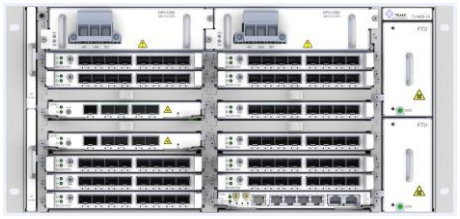
TJ1400 OLT Solutions

Versatile GPON/NGPON Solutions for Fiber Access

TEJAS NETWORKS

DATA SHEET



Product Highlights

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 catering to 2000 RU/4000 (in 5 RU)/8000 (in 7 RU) subscribers with 128-way optical split.

Enhanced **QoS and Multicast** for Video

Key Features and Benefits

Tejas offers a series of advanced GPON 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 as 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/4U 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 WiFi (802.11n/ac) to address multiple deployment scenarios in the access.

Solar Powered : Tejas provides compact, ruggedized, portable enclosure for remote installation of TJ2100N ONTs in rural and industrial areas. Enclosure houses splitter for additional ONTs, charge control unit for solar/AC/battery monitoring and control with up to four hours of backup.

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Versatile GPON Solutions for Fiber Broadband

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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 8xGPON+2x10G+ 4x1G uplink ports
TJ1400-1 : Fixed 1U OLT with 16xGPON+4x10G uplink ports
TJ1400-7 : Fully redundant, modular 2U OLT with up to 40xGPON+10x10G uplink ports
TJ1400-13: Fully redundant, modular 5U OLT with up to 80xGPON+16x10G uplink ports
TJ1400-18 : Fully Redundant, modular 7U OLT with up to 128xGPON + 2 x100G + 20 x10G uplink ports
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-20PSW : 8x100/1000 + 2x POTS + 2 USB + WiFi (802.11ac)
TJ2100N-12 : 1GE + 1FE+ 1 POTS + 1 USB
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

Syncronization

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 ºC to 50 ºC (65ºC 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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