

SFP Fiber Optic Transceivers

TKCxxxx-TL40

4.250 Gbps CWDM Optical Transceiver Module

FEATURES

- Supports DT4250 and VT4250 Universal Digital Return Platform links up to 40 km
- 4.25 Gbps data throughput
- Enables transport of 2x 5–100 MHz returns over a single wavelength
- 15 CWDM ITU grid wavelengths
- Pluggable SFP MSA footprint
- Duplex LC connector
- Very low jitter
- Metal enclosure for lower EMI
- Extended operating temperature range (–40° to +85°C)



PRODUCT OVERVIEW

TKCxxxx-TL40 series CWDM Optical Transceiver Modules enable additional transmission capabilities for high-speed communications modules offered by ARRISS, such as the DT4250N-xx Universal Digital Return Platform Transmitter and VT4250N-xx Monitoring Digital Return Transmitter. A single SFP unit supports the transport of two separate 5–100 MHz returns, including 5–85 MHz returns, over a single wavelength.

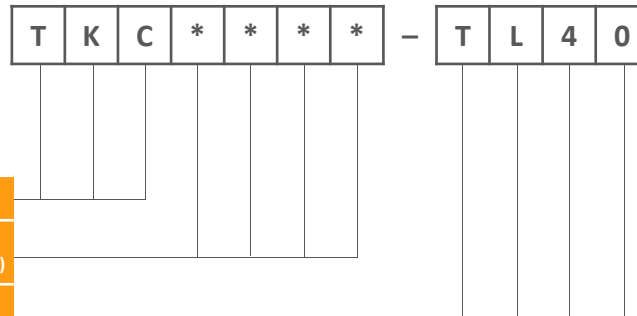
Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, these state-of-the-art plug-in TKCxxx-TL40 transceivers are designed for applications that require 4.25 Gbps rates, with the laser transmission portion of the device operating at one of 15 available ITU-compliant (G.694.2) CWDM wavelengths. The modules are equipped with a duplex LC connector.

TKCxxx-TL40 series modules feature a very low jitter contribution, resulting in an extremely clean high-quality eye pattern required for high transmission performance. The modules' metal enclosure not only makes them sturdier, but also improves their FCC test margins. This emission and ESD control is particularly important in applications with sensitive multiport hubs and switches. The module dissipates less than 1.73 W and operates at an extended temperature range of -40° to +85°C.

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°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	1.73 W max
General	
Link budget	40 km on SMF-28 or equivalent
Data rate	4.250 Gbps
Hot plug-in/out	
Optical	
Transmitter	
Transmitter type	CWDM uncooled DFB
CWDM optical wavelengths	15 (five in the range 1270, 1290, . . . , 1350, and ten in the range 1430, 1450, . . . , 1610 nm)
Output power	0 dBm
Dispersion penalty (at 40 km)	2.5 dB
Receiver	
Optical wavelength	1260 to 1620 nm
Sensitivity	-18 dBm min
Input power	0 dBm max
LOS of Signal assert level	-30 dBm
Regulatory and Safety	
IEC/EN-60825-1	
21 CFR 1040.10/1040.11	
Class 1 Laser	

ORDERING INFORMATION



NOTE:

TKCxxx-TL40 series transceiver modules are currently approved for use in DT4250 and VT4250 series Digital Transceiver modules for optical nodes.

4.25 Gbps CWDM Optical Transceiver

CWDM Wavelength (1270, 1290, 1310, 1330, 1350, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, or 1610 nm)

Extended Op Temp Range, with Duplex LC Connector, for 40 km Link Length

RELATED PRODUCTS

NH2000/NH4000 VHubs

NC2000/NC4000

DT/VT4250N Universal Digital Transceiver

DR3450 Digital Receiver

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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