

TJ2100N-14D3 GPON ONT

High performance enterprise and residential GPON ONT



DATA SHEET



Product Highlights

- **Standard ITU G.984 compliant GPON ONT**
- **Enterprise, Residential, POTS and IoT applications**
- **Dual band, Dual mode, Dual radio, High performance Wi-Fi**
- **Enhanced QoS, and Multicast for Video**

Key Features and Benefits

Overview:

Tejas offers a series of advanced GPON 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 needs for flexible, high-capacity fixed-line broadband solutions to support emerging high bandwidth video applications (e.g., IPTV, Mobile backhaul, MTU, VOD) in enterprise, 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. TJ2100N is a versatile ONT product available in multiple flavours supporting 10/100/1000 Gigabit Ethernet, Dual Wi-Fi and POTS interfaces.

TJ2100N-14D3 is compliant to ITU-T G.984 ,G.988 and TR-069 set of standards.

Product highlights:

Plug-and-play (PNP): Configuration using standard OMCI and TR-069 protocols for provisioning IPTV, VOD, IOT, Internet, VoIP, Wi-Fi etc services.

Ethernet interfaces: Has four Ethernet interfaces to cater to use cases such of IPTV, Internet etc.

POTS: The ONT has one POTS interfaces for voice services to public switched telephone network (PSTN).

Wi-Fi: Dual band, Dual concurrent Wi-Fi, complied to IEEE 802.11a/b/g/n/ac standards to support enhanced Wi-Fi coverage for home applications.

Mechanical and Environmental: Table top and wall mount enclosure suitable for indoor environments (up to 45 °C)

Technical Specifications

GPON Interface Specifications

SC/APC connector
Transmission: ITU-T G.984 |
Optical module: Class B+
Optical transmit power: +0.5 to +5dBm
Receive sensitivity: -28dBm.

Ethernet

Meets 802.3 specifications
4x10/100/1000Mbps
RJ-45 connector

POTS: 1*FXS ports with RJ11 connectors.

USB: 1*USB 2.0

Voice Features

Signaling: SIP
Locale selection based on country profile
Codecs: G.711 a-law, G.711 u-law, G.729
Media and signaling are separated
Fax: Transparent FAX, T.38 relay
DTMF: Inband, RFC2833, SIP Info
V.18 support
Voice Activity Detection: Supported
SIP Transport : UDP & TCP

Wireless Features

Standards: 802.11 a/b/g/n/ac with channel bandwidth:
20/40/80MHz (ac) | Frequency of operation: 2.4GHz &
5GHz | SSIDs per radio: 4 | AP isolation : Supported | Max
clients: 32 per radio| Mac restrict mode: Supported | Mac
filter based probe response: Supported | No of TX/RX
chains: 2 for 2.4GHz; 2 for 5GHz ; Band steering | WMM
support | Preamble: Configurable between short/long |
Configurable Beacon interval

Layer 2 capabilities

Ethernet frame filtering based on port, Source/Destination
IP and MAC Addresses | IEEE 802.3as | Supports maximum
MTU size of 2000 Bytes | IEEE 802.1d bridging |
Ingress/egress IEEE 802.1p tagging, replacement, and
stripping | IEEE 802.1ad Double tagging | Traffic class
forwarding to GEM Port and TCONT | QoS based on
802.1p and 802.1q | 802.1p marking based on DSCP |
Multicast : IGMP v2, v3, IGMP snooping

Layer 3/4 hardware NAT/NAPT

Port Forwarding | Port/VLAN bridging | Port Forwarding |
IPV4/IPV6 flow routing for policy rate | POE/DHCP/PPPoE
WAN hardware forward

GPON Features

Data rates of 2488Mbps downstream and 1244Mbps
upstream. | 32 TCONT and 128 GEM port IDs | Ranging
and activation process support | HW Dying gasp |
Wavelength: 1490 nm/1310 nm | Distance: 20km between
closest and farthest ONT from OLT, as per GPON
standards.

Downstream

Downstream AES-128 encryption and key exchange
process | Downstream FEC, RS(255,239) | Dedicated
independent TX queues for PLOAM and CPU packets

Upstream

Upstream FEC, RS(255,239) | Normal queues for PLOAM
and CPU packets | Performance monitoring, faults and
alarm, including BER rate monitor.

Power saving

As per ITU-T 984.3 (01/2014) of ONU power management
aspects

OAM

Management: G.988 (OMCI), TR-069, Telnet | LED: LED
indicators. Firmware: Firmware upgrade, active and
alternative firmware images

Power

12V DC, 1.5A +/- 5%, Round barrel-type connector with
110-240VAC, 50/60Hz input

Mechanical and Environmental

Table Top and wall mount enclosure design | Operating
Temperature: 0 °C to 45 °C | Altitude: 4,000m operations |
Humidity: 5 to 95% RH non-condensing

Regulatory Compliances

RoHS (6/6)

Ordering Information:

Power plug availability: Type-A (USA), Type-C (EU), Type-G
(UK), Type-C (India)

Model	Configuration
TJ2100N-14D3	4x1GE RJ45, 1xPOTS, 1xUSB, 2x2 WiFi 2.4GHz 802.11 b/g/n, 2x2 WiFi 5GHz 802.11ac

**specifications subject to change without notice*



Software-Enabled Transformation

Plot No. 25, J.P. Software Park,
Electronic City Phase-1
Hosur Road, Bengaluru,
Karnataka 560100, India
www.tejasnetworks.com
+91 8041794600

USA	UAE
KENYA	MALAYSIA
SOUTH AFRICA	SINGAPORE
NIGERIA	MEXICO
ALGERIA	BANGLADESH