

SFP+ Single Fiber 60 km transceiver | Cisco Compatible 10G ER Ethernet
Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.

Datasheet

SFP+ Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- 10GBASE-ER/EW Ethernet 21dB SFP+
- 60 km ER SFP+ for SMF @ 10Gbps
- 1330Tx - 1270Rx DFB+PIN Laser 60 km SFP+
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SFP+ LC ports
- Extended 2 Years Warranty
- Tested and Certified in Brand Specific Networks and Target Applications
- Assembled Using Highest Quality Raw Components
- Compliant with SFF-8431, SFF-8432 & ROHS

PSPP-81DB33K060



Applications

- 10GBASE-ER @ 10.31Gbps
- 10 Gigabit Ethernet
- Fibre Channel 8x
- Fibre Channel 4x

Description

Platinum OEM Series PSPP-81DB33K060 is a Cisco Compatible Single Fiber BiDirectional 10GBASE-ER/EW Ethernet 10G Ethernet transceiver designed for long distance optical communications up to 60 km with signaling rates up to 10Gbps.

OptoSpan Platinum OEM Series 10Gbps Single Fiber BiDirectional (BiDi) optical transceivers have undergone rigorous qualification and certification testing to provide End-to-End Compatibility using switching equipment from CISCO, BROCADE, JUNIPER, ALCATEL, HP (select models), NORTEL, EMC, QLOGIC and other OEMs.

All OptoSpan Platinum OEM Series long-reach SFP+ s are ROHS compliant, allow for real-time diagnostic monitoring as per SFF-8472 and designed to meet Multi-Source Agreement (MSA) standards for Single Fiber BiDirectional (BiDi) transceivers with LC interface.

Optical Budget Calculation for 60 km Platinum OEM SFP+ Optical Transceiver

| PSPP-81DB33K060 | Distance: 60 km | | | | Fiber: 1330Tx - 1270Rx | |
|-----------------------------|-----------------|------------|------------|------------|------------------------|-----------------|
| | Tx Min dBm | Tx Max dBm | Rx Min dBm | Rx Max dBm | Link Attenuation dB | Power Budget dB |
| Product Specifications | 1 | 6 | -20 | -6 | | |
| Optical Calculation Results | | | -19.8 | -14.8 | 20.8 | 21 |

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General Specifications

| Parameter | Unit | Min. | Typ. | Max |
|--|------|------|------------|------|
| Absolute Maximum Ratings | | | | |
| Maximum Supply Voltage | V | -0.5 | | 3.6 |
| Storage Temperature | °C | -40 | | +85 |
| Case Operating Temperature | °C | 0 | | +70 |
| Recommended Operating Condition | | | | |
| Supply Voltage | V | 3.15 | 3.3 | 3.45 |
| Supply Current | mA | | | 430 |
| Data Rate | Gbps | | 9.95/10.31 | |

Electrical Characteristics

| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------------|------|------|------|---------|
| Transmitter | | | | |
| Differential Input Voltage Swing | mVpp | 150 | | 1200 |
| Input Differential Impedance | ohm | 85 | 100 | 115 |
| Transmit Disable Voltage - High | V | 2 | | Vcc+0.3 |
| Transmit Disable Voltage - Low | V | 0 | | 0.8 |
| Transmit Fault Voltage - High | V | 2 | | Vcc+0.3 |
| Transmit Fault Voltage - Low | V | 0 | | 0.5 |
| Receiver | | | | |
| Differential Output Voltage Swing | mVpp | 350 | | 700 |
| Differential Output Impedance | ohms | 85 | 100 | 115 |
| LOS Output Voltage - High | V | 2 | | Vcc+0.3 |
| LOS Output Voltage - Low | V | 0 | | 0.8 |

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Optical Characteristics

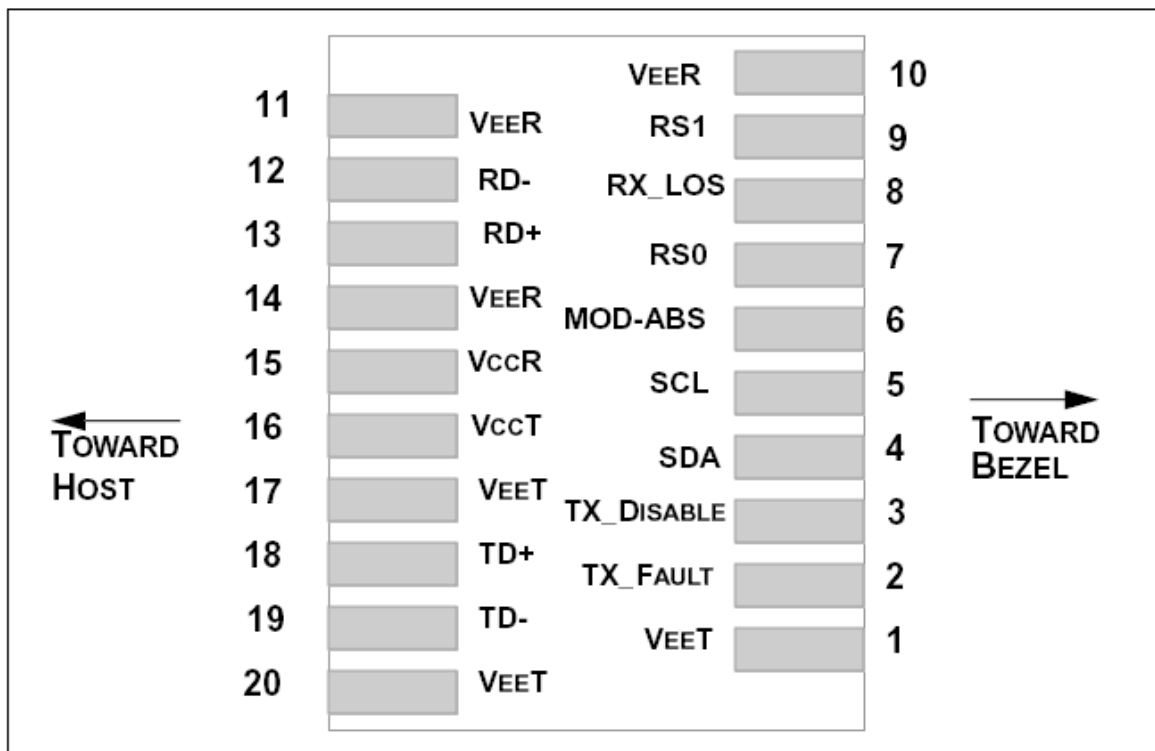
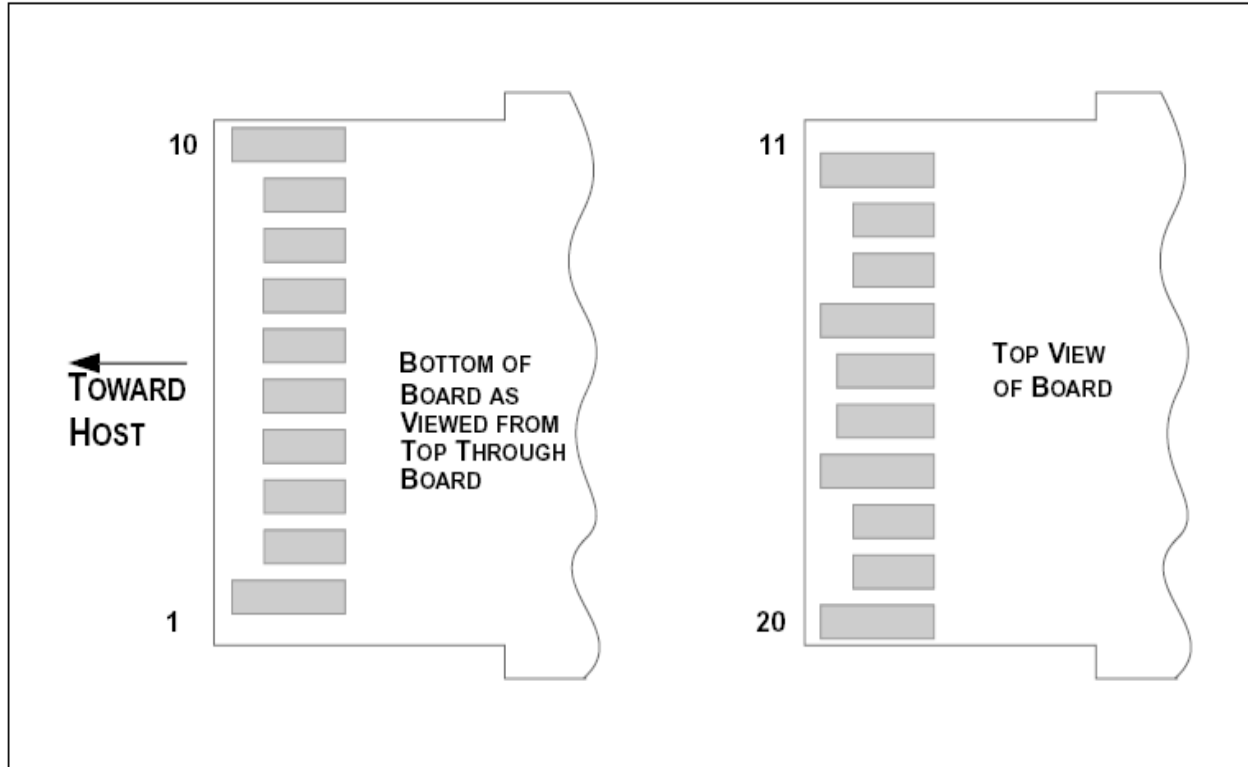
| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------|------|------|------|------|
| Transmitter | | | | |
| Output Optical Power | dBm | 1 | | 6 |
| Optical Extinction Ratio | dB | 3.5 | | |
| Optical Wavelength | nm | 1320 | 1330 | 1340 |
| Spectral Width | nm | | | 1 |
| Side Mode Suppression Ratio | dB | 30 | | |
| Receiver | | | | |
| Optical Center Wavelength | nm | 1260 | | 1280 |
| Receiver Sensitivity @ 10G | dBm | -20 | | -6 |
| LOS DE-Assert | dBm | | | -21 |
| LOS Assert | dBm | -30 | | |

Laser Safety

This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

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PIN Layout

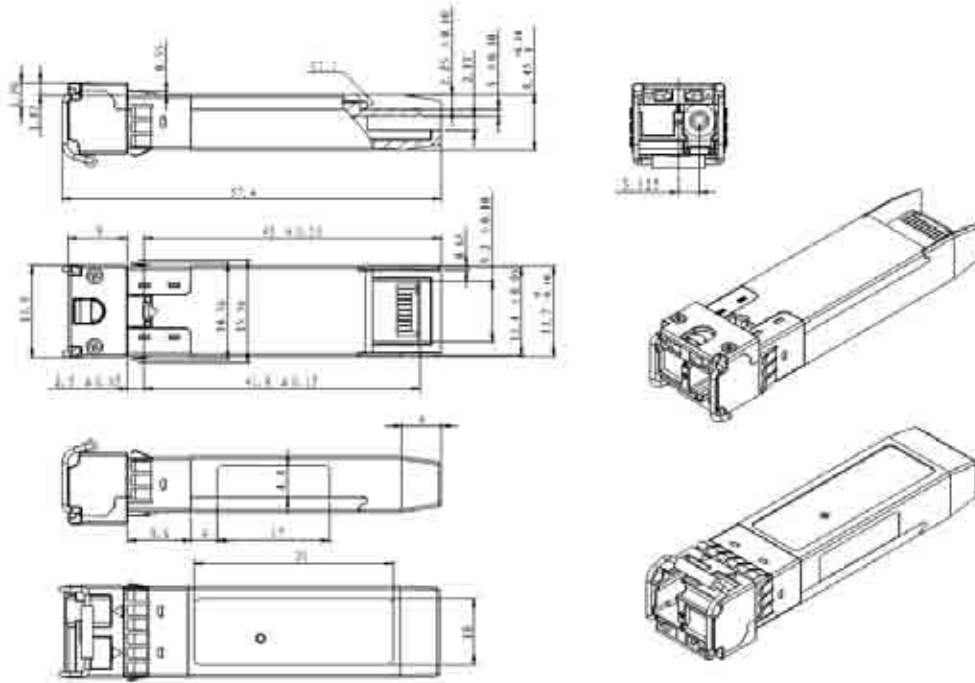
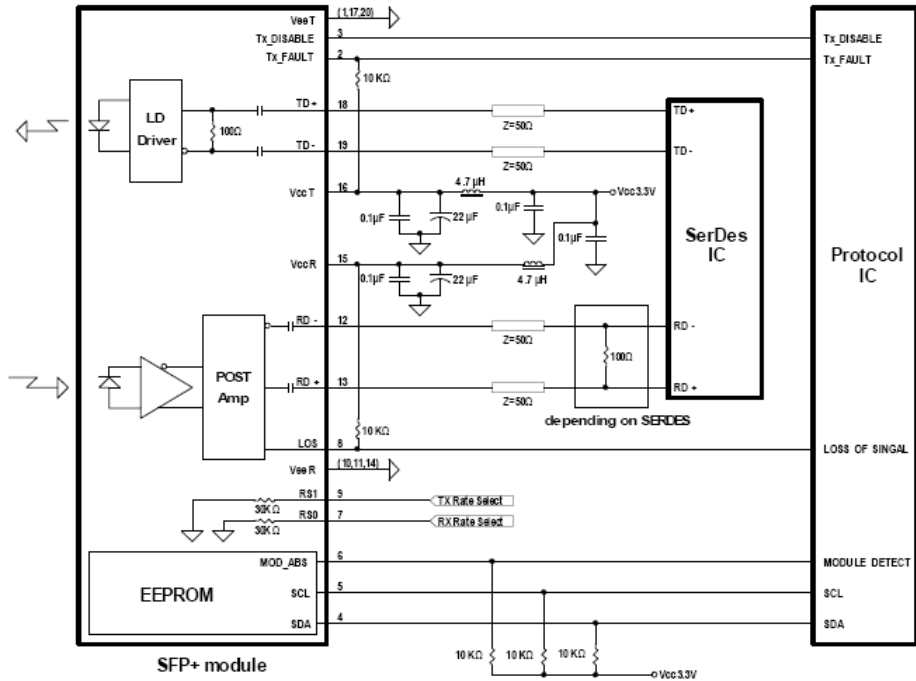


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PIN Functions

| Pin # | Name - Description |
|-------|---|
| 1 | Transmitter Ground |
| 2 | Transmitter Fault |
| 3 | Transmitter Disable. Laser output disabled on high or open |
| 4 | 2-wire Serial Interface Data Line |
| 5 | 2-wire Serial Interface Clock Line |
| 6 | Module Absent. Grounded within the module |
| 7 | RS0 for Rate Select: Open or Low = Module supports $\leq 4.25\text{Gbps}$ |
| 8 | Loss of Signal indication. Logic 0 indicates normal operation |
| 9 | No connection required |
| 10 | Receiver Ground |
| 11 | Receiver Ground |
| 12 | Receiver Inverted DATA out. AC Coupled |
| 13 | Receiver DATA out. AC Coupled |
| 14 | Receiver Ground |
| 15 | Receiver Power Supply |
| 16 | Transmitter Power Supply |
| 17 | Transmitter Ground |
| 18 | Transmitter Ground |
| 19 | Transmitter Inverted DATA in. AC Coupled |
| 20 | Transmitter Ground |
| 21 | |
| 22 | |
| 23 | |
| 24 | |
| 25 | |
| 26 | |
| 27 | |
| 28 | |
| 29 | |
| 30 | |

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Mechanical Layouts



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