

# TJ1400 7-Slot

Tejas Networks Packet Transport Network



**High Capacity:** 64Gbps Packet Switch

**MPLS-TP:** Traffic Engineered Pseudowires

**Carrier Ethernet :** VLAN and Q-in-Q

**Packet Transport:** Using the next generation in Packet Transport Network (PTN) technology, the TJ1400 7-Slot is a 2U solution designed for access and aggregation applications in the network. With a full PTN feature set the TJ1400 7-Slot has the advanced features for tomorrow's mobile backhaul, enterprise, business, data center, cloud and infrastructure services.

**High Reliability, Modular Architecture:** The TJ1400 7-Slot increases network reliability by providing optional redundant switch fabrics and the ability to support protected UNIs and NNIs across interface cards. This modularity significantly increases availability allowing the network to meet stringent SLAs. Modular interfaces also decrease meantime to repair by requiring only the affected module to be replaced, not the entire unit.

**MPLS-TP:** MPLS label based connection oriented Ethernet allows networks to easily scale from a few subscribers to millions of subscribers and a few services to thousands of services. The TJ1400 7-Slot provides MPLS-TP based pseudowires for engineered traffic flows on trunks, optimizing the network by providing the right amount of packet traffic control. The cost benefits of stat-muxing are combined with traffic engineering to lower CAPEX. OPEX reductions come through faster provisioning, robust protection and quicker outage analysis.

**Circuit Emulation:** The TJ1400 7-Slot supports DS1, DS3 SAToP and OC-n CEP for carrying TDM traffic with the reliability and performance of legacy TDM networks.

**50ms Protection:** ERPS and 1:1

**Packet Synchronization:** SyncE, 1588v2

**Circuit Emulation with trib protection**

**Advanced Ethernet Features:** The TJ1400 7-Slot provides best in class packet switching to create networks with the highest performance. Ingress rate limiting ensures that every packet entering the network is within the SLA bounds preventing any one customer/service from congesting/choking the network. Each packet is classified so that the appropriate network policies (like prioritization and scheduling) can be applied. Eight CoS queues and scheduling algorithms ensure that there are sufficient options available to manage the data traffic efficiently. Standard G.8032 provides 50ms protected rings for greater resiliency. Multiple ringlets and multiple ring topologies are supported.

**Ethernet OAM:** allows real-time monitoring of end-to-end circuits, connections or trunks, enabling quick detection and isolation of faults to a particular subnet, trunk, link or node. The TJ1400 7-Slot supports BFD based Fault OAM and ping/traceroute at tunnel/pseudowire level. It also supports MPLS-TP based performance OAM for PW services. For .1q/1ad based MEF services, Y.1731/802.1ag based CFM OAM (Port level down MEP) and Y.1731 PM counters are supported.

**Flexible Network Architectures:** The TJ1400 7-Slot has a flexible architecture that allows it to build the network best suited for all services. Linear for rapid deployment. Hub and spoke for cost effective aggregation. Ring and ringlet for high utilization and resiliency. Meshed for low latency and flexible protection. This is achieved with a unique combination of functionality including the ability for every optical port to be an UNI or an NNI.

# TJ1400 7-Slot

## Tejas Networks Packet Transport Network

### Ethernet Switch Capacity

64Gbps bidirectional

### Interfaces to Ethernet Switch

10 Gig E – up to 4 XFP  
1 GigE – up to 24 SFP  
10/100/1000bT – up to 24  
10/100bT – up to 24

### MPLS-TP

MPLS-TP Connection Oriented Ethernet  
VPWS, VPLS, H-VPLS  
ELAN, EVLAN, EVPL, EPL,  
E-TREE\*  
IGMP v1/v2/v3\*

### Ethernet Switching

VLAN, QinQ based services  
VLAN Translation / Swap  
Ingress Rate Limiting at 64kbps granularity  
Programmable Committed / Peak Information Rates  
Programmable Committed / Peak Burst sizes  
Egress rate shaping on all ports  
8 classes of service as per IEEE 802.1p  
2 Rate, 3 color marking  
Port + Vlan ingress metering with DSCP and .1P  
HQoS\*  
Every Ethernet port UNI/NNI

### Ethernet/MPLS-TP OAM

MPLS-TP OAM RFC5860  
BFD based Fault OAM  
LSP Ping and Traceroute (RFC6426)  
PW Ping  
On demand LM/DM at Tunnel/PW level  
Y.1731/802.1ag based CFM OAM  
UP-MEP  
RFC 2544  
Port mirroring and loopback  
Link integrity (LLCF/LLR)  
SNMPv3\*

*\*upcoming release  
specifications subject to change without notice*

68-72 Church Street, Suite 6  
Northbridge, MA 01588  
USA

### Network Protection & Security

Ethernet Ring Protection ITU-T G.8032  
1:1 bidirectional Linear Protection LSP (RFC6378)  
MPLS-TP Mesh  
Link Aggregation Group (LAG)

### Synchronization

SyncE , DCR, ACR  
1588v2 BC/TC with ToD interface\*

### Circuit Emulation

DS1 SAToP RFC4553\*, MEF8  
DS3 SAToP RFC4553\*, MEF8\*  
OC-3 CEP RFC4842\*, MEF3\*  
OC-12 CEP RFC4842\*, MEF3\*  
OC-48 CEP RFC4842\*, MEF3\*

### Power Supply (optional redundancy)

-36V to -60V DC  
120V AC, 60Hz

### Environmental

Operating Temperature: 0°C to 50°C.  
Extended Operating Temperature : -40°C to 65°C.  
Relative Humidity: 10% to 90%, non condensing  
CE, ROHS 6/6 Compliant  
ETSI/EN 300386  
EN 55022  
IEC/EN 60950, 61000  
ETSI EN 300

### Dimensions (W x H x D)

444 mm x 88 mm x 235 mm (Base Chassis)  
444 mm x 220 mm x 235 mm (with Expansion)  
19" and 23" rack mount options  
Front to back airflow optional

### Related Products

TJ1400P 1U PTN  
TJ1400 18-Slot  
TJ1600C 6-Slot 4U PTN and DWDM Transport  
TJ1600C 11-Slot 9U PTN and DWDM Transport  
TJ5000 Network Management System



Software Enabled Transformation  
Copyright Tejas Networks Ltd. 2017

Plot No 25, JP Software Park  
Electronic City Phase 1  
Bangalore 560 100, India