# SFP28 25G BiDi 60 km I-Temp

SFP28 BiDi transceiver · 25GbE · TX 1290 / RX 1310 nm · 60 km · 22 dB · Simplex LC

The GLOBALfiber S25G-BXI60D-23 is an SFP28 transceiver for 25GbE links up to 60 km over singlemode fiber at TX 1290 / RX 1310 nm, with a 22 dB optical budget and digital diagnostics. It transmits at 1290 nm and receives at 1310 nm over one fiber.

## KEY FEATURES

- SFP28 form factor, hot-pluggable
- 25GbE (25.78 Gb/s)
- Wavelength TX 1290 / RX 1310 nm, DFB laser, APD receiver
- Reach up to 60 km, optical budget 22 dB
- Simplex LC optical connector
- Power < 1.5 W, single 3.3 V supply, DDM (SFF-8472)
- Case temperature -40 to +85 °C

## APPLICATIONS & COMPATIBILITY

- 25GbE over a single fiber in access, mobile fronthaul and campus networks
- Coding available for the major switch and router vendors. Specify the host equipment when ordering.
- Provide equipment model, port configuration and software version so support can be checked. Coding does not confirm compatibility with every model or mode.

## KEY SPECIFICATIONS

| | |
|---|---|
| Form factor | SFP28 |
| Data rate | 25GbE (25.78 Gb/s) |
| Wavelength | TX 1290 / RX 1310 nm |
| Reach | 60 km |
| Optical budget | 22 dB |
| Connector | Simplex LC |
| Fiber | Singlemode |
| Max. power | 1.5 W |
| Case temperature | -40 to +85 °C |

## ORDERING INFORMATION

| GLOBALfiber item | Description |
|---|---|
| **S25G-BXI60D-23** | SFP28 BiDi 25GbE DDM SM Simp 60km I-Temp Tx/Rx=1290/1310nm 22dB |

Other coding on request: salg@globalfiber.no.

## ABSOLUTE MAXIMUM RATINGS

| Parameter | Min | Max | Unit |
|---|---|---|---|
| Supply voltage | -0.5 | 3.6 | V |
| Storage temperature | -40 | 85 | °C |
| Relative humidity (non-condensing) | 5 | 85 | % |

## RECOMMENDED OPERATING CONDITIONS

| Parameter | Min | Typ | Max | Unit |
|---|---|---|---|---|
| Case temperature | -40 | – | 85 | °C |
| Supply voltage | 3.135 | 3.3 | 3.465 | V |
| Power dissipation | – | – | 1.5 | W |
| Signalling rate (±100 ppm) | – | 25.78125 | – | Gb/s |
| Link distance | – | – | 60 km | |

## OPTICAL CHARACTERISTICS – TRANSMITTER

| Parameter | Min | Typ | Max | Unit |
|---|---|---|---|---|
| Center wavelength | 1286 | 1290 | 1294 | nm |
| Average launch power | 0 | – | +6 | dBm |
| Side-mode suppression ratio | 30 | – | – | dB |
| Extinction ratio | 4 | – | – | dB |
| TX-off launch power | – | – | -30 | dBm |

## OPTICAL CHARACTERISTICS – RECEIVER

| Parameter | Min | Max | Unit |
|---|---|---|---|
| Receiver sensitivity (avg.) | – | -17 (stressed) | dBm |
| Receiver overload | -4 | – | dBm |
| Receiver wavelength | 1306 | 1322 | nm |
| Receiver sensitivity (OMA) | – | -20 | dBm |
| LOS assert | -30 | – | dBm |

Sensitivity and overload at 25.78 Gb/s, PRBS31, BER ≤ $5\times10^{-5}$ (host FEC). Use -23 and -32 modules as a pair (host FEC required).

## MANAGEMENT & DIAGNOSTICS

- Digital diagnostic monitoring per SFF-8472 over 2-wire serial interface
- Monitoring: temperature, supply voltage, TX bias, TX and RX power
- TX_Disable, TX_Fault, RX_LOS, MOD_ABS per SFP MSA

## COMPLIANCE

- IEEE 802.3cp 25GBASE-BR class (single-fiber 25GbE)
- SFP28 MSA (SFF-8402), SFF-8472 digital diagnostics
- Class 1 laser product, RoHS compliant

## INSTALLATION NOTES

- Use in SFP28 host ports. Confirm host support, port mode, firmware version and FEC before deployment.
- Check host cooling and power budget for a 1.5 W module.
- Check the optical link budget (22 dB) and fiber loss for the full link (singlemode fiber, Simplex LC).
- Keep connectors clean and capped when not in use.

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