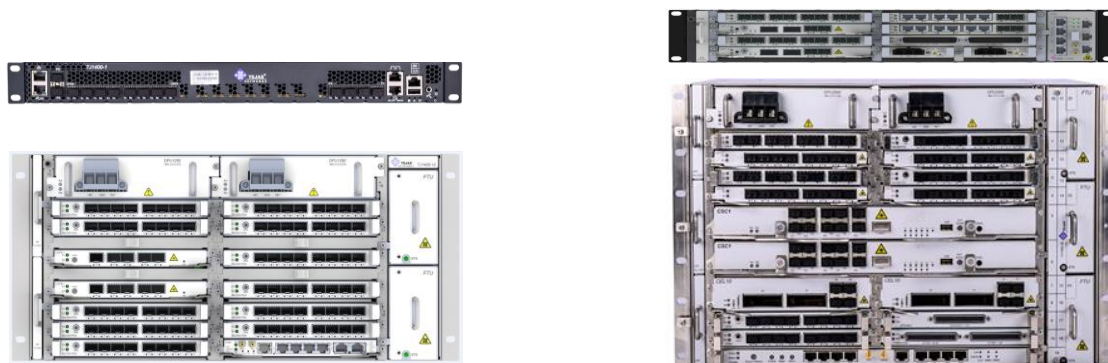


TJ1400 OLT Solutions

Versatile GPON/NG-PON Solutions for Fiber Access



DATA SHEET



Product Highlights

GPON/XGS-PON/Multi-PON support

Residential, Enterprise, Mobile Backhaul and IoT applications

Compact family of state of the art OLTs with common service cards to build modular 1U/2U/5U/7U OLT solutions

Enhanced **QoS and Multicast** for Video

Key Features and Benefits

Tejas offers a series of advanced GPON/XGS-PON/Multi-PON OLT and ONT elements designed for next-generation Optical Access networks deployed in FTTH (Fiber-to-the-Home) and FTTB (Fiber-to-the-Building) formats. It addresses the rapidly growing service provider need for flexible, high-capacity fixed-line broadband solutions to support emerging video applications (e.g., HDTV, VOD) in residential deployments, aggregation of backhaul traffic from LTE cell sites, enterprise VPN Services and SD-WAN networks based on NFV paradigm.

Tejas has a full GPON solution that includes both TJ1400 OLT (Optical Line Terminal) and TJ2100N ONT (Optical Network Terminal) platforms. TJ1400 offers one of the densest OLT realizations in the market today in a 1U/2U/5U/7U form factors with a myriad of transport protocol options Ethernet, OTN and C/DWDM. TJ2100N is a versatile ONT product family available in multiple flavors supporting 10/100/1000 Gigabit Ethernet, WiFi, USB and POTS interfaces. TJ2100N can be solar powered and is available in custom ruggedized enclosures for rural environments.

Tejas GPON products are fully compliant to ITU-T G.984 and G.988 set of standards. Upcoming releases will support higher speed next-generation PON standards such as XG-PON1, XGS-PON, NG-PON2 standards through simple upgrades.

Flexible, Scalable Backhaul: Tejas GPON offers a range of SNI interface cards (2x10G/5x10G/8x10G) to allow the FTTx provider to choose the most cost-effective backhauling option for his GPON traffic. Besides

supporting traditional technology like Ethernet, upcoming interfaces like OTN are also supported to future-proof the network.

Comprehensive OAMP Functions: Tejas GPON OLT product supports advanced fault, alarm and performance management tools based on standards such as ITU Y.1731 and IEEE 802.1ag. The tools are complemented by a powerful visual interface for alarm notifications, fault localization and SLA reporting developed using modern web technologies.

Multilevel Protection and QoS: Tejas GPON solution supports multi-level protection for fiber cuts, splitter damage, ONT and OLT port failures. It has advanced bandwidth management features to assure the highest quality of service to delay/jitter sensitive real-time video/voice/data applications.

Carrier-class Management: Tejas GPON is available as a fully managed, end-to-end solution for FTTH/FTTB services with a complete range of end-user ONT devices. These devices come with a diverse set of customer ports such as Fast Ethernet, Gigabit Ethernet, POTS, and Wi-Fi (802.11n/ac) to address multiple deployment scenarios in the access.

Multi-PON support: With Multi-PON support, Multi-PON provides a cost-effective approach for launching XGS-PON by replacing GPON cards with Multi-PON cards equipped with Multi-PON optics. Existing GPON users can leverage a smooth transition to XGS-PON with no manual work, re-cabling, new cards or other equipment.

Technical Specifications

GPON Interface Specifications

Transmission: ITU-T G.984
 Line Rate: D/S, U/S – 2.5/1.2 Gbps
 Connector: LC/APC
 Wavelength: 1490 nm/1310 nm
 Video: 1550 nm
 Distance: 20km depending on split ratio

Network Uplinks

Gigabit Ethernet
 10 Gigabit Ethernet
 100 Gigabit Ethernet

L2 Switching

IEEE 802.1Q, IEEE 802.1ad
 STP, RSTP (IEEE 802.1D-2004)
 IGMP Snooping
 IGMP v1/v2/v3
 Broadcast/Multicast storm recovery
 Traffic Policing
 QoS (DSCP/802.1p)
 ERPS (ITU G.8032)
 MAC learning, MAC limiting
 DHCP relay Agent with Option-82
 Multicast VLAN Registration function
 Pluggable SFP/XFP for Ethernet ports
 MPLS-TP (Optional)

OLT Variants

TJ1400-1 : Fixed 1U OLT with 16xGPON+4x10G SNI
 TJ1400-7 : Fully redundant 2U OLT with 40xGPON+10x10G SNI
 TJ1400-13: Fully redundant 5U OLT with 80xGPON+16x10G SNI
 TJ1400-18 : Fully Redundant 7U OLT with 20 x10G +128xGPON
 100Gbps to 800 Gbps Carrier Ethernet switch Fabric

OLT Service Card on TJ1400

8x2.5G GPON Cards;
 * 16x 2.5G GPON Cards;
 * 4 x 10G GPON/XG-PON/XGS-PON Card
 * 8 x 10G GPON/XG-PON/XGS-PON Card
 1:128 split ratio
 1+1 Power, Fabric and Control card Redundancy
 Unified TejNMS based Network Management

ONT Variants

TJ2100N-10: SFP ONT
 TJ2100N-20P : 4x100/1000 + 2x POTS +WiFi (802.11ac)
 TJ2100N-12VT : 4x100/1000 +WiFi (802.11ac)
 TJ2100N-12W : 1x 100/1000 + 1 x100 + 1xPOTS +WiFi (802.11n)
 TJ2100N-14E : 4x 100/1000 +2xPOTS +WiFi (802.11n +802.11ac)

Node Management

Configurable management VLAN
 WEB based (HTTPS)
 Telnet
 SNMP v1/v2c
 10/100BaseT Management Interface

Synchronization

NTP v1/v2/v3
 Clock recovery : ACR, DCR and internal re-timed clock Support
 TOD*

Power & Thermal

AC: 160-270V
 DC: -40 to -60 Volts
 Maximum Power (per OLT Card): 50 Watts
 Forced Cooling

Physical Dimensions (H*W*D)

TJ1400-1 : 44*414*300 mm
 TJ1400-7 : 88*433*204 mm
 TJ1400-13 : 222*483*250 mm
 TJ1400-18 : 311*444*237 mm

Environmental

Operating Temperature: 0 °C to 50 °C (65°C as orderable)
 Altitude: 15,000 ft operations
 Humidity: 5 to 90% non-condensing

Advanced Security

L2 classification based on: Source MAC, Destination MAC, Ethertype, 802.1p priority

Standards

ITU-T G.984 (GPON)
 ITU-T G.987 (XG-PON1)*
 ITU-T G.9807 (XGS-PON)*
 ITU-T G.989 (NG-PON2/TWDM PON)*

**upcoming release specifications subject to change without notice*



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