

GEPON

EEP4311-3SCDP2

1.25G SFP SC GEPON OLT PX20+

- Compatible IEEE 802.3ah 1000BASE-PX20/PX20+ GEPON application
- Applied to EPON OLT for a Single Fiber Bi-directional EPON System
- SFP, Single SC connector, Digital Diagnostic Interface Compliant with SFF-8472
- Burst Digital Receiving Signal Strength Indication (RSSI)
- Single 3.3V power supply
- Operation case temperature -40~85°C for industrial and -10~70°C for commercial
- RoHS-6 compliance



Absolute Maximum Ratings

| Parameter | Unit | Min. | Typical | Max. |
|-----------------------------|------|------|---------|------|
| Power Supply | V | 0 | | 4.2 |
| Storage Ambient Temperature | °C | -40 | | 85 |
| Operating Case Temperature | °C | -40 | | 85 |
| Operating Relative Humidity | % | 5 | | 95 |
| Receiver Damaged Threshold | dBm | 0 | | |

Operating Condition

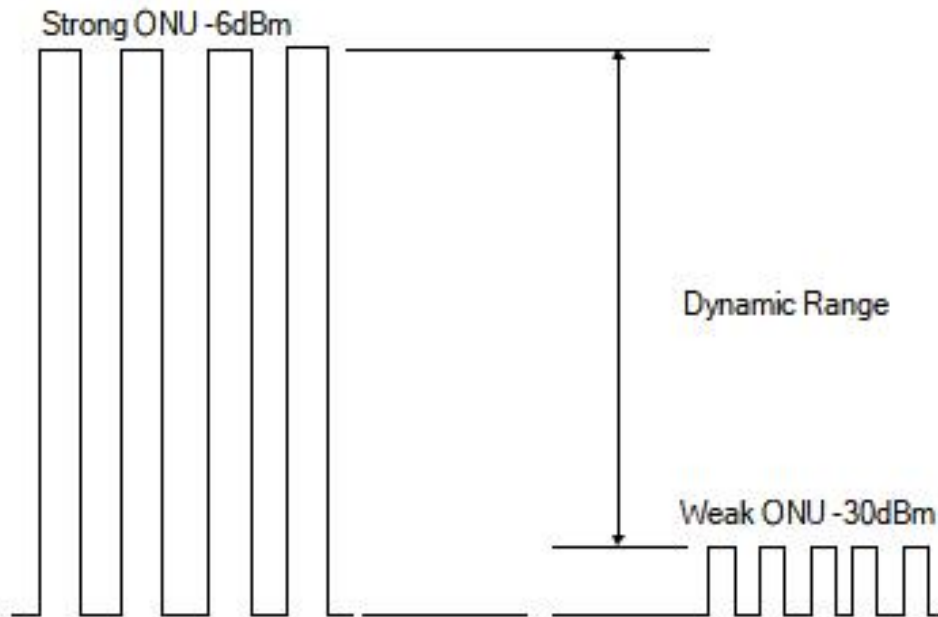
| Parameter | Unit | Min. | Typical | Max. |
|--------------------------------|--------|------|---------|------|
| Power Supply | V | 3.1 | 3.3 | 3.5 |
| Operating Case Temp for C-temp | °C | -10 | | 70 |
| Operating Case Temp for I-temp | °C | -40 | | 85 |
| Operating Relative Humidity | % | 5 | | 95 |
| Data Rate(TX/RX) | Gbit/s | | 1.25 | |

Optical Characteristics

| Parameter | Unit | Min. | Typ. | Max. |
|--|---------------------------------------|------|------|------|
| TX Central Wavelength | nm | 1480 | | 1500 |
| Spectral Width (-20dB) | nm | | | 1 |
| SMSR | dB | 30 | | |
| Mean Launched Power | dBm | 2 | | 7 |
| Mean Launched Power (TX Off) | dBm | | | -39 |
| Extinction Ratio(Note 1) | dB | 9 | | |
| TX Total Jitter | UI | | | 0.43 |
| Rise/Fall Time (20%-80%) | ps | | | 260 |
| RIN ₁₅ OMA | dB/Hz | | | -115 |
| Optical Return Loss Tolerance | dB | | | 12 |
| Transmitter and dispersion Penalty(20km G.652) | dB | | | 2.3 |
| TX Optical Eye Mask | Compliant With IEEE Std 802.3ah™-2004 | | | |
| Receive Wavelength | nm | 1260 | | 1360 |
| Sensitivity (Note 2) | dBm | | | -30 |
| Overload | dBm | -6 | | |
| Receiver Threshold Settling Time | ns | | | 250 |
| RX Dynamic Range(Note 3) | dBm | -30 | | -6 |
| LOS-Deassert | dBm | | | -31 |
| LOS-Assert | dBm | -45 | | |
| SD Hysteresis | dB | 0.5 | | 6 |
| Receiver Reflectance | dB | | | -12 |

Note:

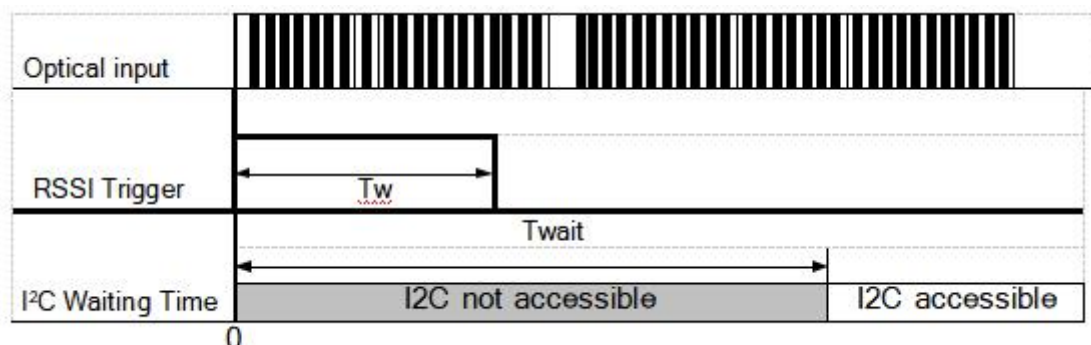
1. Measured with PRBS 2⁷-1 test pattern @1.25Gbps, Low Pass Filter is on.
2. Measured with a PRBS 2⁷-1 test pattern @1.25Gbps and ER=10dB, BER =10⁻¹²3,
3. RX Dynamic Range Definition



Electrical Characteristics

| Parameter | Unit | Min. | Typical | Max. |
|--------------------------------|------|------|---------|-----------------|
| Power Supply Current | mA | | | 300 |
| Data Input Differential Swing | mV | 200 | | 1600 |
| Data Differential Impedance | Ω | 90 | 100 | 110 |
| TTL Input -Low | V | 0 | | 0.8 |
| TTL Input -High | V | 2.0 | | V _{cc} |
| TTL Output -Low | V | 0 | | 0.4 |
| TTL Output -High | V | 2.4 | | V _{cc} |
| Data Output Differential Swing | mV | 400 | | 1600 |
| Los Assert Time | ns | | | 500 |
| Los Deassert Time | ns | | | 500 |

RSSI Trigger Time Sequence



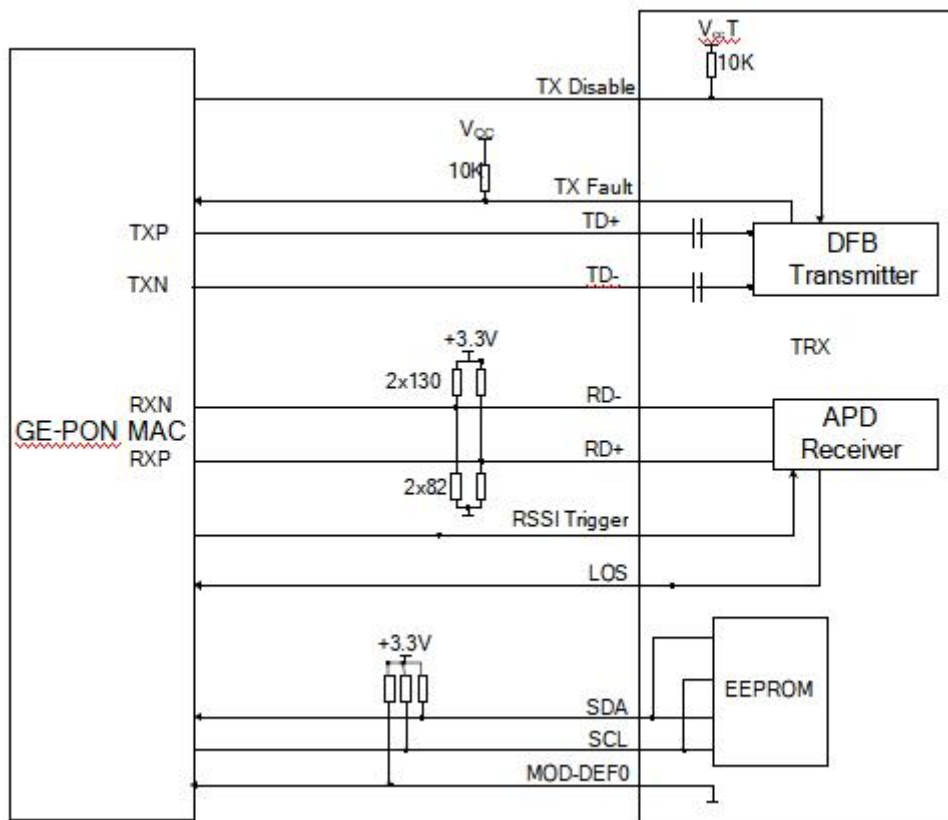
| Item | Symbol | Min | Max | unit |
|-------------------------------|------------|-----|------|------|
| Trigger width | T_w | 1 | 1.25 | us |
| I ² C Waiting Time | T_{wait} | | 500 | us |

Pin Definition

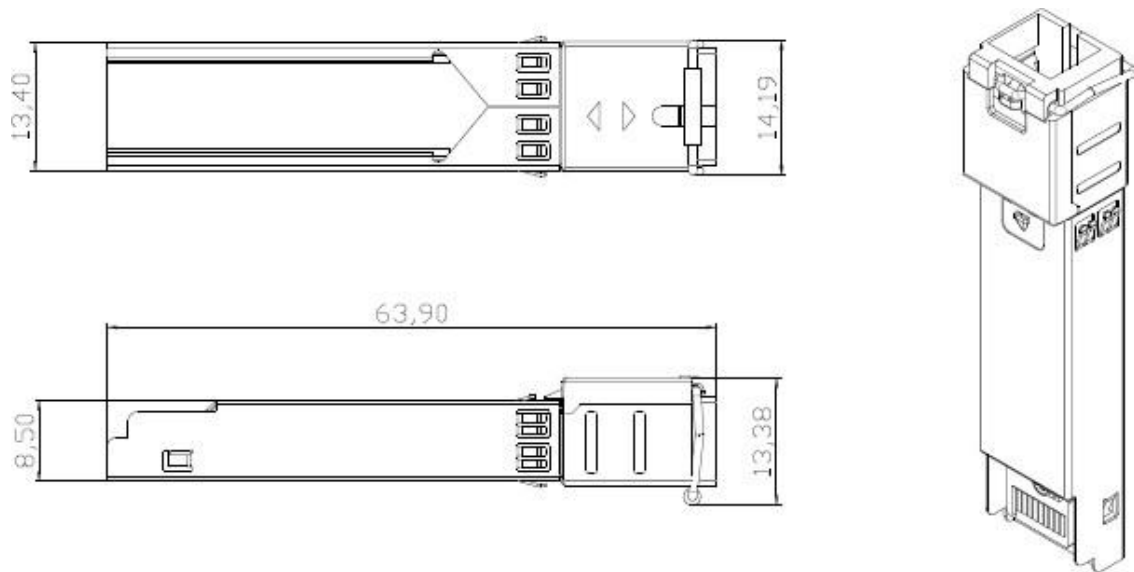
| Pin No. | Name | Level/Logic | Function | Description |
|---------|-----------|-------------|----------------------------|--|
| 1 | GNDT | NA | Ground | Transmitter Ground |
| 2 | TX_Fault | LVTTTL | TX Fault | TX Fault Alarm, TX Fault State: High; TX Normal State: Low |
| 3 | TX_Dis | LVTTTL | Transmitter Enable/Disable | Active High |
| 4 | MOD-DEF2 | LVTTTL | SDA | I2C clock |
| 5 | MOD-DEF1 | LVTTTL | SCL | I2C data |
| 6 | MOD-DEF0 | MOD-DEF0 | | Module Definition 0, Grounding in SFP |
| 7 | RSSI_Trig | LVTTTL | RSSI Trigger | Active High for Sampling |
| 8 | LOS | LVTTTL | Receiver Signal Detection | Loss of Signal. Asserted when light is off |
| 9 | GNDR | NA | Ground | Receiver Ground |
| 10 | GNDR | NA | Ground | Receiver Ground |
| 11 | GNDR | NA | Ground | Receiver Ground |
| 12 | RD- | LVPECL | Rx Data- | RX data NOT output, DC coupled output |
| 13 | RD+ | LVPECL | Rx Data+ | RX data output, DC coupled |

| | | | | |
|----|-------------------|--------|--------------------------|---|
| | | | | output |
| 14 | GNDR | GNDR | Ground | Receiver Ground |
| 15 | V _{cc} R | NA | Receiver Power Supply | Rx Power |
| 16 | V _{cc} T | NA | Transmitter Power Supply | Tx Power |
| 17 | GNDT | GNDT | Ground | Transmitter Ground |
| 18 | TD+ | LVPECL | Tx Data+ | TX data input, internally AC coupled with 100ohm terminated |
| 19 | TD- | LVPECL | Tx Data- | TX data NOT input, internally AC coupled with 100ohm terminated |
| 20 | GNDT | NA | Ground | Transmitter Ground |

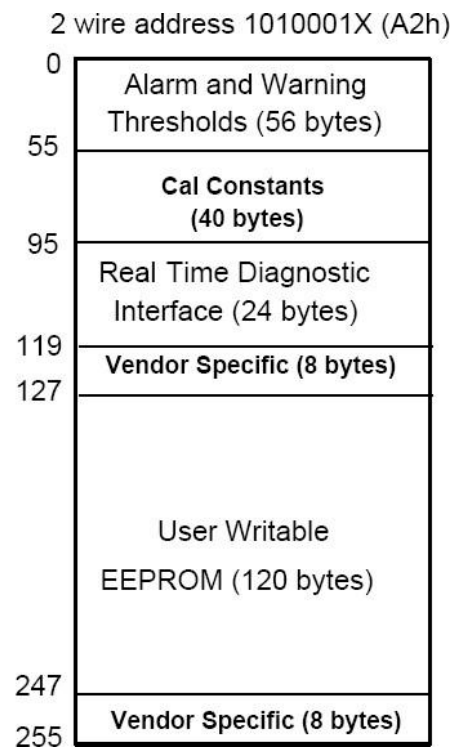
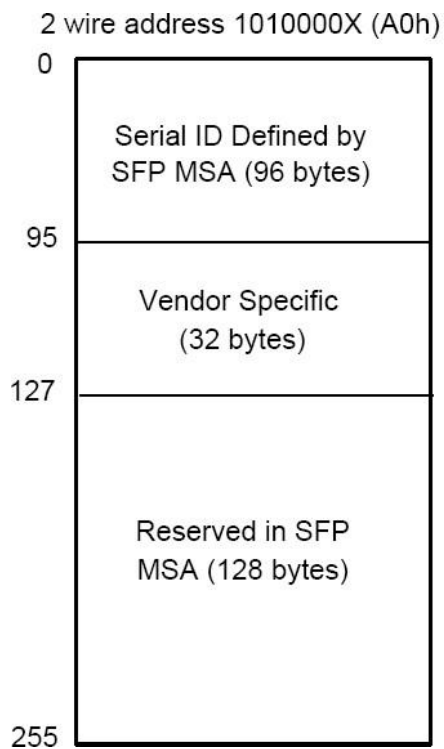
Recommended Interface Circuit



Mechanical Diagram



EEPROM Information



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

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**



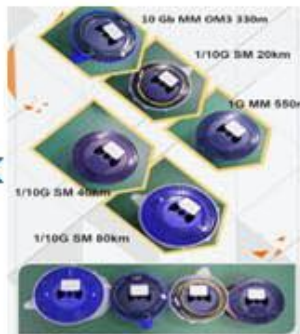
**Professional
Welding**



Assembling



Aging Testing



Distance Testing



Cleaning end face



Product Initial Test



Switch Testing



Product Final Test

Packaging

ETU-Link provides two kinds of packaging, 10pcs/Tray and individual package.



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