

## Features

- High density chassis-based Network Interface module, enabling termination of up to 96 Fast Ethernet ports per chassis
- Serves up to 16 customers per module, each with a dedicated wire-speed full duplex 100Base-T port
- Optical port is field configurable with a variety of SFP plug-in transceivers (1310nm, 1550nm, CWDM)
- Layer 1 transport device
- Low latency and low delay variation (jitter)
- Managed via SNMP or Aurora's EMS
- High degree of customer data security and isolation
- Hot plug-in/out

## Network Interface Module



Module front and rear panel views

The model NI3030E is a chassis-based module that interfaces headend, hub or regional data center (RDC) WAN routers and switches to Aurora's transport network. It provides up to 16 full duplex, wirespeed, symmetric, dedicated, and completely independent local 100Mbps connections to up to 16 customers, for a total throughput of 3.2 Gbps.

The unit's full duplex optical port accepts any of a variety of SFP (plug-in) transceivers available from Aurora Networks for network communications with Aurora's high-speed digital transport system and DWDM optical transport technology.

The NI3030E is a Layer 1 transport device and is fully transparent to Layer 2 and higher protocols. Higher layer functionalities and external value added applications such as VLAN tagging are preserved and passed through. Traffic is channelized end-to-end via TDM, enabling a very high degree of security.

The NI3030E provides (1) 16 RJ-45 ports for connections to routers and switches, (2) a full duplex optical port, (3) a standard Compact Flash card slot to store program and network configuration files, and (4) an RJ-45 10Base-T port for interfacing to a management server/terminal.

The NI3030E can provision new customer connections from the headend in minutes, and can locally or remotely monitor and manage every active device in Aurora's fiber network via standard SNMP, including nodes, transceivers, and receivers.

The model NI3030N is available for network monitoring and node control only, and does not include the 16 RJ-45 ports.

# NI3030

## Product Specifications

### Physical:

- Dimensions: 13.0" D x 4.3" H x 2.0" W (3RU, 2 chassis slots)  
(33 cm x 11 cm x 5.1 cm)
- Weight: 2.6 lbs (1.2 kg)

### Environmental:

- Operating temperature range: -20° to +65°C (-4° to 149°F)
- Storage temperature range: -40° to +85°C (-40° to 185°F)
- Humidity: 5% to 95% non-condensing

### Power Requirements:

- Input voltage: 12 V<sub>DC</sub>
- Power consumption: 16 W (max)

### General:

- Optical transmission bit rate: 2.125 Gbps
- Optical interface: SFP transceiver
- Hot plug-in/out

### Local Ethernet Ports (Model NI3030E only):

- Connectors: 16 RJ-45 (8-pin)
- Cable length, max: 100 meters (CAT-5 compliant cable)
- Speed supported: 100 Mbps (full duplex)
- Protocols supported: Layer 2 VLAN (64 to 1522-byte packet lengths), ToS bit in IP header, Priority (802.1p, transparent), QoS (802.1q, transparent), QinQ, and MAC-in-MAC
- Auto-negotiation: advertises 100 Mbps, full duplex only

### Optical:

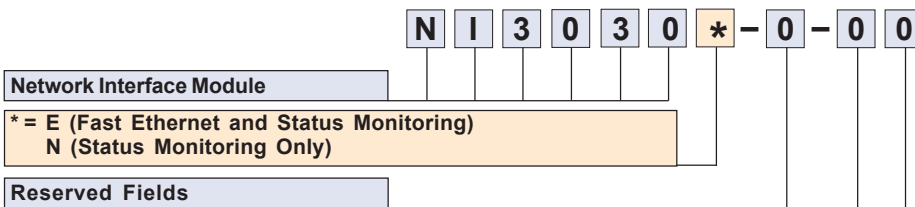
The network optical port can be populated with a variety of SFP (plug-in) transceivers depending on the network application. Please refer to the appropriate data sheets for the selected transceivers for detailed specifications. Following is a summary of available transceiver options (model numbers and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

- Network Port (2.125 Gbps) Transceivers
  - TR40xx-PI (transmit at 1310nm for links up to 10 km or 40 km)
  - TR4540-0000-PI (transmit at 1550nm 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 40 km)

### Indicators and Alarms:

- Front panel status indicators: green LED (OK), yellow LED (non-service-affecting alarm), red LED (service-affecting alarm), blue LED (illuminated during midplane communication access)
- Rear panel indicators:
  - Optical port: red "LOS" LED (indicating loss of signal at optical receiver port), red "BER" LED (indicating excess bit error rate on the optical receive port)
  - RJ-45 ports: Link and Activity LEDs
- Service affecting alarms: DC failure, hardware failure, loss of optical power, loss of valid data on data input

## Ordering Information



### Note

An appropriate SFP (plug-in) transceiver for the network optical port must be selected for your application and ordered separately. (Please refer to the list of available SFPs above.)



### Corporate Headquarters

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