Packet Transport Network
TJ1400P
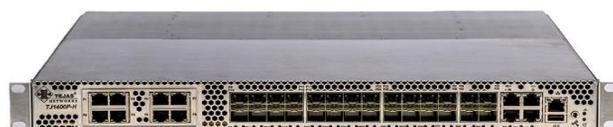
Product Highlights

High Capacity : From 16G to 300 G Packet Switch

MPLS-TP : Traffic Engineered Pseudowires

Carrier Ethernet : VLAN and Q-in-Q

50ms Protection: ERPS and 1:1

Packet Synchronization: SyncE

Key Features and Benefits

Packet Transport: Using the next generation in Packet Transport Network (PTN) technology, the TJ1400P is a 1U packet aggregation solution designed for edge and access applications in the network. With a full PTN feature set enabling end-to-end pseudo-wire and Ethernet multipoint services the TJ1400P has the advanced features for tomorrow's mobile backhaul, enterprise, business, data center, cloud and infrastructure services.

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 TJ1400P provides MPLS-TP based 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 root cause analysis during failures.

Packet Synchronization: The TJ1400P supports SyncE for distribution of synchronization information over pure packet networks.

Advanced Ethernet Features: The TJ1400P 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 ERPS (Ethernet Ring Protection Switching) provides 50ms protected packet rings for greater resiliency. Multiple ringlets and multiple ring topologies are supported.

TJ1400P
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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 TJ1400P supports BFD based Fault OAM and ping/traceroute at tunnel/pseudo wire level. It also supports MPLS-TP based performance OAM for MPLS-TP based 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 TJ1400P 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 ring-let 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.

Technical Specifications

Ethernet Switch Capacity
TJ1400P Model A/B/C/D : Upto 64Gbps bidirectional
TJ1400P Model H: upto 300Gbps

Interfaces to Ethernet Switch
TJ1400P Model A/B/C/D:
      10 Gig E – Upto 4 SFP+
      1 GigE – Upto 12 SFP
      10/100/1000bT – Upto 12
      E1/DS1 Upto 16
      STM1/OC-3 Upto 4
TJ1400P Model H :
      10 Gig E – Upto 28 SFP+
      1 GigE – Upto 28 SFP
      10/100/1000bT – Upto 24
      STM1/OC-3 Upto 4*
      STM4/OC-12 Upto 2*

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
Link integrity
SNMP

Network Protection & Security
Ethernet Ring Protection ITU-T G.8032
1:1 bidirectional Linear Protection LSP (RFC6378)
MPLS-TP Mesh
Link Aggregation Group (LAG)
Port mirroring and loopback

Synchronization
SyncE , DCR, ACR

Ethernet Switching
VLAN, QinQ based services
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
HQoS*, Deep packet buffering
Every Ethernet port UNI/NNI

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

Environmental
Operating Temperature: -40ºC to 65ºC. (Model A/B/C/D)
-10ºC to 65ºC (Model H)
Relative Humidity: 10% to 90%, non condensing
CE, ROHS Compliant
ETSI/EN 300386
EN 55022 Class A
FCC Part 15 Class A

Power Supply(optional redundancy)
-36V to -60V DC
230V AC, 50Hz*
120V AC, 60Hz*
PSU Redundancy
90 Watts/225 watts

Form factor:
TJ1400P Model A/B/C/D: Half depth (< 300mm)
TJ1400P Model H : Full depth (< 600 mm),
ETSI and 23" rack mount options

Technical Specifications

TJ1400P Model A : Packet Transport System with 8xGE optical and 8xGE electrical ports, separate DC / AC PSU	
TJ1400P Model B : Packet Transport System with 2x10GE optical (additional 2x10GE optical licensable), 8xGE optical and 8xGE electrical ports, separate DC / AC PSU	
TJ1400P Model C : Packet Transport System with 8xGE optical and 8xGE electrical ports and 16xE1/DS1+4xSTM1/OC3 CEM, separate DC / AC PSU	
TJ1400P Model D : Packet Transport System with 2x10GE optical (additional 2x10GE optical licensable), 8xGE optical and 8xGE electrical ports and 16xE1/DS1+4xSTM1/OC3 CEM, separate DC / AC PSU	
TJ1400P Model H : Packet Transport System with Upto 28x10GE/GE optical ports, upto 2x100G, DC PSU, Front to back cooling, Long Reach Optics support (CFP2 optics)	

TJ1400P Model A/B/C/D DC PSU DPU22 TOP LEVEL ASSEMBLY. N48V INPUT, OUTPUTS 12V/100W, 62x245mm ROHS COMP	Sold Separately
APU17,100-240V input, 12V/150W output, Rear entry	Sold Separately
TJ1400P Model H DC PSU TOP LEVEL ASSEMBLY. N48V INPUT, OUTPUTS 12V/300W	Sold Separately

upcoming release specifications subject to change without notice