

- HUNDER

Product Specification

10.3125Gb/s ZR SFP+ 1550nm 80km Optical Transceiver

P/N: 10G-SFP-ZR

Features

- Hot Pluggable SFP+ form factor
- Operating data rate 10.3125Gbps
- Single +3.3V power supply
- Duplex LC-UPC connector
- Max power dissipation <1.8W
- Up to 80km transmission distance
- 1550nm cooled EML transmitter
- PIN receivers
- Built-in digital diagnostic function
- Commercial temperature range 0°C to 70°C

Compliance

- SFP MSA
- Compliant with SFP+ Electrical MSA SFF-8431
- Compliant with SFP+ Mechanical MSA SFF-8432
- SFF-8472
- IEEE 802.3ae
- RoHS

Applications

- Switches with SFP+ ports
- Router with SFP+ Ports
- Server or Network Adapter Card
- Optical Transmission System
- Other devices with SFP+ Ports



Description

The 10G-SFP-ZR is a high-performance, long-range optical transceiver module designed for 10 Gigabit Ethernet applications. It operates on single-mode fiber (SMF) and supports link distances of up to 80 kilometers, making it ideal for metropolitan area networks (MANs), data center interconnects, and other long-haul communication scenarios. Compliant with the SFP+ Multi-Source Agreement (MSA) and IEEE 802.3ae standards, the 10G-SFP-ZR ensures reliable and interoperable performance across a wide range of networking equipment. Its advanced design incorporates high-quality optics and digital diagnostics monitoring (DDM) capabilities, enabling real-time performance tracking and fault detection.

The 10G-SFP-ZR transceiver is engineered to deliver exceptional signal integrity and low power consumption, making it a cost-effective solution for high-speed, long-distance data transmission. It supports a wavelength of 1550 nm and utilizes duplex LC connectors for seamless integration into existing network infrastructures. With its robust construction and industry-standard compliance, the 10G-SFP-ZR is a trusted choice for network operators seeking to extend their 10G Ethernet capabilities over extended distances while maintaining high reliability and performance.

Product performance Specifications

1. Basic Product Characteristics

Parameter	Symbol	Min	Тур.	Мах	Unit
Storage Temperature	Ts	-40	-	+85	°C
Supply Voltage	Vcc	0	-	3.6	V
Relative Humidity	RH	0	-	+85	%
Operating Case Temperature	Tc	0	25	70	°C
Power Supply Voltage	Vcc	3.135	3.3	3.465	V
Power Supply Current	lcc			450	mA
Power Dissipation	PD	-	-	1800	mW
Data Rate	DR	-	10.3125	-	Gbps



2. Product Optical and Electrical Characteristics

Parameter	Symbol	Min	Тур.	Мах	Unit
		Transmitter			
Center Wavelength	λ _c	1530	1550	1560	nm
Side Mode Suppression Ratio	SMSR	30			dB
Spectral Width	σ			1	nm
Average Output Power	PO	0		5	dBm
Disabled Power	P _{off}			-30	dBm
Extinction Ratio	ER	9			dB
Eye Mask			5		%
Relative Intensity Noise	RIN			-128	dB/Hz
Operating Distance		80			km
Transmitter and dispersion penalty				3	dB
Dispersion tolerance				1600	ps/nm
Optical return loss tolerance				21	dB
Operating Data Rate	DR	9.95		11.3	Gb/s
		Receiver			
Input Center Wavelength	Irc	1260		1565	nm
Overload	Rovl	-7			dBm
Sensitivity	Sens.			-23	dBm
RX_LOS Assert Level	RLOSa	-37			dBm
RX_LOS De-Assert Level	RLOSd			-26	dBm
RX_LOS Hysteresis	RLOSh	0.5			dB
Input differential impedance			100		Ω
Differential data input swing	VI	190		700	mV
Differential data output swing	VO	300		850	mV
		VEE		V _{EE} +0.8	V
TX Fault, LOS Output Voltage		Vcc-0.8		Vcc	V
Ty Dischlar DC0 DC4	VIL	VEE		V _{EE} +0.8	V
IX DISADIE, KOU,KOT	VIH	Vcc-0.8		Vcc	V



Recommended Host Board Power Supply Circuit



Figure 1:Recommended Host Board Power Supply Circuit

Recommended Interface Circuit



Figure2:Recommended Interface Circuit



Pin-out Definition



Pin Function Definitions

Pin	Logic	Symbol	Description	Note
1		VeeT	Module Transmitter Ground	1
2	LVTTL-O	TX_Fault	Module Transmitter Fault	2
3	LVTTL-I	TX_Disable	Transmitter Disable; Turns off transmitter laser output	3
4	LVTTL-I/O	SDA	2-wire Serial Interface Data Line (Same as MOD-DEF2 as defined in the INF-8074i)	4
5	LVTTL-I/O	SCL	2-wire Serial Interface Clock (Same as MOD-DEF1 as defined in the INF-8074i)	4
6		MOD_ABS	Module Absent, connected to VeeT or VeeR in the module	5
7	LVTTL-I	RS0	Adaptive multi-rate operation	6
8	LVTTL-O	RX_LOS	Receiver Loss of Signal Indication (In FC designated as RX_LOS, in SONET designated as LOS, and in Ethernet designated at Signal Detect)	2
9	LVTTL-I	RS1	Adaptive multi-rate operation	6
10		VeeR	Module Receiver Ground	1
11		VeeR	Module Receiver Ground	1
12	CML-O	RD-	Receiver Inverted Data Output	
13	CML-O	RD+	Receiver Non-Inverted Data Output	
14		VeeR	Module Receiver Ground	1
15		VccR	Module Receiver 3.3 V Supply	
16		VccT	Module Transmitter 3.3 V Supply	
17		VeeT	Module Transmitter Ground	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input	
19	CML-I	TD-	Transmitter Inverted Data Input	
20		VeeT	Module Transmitter Ground	1



Note1: The module signal ground pins, VeeR and VeeT, shall be isolated from the module case.

Note2: This pin is an open collector/drain output pin and shall be pulled up with $4.7k\Omega - 10k\Omega$ to Host_Vcc on the host board. Pull ups can be connected to multiple power supplies, however the host board design shall ensure that no module pin has voltage exceeding module VccT/R + 0.5V.

Note3: This pin is an open collector/drain input pin and shall be pulled up with $4.7k\Omega$ -10k Ω to VccT in the module.

Note4: See SFF-8431 4.2 2-wire Electrical Specifications.

Note5: This pin shall be pulled up with $4.7k\Omega$ -10k Ω to Host_Vcc on the host board.

Note6: Connect with $30k\Omega$ load pulled down to GND in the module.

Monitoring Specification



Memory map Table

A0h	Bytes	Name	Description		
A0h ID Fields					
0	1	Identifier	Type of transceiver		
1	1	Ext. Identifier	Extended identifier of type of transceiver		
2	1	Connector	Code for connector type		
3-10	8	Transceiver	Code for electronic or optical compatibility		
11	1	Encoding	Code for high speed serial encoding algorithm		
12	1	Signaling Rate, Nominal	Nominal signaling rate, units of 100 MBd.		
13	1	Rate Identifier	Type of rate select functionality		
14	1	Length (SMF,km) or Copper Cable	Link length supported for single-mode fiber, units of km, or copper		

SFP+ 10G SMF 1550nm 80km Duplex LC DOM



		Attenuation	cable attenuation in dB at 12.9 GHz
15	1	Length (SMF) or Copper Cable	Link length supported for single-mode fiber, units of 100 m, or copper
15	'	Attenuation	cable attenuation in dB at 25.78 GHz
16	1	Length (50 um, OM2)	Link length supported for 50 um OM2 fiber, units of 10 m
17	1	Length (62.5 um, OM1)	Link length supported for 62.5 um OM1 fiber, units of 10 m
18	1	Length (OM4 or copper cable)	Link length supported for 50um OM4 fiber, units of 10 m. Alternatively, copper or direct attach cable, units of m
19	1	Length (OM3) or Cable length, additional	Link length supported for 50 um OM3 fiber, units of 10 m.
20-35	16	Vendor name	SEP vendor name (ASCII)
36	1	Transceiver	Code for electronic or optical compatibility
37-39	3	Vendor OUI	SFP vendor IEEE company ID
40-55	16	Vendor PN	Part number provided by SFP vendor (ASCII)
56-59	4	Vendor rev	Revision level for part number provided by vendor (ASCII)
60-61	2	Wavelength	Laser wavelength (Passive/Active Cable Specification Compliance)
62	1	Fibre Channel Speed 2	Transceiver's Fibre Channel speed capabilities
63	1	CC_BASE	Check code for Base ID Fields (addresses 0 to 62)
64-65	2	Options	Indicates which optional transceiver signals are implemented
66	1	Signaling Rate, max	Upper signaling rate margin, units of %
67	1	Signaling Rate, min	Lower signaling rate margin, units of %
68-83	16	Vendor SN	Serial number provided by vendor (ASCII)
84-91	8	Date code	Vendor's manufacturing date code
92	1	Diagnostic Monitoring Type	Indicates which type of diagnostic monitoring is implemented (if any) in the transceiver
93	1	Enhanced Options	Indicates which optional enhanced features are implemented (if any) in the transceiver
94	1	SFF-8472 Compliance	Indicates which revision of SFF-8472 the transceiver complies with.
95	1	CC_EXT	Check code for the Extended ID Fields (addresses 64 to 94)
96-127	32	Vendor Specific	Vendor Specific EEPROM
128-255	128	Reserved	Reserved (was assigned to SFF-8079)
		A	2h ID Fields
00-01	2	Temp High Alarm	MSB at low address
02-03	2	Temp Low Alarm	MSB at low address
04-05	2	Temp High Warning	MSB at low address
06-07	2	Temp Low Warning	MSB at low address
08-09	2	Voltage High Alarm	MSB at low address
10-11	2	Voltage Low Alarm	MSB at low address
12-13	2	Voltage High Warning	MSB at low address
14-15	2	Voltage Low Warning	MSB at low address
16-17	2	Bias High Alarm	MSB at low address
18-19	2	Bias Low Alarm	MSB at low address
20-21	2	Bias High Warning	MSB at low address



22-23	2	Bias Low Warning	MSB at low address
24-25	2	TX Power High Alarm	MSB at low address
26-27	2	TX Power Low Alarm	MSB at low address
28-29	2	TX Power High Warning	MSB at low address
30-31	2	TX Power Low Warning	MSB at low address
32-33	2	RX Power High Alarm	MSB at low address
34-35	2	RX Power Low Alarm	MSB at low address
36-37	2	RX Power High Warning	MSB at low address
38-39	2	RX Power Low Warning	MSB at low address
40-41	2	Optional Laser Temp High Alarm	MSB at low address
42-43	2	Optional Laser Temp Low Alarm	MSB at low address
44-45	2	Optional Laser Temp High Warning	MSB at low address
46-47	2	Optional Laser Temp Low Warning	MSB at low address
48-49	2	Optional TEC Current High Alarm	MSB at low address
50-51	2	Optional TEC Current Low Alarm	MSB at low address
52-53	2	Optional TEC Current High Warning	MSB at low address
54-55	2	Optional TEC Current Low Warning	MSB at low address
			Diagnostic calibration constants for optional External Calibration if
56 01	26	Ext Cal Constants or Additional	External Calibration bit, A0h, byte 92, bit 4 is 1
50-91	30	Enhanced Features	Additional Enhanced Features advertisement, control and status if
			External Calibration bit, A0h, byte 92, bit 4 is 0
92-94	3	Reserved	
92-94 95	3 1	Reserved CC_DMI	Check code for Base Diagnostic Fields (addresses 0 to 94)
92-94 95 96-105	3 1 10	Reserved CC_DMI Diagnostics	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated)
92-94 95 96-105 106-109	3 1 10 4	Reserved CC_DMI Diagnostics Optional Diagnostics	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current
92-94 95 96-105 106-109 110	3 1 10 4 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits
92-94 95 96-105 106-109 110 111	3 1 10 4 1 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079)
92-94 95 96-105 106-109 110 111 112-113	3 1 10 4 1 1 2	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits
92-94 95 96-105 106-109 110 112 112-113 114	3 1 10 4 1 1 2 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control
92-94 95 96-105 106-109 110 112 112-113 114 115	3 1 10 4 1 1 2 1 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117	3 1 10 4 1 1 2 1 1 2	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117 118-119	3 1 10 4 1 1 2 1 1 2 2 2	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes
92-94 95 96-105 106-109 110 112-113 112-113 114 115 116-117 118-119 120-126	3 1 10 4 1 1 2 1 1 2 2 2 7	ReservedCC_DMIDiagnosticsOptional DiagnosticsStatus/ControlReservedAlarm FlagsTx Input EQ controlRx Out EmphasiscontrolWarning FlagsExt Status/ControlVendor Specific	 Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses
92-94 95 96-105 106-109 110 111 112-113 112-113 114 115 116-117 118-119 120-126 127	3 1 10 4 1 1 2 1 1 2 2 7 7 1	ReservedCC_DMIDiagnosticsOptional DiagnosticsStatus/ControlReservedAlarm FlagsTx Input EQ controlRx Out EmphasiscontrolWarning FlagsExt Status/ControlVendor SpecificTable Select	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117 118-119 120-126 127	3 1 10 4 1 1 2 1 1 2 2 7 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117 118-119 120-126 127 128-247	3 1 10 4 1 2 1 2 2 7 1 2 7 1 1 20	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select User EEPROM	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h User writable non-volatile memory
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117 118-119 120-126 127 128-247 248-255	3 1 10 4 1 2 1 2 7 1 2 7 1 2 7 1 1 20 8	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select User EEPROM Vendor Control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h User writable non-volatile memory Vendor specific control addresses
92-94 95 96-105 106-109 110 112-113 112-113 114 115 116-117 118-119 120-126 127 128-247 248-255	3 1 10 4 1 1 2 1 1 2 2 7 1 2 7 1 1 2 2 7 1 1 2 8	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select User EEPROM Vendor Control	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h User writable non-volatile memory Vendor specific control addresses
92-94 95 96-105 106-109 110 111 112-113 114 115 116-117 118-119 120-126 127 128-247 248-255	3 1 10 4 1 2 1 2 1 2 7 1 2 7 1 1 2 2 7 1 1 2 2 8	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select User EEPROM Vendor Control Alar Reserved	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h User writable non-volatile memory Vendor specific control addresses Chage 02h Reserved for SFF-8690 (Tunable Transmitter)
92-94 95 96-105 106-109 110 112-113 112-113 114 115 116-117 118-119 120-126 127 128-247 248-255 128-247 248-255	3 1 10 4 1 2 1 1 2 7 1 2 7 1 2 7 1 1 20 8 8 1 2 1	Reserved CC_DMI Diagnostics Optional Diagnostics Status/Control Reserved Alarm Flags Tx Input EQ control Rx Out Emphasis control Warning Flags Ext Status/Control Vendor Specific Table Select User EEPROM Vendor Control Reserved Reserved	Check code for Base Diagnostic Fields (addresses 0 to 94) Diagnostic Monitor Data (internally or externally calibrated) Monitor Data for Optional Laser temperature and TEC current Optional Status and Control Bits Reserved (was assigned to SFF-8079) Diagnostic Alarm Flag Status Bits Tx Input equalization level control Rx Output emphasis level control Diagnostic Warning Flag Status Bits Extended module control and status bytes Vendor specific memory addresses Optional Page Select Page 00-01h User writable non-volatile memory Vendor specific control addresses Phage 02h Reserved for SFF-8690 (Tunable Transmitter) Reserved for future receiver controls



		Threshold	
132-172	41	Reserved	Reserved for SFF-8690
173-255	83	Reserved	Reserved

Mechanical Dimension



Unit: mm

	L	L1	L2	L3	W	W1	W2	Н	H1	H2
MAX	56. 9	31.2	41.95	47.7	13.8	10.2	14.0	8.6	0.6	11.5
Typical	56.7	31.0	41.80	47.5	13.7	10.0	-	8.5	0.5	11.3
MIN	<mark>5</mark> 6. 5	30.8	41.6 5	47. <mark>3</mark>	13.5	9.8	-	8.4	0.4	11.1



Test Center

1. Performance Testing

Every fiber optic transceiver is thoroughly tested by the LSOLINK Assurance Program, which is equipped with the world's most advanced analytical equipment to ensure that our transceivers meet the industry's international public protocol standards while still functioning flawlessly in your facility.



Optical Spectrum Inspection

Using the industry's leading optical spectrum analyser to check in real time that the parameters of the optical transceiver's laser comply with industry standards.

- > Peak: Peak wavelength and peak level
- > 2nd Peak: Side-mode wavelength and level
- Mean WI: Center wavelength
- > Total Power: Total power of spectrum
- SMSR: Side-Mode Suppression Ratio



Optical Signal Quality Inspection

Using highly efficient sampling oscilloscopes and BERT testers, equipped with an automated test platform to accurately test the signal quality of the transceiver, test records are kept for up to 5 years to ensure the traceability of each transceiver.

- Eye Mask Margin(NRZ)
- > TDECQ(PAM4):transmitter dispersion eye closure
- > OMA: Optical modulation amplitude
- BER: Bit error rate
- ER: Extinction Ratio



Flow Pressure Test

Using multi-protocol network traffic analyser with various brands of switches to test the transceiver's ability to transmit at full speed.

- **Bandwidth:** Actual transceiver bandwidth on the port
- Packet Loss
- Packet Errors:CRC Errors/PCS Errors/Symbol Errors
- LinkDown Counts
- > latency

Aboveis part of our test bed network equipment. For more information, Please click <u>download</u> for optical transceiver performance test report.



2. Quality Control

We adopt advanced quality management solutions. Each transceiver is self-inspected, including:20x microscope inspection, 200x microscope inspection, and QC process inspection.



visual inspection



Microscopic inspection: 20X



Microscopic inspection: 200X



Reliability Verification



Optical endface inspection



OQC Inspection



3. Compatibility Testing

Each optical transceiver is tested in LSOLINK's library of compatibility test equipment to ensure perfect compatibility with multiple brands on the market.



Aboveis part of our test bed network equipment. For more information, Please click <u>download</u> to get the compatibility test report of each brand of optical transceiver.



Order Information

Part Number	Description
10G-SFP-T-30	10GBASE-T SFP+Cooper RJ45 30m Transceiver Module
10G-SFP-T-80	10GBASE-T SFP+Cooper RJ45 80m Transceiver Module
10G-SFP-SR	10GBASE-SR SFP+850nm 300m DOM LC MMF Transceiver Module
10G-SFP-IR	10GBASE-IR SFP+ 1310nm 2km DOM LC SMF Transceiver Module
10G-SFP-LR	10GBASE-LR SFP+1310nm 10km DOM LC SMF Transceiver Module
10G-SFP-ER	10GBASE-ER SFP+1550nm 40km DOM LC SMF Transceiver Module
10G-SFP-ZR	10GBASE-ZR SFP+1550nm 80km DOM LC SMF Transceiver Module
10G-SFP-SR-I	10GBASE-SR SFP+ 850nm 300m DOM LC MMF Industrial-Temp Transceiver Module
10G-SFP-LR-I	10GBASE-LR SFP+ 1310nm 10km DOM LC SMF Industrial-Temp Transceiver Module
10G-SFP-ER-I	10GBASE-ER SFP+ 1550nm 40km DOM LC SMF Industrial-Temp Transceiver Module



Further Information

Lighting the Path to Global Links

- Web | www.lsolink.com
- Email | For Sales@lsolink.com

Disclaimer

- 1. We are committed to continuous product improvement and feature upgrades, and the contents cont ained in this manual are subject to change without notice.
- 2. Nothing herein should be construed as constituting an additional warranty.
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