



GSFP series

The GSFP (PON SFP) series optical modules are designed for the high-speed and bidirectional telecommunication system. The GSFP optical module supports the commercial/quasi-industrial EPON Central Office (CO) device, commercial/quasi-industrial GPON CO device, commercial 10GEPON CO device and terminal, commercial XGS-PON CO device and terminal, commercial XGS-PON/GPON Combo CO device, and commercial XG-PON/GPON Combo CO device.

The GSFP optical module complies with the relevant ITU-T and IEEE standards, refers to the MSA specifications, and meets Class 1 laser product safety standards. It provides the standard Square Connector (SC) interface, electrical connector, and shield cover, which improves EMI performance.



Highlights

- Be of low power consumption.
- Provide the standard SC interface.
- Be of stable performance and high efficiency.
- Adopt the pull-tab latch structure.
- Adopt a single +3.3 V power supply and TTL interface.
- Adopt a metallic packaging, featuring excellent EMI performance.
- Adopt the standard serial protocol interface in the internal EEPROM.
- Provide more powerful monitoring functions (SFF-8472-compliant).
- Meet the MSA specifications.
- Meet requirements for standard commercial (0–70°C) or quasi-industrial (-20 to 75°C) operating temperature.
- Meet Class 1 laser product safety standards.

Typical Application

- EPON Access Network (AN) (1000BASE-PX20+, 1000BASE-PX20++, 1000BASE-PX10, and 1000BASE-PX20)
- GPON AN (CLASS B+, CLASS C+, and CLASS C++)
- 10GEPON AN (10GBASE-PR-D3/U3, 10GBASE-PRX-D3/U3, and 10GBASE-PR30-D)
- XGS-PON AN (GSFP+-XSN1DM-R, GSFP+-XSN2DM-R, and GSFP+-XSNU-R)
- XGS-PON and GPON AN (GSFP+-XSCN2DM-R)
- XG-PON and GPON AN (GSFP+-XCN2DM-R)
- FTTx, such as FTTH, FTTC, and FTTB
- Point-to-Multipoint (P2MP) system

Ordering Information

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| Model | Description |
|----------------|---|
| GSFP-PX20DM-R | EPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |
| GSFP-PX20DM-RI | EPON optical module, OLT side, 20 km, quasi-industrial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |
| GSFP-PX2PDM-R | EPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |
| GSFP-CLBDM-R | GPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GSFP-CLBDM-RI | GPON optical module, OLT side, 20 km, quasi-industrial, DDM, RoHS Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GSFP-CLCDM-R | GPON optical module, OLT side, 60 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GSFP-CLCDM-RI | GPON optical module, OLT side, 60 km, quasi-industrial, DDM, RoHS Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GSFP-CLDDM-R | GPON optical module, OLT side, 60 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GXFP-PR30DM-R | Symmetric 10GEPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1577 nm, uplink rate 10.31 Gbit/s, downlink rate 10.31 Gbit/s Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |
| GXFP-PRX30DM-R | Asymmetric 10GEPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1577 nm, uplink rate 1.25 Gbit/s, downlink rate 10.31 Gbit/s Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |
| GSFP+-PR30U-R | Symmetric 10GEPON optical module, ONU side, 20 km, commercial, RoHS <ul style="list-style-type: none"> Tx wavelength 1270 nm, uplink rate 10.31 Gbit/s, downlink rate 10.31 Gbit/s |
| GSFP+-PRX30U-R | Asymmetric 10GEPON optical module, ONU side, 20 km, commercial, RoHS <ul style="list-style-type: none"> Tx wavelength 1310 nm, uplink rate 1.25 Gbit/s, downlink rate 10.31 Gbit/s |
| GSFP+-PR30DM-R | Symmetric 10GEPON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1577 nm, uplink rate 10.31 Gbit/s, downlink rate 10.31 Gbit/s Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 1.25 Gbit/s |

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| Model | Description |
|-----------------|--|
| GSFP+-XSN1DM-R | Symmetric XGS-PON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1577 nm, uplink rate 9.953 and 2.488 Gbit/s, downlink rate 9.953 Gbit/s |
| GSFP+-XSN2DM-R | Symmetric XGS-PON optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> Tx wavelength 1577 nm, uplink rate 9.953 and 2.488 Gbit/s, downlink rate 9.953 Gbit/s |
| GSFP+-XSNU-R | Symmetric XGS-PON optical module, ONU side, 20 km, commercial, DDM, RoHS Tx wavelength 1270 nm, uplink rate 9.953 Gbit/s, downlink rate 9.953 Gbit/s |
| GSFP+-XSCN2DM-R | XGS-PON/GPON Combo optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> XGS-PON: Tx wavelength 1577 nm, uplink rate 9.953 and 2.488 Gbit/s, downlink rate 9.953 Gbit/s GPON: Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |
| GSFP+-XCN2DM-R | XG-PON/GPON Combo optical module, OLT side, 20 km, commercial, DDM, RoHS <ul style="list-style-type: none"> XG-PON: Tx wavelength 1577 nm, uplink rate 2.488 Gbit/s, downlink rate 9.953 Gbit/s GPON: Tx wavelength 1490 nm, uplink rate 1.25 Gbit/s, downlink rate 2.488 Gbit/s |

Technical specifications

| Model | Rate (Gbit/s) | Tx optical power (dBm) | Overload point (dBm) | Rx sensitivity (dBm) | Distance (km) |
|----------------|---------------------------------|------------------------|----------------------|----------------------|---------------|
| GSFP-PX20DM-R | Uplink: 1.25 Downlink: 1.25 | 2.5-7 | > -6 | < -30 | 20 |
| GSFP-PX20DM-RI | Uplink: 1.25 Downlink: 1.25 | 2-7 | > -6 | < -30 | 20 |
| GSFP-PX2PDM-R | Uplink: 1.25 Downlink: 1.25 | 4.5-9 | > -10 | < -32 | 20 |
| GSFP-CLBDM-R | Uplink: 1.25 Downlink: 2.488 | 1.5-5 | > -8 | < -28 | 20 |
| GSFP-CLBDM-RI | Uplink: 1.25 Downlink: 2.488 | 1.5-5 | > -8 | < -28 | 20 |
| GSFP-CLCDM-R | Uplink: 1.25 Downlink: 2.488 | 3-7 | > -12 | < -30 | 60 |
| GSFP-CLCDM-RI | Uplink: 1.25 | 3-7 | > -12 | < -30 | 60 |

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| Model | Rate (Gbit/s) | Tx optical power (dBm) | Overload point (dBm) | Rx sensitivity (dBm) | Distance (km) |
|-----------------|---|------------------------|----------------------|----------------------|---------------|
| | Downlink: 2.488 | | | | |
| GSFP-CLDDM-R | Uplink: 1.25 Downlink: 2.488 | 4.5–10 | > -12 | < -30 | 60 |
| GXFP-PR30DM-R | Uplink: 10.31 Downlink: 10.31 | 2–5 | > -6 | < -28 | 20 |
| | Uplink: 1.25 Downlink: 1.25 | 2–7 | > -9.38 | < -29.78 | |
| GXFP-PRX30DM-R | Uplink: 1.25 Downlink: 10.31 | 2–5 | > -9.3 | < -29.7 | 20 |
| | Uplink: 1.25 Downlink: 1.25 | 2–7 | | | |
| GSFP+-PR30U-R | Uplink: 10.31 Downlink: 10.31 | 4–9 | > -8 | < -28.5 | 20 |
| GSFP+-PRX30U-R | Uplink: 1.25 Downlink: 10.31 | 0.62–5.62 | > -8 | < -28.5 | 20 |
| GSFP+-PR30DM-R | Uplink: 10.31 Downlink: 10.31 | 2–5 | > -6 | < -28 | 20 |
| | Uplink: 1.25 Downlink: 1.25 | 2–7 | > -5 | < -30 | |
| GSFP+-XSN1DM-R | Uplink: 9.953 or 2.488 Downlink: 9.953 | 2–5 | > -5 | < -26 | 20 |
| GSFP+-XSN2DM-R | Uplink: 9.953 or 2.488 Downlink: 9.953 | 4–7 | > -7 | < -28 | 20 |
| GSFP+-XSNU-R | Uplink: 9.953 Downlink: 9.953 | 4–9 | > -8 | < -28 | 20 |
| GSFP+-XSCN2DM-R | XGS-PON uplink: 9.953 or 2.488 | XGS-PON: 4–7 | XGS-PON: > -7 | XGS-PON: < -28 | 20 |
| | XGS-PON downlink: 9.953 | XG-PON: 3–7 | XG-PON: > -9 | XG-PON: < -29.5 | |
| | GPON uplink: 1.25 GPON downlink: 2.488 | GPON: 3–7 | GPON: > -7 | GPON: < -30 | |
| GSFP+-XCN2DM-R | XG-PON uplink: 2.488 | XG-PON: 4–8 | XG-PON: > -8.5 | XG-PON: < -29.5 | 20 |
| | XG-PON downlink: 9.953 | | | | |
| | GPON uplink: 1.25 | GPON: 3–7 | GPON: > -12 | GPON: < -30 | |
| | GPON downlink: 2.488 | | | | |

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