TJ1400 OLT and TJ2100N ONT

Versatile GPON Solutions for Fiber Broadband

Highlights:

- Residential, Enterprise, Mobile Backhaul and IoT applications

- Enhanced QoS and Multicast for Video

- 4096 subs in 2U with 128-way optical split. GE, WiFi, USB and POTS interfaces

- Ruggedized Enclosure with Solar Charging

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 2U form factor with myriad transport protocol options, namely, TDM, Ethernet, OTN and C/DWDM. TJ2100N is a versatile ONT product 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 software upgrades.

Key Benefits:

Flexible, Scalable Backhaul: Tejas GPON offers a range of SNI interfaces to allow the FTTx provider to choose the most cost-effective backhauling option for his GPON traffic. Besides supporting traditional technologies like SDH/SONET and Ethernet, upcoming interfaces like OTN are also supported to future-proof the network.

Comprehensive OAMP Functions: Tejas GPON 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, RF Video and WiFi (802.11n) 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.

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

L2 Switching

IEEE 802.1Q, IEEE 802.1ad
Link Aggregation (802.3ad)
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
Pluggable SFP/XFP for Ethernet ports
MPLS-TP

ONT Variants

TJ2100N-ONT11: 4x10/100/1000+2xPOTS +2xUSB+802.11n
TJ2100N-ONT12: 2xGE+2xPOTS
TJ2100N-ONT14*: Supports 4xPoE interfaces
Virtualized CPE (vCPE)*
Dying Gasp support

OLT Service Card on TJ1400

100Gbps-640Gbps Carrier Ethernet Fabric
Integrated C/DWDM Modules
5x2.5G GPON Cards; 1:128 split ratio
1+1 Fabric and Control card Redundancy
Unified TejNMS supports OMCI commands

Node Management

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

Power & Thermal

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

Environmental

Operating Temperature: 0 ºC to 50 ºC
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
IEEE 802.1X port security

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)*
IEEE P802.3av (10G EPON)*

*upcoming release
specifications subject to change without notice

68-72 Church Street, Suite 6

Northbridge, MA 01588

USA

TEJAS®
NETWORKS

Software Enabled Transformation

Copyright Tejas Networks Ltd. 2017

Plot No 25, JP Software Park

Electronic City Phase 1

Bangalore 560 100, India