

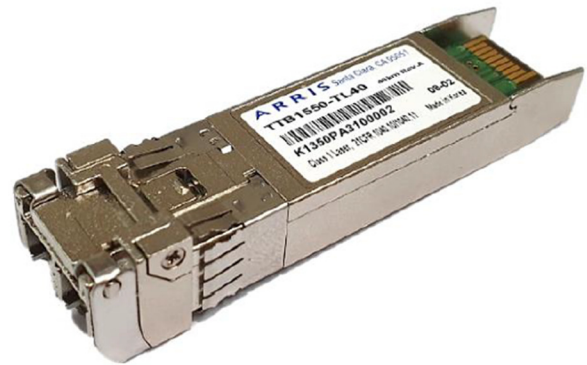
SFP Fiber Optic Transceivers

TTB1550-TL40/TL80

10 Gbps 1550 nm SFP+ Optical Transceiver Module

FEATURES

- Supports selected ARRIS PON product uplinks: 40 km and 80 km versions
- IEEE 802.3ae compliant; 10.3125 Gbps data throughput
- Pluggable SFP+ MSA compliant footprint
- Duplex LC connector
- Very low jitter
- Low power dissipation
- Metal enclosure for lower EMI
- Extended industrial operating temperature range of -40° to 95°C



PRODUCT OVERVIEW

The TTB1550-TL40 and TTB1550-TL80 Optical Transceiver Modules enable transmission capabilities for high-speed optical communications modules offered by ARRIS such as the E6000 Remote Phy Device (RPD), the XE4202M Remote Optical Line Termination (R-OLT), and the DT4600N RF Return Transmitter/Transceiver.

Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, these SFP+ transceivers are designed expressly for high-speed duplex PON communication applications that require 10 Gbps data rates, with the laser transmission portion of the device operating at 1550 nm, and fiber distances of 40 or 80 km.

TTB1550-TL40 and TTB1550-TL80 modules feature very low jitter contribution, resulting in an extremely clean, high-quality eye pattern required for high transmission performance. The metal enclosure not only makes the unit sturdier, but also improves FCC EMI test margins. This emission and ESD control is particularly important in applications with sensitive multi-port switches. The modules operate over an extended industrial temperature range of -40° to +95°C, dissipate less than 2.3 Watts (TL40), and are supplied with duplex LC connectors.

SPECIFICATIONS		
Characteristics	Specification	
Physical		
Dimensions	2.2" L x 0.4" H x 0.5" W (5.6 cm x 1.1 cm x 1.4 cm) MSA-SFP+ Compliant	
Weight	0.1 lbs (0.08 kg)	
Environmental		
Operating Temperature Range	-40° to +95°C (-40° to 203°F)	
Storage Temperature Range	-40° to +95°C (-40° to 203°F)	
Humidity (Operating)	5% to 95% non-condensing	
Power Requirements		
Input Voltage	3.3 VDC ± 5%	
Input Current @ 3.465 V _{DC}	TTB1550-TL40: 350 mA	TTB-1550-TL80: 430 mA
Power Consumption, max	TTB1550-TL40: 2.3 W	TTB-1550-TL80: 2.8 W
General		
Data Rate	10.3125 Gbps	
	Hot plug-in/out	
Supported Link Length	40 km (TTB1550-TL40), 80 km (TTB1550-TL80) on SMF-28 or equivalent	
Optical Connector	Duplex LC	
Optical Transmitter		
	TTB1550-TL40	TTB1550-TL80
Transmitter Type	Cooled EML Laser	Cooled EML Laser
Center Wavelength, Range	1550 nm (1530–1565 nm)	1550 nm (1530–1565 nm)
Mask Compliance	10 GbE, 10.3125 Gbps	10 GbE, 10.3125 Gbps
Transmission Distance, min	40 km	80 km
Output Power, min	-2 dBm	-1 dBm
Extinction Ratio, min	8.2 dB	9 dB
Dispersion Penalty, max	3 dB	3 dB
Optical Receiver		
	TTB1550-TL40	TTB1550-TL80
Receiver Type	PIN	APD
Wavelength Range	1530–1565 nm	1530–1565 nm
Reflectance	-26 dB	-26 dB
Sensitivity, max	-16.5 dBm, 1550 nm, PRBS 2 ³¹ -1, 0 km SMF, BER < 10 ⁻¹²	-22 dBm, 1550 nm, PRBS 2 ³¹ -1, 0 km SMF, BER < 10 ⁻¹²
Overload, min	-1 dBm	-7 dBm
LOS Assert, min	-30 dBm	-35 dBm
LOS Deassert, max	-16.5 dBm	-23 dBm
Regulatory and Standards Compliance		
	Class 1 devices per FDA/CDRH and IEC/EN-60825-1 certification laser safety regulations	
	EMC certifications are currently under study	
	RoHS compliant	

ORDERING INFORMATION

Model Name	Description
TTB1550-TL40	10 Gbps, 1550 nm, SFP+, Duplex LC/UPC, 40 km, -40° to +95°C
TTB1550-TL80	10 Gbps, 1550 nm, SFP+, Duplex LC/UPC, 80 km, -40° to +95°C

RELATED PRODUCTS

Remote Phy Device (RPD)	NC2000/NC4000 Nodes
DT4600N RF Transceiver	Remote OLT (R-OLT)

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

Note: Specifications are subject to change without notice.

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SFP-TTB1550