

Rukus Compatible 10G-SFP-SR Quick Spec:

| | |
|-------------------|--|
| Part Number: | 10G-SFP-SR 10G-SFP-SR-EXT 10G-SFP-SR-IND |
| Form Factor: | SFP+ |
| TX Wavelength: | 850nm |
| Reach: | 300m |
| Cable Type: | MMF |
| Rate Category: | 10GBase |
| Interface Type: | SR |
| DDM: | Yes |
| Connector Type: | Dual-LC |
| Temperature: | Commercial |
| Power Budget: | 5.1dB |
| TX Power Min/Max: | -6.00 to -1.00 |
| RX Power Min/Max: | -11.1 to -1.00 |



Rukus Compatible 10G-SFP-SR Features

- Operating Data Rate up to 10.3Gbps
- Single 3.3V Power Supply and TTL Logic Interface
- Hot Pluggable
- 850nm VCSEL Transmitter
- Reach:
 - OM1 (62.5/125micron) 33m
 - OM2 (50/125micron 400 MHz*km) 82m
 - OM3 (50/125micron 2000 MHz*km) 300m
 - OM4 (50/125micron 4700) 300m
- Operating Case Temperature
 - Standard: 0°C to +70 °C
 - Extended -5°C to +85 °C
 - Industrial -40°C to +85 °C
- Compliant with MSA
- Compliant with IEEE 802.3ae 10GBASE-SR
- Digital Diagnostic Monitor Interface
- Compliant with SFF-8472
- RoHS 6 Compliant

Rukus Compatible 10G-SFP-SR Applications

- 10G Ethernet at 10.3125Gbps

Rukus Compatible 10G-SFPP-SR Electrical Characteristics (Condition: Ta=TOP)

| Parameter | Symbol | Min. | Typ | Max. | Unit | Notes |
|---------------------------------|--------|------|-----|---------|--------|---------------------|
| CML Inputs(Differential) | Vin | 150 | | 1200 | mV p-p | AC coupled inputs |
| Supply Current | ICC | | | 300 | mA | |
| Input Impedance (Differential) | Zin | 85 | 100 | 115 | ohm | Rin > 100 kohm @ DC |
| Tx_Disable Input Voltage – Low | VIL | 0 | | 0.8 | V | |
| Tx_Disable Input Voltage – High | VIH | 2.0 | | 3.45 | V | |
| Tx_Fault Output Voltage – Low | VOL | 0 | | 0.5 | V | |
| Tx_Fault Output Voltage – High | VOH | 2.0 | | Vcc+0.3 | V | |
| CML Outputs (Differential) | Vout | 350 | | 700 | mV pp | AC coupled outputs |
| Output Impedance (Differential) | Zout | 85 | 100 | 115 | ohms | |
| Rx_LOS Output Voltage- Low | VOL | 0 | | 0.5 | V | |
| Rx_LOS Output Voltage- High | VOH | 2.5 | | | V | |

Rukus Compatible 10G-SFPP-SR Optical Characteristics (Condition: Ta=TOP)

| TX | | | | | | |
|--------------------------------|------------------|---------------------------|------|---------|----------|--|
| Parameter | Symbol | Min | Typ | Max | Unit | |
| Data Rate | | - | 10.3 | - | Gb/s | |
| 50/125mm MMF | | | 300 | | m | |
| Centre wavelength | λ_c | 840 | 850 | 860 | nm | |
| Output Spectral Width(RMS) | $\Delta\lambda$ | - | - | 0.45 | nm | |
| Average Output Power | P _{out} | -6 | - | -1 | dBm | |
| Extinction Ratio | ER | 3.0 | 5.0 | - | dB | |
| Output Optical Eye | | IEEE 802.3-2005 Compliant | | | | |
| Transmitter Dispersion Penalty | TDP | | | 3.9 | dB | |
| Input Differential Impedance | Zin | 90 | 100 | 110 | Ω | |
| TX Disable | Disable | | 2.0 | Vcc+0.3 | V | |
| | Enable | | 0 | 0.8 | | |
| TX Fault | Fault | | 2.0 | Vcc+0.3 | V | |
| | Normal | | 0 | 0.8 | | |
| TX Disable Assert Time | t _{off} | | | 10 | us | |

| RX | | | | | | |
|--------------------------------------|------|-------------|-----|-----|--------------|----------|
| Parameter | | Symbol | Min | Typ | Max | Unit |
| Center Wavelength | | λ_c | 840 | 850 | 860 | nm |
| Receive Sensitivity | | P_{in} | - | - | -11.1 | dBm |
| Maximum Input Power | | P_{MAX} | -1 | | | dBm |
| Signal Detect Threshold-Assertion: | | SD_{HIGH} | - | - | -12 | dBm |
| Signal Detect Threshold-Deassertion: | | SD_{LOW} | -25 | - | - | dBm |
| Output Differential Impedance | | P_{in} | 90 | 100 | 110 | Ω |
| Receiver Overload | | P_{max} | 0.5 | | | dBm |
| Optical Return Loss | | ORL | | | -12 | dB |
| LOS | High | 2.0 | | | $V_{cc}+0.3$ | V |
| | Low | 0 | | | 0.8 | |

Absolute Maximum Ratings ($T_c=25^\circ C$)

| Parameter | Symbol | Min | Max | Unit |
|------------------------------------|----------|-----|-----|------------|
| Storage Temperature | T_{ST} | -40 | +85 | $^\circ C$ |
| Operating Temperature (Standard) | T_{IP} | 0 | +70 | $^\circ C$ |
| Operating Temperature (Industrial) | | -40 | +85 | |
| Input Voltage | T_{CC} | 0 | 5 | V |

Recommend Operation Environment

| Parameter | Symbol | Min | Typ | Max | Unit |
|------------------------------------|----------|-------|-----|-------|------------|
| Supply Voltage | V_{CC} | +3.15 | 3.3 | +3.45 | V |
| Operating Temperature (Standard) | T_{OP} | 0 | - | +70 | $^\circ C$ |
| Operating Temperature (Industrial) | | -40 | - | +85 | |

Licensing

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U.S. Patent Nos: 7,184,668, 7,079,775, 6,957,021, 7,058,310, 6,952,531, 7,162,160, 7,050,720