TJ100MC-1 STM-1 (OC-3) Multi-Service Provisioning Platform

The TJ100MC-1 Multi-Service Provisioning Platform (MSPP) is a compact, leading-edge and yet practical, bandwidth provisioning equipment designed to meet low or medium capacity bandwidth service demands.

The product supports end-to-end provisioning and management of services across all segments of the optical network. It combines innovative optical networking software with the intelligence of SDH/SONET to deliver a flexible solution to today's service providers. It is well suited for applications where multiple services need to be aggregated and transported across an optical backbone.

As transmission networks are gradually being dominated by data traffic, TJ100MC-1 provides 10/100 Base-T interfaces to efficiently carry inter-office data traffic from a corporate LAN, traffic from an ISP, DSL, Cable Networks and so on.

Benefits to the Customer

The TJ100MC-1 supports various features, which translate into various benefits for the customer. Provided below is the Feature-Benefit mapping.

Features	Advantages	Benefits
Multiple tributary slots	Flexibility and modularity in tributary configurations	"Build as you grow". Pay for capability you require today. Provides improved cash flow with minimum initial capital outlay
Cost-effective Terminal Multiplexer and Add-Drop Multiplexer	Can be placed in customer premises or PoP's with space constraints	A practical and cost effective solution catering to low volume traffic requirements
3U chassis – available in rack mounting option	Space efficient	Better utilization of available rack space and easy installation at customer premises.
Integrated multi-service delivery	Provision both voice and data services from the same platform. Efficient use of transport bandwidth by supporting per-port rate adaptive Ethernet Services	Future-proof architecture protecting investment
Point-to-point, linear, ring & mesh topologies	Diverse topology support to cater to all customer network scenarios	Flexible and cost-effective network solutions
Multi-level protection schemes MSP/APS, SNCP/UPSR or MS-SPRing/BLSR	Advanced protection schemes enable you to cater to differing customer protection requirements	Creation of differentiated services to enhance the portfolio of service offerings
Advanced networking software with support for open standards such as GMPLS and OSPF	Enables automatic topology discovery, shared mesh restoration and Point- and-Click Provisioning (PNCP) User friendly GUI based Network Element Software for local and remote provisioning	Reduction in operational costs and increase in efficiency through lower provisioning time and operator intervention
Direct Ethernet to SDH/SONET mapping using built-in 10/100 Base-T interfaces	Enables creation of point-to-point Transparent LAN services or Virtual Private Network Services	Cost-effective methods to create new Ethernet Data services for incumbent or new carriers

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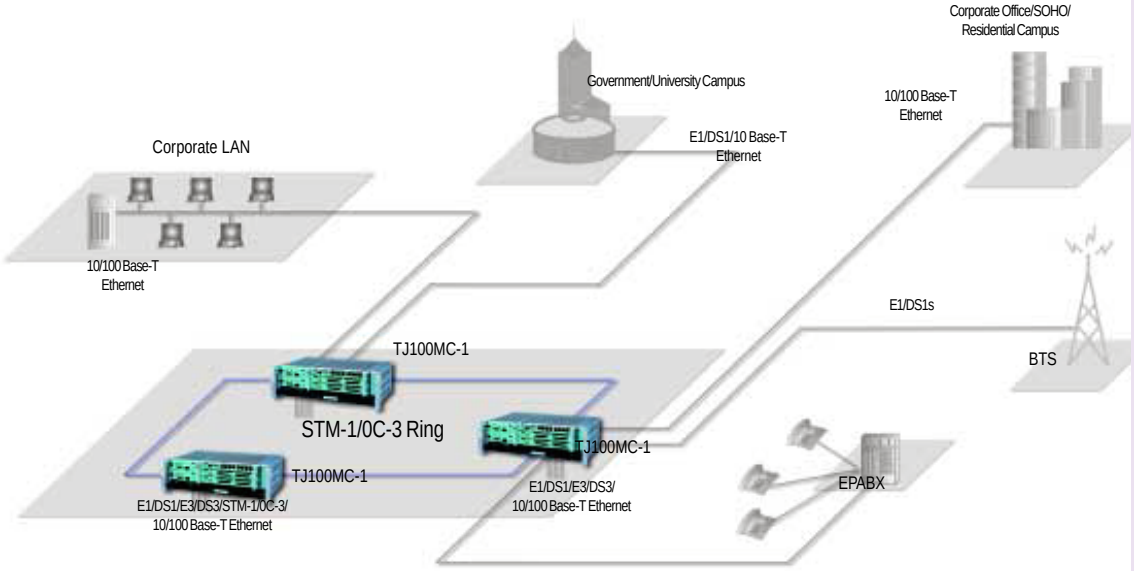
TJ100MC-1: Application Diagram



Technical Specifications*

Network Element Configurations

- Terminal Multiplexer (TMUX)
- Add-Drop Multiplexer (ADM)

Aggregate Interfaces

- 2 x STM-1 e/o (OC-3/STS-3e)
- S1.1, L 1.1, L1.2 (ITU-T G.957 Compliant)

Tributary Interfaces

- E1/DS1, E3/DS3, E4
- STM-1o/STM-1e (OC-3/STS-3e)
- 10/100 Base-T Ethernet

Modularity

- Separate aggregate and tributary cards
- Mix and match tributaries – E1/DS1, E3/DS3, E4, STM-1o/e (OC-3/STS-3e), 10/100 Ethernet

Cross-Connect

- 252 X 252 VC-12 (336 x 336 VT1.5)
- 4 x 4 STM-1 (OC-3)
- Line to Line, Line to Tributary, Tributary to Line, Tributary to Tributary

Protection

- SNCP/1+1 MSP (as per ITU-T G.841)
- VC-12 /VT1.5 Level path protection
- Optional hardware redundancy: Power Supply
- 1:3 E1/DS1 Tributary Protection

Maintenance

- Higher-order and Lower-order POH, SDH/SONET level alarms and performance monitoring (as per ITU-T G.826 and G.784)
- Software Upgrades

Power Supply

- Power Input: -48V DC nominal, -36V to 60V DC Power consumption: 35W (without Ethernet Interfaces)

Network Topology

- Linear, Mesh, Ring

Network Management

- Web-based User Interface
- RS-232 port for craft interface
- In-band control supported using SDH overhead bytes
- E1/VC-12 management channel support with drop facility
- 10/100 Base-T/RJ45 management interface
- Alarm signaling indicators and external contacts

Timing and Synchronization

- Timing & Synchronization of system (as per ITU-T G.813)
- Internal and External Timing Interfaces: Two E1 BITS interfaces (as per ITU-T G.703)
- Internal oscillator capable of supplying an ITU-T G.813 compliant Stratum-3E
- SSM support

Order wire support, Alarms and User Data Channel

- E1/E2 bytes used for Express order wire (Omnibus/Selective calling facilities)
- Five potential free outputs and two potential-free inputs
- F1 byte for user data channel

Physical Dimensions

- Dimensions (H x W x D): 132mm x 438mm x 230mm
- Weight: 5.5 Kg. (max. configuration)

Environmental

- Operating Temperature: 0° to 50° C
- Relative Humidity: 10% to 90%, non condensing

Applications of TJ100MC-1

The Tejas TJ100MC-1 has a variety of service interfaces such as E1/DS1, E3/DS3, E4, STM-1e/o (OC-3/STS-3e) and 10/100 Mbps Ethernet tributary interfaces and trunk interfaces at STM-1 or OC-3 rates are supported. The product features non-blocking cross-connect at VC-3/VC-4 and VC-12 (STS-1 or VT1.5) granularity and supports drop and continue functionality.

This enables the TJ100MC-1 to support a variety of applications as listed below.

- Access networks
- Regional Backbone
- Wireless backhaul
- Ethernet LAN over SDH WAN
- Customer Premise equipment carrying TDM as well as Ethernet traffic
- Multiple-ADMs (MADM) and Wideband DXC for superior bandwidth management and utilization
- Optical transport for Digital Loop Carrier (DLC)

Flexible and Cost-effective network solutions

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*Technical specifications subject to change without notification.