

AMN7100

Lambda Terminal
micro-Transmux

General Description

Hitachi's AMN7100 Lambda Terminal is configurable as a stand-alone Transmux via the single card micro-Transmux. The AMN7100 micro-Transmux (Transparent Transponder + Multiplexer) multiplexes lower speed traffic to the OC-192 line rate directly through the DWDM system. It is optimized for best effort data traffic like IP, ATM or Frame Relay. In its simplest terms the micro-Transmux provides OC-48/48c access, 4:1 time division multiplexing or GbE access with 2:1 mapping per OC-48 circuit to OC-192 transparent transport. When used in conjunction with DWDM, the micro-Transmux maximizes the channel capacity by providing four OC-48 inputs or 8 GbE inputs for each OC-192 wavelength of the DWDM system resulting in full 10 Gbit/s DWDM channel utilization.

And for International applications, it offers recognition and transport of SONET and SDH signals. The micro-Transmux is also available as a standalone multiplexer or integrated with Hitachi's AMN6100 DWDM system.

Major Advantages

- Service providers benefit from low initial cost and continuing usage of their OC-48 networks, while having a smooth growth path to the ultra high capabilities offered by OC-192 transmission over DWDM.
- As an OC-192 TDM multiplexer, the micro-Transmux multiplexes lower level OC-48 signals for transport at OC-192. It provides full visibility with SONET/SDH PMs, alarms, threshold crossing alerts, etc.
- The micro-Transmux can be used to provide leased lambda service to other carriers or large business customers requiring OC-48/48c services.
- The micro-Transmux can be used to provide GbE services to large business customers requiring those services.
- The micro-Transmux can be used to mix OC-48/48c and GbE services in the same 10G interface, therefore not stranding any bandwidth.

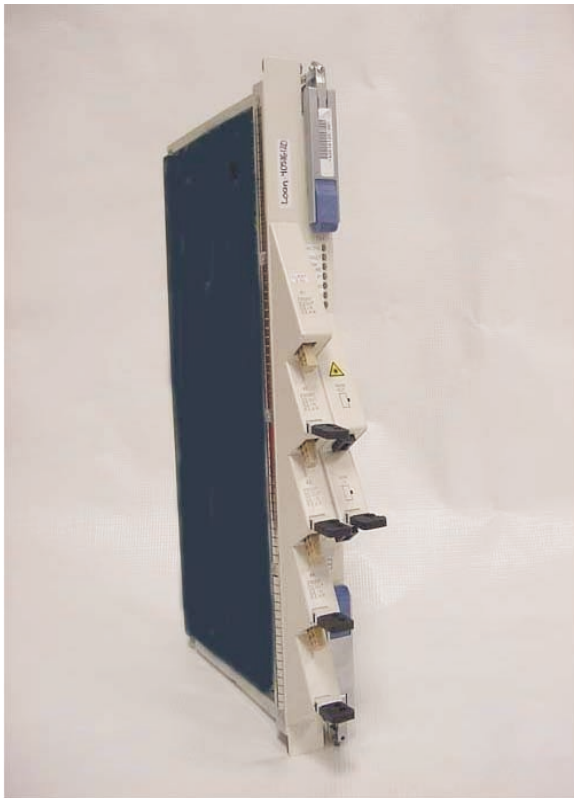
- Designed as an optional component of Hitachi's AMN6100 DWDM system, four (4) OC-48s can be multiplexed into a single input of the AMN6100. With a 10.7G ITU-grid compliant line interface.
- Also, the micro-Transmux can be used with transponder based DWDM systems from other vendors, or without DWDM as a SONET terminal multiplexer when configured with a standard 10G SONET compliant line.
- The micro-Transmux is OC-192-capable and SONET-based and supports both SONET and SDH 2.5 Gb/s tributaries.
- The micro-Transmux provides clear channel transport of the SONET/SDH OC-48 section and line overhead data bytes referred to as *Transparent Transport*. (See figure on back).

Advanced Features

- High-speed 10 Gb/s multiplexer /transponder
- IP/ATM/FR optimized multiplexer/ transponder
- Cost-effective solution for transport of high-density OC-48 (2.5 Gb/s) traffic over 10G DWDM
- Maximum 10 Gb/s per wavelength via DWDM or 10 Gb/s per fiber in terminal multiplexer operation
- Modular single-shelf system with up to 11 micro-Transmux cards per shelf (44 OC-48s)
- 330 Gb/s capacity per 7 ft. bay (three micro-Transmux shelves per bay)
- Patented transparent transport (patent pending), which supports existing OC-48 SONET rings and protection (SONET BLSR, UPSR and 1+1)
- SDH recognition
- Based on field-proven technology (first coast-to-coast OC-192 network)
- Integrated forward error correction supports improved bit error rate services 10^{-15} or extended DWDM s

AMN7100

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Specifications (cont'd)

Physical: 23.626 in. (H) x 23 in. (W) x 11.8 in. (D)
3 shelf/bay

Housekeeping Alarms: Input: 32
Output: 16

Supervisory and Control Interface Characteristics

OSS: TL-1/TCP-IP/802.3

Local/Remote: TL-1/802.3, TL-1/RS-232

Remote (modem): PCI-IP, PPP/RS-232

Remote (ethernet): SONET DCC

Order Wire: Analog, Digital (64 kb/s)

Specifications

Transmission Rate: 9.953 Gb/s SDH (1550 nm)
(SONET OC-192)

Optional: 9.953 Gb/s or 10.664 Gb/s
(With G.709 OB-FEC ITU-Grid compliant)

Tributaries: 4 OC-48/48c

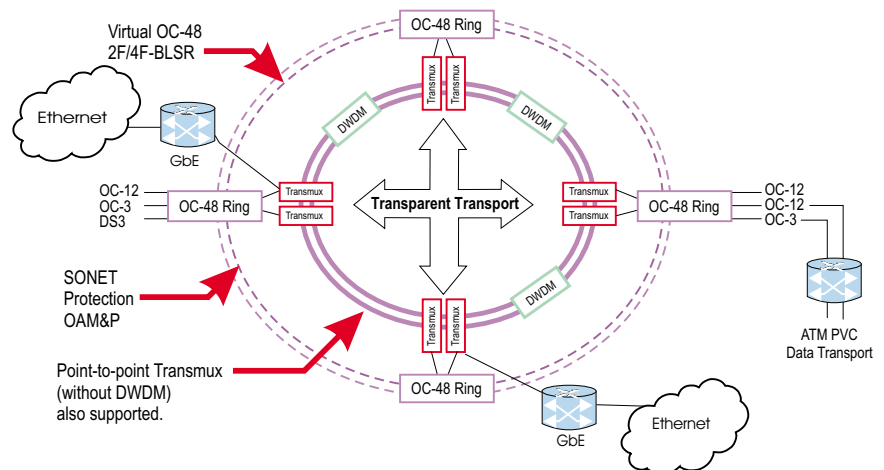
8 GbE

DC Power Input: -42.5V ~ -56.5V

Power Consumption: 900 W max per shelf

Operating Environment: 5 ~ 40° C (41°F to ~ 104°F)
(Normal Operation)

OC-48 Ring via Transparent Transport



Hitachi micro-Transmux Solution

- Cost effective
- No wasted bandwidth
- Investment in OC-48 is not stranded (SONET OC-48 ADMs, OC-48 IP router ports, Optical switch OC-48 grooming, metro multi-service nodes)
- GbE client service

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