ONS-SE-ZE-EL-OPC

Cisco® ONS-SE-ZE-EL Compatible TAA 10/100/1000Base-TX SFP Transceiver (Copper, 100m, RJ-45, -10 to 85C)

Features

- INF-8074 Compliance
- RJ-45 Connector
- Copper Media Type
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free

Applications:

- 1000Base Ethernet
- Access and Enterprise

Product Description

This Cisco® ONS-SE-ZE-EL compatible SFP transceiver provides 10/100/1000Base-TX throughput up to 100m over a copper connection via a RJ-45 connector. It can operate at temperatures between 0 and 70C. This TX module supports 10/100/1000Base auto-negotiation and can be configured to fit your needs. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with Cisco®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

OptioConnect's transceivers are RoHS compliant and lead-free.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR	10		1000	Mb/sec	2
Cable Length	CL			100	m	3
Bit Error Rate	BER			10		
Operating Temperature	T_{OP}	-40		85	℃	4
Storage Temperature	T_{STO}	-40		85	℃	5
Supply Current	IS		320	375	mA	6
Input Voltage	V_{CC}	3.14	3.3	3.46	V	7
Maximum Voltage	V_{MAX}			4	V	6

Notes:

1. IEEE 802.3 compatible
2. Category 5 UTP
3. Case Temperature
4. Ambient Temperature
5. For electrical power interface
6. Referenced to GND. For electrical power interface

Electrical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
High Speed Electrical Interface Host-SFP							
Single ended Input Swing		V_{IN}	250		1200	mV	1
Single ended output Swing		V_{OUT}	275		800	mV	1
Rise time (20%-80%)		TR		175		ps	
Fall Time (20%-80%)		TF		175		ps	
Tx Input Impedance		Z_{IN}		50		ohm	1
Rx Output Impedance		Z_{OUT}		50		ohm	1
High Speed Electrical Interface Transmission Line-SFP							
Line Frequency		FL		125		MHz	2
Tx Output Impedance Differential		Z_{OUT_TX}		100		Ohm	3
Rx Input Impedance Differential		Z_{IN_RX}		100		Ohm	3
Low Speed Electrical Signal							
SFP Output	**Low**	V_{OL}	0		0.5	V	4
	High	V_{OH}	Host_V_{CC} –0.5		Host_V_{CC} +0.3	V	4
SFP Input	**Low**	V_{IL}	0		0.8	V	4
	High	V_{IH}	2		V_{CC} + 0.3	V	4

Notes:

1. Single ended
2. 5-level encoding
3. For all frequencies between 1MHz and 125MHz
4. External 4.7-10k ohm pull-up resistor required

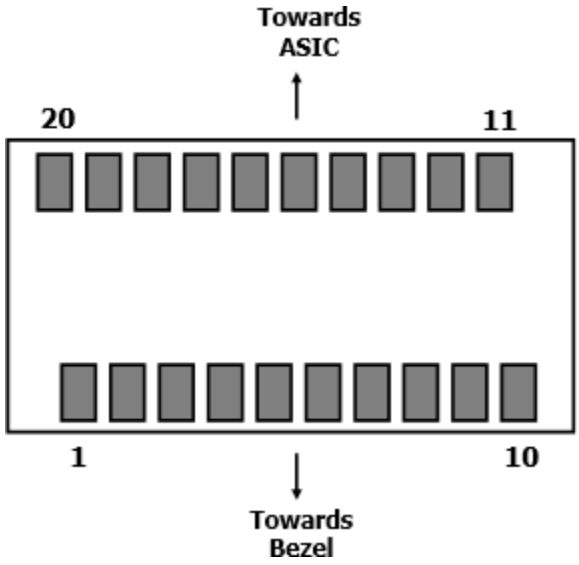
Pin Descriptions

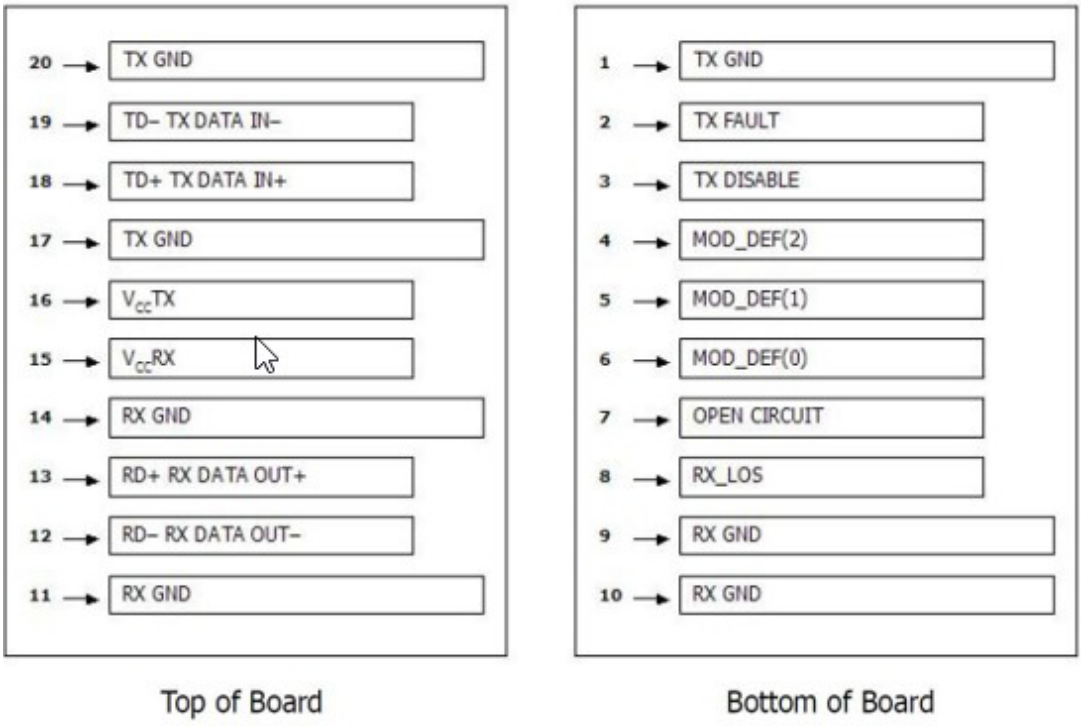
Pin	Symbol	Name/Descriptions	Ref.
1	V_{EET}	Transmitter ground (common with receiver ground)	1
2	TX_FAULT	Transmitter Fault. Not supported	
3	TX_DISABLE	Transmitter Disable. PHY disabled on high or open	2
4	MOD_DEF (2)	Module Definition 2. Data line for serial ID	3
5	MOD_DEF (1)	Module Definition 1. Clock line for serial ID	3
6	MOD_DEF (0)	Module Definition 0. Grounded within the module	3
7	Rate Select	No connection required	
8	RX_LOS	Loss of Signal	
9	V_{EER}	Receiver ground (common with transmitter ground)	1
10	V_{EER}	Receiver ground (common with transmitter ground)	1
11	V_{EER}	Receiver ground (common with transmitter ground)	1
12	RD–	Receiver Inverted DATA out. AC coupled	
13	RD+	Receiver Non-inverted DATA out. AC coupled	
14	V_{EER}	Receiver ground (common with transmitter ground)	1
15	V_{CCR}	Receiver power supply	
16	V_{CCT}	Transmitter power supply	
17	V_{EET}	Transmitter ground (common with receiver ground)	1
18	TD+	Transmitter Non-Inverted DATA in. AC coupled	
19	TD–	Transmitter Inverted DATA in. AC coupled	
20	V_{EET}	Transmitter ground (common with receiver ground)	1

Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: TX_DISABLE>2V or open, Enabled: TX_DISABLE <0.8V
3. Should be pilled up with 4.7k-10k ohm on host board to a voltage between 2V and 3.6V

Electrical Pad Layout

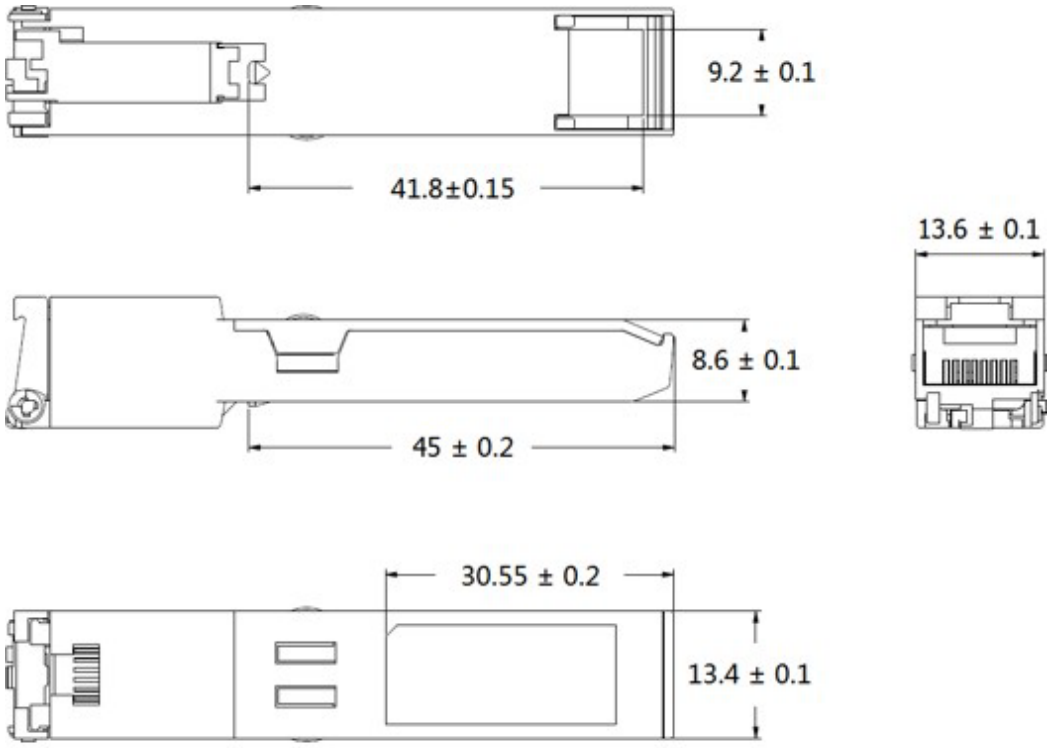




Top of Board

Bottom of Board

Mechanical Specifications



UNIT: mm

OptioConnect
Innovation for the Future of High-Speed Networking

Who We Are
OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do
At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design
Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team
Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission
To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect
Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.
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