

# TJ2100N-14ET / TJ2100N-G004021-AC1200 GPON ONT

High performance enterprise and residential ONT



DATA SHEET



## Product Highlights

- **Standard ITU G.984 compliant GPON ONT**
- **Enterprise, Residential, POTS and IoT applications**
- **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 dual POTS interfaces.

TJ2100N-14ET 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 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 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  
Receiver sensitivity of -28dBm

### Ethernet

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

**POTS:** 2\*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: 20/40/80 MHz (ac) | Frequency of operation: 2.4GHz & 5GHz | 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, RSSI

### Wireless Security

Open, 802.1x for WiFi/LAN, WPA2-PSK

### 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 for Per Subscriber and Per Service bandwidth control | 802.1p marking based on DSCP | Multicast : IGMP v2, v3, IGMP snooping, Wire Speed Data

### Layer 3/4 hardware NAT/NAPT

Support 4K/8K/16K/32K flow based connections | Port Forwarding | Port/VLAN bridging | IPV4/IPV6 flow routing for policy rate | IPOE/DHCP/PPPoE/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 | DBA | 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, RADIUS, Telnet using IP Address | 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 | Dimensions: L186mm\*W106mm\*H36mm | 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-14ET	4x1GE RJ45, 2xPOTS, 1xUSB, 2x2
TJ2100N-G004021-AC1200	WiFi 2.4GHz 802.11 b/g/n, 2x2 WiFi 5GHz 802.11 ac,

*specifications subject to change without notice*



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