

TTD4580 | 10G SFP+ DWDM



SFP+ DWDM Optical Transceiver Module, Hot Pluggable, Duplex LC /UPC, 10.3125 Gbps data Transmit/Receive operation, providing long# haul 10G Ethernet optical transmission up to 80 km

TTD4580 family of DWDM transceiver modules provide the optical high-speed data communication functions supported by CommScope Distributed Access Architecture (DAA) products such as the E6000N Remote Phy Device (RPD) and the XE4202M Remote Optical Line Termination (R-OLT). These small and compact DWDM transceiver modules drive and receive 10G symmetrical Ethernet between the headend switch/routers and remote node/VHub platforms at distances up to 80 km, enabling gigabit data services to be available in rural and fast growing residential and commercial developments, supporting modern day communications needs without the expense of investing in new plant facilities.

Conforming to the Small Form Factor Pluggable (SFP+) Multisource Agreement, these state-of-the-art components are designed expressly for high-speed bi-directional communication applications that require 10 (10.3125) Gbps, with the laser transmission operating at one of 40 available ITU-T compliant (G.694.2) DWDM wavelengths (20–59). The TTD4580 family of modules features a very low jitter contribution, resulting in extremely clean, high-quality eye patterns. The module's metal enclosure ensures rugged durability, but also improves FCC EMI test margins. This emission and ESD control is particularly important in applications with sensitive multiport hubs and switches. The modules, which dissipate less than 2.5 W, are supplied with a duplex LC connector.

Key features of the TTD4580-xx-PI:

- Provides long-haul 10G Ethernet optical transmission up to 80 km
- Supports CommScope Remote Phy Device (RPD) and Remote OLT (R-OLT) DAA Solutions
- 10.3125 Gbps data Transmit/Receive operation
- Hot Pluggable SFP+ MSA footprint
- Duplex LC connector
- Very low jitter
- Metal enclosure for low EMI and durability
- Low power dissipation
- Extended industrial operating temperature range

Product Classification

Regional Availability	Asia Australia/New Zealand EMEA Latin America North America
Product Type	Optical transceiver
Product Brand	CommScope FLX™
Product Series	SFP+

Dimensions

Height	11.43 mm 0.45 in
Width	13.716 mm 0.54 in

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Length 55.88 mm | 2.2 in

Electrical Specifications

Input Voltage 3.3 VDC \pm 5% (supplied by node/VHub module)

Power Consumption, typical 2.8 W

Ordering Tree

ORDERING INFORMATION TTD4580

Model Name	Description
TTD4580-20-PI	10 Gbps, Ch 20, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-21-PI	10 Gbps, Ch 21, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-22-PI	10 Gbps, Ch 22, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-23-PI	10 Gbps, Ch 23, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-24-PI	10 Gbps, Ch 24, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-25-PI	10 Gbps, Ch 25, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-26-PI	10 Gbps, Ch 26, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-27-PI	10 Gbps, Ch 27, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-28-PI	10 Gbps, Ch 28, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-29-PI	10 Gbps, Ch 29, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-30-PI	10 Gbps, Ch 30, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-31-PI	10 Gbps, Ch 31, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-32-PI	10 Gbps, Ch 32, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-33-PI	10 Gbps, Ch 33, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-34-PI	10 Gbps, Ch 34, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-35-PI	10 Gbps, Ch 35, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-36-PI	10 Gbps, Ch 36, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-37-PI	10 Gbps, Ch 37, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-38-PI	10 Gbps, Ch 38, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-39-PI	10 Gbps, Ch 39, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-40-PI	10 Gbps, Ch 40, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-41-PI	10 Gbps, Ch 41, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-42-PI	10 Gbps, Ch 42, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-43-PI	10 Gbps, Ch 43, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-44-PI	10 Gbps, Ch 44, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-45-PI	10 Gbps, Ch 45, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-46-PI	10 Gbps, Ch 46, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-47-PI	10 Gbps, Ch 47, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-48-PI	10 Gbps, Ch 48, Duplex LC/UPC, 80 km, -40° to +95°C
TTD4580-49-PI	10 Gbps, Ch 49, Duplex LC/UPC, 80 km, -40° to +95°C

Optical Specifications

Supported Link Length 80 km on SMF-28 or equivalent

Dispersion Penalty 3.0 dB (Measured with PRBS 231-1 at 10.3125 Gbps, 80 km SMF and 1x 10-12 BER)

DWDM Channels 40 channels (20 through 59) | Center wavelengths per ITU-T G.694.2

Optical Port Interface LC/UPC

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Receiver Input Power, maximum	-6.0 dBm
Receiver Loss of Signal Assert Level, minimum	-35 dBm
Receiver Sensitivity, minimum	-24 dBm over 1525 – 1565 nm
Transmitter Data Rate	10.312 Gb/s
Transmitter Extinction Ratio, minimum	8.2 dB
Transmitter Output Power	-1 dBm min over -40° to 95°C
Transmitter Type	DWDM DFB, cooled
Wavelength Range	1260–1620 nm
Wavelength Stability, EOL	± 0.1 nm

Environmental Specifications

Operating Temperature	-40 °C to +95 °C (-40 °F to +203 °F)
Storage Temperature	-40 °C to +95 °C (-40 °F to +203 °F)
Operating Humidity	5%–95%, non-condensing
Safety Standard	Class 1 devices per FDA/CDRH IEC 60825-2 Class I laser safety compliant

Packaging and Weights

Weight, net	0.023 kg 0.05 lb
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant
UK-ROHS	Compliant

