

**ETU-LINK**

Optical Communication System

1X9 Series

1X9

E1B35(53)03-3(5) SC20

155M Single Fiber Bi-direction 1x9 Single fiber Transceiver (20km)

- 1X9 DIP plastic package with duplex SC receptacle
- Single Fiber Bi-direction;
- LVPECL logic interface, +3.3V/5.0V single power supply
- 1310nm FP Laser,
- InGaAs/InP PIN photodiode receiver
- 40km transmission with SMF
- Suitable used in the full-duplex transmission application
- Full compliant with ITU-T G.957, G.958 specification
- SONET/SDH OC-3/STM-1 compliant



Applications

- Long haul Ethernet transmission
- SONET/SDH/ATM

Description

T1310-R1550-155M-20km transceiver is a series single mode SC Single fiber Bi-direction 1x9 155Mbit/s module designed for optical data communication applications. It is electrically compatible with the MSA transceiver.

The transmitter section incorporates an advanced FP laser and driver IC with temperature compensation and automatic power control circuit. The receiver section incorporates an efficient InGaAs/InP PIN photodiode and Trans-impedance amplifier with AGC for wide dynamic range. The transceiver has excellent reliability.

T1310-R1550-155M-20km series transceiver is used for Long haul Ethernet transmission or SONET/SDH/ATM. It is fully compliant with ITU-T G.957, G.958 specification. a 15km to 80km point-to-point solution is suitable to use in the SONET/SDH and 10/100 Ethernet full-duplex transmission system.

Performance specifications

Operation Environment (3.3V/5V)

Parameter	Symbol	Minimum	Maximum	Units
Supply Voltage	Vcc	3.1/4.8	3.6 /5.5	V
Ambient operating Temperature	Top	0	+70	°C
RL of connector	RL	20	-	dB

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	Tst	-40	+85	°C
Operating Temperature	Top	0	70	°C
Supply Voltage	Vcc	0	6	V
Input voltage	Vin	GND	Vcc	
Lead Soldering Temperature & Time		240/10		°C/s

Transmitter Section

(Ambient Operating Temperature 0°C to +70°C, V_{cc} =3.1to 3.5V)

Parameter	Symbol	Min.	Typ.	Max.	Units
Data rate		10	-	155	Mb/s
Center Wavelength	λ_0	1270	1310	1350	nm
Output Spectral width	$\Delta \lambda$	-	-	2	nm
Average Optical Output Power	P ₀	-12	-8	-5	dBm
Extinction Ratio	E _r	-	10	-	dB
Power Supply Current	I _{oc}	-	70	-	mA
Optical Eye Diagram	ITU-T G.957 Recommendation				

Receiver Section

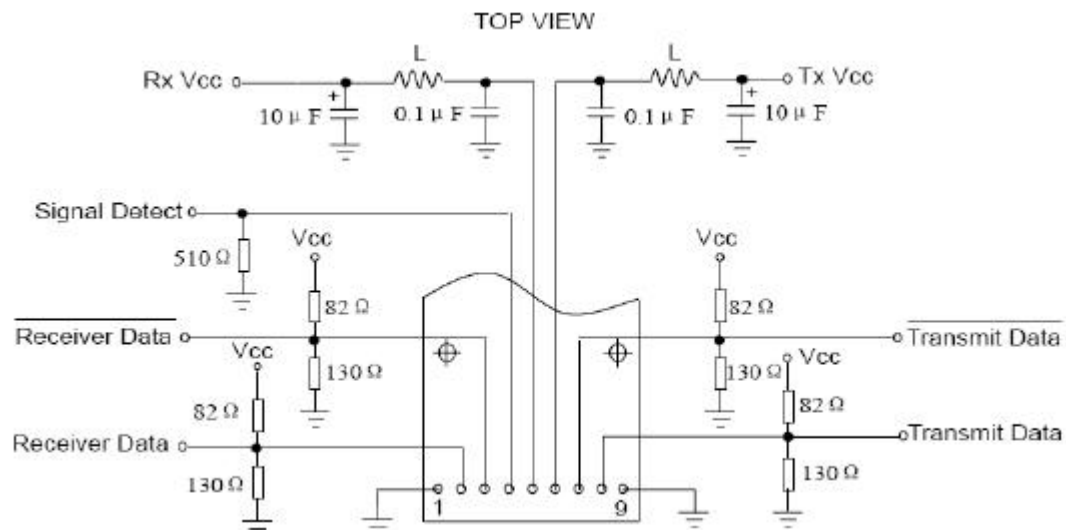
(Ambient Operating Temperature 0°C to +70°C, V_{cc} =3.1to 3.5V)

Parameter	Symbol	Min.	Typ.	Max.	unit
Wavelength	λ	1510	1550	1570	nm
V _{cc} Current	I _{cc}	-	70	-	mA
Maximum Input Power	P _{max}	0	-	-	dBm
Data rate		10	-	155	Mb/s
Receiver Sensitivity	P _{min}	-	-35	-33	dBm
Signal Detect Thresholds	P _{th}	-41	-	- 36	dBm

Pin Description

Receiver Signal Ground	○ 1 (Rx VBB)	○
Receiver Data Out	○ 2 (RD+)	N/C
Receiver Data Out Bar	○ 3 (RD-)	
Signal Detect	○ 4 (SD)	
Receiver Power Supply	○ 5 (Rx VCC)	TOP VIEW
Transmitter Power Supply	○ 6 (Tx VCC)	TX/RX
Transmitter Data In Bar	○ 7 (TD-)	
Transmitter Data In	○ 8 (TD+)	N/C
Transmitter Ground	○ 9 (Tx VBE)	○

Application Circuit



Compatibility Test

In order to ensure the product compatibility, our products will be tested on the switch before shipment. Our modules can be compatible with many mainstream brand switches, such as Cisco, Juniper, Extreme, Brocade, IBM, H3C, HP, Huawei, D-Link, Mikrotik, ZTE, TP-Link...

Our test equipment: VOLKTEK MEN-4110, HP 2530-8G, CRS226-24G-25+RM, Catalyst 2960G Series, Catalyst 3850 XS 10G SFP+, Catalyst 3750-E Series, HUAWEI S5700Series, H3C S3100V2 Series, Juniper-EX4200, etc.



Cisco Catalyst 3850



HUAWEI S5700



H3C S3100V2



HP J9264AR



Juniper EX 4200



Alcatel 6850E-U24X



Mikrotik CR5226-24G-25+RM



Cisco Catalyst 2960G



Volktek MEN-4110

Product Production Process

Quality Assurance

Continuous introduction of new equipment, produced by strict standards, strict quality inspection, to guarantee the high quality standard of each product.



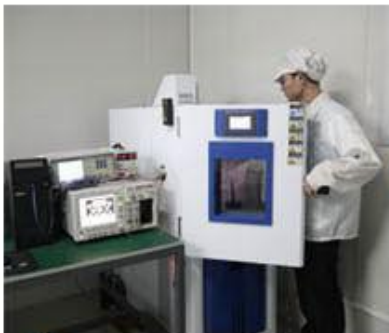
**Standardized
Production Line**



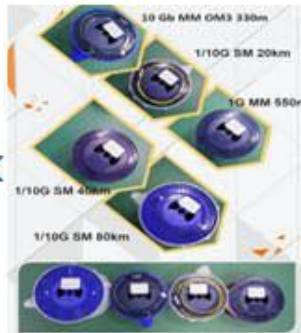
**Professional
Welding**



Assembling



Aging Testing



Distance Testing



Cleaning end face



Product Initial Test



Switch Testing



Product Final Test

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