

TJ2100N-14B 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 interface**
- **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-14B is a versatile ONT product supporting Quad 10/100/1000 Gigabit Ethernet interface, Dual band, Dual radio Wi-Fi and POTS interfaces.

TJ2100N-14B 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.

Ethernet interfaces: Has 2 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 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 40 °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 -27 dBm.
 Upstream and Downstream FEC

Ethernet

Meets 802.3 specifications
 2x10/100/1000Mbps
 RJ-45 connector

POTS: 1*FXS ports with RJ11 connectors.

USB : 1 * USB 2.0

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 fax relay
 DTMF: Inband, RFC2833, SIP Info
 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
 Multiple SSID per radio: Supported
 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 (802.11 ac); band steering | WMM support: Yes
 Preamble: Configurable between short/long
 Beacon interval: Configurable

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

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/PPTP/L2TP
 WAN hardware forward

Layer 2 capabilities

Non-Blocking wire speed reception and transmission | Supports source and destination MAC address filtering

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|

Power & Thermal : 12V DC ,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

Ordering Information:

Model	Configuration
TJ2100N-14B	2GE+ 1POTS + 1 USB +Dual Wi-Fi

specifications subject to change without notice



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