



TJ1600C

High density core networks node with evolution path to Converged Packet Optical

Highlights

- STM-1/4/16/64/256 Packet Optical Transport
- Integrated Multi-Service Delivery up to 10 GE
- TDM, OTN, WDM & Carrier Ethernet Services*
- Multilevel Protection Scheme
- Best in Class STM-64 Density
- Future Proof Design
- Scalable Addition of Capabilities

Overview

TJ1600C is a high density core node encompassing TDM, OTN, WDM and Carrier Ethernet (CE) technologies. It is a single, unified platform for aggregation and transport of packets and circuits. Within 9U form factor TJ1600C comes with 9 universal slots that can accommodate a large variety of high density traffic modules.

Ideal Environment

It is ideal for core network locations where you have to aggregate large amount of high-speed traffic from different sources and switch them in a completely reliable manner. It comes with 80G or 320G cross connect size options - thus catering moderate to very high volume traffic aggregation requirements.

Key Benefits

Versatile Platform: TJ1600C is a future-proof versatile platform for the core network. In addition to TDM and Carrier Ethernet, it integrates cutting edge OTN

switching and WDM functionality. As multiple equipments are replaced by one compact equipment, management & maintenance becomes hassle-free. Cutting edge ASON & GMPLS capability is provided for automated network management.

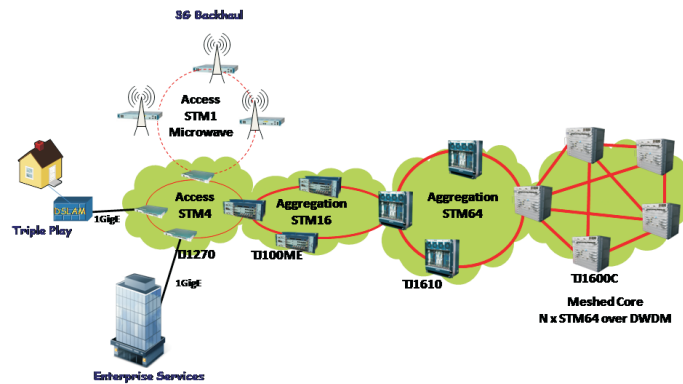
Scalable WDM functionality: It allows scalable addition of WDM capability like Optical Amplifiers, ROADMs, Optical Monitoring, Dispersion Compensation as and when they are required. Thus it can easily adapt to evolving network architectures.

Network Scalability: The TJ1600C supports PBB based Carrier Ethernet technology which results in increase scalability by a factor of thousands - more number of smaller units & sub-networks can be easily added as the network expands without deploying more complex routing devices.

High availability: It provides a redundant fault-tolerant design for carrier class performance. Multilevel protection scheme including SNCP, MSP, MS-SP Ring, and ERPS provides the best in class network resiliency. Redundant fabrics with hot insertion capability ensure guaranteed availability of the network.

Integrated Multi Service Delivery: TJ1600C is part of the Future Proof Transport Solution from Tejas that ensures efficient use of transport bandwidth for provisioning of voice & data services. While supporting SDH/SONET transport of today, its advanced packet switching technology makes it future ready.

MSPP Products



Technical Specifications*

Network Topology

- Linear, Mesh, Ring and Bus

Network Element Configurations

- Multiple Add-Drop Multiplexer (MADM)
- Digital Cross-connect (DXC)
- Terminal Multiplexer (TMUX)

Aggregate Interfaces

- STM-64
- STM-256 (future)

Tributary Interfaces

- STM-64: S64.1, L64.1, L64.2, DWDM
- STM-16: S16.1, L16.1, L16.2, DWDM
- STM-4: S4.1, L4.1, L4.2
- STM-1: S1.1, L1.1, L1.2
- E1/DS1, E3/DS3, STM-1e
- 10/100 Base-Tx, 100 Base-Fx, 1000 Base Lx/T/ Base Fx, 10GBASE

Electrical Interfaces

- PDH Interfaces: E1
- Data Interfaces: Fast Ethernet, Gigabit Ethernet, 10Gigabit Ethernet (Transport, Switching and PBB)

Cross-Connect

- 80G LO/HO or 320G HO
- Fully non-blocking at VC-12, VC-3 and VC-4 granularity
- Line-to-Line, Line-to-Tributary, Tributary-to-Line, Tributary-to-Tributary

Network Protection

- SDH: SNCP, 1+1 MSP, 2F MS-SP Ring, ASON (Mesh Restoration)
- Ethernet: ERPS (ITU-T G.8032)

Operations Interface

- TejEMS (Tejas Element Management Software) supports full FCAPS functionality via web browser interface
- SNMP interface for NMS
- RS-232 port for craft interface

- V.24/V.28 modem interface for remote management
- In-band control (IBC) supported using SDH Overhead
- 10/100 Base-Tx (RJ-45) management interface
- External alarm interface and indicators

Maintenance

- Higher-order and Lower-order POH, SDH level alarms
- Performance monitoring as per ITU-T Rec. G.826 and G.784
- Local and remote loop-back
- Remote software download

Physical Dimensions

- Height: 9 Rack Units
- Can be mounted on a 19" or 23" or 600 mm rack

Optional Hardware Redundancy

- Power Supply redundancy
- Cross-connect, Timing and Control System Redundancy

Timing & Synchronization

- Timing & Synchronization of System as per ITU-T Rec. G.813
- Internal oscillator capable of supplying a G.813 compliant Stratum-3 SEC
- Support of SSM byte
- Internal & External Timing interfaces: Two E1 BITS interfaces (as per ITU-T G.703)
- Accepts/provides 2 Mbps/2 Mhz clock references

Orderwire Support, Alarms and User Data Channel

- F1 byte for user data channel
- Five potential-free outputs and five potential-free inputs
- Four alarm-outs and 7 alarm-ins

Environmental

- Operating Temperature: -5°C to 50°C
- Relative Humidity: 10% to 90%, non condensing

Power Supply

- -48 V DC nominal, -40 to 72 V DC
- Power consumption - <1200W
- Reverse polarity protection

* Specifications are subject to change without notification

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