



## 02317344-OPC

Huawei® 02317344 (S-SFP-FE-LH40-SM1310) Compatible TAA 100Base-EX SFP Transceiver (SMF, 1310nm, 40km, LC)

### Features

- INF-8074 and SFF-8472 Compliance
- Duplex LC Connector
- Single-mode Fiber
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free



### Applications:

- 100Base Ethernet
- Access and Enterprise

### Product Description

This Huawei® 02317344 compatible SFP transceiver provides 100Base-EX throughput up to 40km over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Huawei® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. 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.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products."



## Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883 Method 3015.
- ESD to the Duplex LC Receptacle: compatible with IEC 61000-4-2.
- Immunity compatible with IEC 61000-4-3.
- EMI compatible with FCC Part 15 Class B EN55022 Class B (CISPR 22B) VCCI Class B.
- Laser Eye Safety compatible with FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2.
- RoHs compliant with 2002/95/EC 4.1&4.2 2005/747/EC.

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Maximum Supply Voltage	Vcc	-0.5		4.0	V
Storage Temperature	TS	-40		85	°C
Operating Humidity	RH	5		85	%
Operating Case Temperature	Tc	0		70	°C
Data Rate			100/155		Mbps

## Electrical Characteristics (TOP=25°C, Vcc=3.3V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.15	3.3	3.45	V	
Power Supply Current	Icc			300	mA	
Transmitter						
Input differential impedance	Zin	85	100	120	Ω	1
LVPECL Inputs (Differential)	Vin	400		2000	mVpp	2
Receiver						
Output Differential Impedance	Zout	85	100	120	Ω	
LVPECL Outputs (Differential)	Vout	400		2000	mVpp	2

Notes:

1. Rin > 100 kohms @ DC
2. AC coupled.

## Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Average Output Power	PO	-5		0	dBm	1
Optical Wavelength	$\lambda$	1275	1310	1350	nm	
Spectral Width (RMS)	$\Delta\lambda$			3	nm	
Optical Rise/Fall Time	tr/tf			2	ns	2
Extinction Ratio	ER	10			dB	3
Output Optical Eye		IUT-T G.957 Compliant				
Receiver						
Receiver Sensitivity	Pmin			-34.5	dBm	4
Receiver Overload	Pmax	-10			dBm	
Optical Center Wavelength	$\lambda_C$	1270		1600	nm	
LOS De-Assert	LOSD			-35	dBm	
LOS Assert	LOSA	-45			dBm	
LOS Hysteresis		1			dB	

### Notes:

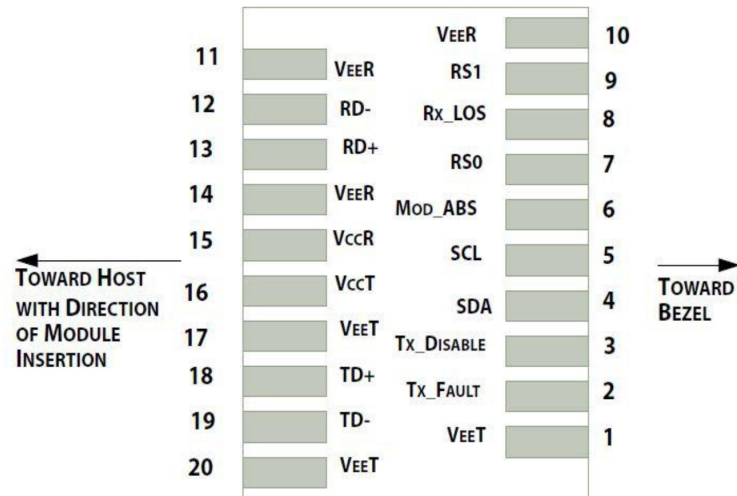
1. Internally AC coupled.
2. 20%-80%
3. Filtered, measured with a PRBS  $2^{23}-1$  test pattern @155Mbps.
4. Minimum average optical power is measured at BER less than  $1E-12$ , with  $2^{23}-1$  PRBS and ER=9 dB

## Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	TX Fault	Transmitter Fault.	
3	TX Disable	Transmitter Disable. Laser output 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	LOS	Loss of Signal indication. Logic 0 indicates normal operation.	4
9	VeeR	Receiver Ground (Common with Transmitter Ground)	1
10	VeeR	Receiver Ground (Common with Transmitter Ground)	1
11	VeeR	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	VeeR	Receiver Ground (Common with Transmitter Ground)	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	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	VeeT	Transmitter Ground (Common with Receiver Ground)	1

## Notes:

1. Circuit ground is internally isolated from chassis ground.
2. Laser output disabled on TX Disable >2.0V or open, enabled on TX Disable <0.8V.
3. Should be pulled up with 4.7k-10kohms on host board to a voltage between 2.0V and 3.6V. MOD\_DEF (0) pulls line low to indicate module is plugged in.
4. LOS is open collector output. Should be pulled up with 4.7k-10kohms on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.



Pin-out of connector Block on Host board

### Recommended Circuit Schematic



**Mechanical Specifications**

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).



**EEPROM Information**

EEPROM memory map specific data field description is as below:



## **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.

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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
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- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

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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.

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