

## ION DS1 - T1/E1 Network Interface Device Module

### DS1 - T1/E1 over Fiber



The ION C6010 is a managed media converter that offers a solution for extending T1/E1 or PRI connections over fiber optic cabling. It provides fiber extension through a twisted pair RJ-48 port and a fiber port. These T1/E1 converters must be used in pairs, one on each end of the fiber link. Typical installations include a chassis card installed in a centrally located managed ION chassis, linked over fiber to a S6010 stand-alone converter at the remote location. The T1/E1 converters are available with fixed fiber connectors or an open SFP slot, with support for various fiber types, distances, and wavelengths to provide maximum flexibility for any network topology. CWDM SFPs can also be used to further increase the bandwidth capacity of the fiber infrastructure.

### Features

- Remote in-band management
- Local or Remote Loopbacks - Copper or Fiber
- Switch selectable for T1 or E1
- Remote firmware upgrade
- LEDs for immediate visual status
- Supports dual or single fiber
- Supports multimode and single mode fiber at a variety of distances
- Supports CWDM SFPs
- SNMP management when used with ION chassis and management module
- Remote stand-alone can be managed by local peer
- Extend PRI over fiber
- Must be used in pairs

### Specifications

|                   |   |
|-------------------|---|
| Standards         | ANSI T1.102<br>T1.402<br>T1.408<br>ITU I.431<br>G.703<br>G.736<br>G.775<br>G.823<br>ETSI 300-166<br>ETSI 300-233<br>TBR12/12                        |
| Copper Connectors | RJ-48, BNC  |
| Fiber Connectors  | SFP: LC connector Uses standard 100Base-X/OC-3<br>SFP Fixed Optics: ST or SC connector  |
| Data Rates        | T1 = 1.544 Mbit/s, E1 = 2.048 Mbit/s  |
| Status LEDs       | Power, Signal Detect Copper, Signal Detect Fiber  |
| Dimensions        | Width: 0.86" [22 mm]<br>Depth: 6.5" [165 mm]<br>Height: 3.4" [86 mm]  |
| Power Consumption | 2.6 Watts   |
| Environment       | Environment specs are dependent on the chassis chosen<br>Operating: 0°C to 50°C<br>Humidity: 5% to 95% (non-condensing)<br>Altitude: 0 – 10,000 ft. |
| Weight            | 1 lb. [0.45 kg]   |
| MTBF              | Greater than 250,000 hours (MIL-HDBD-217F)<br>Greater than 687,000 hours (Bellcore)   |
| Certifications    | CISPR/EN55022 Class A, FCC Class A, CE Mark   |
| Warranty          | Lifetime  |

### Ordering Information

**C6010-1013**  
Twisted Pair (RJ-48) [1.5 km/0.9 mi.]  
to 1300nm multimode (SC) [2 km/1.2 mi.]  
Link Budget: 12.0 dB

**C6010-1014**  
Twisted Pair (RJ-48) [1.5 km/0.9 mi.]  
to 1310nm single mode (SC)  
[20 km/12.4 mi.] Link Budget: 16.0 dB

**C6010-1040**  
Twisted Pair (RJ-48) [1.5 km/0.9 mi.]  
\*to SFP slot (empty)

**C6010-3040**  
(2) Coax (BNC) \*to SFP slot (empty)

Optional Accessories (sold separately)

#### SFP Modules

\*SFP port uses standard 100Base-x/oc-3 SFP