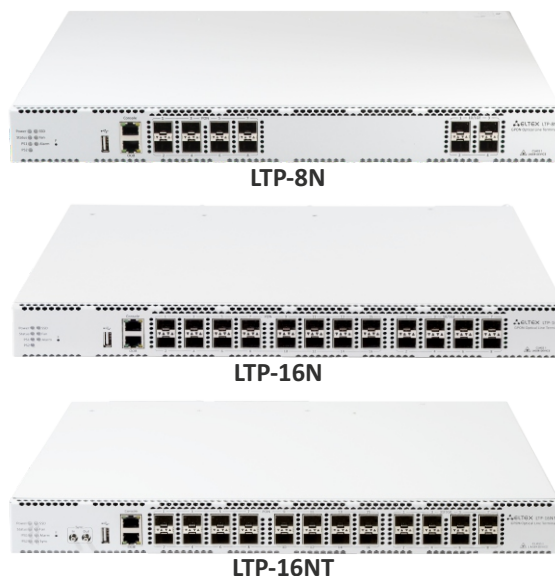


- Hot-swappable redundant power units
- Remote management via CLI (SSH2, Telnet), SNMP
- Compliance with G.988, G.984.x and TR-156 standards
- Ability to provide cable television together with data transmission
- Optimal solution for a small village or apartment building



Station equipment (OLT) is designed to provide broadband access over Passive Optical Network (PON).

GPON interfaces are used for connection of the optical distribution network (PON). Up to 128 subscriber optical terminals can be connected to each interface via single fiber. Access to the operator’s transport network is provided through 10 Gigabit uplink interfaces.

OLT LTP allows carriers to build scalable, fault tolerant ‘last mile’ networks to ensure the highest safety standards. OLT manages subscriber devices, traffic switching, and connection to the transport network.

Broadband access using FTTH technology is the highest quality version of the Triple Play service delivery, as it provides high data rates over long distances. The main advantage of PON technology is the lack of electrically powered active nodes within the section from OLT to ONT, which greatly reduces network operating cost. Furthermore, PON technology saves on cabling infrastructure by reducing the total length of the optical fiber, as only one fiber for a group of up to 128 subscribers is used within the section from the central node to the splitter.

OLTs support 2 hot-swappable redundant power units.

Interfaces configuration

	LTP-8N	LTP-16N	LTP-16NT
10GE (SFP+)/1GE (SFP)	4	8	
2.5/1.25 Gbps GPON	8	16	
Sync		—	2
10/100/1000BASE-T (OOB)		1	
Console port RS-232 (RJ-45)		1	
USB 2.0		1	
Maximum number of ONT	1024		2048

Features and capabilities

Port modes

- Duplex mode 1/10 Gbps for optical ports

SFP PON parameters¹

- Transmission medium: SMF-9/125 optical fiber cable, G.652
- Splitting ratio up to 1:128
- Support for RSSI (Received Signal Strength Indication)

Class B+

- Compliance with ITU-T G.984.2, FSAN Class B+, SFF-8472
- Maximum link distance: 20 km
- Transmitter: 1490 nm DFB Laser
 - Data rate: 2488 Mbps
 - Average launch power: +1.5..+5 dBm
 - Spectral line width: -20 dB 1.0 nm
- Receiver: 1310 nm APD/TIA
 - Data rate: 1244 Mbps
 - Receiver sensitivity: -28 dBm
 - Receiver optical overload: -8 dBm

Class C++

- Compliance with ITU-T G.984.2, FSAN Class C++, SFF-8472
- Maximum link distance: 40 km
- Transmitter: 1490 nm DFB Laser
 - Data rate: 2488 Mbps
 - Average launch power: +7..+10 dBm
 - Spectral line width: -20 dB 1.0 nm
- Receiver: 1310 nm APD/TIA
 - Data rate: 1244 Mbps
 - Receiver sensitivity: -32 dBm
 - Receiver optical overload: -12 dBm
 - Receiver burst mode dynamic range: 20 dB

Switch

- Switch performance: 120 Gbps
- MAC table: 64K entries
- Support for up to 4K VLAN complying to 802.1Q

Physical parameters

- Power supply¹:
 - 220 V (100–240 V) AC, 50 Hz
 - 48 V (36–72 V) DC
- Maximum power consumption:
 - 55 W for LTP-8N
 - 65 W for LTP-16N(T)
- Operating temperature: from -5 to 40 °C
- Relative humidity: up to 80 %
- Dimensions with installed power module (W × H × D):
430 × 44 × 317 mm, 19", 1U
- Weight: 5 kg

Standards

- ITU-T G.988 GPON
- ITU-T G.984x GPON

- ITU-T G.8032/Y.1344 Ethernet ring protection switching²
- IEEE 802.3i 10BASE-T Ethernet
- IEEE 802.3u 100BASE-T Fast Ethernet
- IEEE 802.3ab 1000BASE-T Gigabit Ethernet
- IEEE 802.3z Fiber Gigabit Ethernet
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Full Duplex and flow control²
- IEEE 802.3ad Link aggregation
- IEEE 802.1p Protocol for Traffic Prioritization
- IEEE 802.1Q Virtual LANs
- IEEE 802.1ad Provider Bridges (QinQ)
- IEEE 802.1v VLAN Classification by Protocol and Port
- IEEE 802.3ac VLAN tagging
- IEEE 802.1d MAC bridges
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree²
- IEEE 802.1s Multiple Spanning Trees²

Additional features

- VLAN mirroring, port mirroring
- MAC table: 64K per switch, 8K per port
- MAC address limiting²
- Support for STP, RSTP, MSTP²
- Support for ERPSv2²
- Support for QoS: 802.1p, DSCP², WFQ
- Port isolation, port isolation within a single VLAN
- Unicast/multicast/broadcast traffic shaping²
- Support for ACL IPv4
- Support for QinQ in compliance with IEEE 802.1ad
- Up to 1024 multicast groups
- Support for IGMP Fast Leave
- Support for IGMP Proxy
- Support for IGMP Snooping
- Support for IGMP Querier
- Support for DHCPv4 Snooping
- Support for IP Source guard²
- Support for DHCPv4 Relay Agent (Option 82)
- Support for PPPoE Intermediate agent
- Support for LLDP (802.1ab)
- Support for Storm Control²
- Support for Policy²
- Utilization by ONT services²
- Support for OMCI Bridge
- Support for OMCI RG

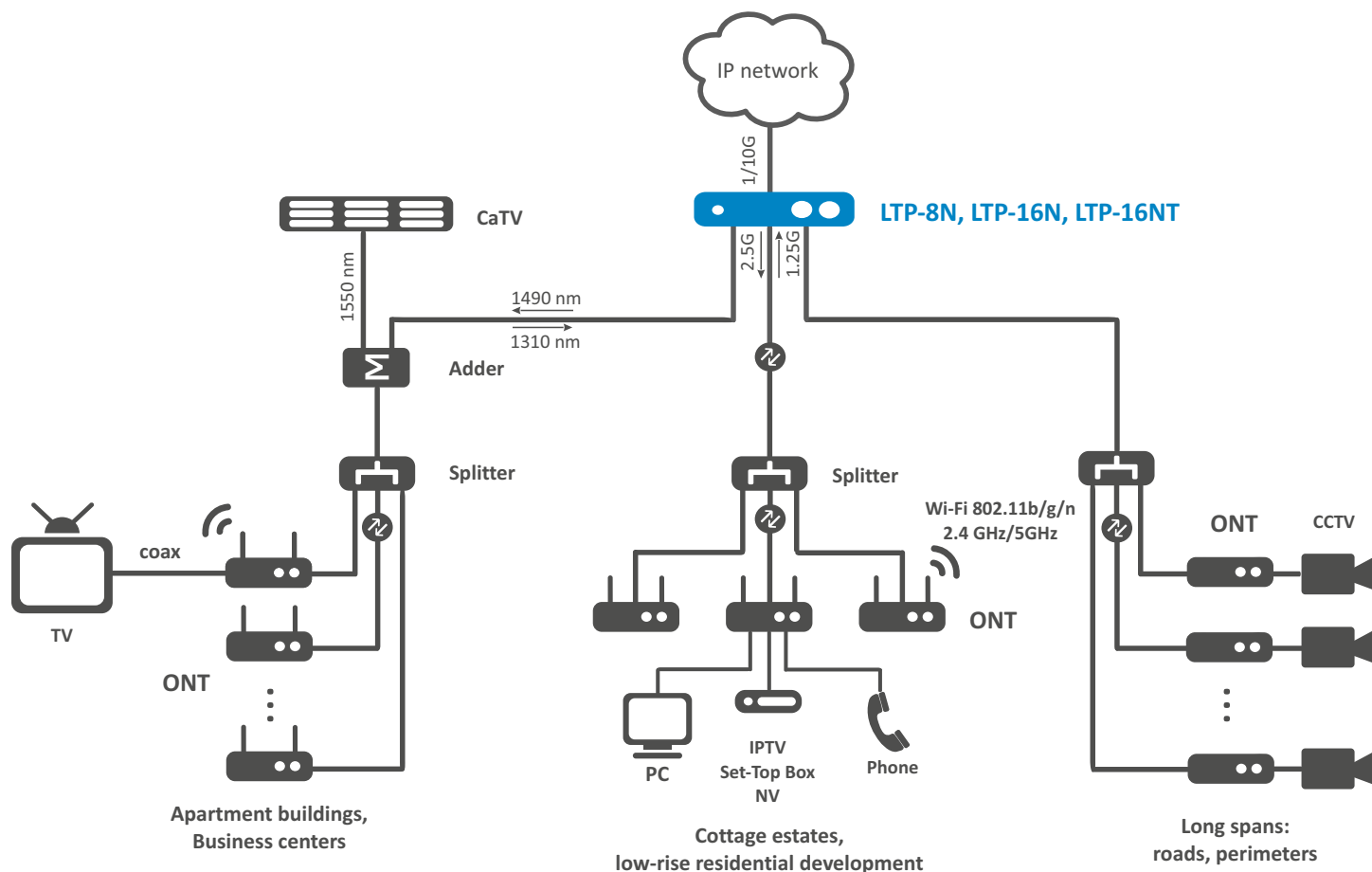
Management and monitoring

- Support for RADIUS, TACACS+
- Management and monitoring: CLI (SSH2, Telnet), SNMP
- Access restriction: by password, by IP address², by privilege level
- Support for several management interfaces²

¹Parameter is defined when ordering

²Not implemented in current version

Use case



Ordering information

Name	Description
LTP-8N	OLT LTP-8N, 8 ports of SFP-GPON, 4 ports of 10GE (SFP+)/1GE (SFP), RSSI
LTP-16N	OLT LTP-16N, 16 ports of SFP-GPON, 8 ports of 10GE (SFP+)/1GE (SFP), RSSI
LTP-16NT	OLT LTP-16NT, 16 ports of SFP-GPON, 8 ports of 10GE (SFP+)/1GE (SFP), 2 SYNC ports, RSSI

Power modules

PM100-48/12	Power module PM100-48/12, 48 V DC, 100 W
PM160-220/12	Power module PM160-220/12, 220 V AC, 160 W