Optical Node Series (NC)

DT4032N-01

Digital Transceiver (5–65 MHz)

FEATURES

- Digitizes 5–65 MHz legacy RF return
- Highly flexible, easily configurable support for transmission at 1310 nm, 1550 nm, 1 of 15 CWDM wavelengths, or 1 of 40 DWDM wavelengths
- Concatenated or point-to-point applications
- Remote status monitoring and management
- Hot plug in/out
- Supports single rings
- Fast Ethernet to single mode optical converter implemented with optional SFP transceivers
- Compliant with IEEE 802.1P, 802.1Q, 802.3u, VLAN, ToS

PRODUCT OVERVIEW

ARRIS' DT4032N-01 Digital Transceiver is a component of ARRIS's Integrated Digital Transport System that combines two major functions into one compact package: digitization of legacy 5–65 MHz RF return path signals and an Ethernet Access Device. The DT4032N-01 transceiver digitizes the legacy RF return path and multiplexes native Ethernet traffic from the optical receiver port of a plug-in (SFP) transceiver module into the return transport system. By providing virtual pipes for Fast Ethernet services and legacy RF return on a single fiber, the DT4032N-01 Digital Transceiver alleviates fiber exhaustion, greatly simplifies the network and provides distinct time-to-market advantages in turning up new revenue bearing services, including voice, video and data services.

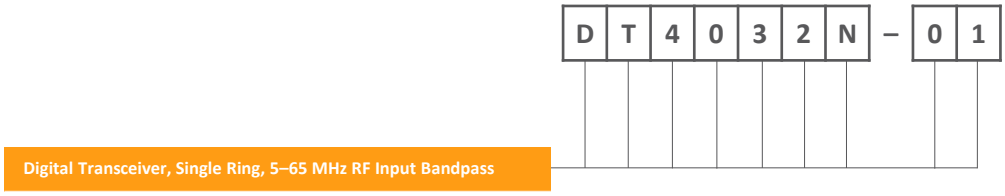
The DT4032N-01 transceiver supports both point-to-point and concatenated applications. For concatenated applications, multiple DT4032Ns can be designed into a daisy-chained configuration. The module's optical transmit/receive ports are implemented with optional plug-in transceivers for ultimate flexibility and affordability. Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, these state-of-the art transceivers are available in a variety of transmit/receive wavelengths, including dedicated 1310 nm (for 10 and 40 km links), 1550 nm (for links up to 40 km), CWDM ITU grid (for links up to 60 km), or DWDM ITU grid (for links up to 120 km), all operating at data rates of 2.125 Gbps. Longer spans are supported by using ARRIS's DX4515 Digital Transponder.

The DT4032N-01 is designed as a plug-in module for ARRIS' NC2000 and NC4000 series Optical Nodes. ARRIS supplies DT4032N-01 transceivers either with these nodes as a fully configured and tested node or as modules that can be installed by customers.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	4.0" L x 1.8" H x 2.3" W (10.2 cm x 4.6 cm x 5.8 cm)
Weight	0.8 lbs (0.4 kg)
Environmental	
Operating 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
Power Requirements	
Input voltage	• 3.3 V_{DC}: 1200 mA max (with SFP installed) • 5 V_{DC}: 180 mA max
Power consumption	4.9 W max (with SFP installed)
General	
Hot plug–in/out	
Optical interface connectors	LC Duplex on SFP
Optical transmission bit rate	2.125 Gb/s
RF Path and Distortions	
Pass band	5–65 MHz
Frequency response	± 0.5 dB
Input return loss, min	16 dB
Level stability	± 0.5 dB
System minimum full gain	30 dB
Loading, nominal	5–65 MHz (QPSK carriers or equivalent Gaussian noise)
Input, nominal	–62 dBmV/Hz
Dynamic range @ 41 dB CNR	11 dB (single link)
Peak NPR	49 dB
Optical	
	The optical ports facility of the DT4032N-01 can be populated with a variety of SFP (plug-in) transceivers depending on the network application. Please refer to the appropriate data sheets for the selected transceivers for detailed specifications. Following is a summary of available transceiver options (model numbers and brief descriptions) for these ports.
2.125 Gbps SFP Transceiver Options	• TR4000-PI (transmit at 1310 nm for links up to 10 km) • TR4040-PI (transmit at 1310 nm for links up to 40 km) • TR4540-0000-PI (transmit at 1550 nm for links up to 40 km) • TR4440B-*xxxx*-PI (transmit at CWDM wavelength of *xxxx* = 1270, 1290, . . ., 1350 or 1430, 1450, 1470, . . ., 1610 nm for links up to 60 km) • TR4580-xx-PI (transmit at 1 of 40 DWDM wavelengths for links up to 120 km) (*Note:* Longer distances can be achieved with the use of an ARRIS Dispersion Compensation Module and/or DWDM transponders in the return path. EDFAs can also be used to extend the link budget.)
LED Indicators (for SFP optical ports)	
	TX: Green ON = OK; OFF = bad SFP or unit not powered RX: Green ON = signal good; OFF = LOS asserted; Blinking = high BER (excessive bit error rate)

ORDERING INFORMATION



Transceiver Plug-in Module

The SFP module must be ordered separately. Please refer to the above list of available transceivers and appropriate data sheets for specific complete model numbers and ordering information.

RELATED PRODUCTS

NC4000 Optical Node	Optical Patch Cords
NC2000 Optical Node	Optical Passives
Fiber Service Cable	Installation Services

Customer Care

Contact Customer Care for product information and sales:

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

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