

Digital Transport

Prisma IP™ Optical Packet Transport System Four Channel TDM-U OC3/STM1 Line Card

High Capacity, Reliable TDM Aggregation

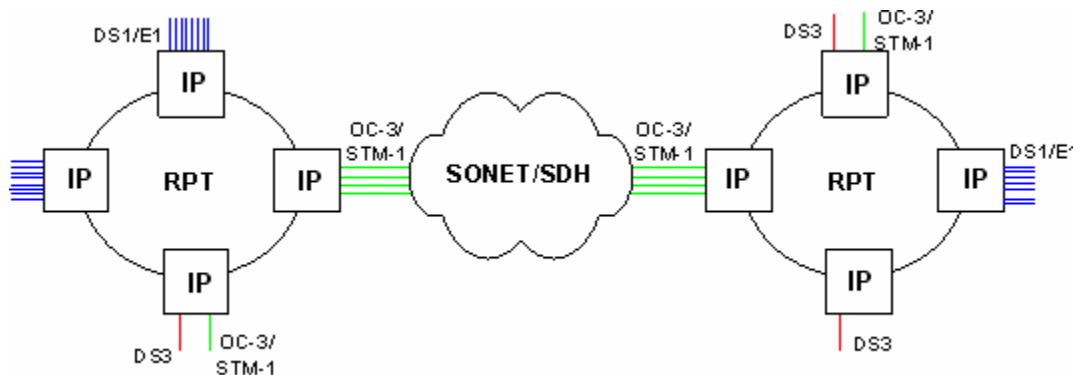
Metropolitan Area Network (MAN) service providers today face the challenge of providing affordable and scalable packet data services while still offering a range of requisite TDM voice and private line services. The Prisma IP™ family of metro optical switches is designed to meet this need. The OC3/STM1 line card is a flexible solution providing support for high-density TDM access aggregation, grooming, and transport applications.

Key Features and Benefits

- High capacity, 4 x OC3/STM1 line card
- Full VT1.5/TU12 cross connect and grooming capability
- Complete Stratum timing support per GR-1244
- Carrier class availability with 1+1 redundancy and hot swap capability
- Standards based SONET/SDH transport allows for timing transparency of tributary circuits
- Compatible with M-Series and C-Series Prisma IP chassis

Bridges Metro Access to Metro Core TDM Applications

The TDM-U OC3/STM1 card supports seamless transport of high-speed optical interfaces over a packet-based network, while maintaining stringent toll-quality parameters for delay and jitter. The card enables carriers to aggregate multiple lower speed TDM channels (T1/E1, DS3) from Metro access nodes onto higher speed OC3/STM1 circuits in the SONET/SDH Metro core. A high capacity cross connect fabric allows flexible grooming of VT1.5/TU12 channels for optimal usage of transport bandwidth.



Carrier Class Reliability, Availability and Performance

The TDM-U OC3/STM1 line card supports standards-based SONET/SDH 1+1 protection for guaranteed service uptime. RPT ensures TDM bandwidth availability and ring protection with sub 50-millisecond restoration for conformance with end-to-end service level agreements (SLAs). The OC3/STM1 card offers additional troubleshooting features including loop-back provisioning and transparently supports standard telephony testing applications such as BER testers.

Management and Provisioning Simplicity

The Prisma IP Element Management System (EMS) provides flexible point and click provisioning and bandwidth management of OC3/STM1 circuits and lower order tributaries. Only provisioned tributaries within an OC3/STM1 pipe consume bandwidth on the Prisma IP RPT ring, enabling ring traffic to maintain maximum efficiency.

Four Channel TDM-U OC3/STM1 Line Card



RPR / RPT compliance

Scientific-Atlanta's Prisma IP is based on Resilient Packet Transport™ (RPT), a superset of the emerging Resilient Packet Ring (RPR) protocol (IEEE 802.17). RPT includes support for Stratum level synchronization over an asynchronous packet network, providing the efficiencies of packet networking while ensuring TDM and SONET/SDH synchronization, reliability, and QoS. Prisma IP TDM-U OC3/STM1 Line Card.

Specifications

Parameter	Specification
Physical	Line Card Slot Width: 1 Number of ports per card: 4
Interface Specifications	4 x OC3/STM1 interfaces 155.22 Mbps +/- 20 ppm Unstructured framing (clear channel) OC3c/STS3c STM1/VC4 Structured tributary mappings (channelized) STM1: TU12 (E1), TU3 (DS3), VC3 OC3: VT1.5 (DS1), STS-1 (DS3), STS-1 SPE
Connectors	Small form factor plug-able (SFP) Optics 1310 nm short reach, 2km 1310 nm intermediate reach, 15km
Cross Connect	336 T1 or 252 E1 per card VT1.5, TU12, STS1, VC3, VC4, and STS3c level cross-connects Non-blocking
Protection	Unidirectional 1+1 SONET Automatic Protection Switching (APS), SDH Multiplex Section Protection (MSP) facility (line and interface) protection switching per Telcordia GR-253-CORE and ITU-T G.841. Hot swappable front and rear cards
Supported Standards	ITU-T: G.703, G.704, G.707, G.826, G.841, G.957 ANSI: T1.102, T1.105, T1.107, T1.231, T1.404 Telcordia GR-253, GR-499, GR-820, GR-1244
Performance Parameters	Conforms to ANSI T1.231, Telcordia GR-253, ITU-T G.826 Full section, line, and path monitoring Level 1 intermediate-path monitoring Far-end, near-end monitoring
Environmental	Operating temperature: 0° to 50°C / 32° to 122°F (extended operation above 40°C / 104°F not recommended) Storage temperature: -40°C to 70°C / -40°F to 158°F Humidity: 5% to 85% (non-condensing) Power: 65 Watts
Agency compliance	Safety: UL, cUL, TÜV, CB Scheme Emissions: FCC Part 15B & CE



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