OLT LTP-8X
central office node terminal (GPON)

OLT LTP-8X

LTP-8X central office node terminal is designed to provide a broadband access over Passive Optical Network (PON). Access to transport network of provider is realized through 10 Gigabit and combo Gigabit uplink interfaces. GPON interfaces are used for connection to Passive Optical distribution Network (PON). It is possible to connect up to 64 subscriber optical terminals to each interface by one fiber. Dynamic Bandwidth Allocation (DBA) enables to provide downstream rate up to 2.5 Gbps.

LTP-8X application enables operator to build scalable fail-safe “last mile” networks, providing the high level of safety in urban as well as rural areas. OLT LTP-8X provides subscriber devices control, packet traffic switching and connection to transport network.

+ **Uplink connection:**
  - 2 10G SFP+ ports,
  - 4 10/100/1000 Base-T / 10/100/1000 Base-X SFP combo ports
  - 4 10/100/1000Base-T ports;
+ **8 GPON ports (2.5 Gbps);**
+ **Up to 512 ONT to one node;**
+ **RSSI support.**

Embodiment

The device is performed in 1U metal case available for 19” form-factor rack-mount shelf installation.

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LTP-8X. Technical characteristics

Processor
Processor type: Marvell, ARMvSTE architecture
Clock frequency: 800mHz
Core quantity: 1
Main memory: DDR2 SDRAM 256 МБ 320 mHz
Nonvolatile memory: 32MB SPI Flash
Switch
Ethernet switch: Marvell Packet Processor
Switch productivity: 128 Gbps
Table of MAC addresses: 16K
VLAN support up to 4K in accordance with 802.1Q
Quality of Services (QoS)
Interfaces
USB interface (compatible with USB 2.0 specification)
Network interfaces
Uplink:

- 2x10GBase-X(SFP+)
- 2x (10/100/1000Base-T / 1000Base-X (SFP))

Optical transiveres: 1G SFP, 10G SFP+
Serial port: RS232
8 2.5 Gbps GPON ports
Port modes:

- Duplex/ half-duplex mode 10/100/1000Mbps for electrical ports.
- Duplex mode 1/10 Gbit/s for optical ports.

SFP PON parameters
Connector type: SC/UPC
Receiver sensitivity: from -30 to -6 dB
Transmission medium: fiber optical cable SMF- 9/125, G.652
Optical power budget (up/downstream): 30,5 dB /30 dB
Min. optical loss up/downstream: 11 dB/15 dB
Spectral width of the laser up/downstream: Δλ1 nm/1 nm
Wavelength for transmission up/downstream: 1310/1490 nm
Transmission speed up/downstream: 1,25/2,5 Gbps
Splitting ratio: 1:4, 1:8, 1:16, 1:32, 1:64
Max. transmission distance: up to 20 km
Supported standards:
IEEE 802.3 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 Flow control
IEEE 802.3ad LACP
IEEE 802.1p Traffic class expediting and dynamic multicast filtering
IEEE 802.1Q VLAN
IEEE 802.1ad Provider Bridges (QinQ)
IEEE 802.1v
IEEE 802.3 ac
IEEE 802.1d STP Spanning Tree Protocol
IEEE 802.1w RSTP Rapid Spanning Tree Protocol
IEEE 802.1s MSTP Multiple Spanning Tree Protocol
IEEE 802.1x User authentication
ITU-T G.984x

Power consumption not more than 60 Watt

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LTP-8X. Features

Support of common interface of device control through CLI, web, snmp interfaces;
Processing of all device modules configuration data;
Aggregate switch functions with support of the following features:

- MAC address learning /aging
- MAC address quantity restriction
- Unknown MAC address processing
- Broadcasting traffic restriction
- Multiaddress traffic restriction
- Quantity of multicast groups up to 2000
- Q-in-Q support in accordance with IEEE802.1ad
- STP, RSTP, MSTP
- IGMP-proxy
- IGMP-snooping
- IGMP fast leave
- Static routing *
- Dynamic routing is based on RIP, OSPF protocols *
- Bidirectional Forwarding Detect (BFD) for uplink interfaces *
- Port insulation, port insulation within one VLAN
- Received Signal Strength Indication (RSSI)

Interaction with internal devices of monitoring and control by Telnet, SSH, HTTP, HTTPS*, SNMP protocols.
Error data gathering of device and interface modules, alarm and information messages forming for monitoring systems;
Temperature conditions and ventilation system control;
Software updating control.

* Not supported in the current version.

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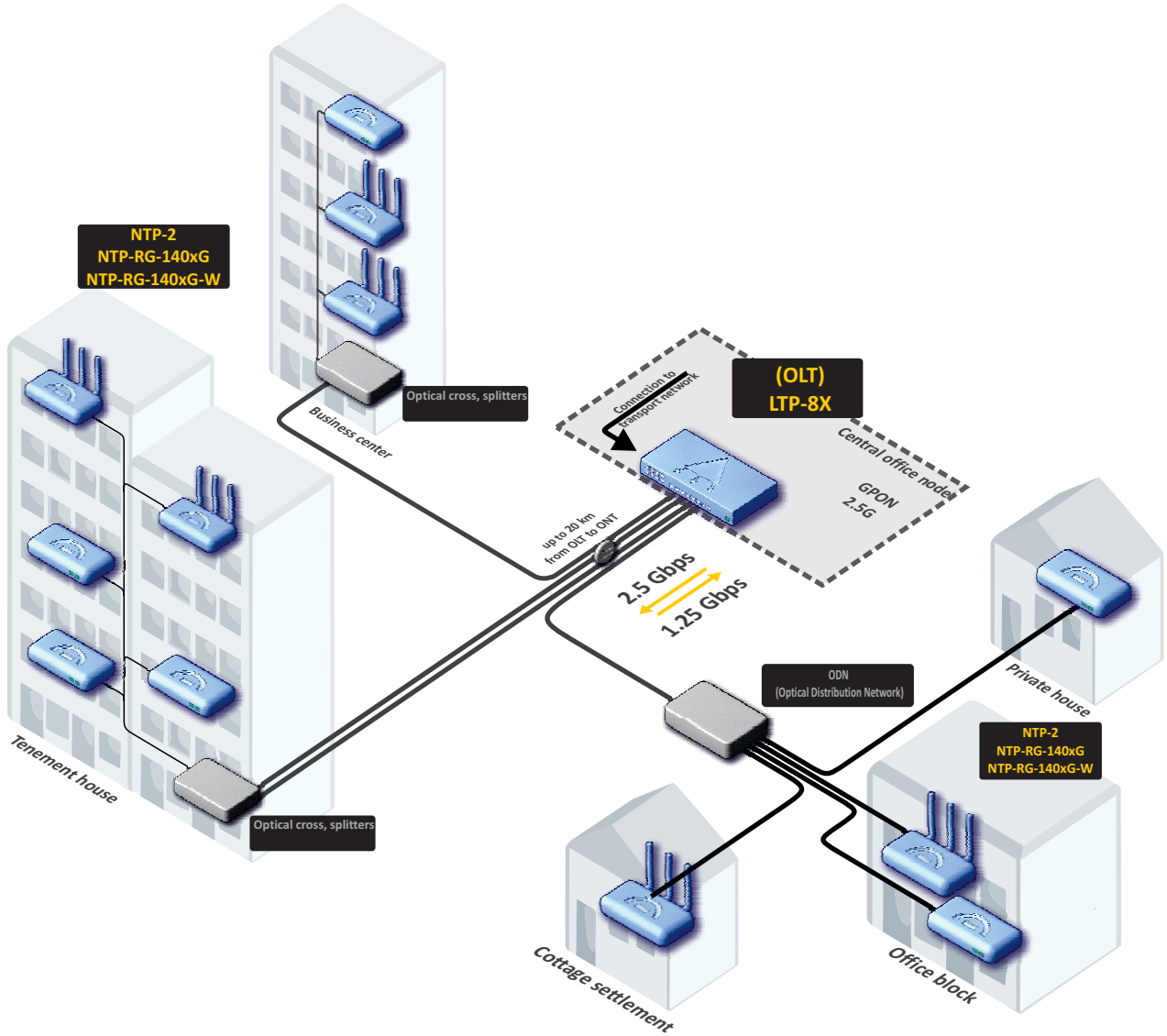
Typical application diagram

GPON network

Broadband subscriber access via “Fiber to the home” is the highest quality means of Triple Play sending, as it provides high data transmission rate at a long range.

The primary advantage of PON technology is the absence of the active nodes which need power supply on a section from OLT to ONT that significantly reduces expenditures for network exploitation. In addition, PON technology enables to save on cable infrastructure because of reducing optical fiber total length, as far as one fiber is used for the group of up to 64 subscribers from central node to splitter.

GPON LTP-8X equipment of Eltex production is the best solution for network building in tenement houses and cottage settlements. It enables to connect large and small corporative clients in business centers.



Information for order

Description	Picture	Part number
OLT LTP-8X, 8 SFP-xPON ports, 4 10/100/1000 combo ports, 2 SFP+(10G) ports, L2+ switch, RSSI		LTP-8X
SFP xPON 2,5 GE 20 km, 1 fiber		
SFP+ 10GE 10 km, 2 fiber, 1310 nm		
SFP 1,25 GE 20 km, 1 fiber, TX/RX		
SFP 1,25 GE 40 km, 1 fiber, TX/RX		
SFP 1,25 GE 80 km, 1 fiber, TX/RX		

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