



- ◆ Up to 10Gb/s bi-directional data links ◆
- Hot-pluggable SFP+ footprint
- ◆ Fully metallic enclosure for low EMI ◆
- Low power dissipation
- ◆ Compact RJ-45 connector assembly
- ◆ Access to physical layer IC via 2-wire serial bus ◆
- Supports Links up to 30m using Cat 6a/7 Cable ◆
- RoHS Compliant
- ◆ Operating case temperature: 0°C to 70°C

Applications

- ◆ 10 Gigabit Ethernet over Cat 6a/7 cable

Description

SFP-10G-T Copper Small Form Pluggable (SFP) transceivers are high performance, cost effective module compliant with the 10G Ethernet and 10GBASE-T standards as specified in IEEE 802.3az, which supporting 10Gbps data- rate up to 30 meters reach over unshielded twisted-pair category 6a/7 cables. The module provides standard serial ID information compliant with SFP+ MSA, which can be accessed with address of A0h via the 2wire serial EEPROM protocol. The physical IC can also be accessed via 2wire serial bus at address A0h.

Cable Length

| Standard | Cable | Reach | Host Port |
|-----------|-------|-------|-----------|
| 10Gbase-T | CAT6A | 30m | XFI |

Specification

| +3.3V Volt Electrical Power Interface | | | | | | |
|---------------------------------------|--------|--------------------------|---------|------|------|---|
| Parameter | Symbol | Min | Typical | Max | Unit | Notes |
| Input Voltage | Vcc | 3.13 | 3.3 | 3.47 | V | |
| Supply Current | Icc | | 700 | 900 | mA | 3.0W max power over full range of voltage and temperature. See caution note below |
| Maximum Voltage | Vmax | -0.3 | | 4.0 | V | |
| Surge Current | Surge | | TBD | | mA | |
| Current | | current See caution note | | | | |

Notes:

1. Power consumption and surge current are higher than the specified values in the SFP MSA.

General Specifications:

| Parameter | Symbol | Min | Typical | Max | Unit | Notes |
|-----------------------------|--------|-----|---------|---------|------|-----------------------|
| Data Rate | BR | 10 | | 1000 | Mb/s | IEEE 802.3 compatible |
| Storage temperature | TS | -40 | | 85 | °C | Case temperature |
| Operating temperature range | Top | 0 | | 60 | °C | Ambient temperature |
| I ² C Clock Rate | | 0 | | 200,000 | Hz | |

Notes:

- 1) Clock tolerance is +/- 50 ppm.
- 2) By default, the 10G Copper SFP is a full duplex device in preferred master mode.
- 3) Automatic crossover detection is enabled. External crossover cable is not required.
- 4) By default, 1000 GBASE-T operation requires the host system to have an SERDES interface with no clocks.

Ordering information

| Model No. | Product Description |
|-----------------|------------------------|
| Ikshu SFP-10G-T | 10G Copper SFP+ 0~70°C |

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