			dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}			{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}	

Receiver Optical Characteristics

100GBASE-LR4 Operation

Parameter	Minimum	Typical	Maximum	Unit
Signaling Speed per Lane		25.78		Gbps
Data Rate Variation	-100		+100	ppm
Damage threshold	4.5			dBm
Lane_0 Center Wavelength	1294.53	1295.56	1296.59	nm
Lane_1 Center Wavelength	1299.02	1300.05	1301.09	nm
Lane_2 Center Wavelength	1303.54	1304.58	1305.63	nm
Lane_3 Center Wavelength	1308.09	1309.14	1310.19	nm
Average Receive Power per Lane	-10.6		4.5	dBm
Receive Sensitivity in OMA per Lane			-8.6	dBm
Optical Return Loss			-26	dB
LOS Assert		-18		dBm
LOS De-Assert		-15		dBm
LOS Hysteresis	0.5			Db

Specifications

Ordering Information

Part No.	Data Rate	Fiber	Distance	Interface	Temp.	DDMI
M0OEC7402006Z	100 Gbps	SMF	10km	LC	0°C~+70°C	Yes

For More Information

To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

About Edgecore Networks Corporation

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