ELTEX
Integrated Networking Solutions

— 1 GPON port
— Gigabit router
— Wi-Fi 802.11 b/g/n

NTU-52W — high performance multifunctional subscriber terminal designed to access modern telephony, IPTV, OTT services, as well as high-speed Internet. Furthermore, subscriber terminal allows carriers to offer their clients a wide range of services and opportunities to work in a local network.

PON technology
PON technology is one of the most effective last mile solutions. The technology allows to reduce costs for cable infrastructure and ensures data rates up to 2.5 Gbps downlink and 1.25 Gbps uplink. The use of PON technology in access networks allows providing end users with access to IP services.

Provided services
- High-speed access to the Internet
- Stream video/High Definition TV/IP TV, Video on Demand (VoD), video conference
- Online educational and entertainment programs

Application
- Providing broadband access services to subscribers in apartment houses, residential areas, campuses or suburban settlements
- Constracting corporate networks at large strategic enterprises or in office buildings with high requirement in terms of security and data transfer rates

Wireless connection
NTU-52W subscriber terminal allows connecting Wi-Fi clients via IEEE 802.11 b/g/n standard.

NTU-52W interface configuration

	WAN	LAN	Wi-Fi
NTU-52W	1×GPON	1×100M + 1×1G	802.11n, 2*2 – 300 Mbps – 2.4 GHz

Features and capabilities

PON interface parameters
– 1 GPON port
– Compliance with ITU-T G.984.2, ITU-T G.984.5 Filter, FSAN Class B+, SFF-8472
– Connector type — SC/APC
– Transmission media — single-mode optical fiber (SMF) — 9/125, G.652
– Maximum operating distance — 20 km
– Transmitter: 1310 nm DFB laser, burst mode
    – Data rate: 1244 Mbps
    – Average output power: +0.5..+5 dBm
    – Spectral line width: 1 nm (-20 dB)

– Receiver: 1490 nm APD/TIA Downstream digital receiver, CW Mode
    – Data rate: 2488 Mbps
    – Receiver sensitivity: -28 dBm, BER≤1.0×10^{-10}
    – Receiver optical overload: -8 dBm

LAN interface parameters
– 1 port of Ethernet 10/100/1000BASE-T (RJ-45)
– 1 port of Ethernet 10/100BASE-T (RJ-45)

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Features and capabilities (continued)

Wireless module parameters
– Supported standards: 802.11 b/g/n
– MIMO 2×2
– Frequency range: 2400–2483.5 MHz
– Security: WEP, WPA/WPA2

Data rate[1]
– 802.11b: 1, 2, 5.5 and 11 Mbps
– 802.11g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps
– 802.11n: from 6.5 to 300 Mbps (from MCS0 to MCS15)

Maximum power of the transmitter[2]
– 802.11b (11 Mbps): 18 dBm
– 802.11g (54 Mbps): 16 dBm
– 802.11n (MCS7): 16 dBm
– 802.11n (MCS0): 18 dBm

Modulation
– IEEE 802.11b: DQPSK, DBPSK, CCK
– IEEE 802.11g: BPSK, QPSK, 16QAM, 64QAM, OFDM
– IEEE 802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM

Physical parameters and environment conditions
– Power supply: 12 V DC, 0.5 A adapter
– Maximum power consumption: 6 W
– Operating temperature range: from +5 to +40 °C
– Operating humidity: up to 80 %
– Dimensions (W × H × D): 147 × 24 × 110 mm, desktop case, wall mounting option
– Weight: 0.25 kg

Standards
– ITU-T G.984.x – GPON
– ITU-T G.988 OMCI specification
– IEEE 802.1D
– IEEE 802.1Q
– IEEE 802.1P

Functional features
– TR-069
– "Bridge" and "Router" (including virtual ones) operation modes
– PPPoE (auto, PAP, MSCHAP and CHAP authorization)
– IPoE (DHCP-client and static)
– DHCP server on LAN side
– Multicast traffic transmission via Wi-Fi
– DNS (Domain Name System)
– DynDNS (Dynamic DNS)
– UPnP (Universal Plug and Play)
– NAT (Network Address Translation)
– NTP (Network Time Protocol)
– QoS (Quality of Service)
– IGMP Snooping
– IGMP Proxy
– SMB, FTP-alg, Print Server
– Firewall
– VLAN in accordance with IEEE 802.1Q

Security features
– Rate limiting per port
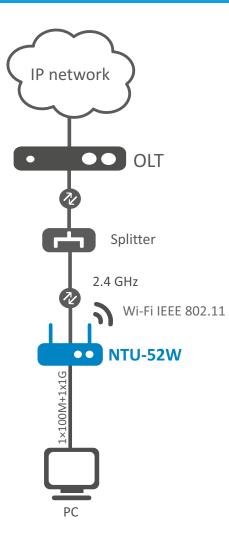– FEC coding

Configuration and monitoring
– In accordance with TR-142:
    – remote management via OMCI
    – remote management via TR-069
– Local management via WEB/CLI
– Firmware update via OMCI, TR-069, HTTP, TFTP

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[1] The maximum wireless data rate is defined according to IEEE 802.11n/ac standard. The real bandwidth can be different. Conditions of the network, environment, the amount of traffic, building materials and constructions and network service data can decrease the real bandwidth. The environment can influence on the network coverage range as well.

[2] The value of the maximum output power will vary according to the rules of radio frequency regulation in your country.

Use case

IP network

OLT

Splitter

2.4 GHz

Wi-Fi IEEE 802.11

NTU-52W

1x100M+1x1G

PC

Ordering information

Name	Description
NTU-52W	NTU-52W subscriber terminal, 1 GPON port, 1 port of LAN 10/100BASE-T, 1 port of LAN 10/100/1000BASE-T, 802.11n, 2*2 – 300 Mbps – 2.4 GHz
Related sofrware	
ACS-CPE-512	ACS-CPE-512 option of Eltex.ACS system for Eltex CPE autoconfiguration: 512 subscriber devices
ACS-CPE-1024	ACS-CPE-1024 option of Eltex.ACS system for Eltex CPE autoconfiguration: 1024 subscriber devices

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About ELTEX

ELTEX Enterprise is a leading Russian developer and manufacturer of communication equipment with 30 years of history. Complete solutions and their seamless integrability into the Customer's infrastructure are the priority growth areas of the company.