

SFP Fiber Optic Transceivers

TKB1550-TL40

4.250 Gbps 1550 nm Optical Transceiver Module

FEATURES

- Supports DT4250 Universal Digital Return and VT4250N Monitoring Digital Return Platform links up to 40 km
- 4.250 Gbps data throughput
- MSA compliant pluggable SFP Transceiver
- Duplex LC connector
- Very low jitter
- Metal enclosure for lower EMI
- 3.3 V power supply with low power dissipation
- Extended operating temperature range (-40° to +85°C)
- RoHS compliant and lead free



PRODUCT OVERVIEW

The TKB1550-TL40 1550 nm Optical Transceiver Module features high-speed communications functionality required for selected ARRIS' digital networking products such as the DT4250N-xx Universal Digital Transceiver and VT4250N-xx Monitoring Digital Transceiver.

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 rates of up to 4.250 Gbps, with the laser transmission portion of the device operating at a wavelength of 1550 nm.

The TKB1550-TL40 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 temperature range (-40° to $+85^{\circ}\text{C}$) and typically dissipates less than 1 Watt. Modules are supplied with a duplex LC connector.

The TKB1550-TL40 SFP can be ordered as an optional plug-in transceiver module to support the primary or secondary ring capabilities of transceiver units in NC2000 and NC4000 series nodes and VHubs.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	2.2" L x 0.4" H x 0.5" W (5.7 cm x 1.1 cm x 1.4 cm)
Weight	0.1 lbs (0.05 kg)
Environmental	
Application temperature range	-40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$)
Storage temperature range	-40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$)
Humidity	0% to 85% non-condensing
Optical Interface	
Optical connectors	Duplex LC
Power requirements	
Input voltage	3.3 V _{DC}
Power consumption	1.04 W max (at 3.465V _{DC} 300mA)
General	
Supported link length	40 km (on SMF-28 or equivalent)
Data rate	4.250 Gbps
BER	10^{-12} max
	Hot plug-in/out
Optical Interface	
Transmitter	
Transmitter type	DFB uncooled
Transmit wavelength	1510 - 1580 nm
Optical output power, min	0 dBm
Transmit distance	2 km
Bail latch color	Gray
Receiver	
Receiver type	PIN
Receiver wavelength	1260 - 1620 nm
Receiver sensitivity, max	-18 dBm (PRBS 2 ²³ -1, 0km SMF-28 BER < 10^{-12})
Input power, max	3 dBm
LOS assert level, min	-30 dBm
LOS de-assert level, max	-18 dBm

ORDERING INFORMATION

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4.25 Gbps 1550 nm Optical
Transceiver Module, 40 km

CAUTION:

The TKB1550-TL40 transceiver is only approved for use in the DT4250N-xx Universal Digital Transmitter and VT4250N-xx Monitoring Digital Transmitter for optical nodes.

RELATED PRODUCTS

VHubs	NC2000
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DT/VT4250N Universal Digital Transceiver	NC4000
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Note: Specifications are subject to change without notice.

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Contact Customer Care for product information and sales:

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