

# Optical Node Series (NC)

DT4030N-00  
Digital Transceiver (5–50 MHz)

## FEATURES

- Digitizes 5–50 MHz legacy RF return
- Highly flexible, easily configurable support for transmission at 1310 nm, 1550 nm, or 1 of 15 CWDM 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

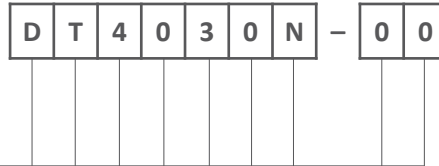
ARRIS' DT4030N-00 Digital Transceiver is a component of ARRIS's Integrated Digital Transport System that combines two major functions into one compact package: digitization of legacy 5–50 MHz RF return path signals and an Ethernet Access Device. The DT4030N-00 transceiver digitizes the legacy RF return 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 DT4030N-00 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 DT4030N-00 transceiver supports both point-to-point and concatenated applications. For concatenated applications, multiple DT4030N-00s 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), and CWDM ITU grid (for links up to 60 km), all operating at data rates of 2.125 Gbps. Longer spans are supported by using ARRIS's DX4515 Digital Transponder.

The DT4030N-00 is designed as a plug-in module for ARRIS' NC2000 and NC4000 series Optical Nodes. ARRIS supplies DT4030N-00 transceivers either with these nodes as a fully configured and tested node or as modules that can be installed by customers.

SPECIFICATIONS	
Characteristics	Specification
<b>Physical</b>	
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)
<b>Environmental</b>	
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
<b>Power Requirements</b>	
Input voltage	<ul style="list-style-type: none"> <li>3.3 V<sub>DC</sub>: 875 mA max (with SFP installed)</li> <li>5 V<sub>DC</sub>: 360 mA max</li> </ul>
Power consumption	4.7 W max (with SFP installed)
<b>General</b>	
Hot plug-in/out	
Optical interface connectors	LC Duplex on SFP
Optical transmission bit rate	2.125 Gb/s
<b>RF Path and Distortions</b>	
Pass band	5–50 MHz NOTE: The DT4030N-00 is a 5–50 MHz passband device. In systems operating with a lower cutoff frequency for the return spectrum, the actual passband is determined and controlled through the use of Diplexers and Low Pass Filters that precede the transceiver.
Frequency response	± 0.5 dB
Input return loss, min	16 dB
Level stability	± 0.5 dB
System minimum full gain	28 dB
Loading, nominal	5–40 MHz (QPSK carriers or equivalent Gaussian noise)
Input, nominal	-60 dBmV/Hz
Dynamic range @ 47 dB CNR	11 dB (single link)
Peak NPR	53 dB
<b>Optical</b>	
2.125 Gbps SFP Transceiver Options	<p><i>The optical ports facility of the DT4030N-00 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.</i></p> <ul style="list-style-type: none"> <li>TR4000-PI (transmit at 1310 nm for links up to 10 km)</li> <li>TR4040-PI (transmit at 1310 nm for links up to 40 km)</li> <li>TR4540-0000-PI (transmit at 1550 nm for links up to 40 km)</li> <li>TR4440B-xxxx-PI (transmit at CWDM wavelength of xxxx = 1270, 1290, . . . , 1350 or 1430, 1450, 1470, . . . , 1610 nm for links up to 60 km)</li> </ul>
LED Indicators (for SFP optical ports)	<p>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)</p>

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.

Digital Transceiver, Single Ring, 5–50 MHz RF Input Bandpass

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

**Note:** Specifications are subject to change without notice.

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