TJ2100N-14B3 GPON ONT

High performance enterprise and residential GPON ONT

TEJAS®
NETWORKS

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-14B3 is a versatile ONT product supporting Dual 10/100/1000 Mbps Ethernet interface, Dual band, Dual radio Wi-Fi and POTS interfaces. TJ2100N-14B3 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 dual 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 ºC)

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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
2x10/100/1000Mbps
RJ-45 connector

POTS: 1*FXS ports with RJ11 connectors.

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-14B3	2x1GE RJ45, 1xPOTS, 2x2 WiFi 2.4GHz 802.11 b/g/n, 2x2 WiFi 5GHz 802.11ac

specifications subject to change without notice