

## ION Gigabit Ethernet Remotely Managed NID Module

10/100/1000Base-T to 1000Base-X with OAM/IP-Based Management

Media Converters



C3220-1040

The ION C3220 is a managed Network Interface Device (NID) module that provides an interface between 10/100/1000Base-T ports and 1000Base-SX/LX ports, allowing users to manage their links while integrating fiber optic cabling into 10/100/1000 copper environments. As a remotely managed device, the C3220 can be managed individually via an IP address or it can be managed by the ION Management Module when installed in a managed ION chassis. With advanced features like IEEE 802.3ah Link OAM, VLAN, QoS, SSH/SSL, jumbo frame support, and bandwidth allocation, the C3220 provides various methods for secure delivery of Ethernet services in business and mobile backhaul applications.

### Features

- MEF 9, 14 and 21 certified
- IEEE 802.3ah Link OAM
- 10K Jumbo Frame Support
- Two selectable Remote Management modes:
  - IP-Based Remote Management
  - In-Band (remote device managed by local peer)
- Auto-MDI/MDIX
- Auto-Negotiation
- Pause
- Transparent Link Pass Through
- Far-End-Fault (FEF)
- Remote Loopback
- Field Upgradeable Firmware
- IEEE 802.1p QoS packet classification
- IPv4 IP TOS, DiffServ and IPv6 traffic class QoS classification
- IEEE 802.1Q VLAN and double VLAN tagging with 4096 VIDs
- DHCP client
- SNTP

### Specifications

Standards	IEEE 802.3 IEEE 802.3ah IEEE 802.1p IEEE 802.1Q IEEE 802.1X
Data Rate	Copper: 10/100/1000 Mbps Fiber: 1000 Mbps
Filtering Addresses	8K MAC Addresses
Max Frame Size	10,240 bytes
Dimensions	Width: 0.86" [22 mm] Depth: 6.5" [165 mm] Height: 3.4" [86 mm]
Power Consumption	4.5 Watts
Environment	Environment specs are dependent on the chassis chosen Operating: 0°C to 50°C Humidity: 5% to 95% (non-condensing) Altitude: 0 – 10,000 ft.
Weight	1 lb. [0.45 kg]
MTBF	With Power Supply: Greater than 65,000 Hours (MIL-HDBK-217F) Greater than 178,000 Hours (Bellcore)  Without Power Supply: Greater than 250,000 Hours (MIL-HDBK-217F) Greater than 687,500 Hours (Bellcore)
Certifications	EN55022 class A, EN55024, CE Mark
Warranty	Lifetime



### Ordering Information

**C3220-1013**  
10/100/1000Base-T (RJ-45) [100 m] to 1000Base-SX 850nm multimode (SC) [62.5/125 µm fiber: 220 m/722 ft.] [50/125 µm fiber: 550 m/1804 ft.] Link Budget: 8.5 dB

**C3220-1014**  
10/100/1000Base-T (RJ-45) [100 m] to 1000Base-LX 1310nm single mode (SC) [10 km/6.2 mi.] Link Budget: 10.5 dB

**\*C3220-1040**  
10/100/1000Base-T (RJ-45) [100 m] to (1) 100/1000Base-X SFP Slot (empty)

**\*C3221-1040**  
10/100/1000Base-T (RJ-45) [100 m] to (2) 100/1000Base-X SFP Slots (empty)

Note: all units feature USB port for local management application.

\*C3220-1040 and C3221-1040 have SGMII support for use with 10/100/1000Base-T copper SFPs.

Optional Accessories (sold separately)

SFP Modules

USB Cables

### Features Continued

- TFTP
- RADIUS client
- RMON counters for each port
- Bandwidth profiling
- DMI Optical Management
- Cable diagnostic function for copper ports
- SSH
- Telnet
- Command Line Interface (CLI)
- Web management
- Focal Point Management
- SNMP v1, v2c, and v3
- USB port for basic setup
- Management VLAN