SFP Fiber Optic Transceivers

TSA1310-TL10

3.2 Gbps Optical Transceiver Module (1310 nm Tx for Links up to 10 km)

FEATURES

- Interconnects ARRIS digital transport devices
  - Selected node-based Digital Transceivers (DT4232N-00/01 and DT4250N)
  - RQ4150S Remote QAM Modulator
- Up to 3.2 Gbps data throughput
- Transmit/receive at distances up to 10 km
- 1310 nm FP laser transmitter
- Wide dynamic range PIN-PD receiver (1264 – 1617 nm)
- Pluggable SFP MSA footprint
- Duplex LC connector
- Very low jitter
- Metal enclosure for lower EMI
- 3.3 V power supply with low power dissipation
- Extended operating temperature range

PRODUCT OVERVIEW

The TSA1310-TL10 Optical Transceiver Module is ideally suited for the high-speed communications required for many of ARRIS' digital networking products, such as the DT4232N-00/01 "2-fer" Digital Transmitter, DT4250N Universal Digital Transmitter, and RQ4150S Remote QAM Modulator.

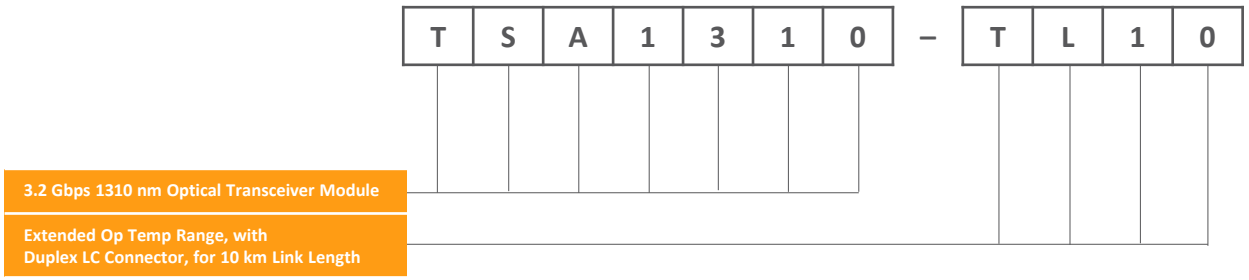
Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, this state-of-the-art plug-in component is designed for applications that require rates of up to 3.1875 Gbps, with the laser transmission portion of the device operating at a nominal center wavelength of 1310 nm. The modules are supplied with a duplex LC connector.

The TSA1310-TL10 module features a very low jitter contribution, resulting in extremely clean, high-quality eye patterns. And the module's metal enclosure not only makes it sturdier, but also improves its FCC test margins. This emission and ESD control is particularly important in applications with sensitive multiport hubs and switches. The module operates at extended voltage and temperature ranges, and dissipates less than 1.75 W. The Class 1 laser transmitter complies with applicable safety standards (IEC 60825-1 and 21 CFR 1040.10 and 1040.11).

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	2.2" L x 0.4" H x 0.5" W (5.6 cm x 1.0 cm x 1.3 cm)
Weight	0.1 lbs (0.05 kg)
Environmental	
Application temperature range	–40° to +85°C (–40° to +185°F)
Storage temperature range	–40° to +85°C (–40° to +185°F)
Humidity	5% to 95% non–condensing
Optical Interface	
Optical connectors	Duplex LC
Power requirements	
Input voltage	3.3 V_{DC}
Power consumption	1.75 W max
General	
Link budget	10 km on SMF-28 or equivalent
Data rate	3.1875 Gbps
Hot plug–in/out	
Optical	
Transmitter:	
Type	FP
Center wavelength, nominal	1310 nm (min, max: 1270, 1360)
Output power	0 dBm min
Link loss budget	18 dB
Extinction ratio (ER)	8.2 dB min
Dispersion penalty (at 10 km)	2 dB max (measured with a PRBS of 2^7-1 at 3.18 Gbps and $1x10^{-12}$ BER)
Receiver:	
Optical wavelength	1263.5 nm to 1617.5 nm
Sensitivity	–18 dBm max
Reflectance	–12 dB
Input power	–3 dBm max
Loss of signal assert level	–34 dBm
Regulatory	
Class 1 devices per FDA 21 CFR 1040.10 and 1040.11, and IEC 60825-1 laser safety regulations	

ORDERING INFORMATION



RELATED PRODUCTS

VHub	NC2000
DT4xxxN Digital Transceivers	NC4000

Customer Care

Contact Customer Care for product information and sales:

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

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