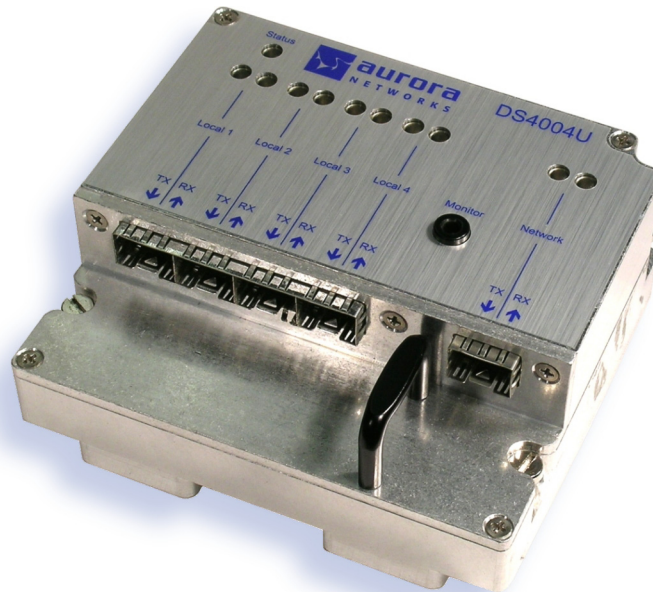


Features

- Compact multiplexer module for optical node platforms (occupies two node slots – up to two modules in NC4000 series optical nodes or up to five modules in an Ethernet Node)
- Services up to four customers per module, each with a dedicated wire-speed full duplex 100Base-FX optical Local Port
- Time Division Multiplexing of traffic from the four Fast Ethernet Local Ports into Aurora's high speed (2.125 Gbps) digital transport optical Network Port
- All ports field configurable with a variety of SFP plug-in transceivers (1310nm, 1550nm, CWDM, and others)
- Layer 1 transport device, transparent to Layer 2 and higher protocols, including IEEE 802.1P, 802.1Q, 802.3u, VLAN, ToS, QinQ, and MAC-in-MAC
- Supports VoIP and other time-sensitive traffic with low latency and low delay variation (jitter)
- Remotely managed via SNMP or Aurora's EMS
- High degree of customer data security and isolation
- Environmentally hardened
- Hot plug in/out
www.aurora.com

Optical Ethernet Multiplexer



Aurora's DS4004 Optical Ethernet Multiplexer enables delivery of Fast Ethernet over fiber, interfacing with standard media converters such as CPE devices. On the network side, the DS4004 is fully compatible with Aurora's high speed digital transport system and DWDM optical transport technology.

The DS4004 can be used over dedicated fiber or can operate over existing digital return infrastructure, generating additional revenues from spare bandwidth in these systems.

The DS4004 features one high-speed (2.125 Gbps) Network Port and four Fast Ethernet Local Ports, all populated by SFP plug-in transceivers for ultimate flexibility and affordability. SFP transceivers are available in a variety of transmit/receive wavelengths, including dedicated 1310nm, 1550nm, CWDM ITU grid, and others. Each Local Port supports a 100Mbps full duplex wire-speed Ethernet link that is terminated at the customer premises by a standard media converter.

The DS4004 module includes a sophisticated add/drop multiplexing function to serve its 2.125 Gbps Network Port, supporting software controlled add/drop of traffic at 100Mbps granularity. This feature enables operators to add and drop only the amount of traffic required per site, conserving valuable bandwidth. The DS4004 also includes a Time Division Multiplexing function, serving the Local Ports to provide high degree of security, low jitter and latency, and wire-speed performance to every customer port.

DS4004

Product Specifications

Physical:

- Ports (all implemented with SFP plug-in transceiver modules):
 - One full duplex 2.125 Gbps optical Network Port
 - Four full duplex 100Base-FX optical Local Ports
 - One monitoring port (stereo jack)
- Dimensions:
 - 4.5" L x 2.0" H x 4.0" W (11.4 cm x 5.1 cm x 10.2 cm)
- Weight:
 - 1.2 lbs (0.5 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: 24 V_{DC}
- Power consumption: 12 W max
(with 1 TR4000-PI transceiver and 4 TFA1310-TL29 transceivers installed in the Network and Local Ports, respectively, and will vary with other combinations of installed SFPs)

General:

- Optical transmission bit rates:
 - Network Port: 2.125 Gbps
 - Local Ports: 125 Mbps
- Hot swappable
- Interfaces: Accepts up to 5 SFP transceivers (one for Network Port and four for Local Ports)

Optical:

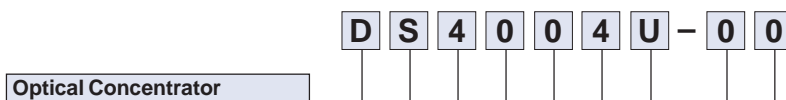
Network and Local optical ports can be populated with a variety of SFP (plug-in) transceivers depending on the network application. Please refer to the appropriate data sheets for the selected transceivers for detailed specifications. Following is a summary of available transceiver options (model numbers and brief descriptions) for these ports.

- Network Port (2.125 Gbps) Transceivers
 - TR4000-PI (transmit at 1310nm for links up to 10 km)
 - TR4040-PI (transmit at 1310nm for links up to 40 km)
 - TR4540-0000-PI (transmit at 1550nm for links up to 40 km)
 - TR4440B-xxxx-PI (transmit at CWDM wavelength of xxxx = 1430, 1450, 1470, . . . , 1610 nm for links up to 40 km)
- Local Port (125 Mbps Fast Ethernet) Transceivers
 - TFA1310-TL29 (transmit at 1310nm, 29 dB link budget, duplex LC connector)
 - TFA1310-TF17 (transmit at 1310nm, 17 dB link budget for links up to 20 km over SMF or up to 4 km over MMF, simplex SC/UPC connector)
 - TFB1550-TF17 (transmit at 1550nm, 17 dB link budget for links up to 20 km over SMF or up to 4 km over MMF, simplex SC/UPC connector)
 - TFCxxxx-TL29 (transmit at CWDM wavelength of xxxx = 1430, 1450, 1470, . . . , 1610 nm; 29 dB link budget; duplex LC connector)

LED Indicators:

- Module: a single indicator for OK and initialization
- Primary Network: 2 LEDs (RX LED for OK, BER and LOS status, TX LED for OK and Fail)
- Local Ports: 2 LEDs per port (RX LED for OK, BER and LOS status, TX LED for OK and Fail)

Ordering Information



Transceiver Plug-in Modules

SFP modules must be ordered separately, one module for the Network Port and four modules for the Local Ports.

Please refer to the above list of available transceivers and appropriate data sheets for specific complete model numbers and ordering information.



Corporate Headquarters
5400 Betsy Ross Drive
Santa Clara, CA 95054
Tel 408.235.7000
Fax 408.845.9045