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.

Key Features and Benefits

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

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**TJ2100N-14B GPON ONT**

**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 | IP/IE/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 ºC to 45 ºC
- Altitude: 4,000m operations
- Humidity: 5 to 93% RH non-condensing

**Management:** G.988 (OMCI), TR69

**Ordering Information:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Configuration</th>
</tr>
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<tbody>
<tr>
<td>TJ2100N-14B</td>
<td>2GE + 1POTS + 1 USB +Dual Wi-Fi</td>
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**TEJAS NETWORKS**

Software-Enabled Transformation

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