OLT2T4

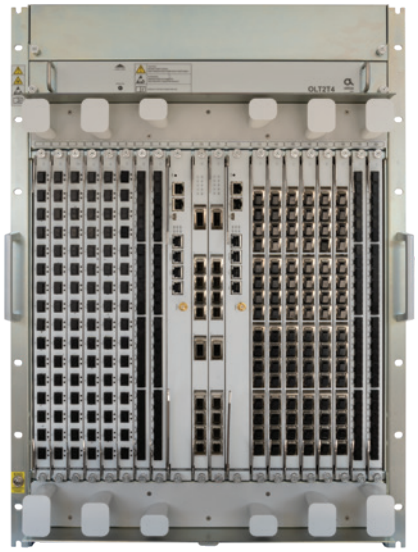
High density OLT

Description

The OLT2T4 is a network system equipment of Altice Labs' central office connectivity portfolio. This equipment delivers ultra-high bandwidth services over high customer density geographical areas, covering metro and urban scenarios and solving the entire access network. B2C and B2B markets are addressed, covering Residential, Business, and Mobile customer segment needs.

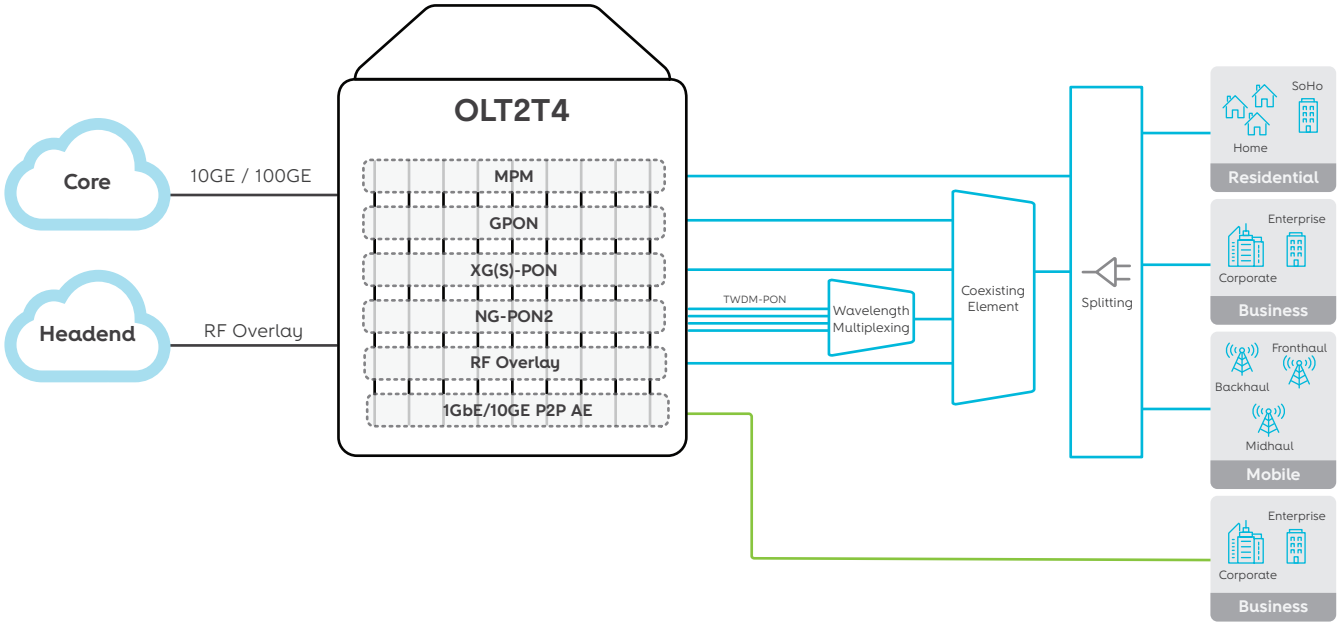
The OLT2T4 complies with all the relevant ITU technology standards, such as GPON (ITU-T G.984.x) and XGS-PON (ITU-T G.9807.1), using Multi-PON-Module (MPM) optical interfaces. NG-PON2 (ITU-T G.989.x) and next-generation 25/50G PON (ITU-T G.hsp) technologies are supported by our chassis, thus ensuring future-proof investments. This equipment also provides active Ethernet Point-to-Point (P2P) connectivity with 1GE and 10GE data rates over a single fiber, covering dedicated P2P network scenarios. Each PON port may serve up to 128 Optical Network Terminals (ONTs), assuming a maximum splitting ratio of 1:128.

The OLT2T4 is a carrier-grade equipment with high availability performance levels and reliability achieved through common element protection, featuring redundant Power Feed, Switching Fabric, and processing and cooling components. Type B protection is available for the subscriber side, while for the network side, star and ring topologies are available with multiple 10GE and/or 100GE optical interfaces supported by the Link Aggregation Control Protocol (LAG/LACP) and the Ethernet Ring Protection Switching (ERPS ITU-T G.8032) protocol. The OLT2T4 system was designed to be accommodated in the central office site.



The AGORA Manager and Controller is Altice Labs' solution to remotely manage OLTs, ONTs, and all of Altice Labs' hardware components. This solution offers operational efficiency features that include centralized Alarm Management, Reporting, Job Scheduler, Access Control, Zero-Touch Configuration (ZTC), and Provisioning (ZTP) capabilities. The equipment also provides a Common Line Interface (CLI) at the management level. Virtualization and slicing scenarios are ready and available to differentiate and enable new business models at the optical fiber access network.

Architecture



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Product Specifications

Size	15RU x 19" x 240 mm (HxWxD).
Line Technology	Advanced Encryption Standard (AES); Forward Error Correction (FEC); Up to 128 ONT/Us per PON; T-CONTs: 1024 per PON; Logical Range: 60 km; Maximum Differential Distance: 20 km. GPON (ITU-T G.984) D/U: 2,5/1,25 Gbps; XG-PON (ITU-T G.987) D/U: 10/2,5 Gbps; XGS-PON (ITU-T G.9807.1) D/U: 10/10 Gbps; NG-PON2 (ITU-T G.989) D/U: 4x 10/10 Gbps; P2P 1GE (ITU-T G.986) D/U: 1/1 Gbps; P2P 10GE (ITU-T G.986) D/U: 10/10 Gbps.
Capacity Specifications	2x Switch Fabric/processing modules (Active / Standby); 2x Uplink card slots; 16x Line card slots.
Switch Fabric	2x CXO2T4 (Full Duplex, Non-Blocking).
Uplink cards	2x UL200G (Up to 4x1/10GE (SFP/SFP+) + 2x100GE(QSFP28)).
Line cards	AG16G (16x GPON); AC16SXG (16x GPON/XG(S)-PON); AE48GE (48GbE or 16GbE + 16 10GE).
L2 Services	Services: 1:1, N:1 (TR-156i3); VLAN-ID conversion to GEM port-ID; Transparent: Add/change S-TAG and C-TAG; Load balancing LACP; Priority bits (p-bits) included in changes; Performance: GPON full wire speed. VLAN Business Ethernet Services / Transparent VLAN Services (VBES/TLS).
QoS & OAM	H-QoS, Fault Management and Performance Monitoring aligned with TR-156i4 e MEF-30.
IPTV features	IGMPv2/v3 snooping with proxy reporting; IPTV streams forwarding: 1024.
Synchronism	SYNC-E, IEEE1588v2/PTP.
Protection	Switch Fabric/processing cards (1+1), Distributed Power (1+1), load balancing, LACP (IEEE 802.3ad) and Ethernet Ring Protection Switching (ERPS ITU-T G.8032) capabilities on uplink interfaces, Type B protection on xPON ports.
Management and Security	Local management by Command Line Interface (CLI); Centralized management using AGORA Management and Control System; Remote using SNMTP and HTTP protocols; CPE remote management over OMCI G.988 channel with ONU software upgrade capability; Anti-MAC and IP spoofing with DAI and IPSG; Access Control Lists & MAC limiting; Storm control of unicast, multicast and broadcast traffic; In-band and Out-of-band Management: CLI, SNMP, XML; RADIUS/TACACS+ login authentication; End-to-end Zero-Touch Provisioning (ZTP) capabilities.
Environment	ETSI ETS 300 019. Partly temperature-controlled locations recommendation, -5ºC to +45ºC, 5 - 95% of Relative Humidity range. Extended Temperature range recommendation, -40ºC to +65ºC, 5 - 95% of Relative Humidity range.
Power Supply	Voltage range is from -40,5 VDC to -57,0 VDC compliant with ETSI EN 300 132-2 V2.1.1 (2003-01) recommendation. Earth connections comply with ETSI ETS 300 253 : January 1995 recommendation.

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