

TJ2100N-14ET 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 a full GPON solution that includes both TJ1400 OLT (Optical Line Terminal) and TJ2100N ONT (Optical Network Terminal) platforms. TJ2100N-14ET is a versatile ONT product available in multiple flavours supporting 10/100/1000 Gigabit Ethernet, Dual Wi-Fi and dual POTS interfaces.

TJ2100N-14ET is compliant to ITU-T G.984, G.988 and TR69 set of standards.

Product highlights:

Plug-and-play (PNP): Configuration using standard OMCI and TR69 protocols for provisioning IPTV, VOD, IOT, Internet, VoIP, Wi-Fi etc services.

Redundant WAN interface: 3G/4G/4.5G dongle can be connected to USB interface of ONT to realize WAN redundancy. i.e. if there is a failure of GPON interface, Internet traffic will be routed on alternate WAN connection.

Ethernet interfaces: Has 4 Ethernet interfaces to cater to use cases such of IPTV, Internet etc.

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

Wi-Fi: Dual band, Dual concurrent Wi-Fi, complied to 802.11 a/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 and Receive sensitivity of -28dBm.
Upstream and Downstream FEC

Ethernet

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

POTS

2*FXS ports with RJ11 connectors.

Voice Features

Signaling: SIP (RFC 3261)
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
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
MIMO: 2x2
SSID 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 ; beam forming; band steering | WMM support: Yes
Preamble: Configurable between short/long
Beacon interval: Configurable

Security: Open, 802.1x, WPA, WPA-PSK, WPA2, WPA2-PSK

USB: 1 Port, Type A, USB 1.1/2.0/3.0

Layer 3/4 hardware NAT/NAPT : Support 4K/8K/16K/32K flow based connections | Port/VLAN bridging | IPV4/IPV6 flow routing for policy rate | IPOE/DHCP/PPPoE/DS-Lite/PPTP/L2TP 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

Power saving: As per ITU-T 984.3 (01/2014) of ONU power management aspects| Supports Ethernet packets of up to 2KB and Jumbo packets.

Power & Thermal: 12 VDC ,2A +/- 5% , Round barrel-type connector for power input

Environmental:

Operating Temperature: 0 °C to 45 °C
Altitude: 4,000m operations
Humidity: 5 to 93% RH non-condensing

Management: G.988 (OMCI), TR69, CLI, SNMP

Ordering Information:

Model	Configuration
TJ2100N-14ET	4GE+ 2POTS + IEEE 802.11a/b/n/g/ac Dual band 2x2 MIMO+ USB

specifications subject to change without notice



Software-Enabled Transformation

68-72, Church Street, Suite 6,
Northbridge, MA: 01588, USA
tejasnetworks.com/northamerica
+1 (877) 448-3527

USA
KENYA
SOUTH AFRICA
NIGERIA
ALGERIA

UAE
MALAYSIA
SINGAPORE
MEXICO
BANGLADESH