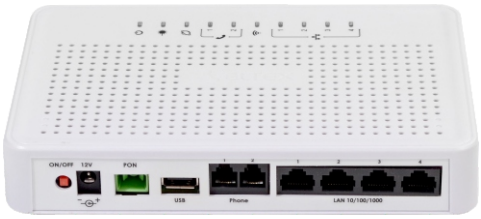
— **1 GPON port**
— **Gigabit router**
— **2 FXS ports for connecting an analog phone**
— **USB 2.0 for network drive or printer connection**
— **Wi-Fi 802.11b/g/n**



ONT NTU-RG-5402G-W is high performance multifunctional subscriber terminal designed to access modern IPTV, OTT and Internet services. NTU-RG-5402G-W enable providers to offer users a wide range of services and local network features.

PON technology

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

Universal devices

The integrated gigabit router with four 10/100/1000BASE-T ports ensures high-speed connection of network devices.
2 FXS ports allow to use VoIP services. The USB port can be used for USB devices (USB flash drive, external HDD, printer).

Provided services

- High-speed access to the Internet
- Video streaming/High Definition TV/IPTV, video on demand (VoD), video conferences
- VoIP
- Online entertainment and educational programmes

Application

- Providing broadband access services to subscribers in apartment blocks, residential estates, campuses and suburban settlements
- Building corporate networks in large strategic enterprises and in business centers with high requirements to security and data transfer rates

Wireless connection

NTU-RG-5402G-W subscriber terminal supports the 802.11b/g/n standard.

ONT NTU interface configuration

	WAN	LAN	FXS	RF	Wi-Fi	USB
NTU-RG-5402G-W	1 × GPON	4 × 1G	2	–	802.11n, 2*2 – 300 Mbps – 2.4 GHz	1 × USB 2.0

Features and capabilities

PON interface parameters
– 1 × GPON
– Compliance with ITU-T G.984.2, ITU-T G.984.5 Filter, FSAN Class B+, SFF-8472
– SC/APC connector type
– Transmission media: SMF 9/125 fiber-optic cable, G.652
– Maximum operating distance: 20 km
– Transmitter: 1310 nm DFB Pulse Mode Output Transmitter
  – Data rate: 1244 Mbps
  – Average power output: +0.5..+5 dBm
  – Spectral line width: 1 nm (-20 dB)
– Receiver: 1490 nm APD/TIA CW Mode Digital Receiver
  – Data rate: 2488 Mbps
  – Receiver sensitivity: -28 dBm, BER≤$1.0x10^{-10}$
  – Receiver optical overload: -8 dBm

LAN interface parameters
– 4 × Ethernet 10/100/1000BASE-T (RJ-45)

FXS interface parameters
– 2 FXS ports
– SIP
– Audio codecs: G.729 (A), G.711(A/U), G.723.1
– Fax transmission: G.711, T.38
– Loop resistance 2 kΩ
– Supported dialing technologies: pulse and frequency (DTMF)
– Caller ID issuing

Wireless interface parameters
– 802.11 b/g/n standards
– MIMO: 2×2
– Frequency range 2400 ~ 2483, 5 MHZ
– Wireless connection security: WEB, WPA/WPA2

Operating channels
– 802.11b/g/n: 1-13

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 output of the transmitter[2]
– 802.11b (11 Mbps): 17 dBm
– 802.11g (54 Mbps): 15 dBm
– 802.11n (MCS7): 15 dBm

Modulation
– IEEE 802.11b: DQPSK, DBPSK, CCK
– IEEE 802.11g: BPSC, QPSC, 16QAM, 64QAM, OFDM
– IEEE 802.11n: BPSC, QPSC, 16QAM, 64QAM c OFDM

USB interface parameters
– 1 × USB 2.0 for connecting USB devices

Physical specifications
– Dimensions (W × H × D): 187 × 32 × 120 mm, desktop case
– Power supply: external 12 V/2 A DC adapter
– Power consumption: no more than 18 W
– Operating temperature: from +5 to +40 °C
– Relative humidity: up to 80 %
– Weight: 0.35 kg

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

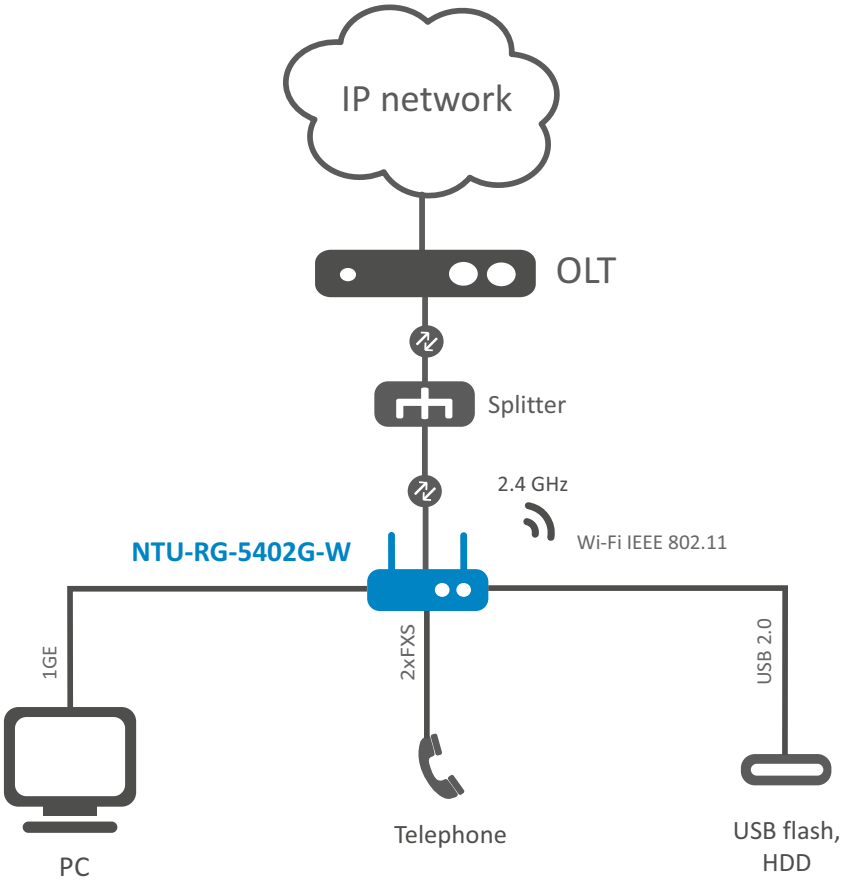
Functional specifications
– Support for TR-069
– «Bridge» and «Router» (including virtual ones) operation modes
– Support for PPPoE (auto, PAP, MSCHAP and CHAP authorization)
– Support for IPoE (DHCP client and static)
– DHCP server on LAN side
– Multicast traffic transmission via Wi-Fi
– DNS (Domain Name System)
– DynDNS (Dynamic DNS)
– UPNP (Universal Plug and Play)
– NAT (Network Address Translation)
– NTP (Network Time Protocol)
– Quality of Service (QoS)
– IGMP Snooping
– IGMP Proxy
– Support for UPNP, SMB, FTP-alg, Print Server
– VLAN complying with IEEE 802.1Q
– Support for VPN in L2TP mode
– L2TP over IPSec

Security functions
– Rate limiting per ports
– FEC coding

Configuration and monitoring
– According to TR-142:
  – Remote management via OMCI
  – Remote management via TR-069
– Local management via web
– Firmware updating via OMCI, TR-069, HTTP

[1] The maximum wireless transmission data rate depends on the IEEE 802.11n/ac standard. The real bandwidth can be different. Network operation conditions, environment, traffic volume, building materials and constructions as well as network service data can decrease the real bandwidth and reduce the network coverage radius.
[2] Frequency ranges, number of channels and maximum transmitter power will vary according to the rules of radio frequency regulation in your country.

Use case



Ordering information

Name	Description
NTU-RG-5402G-W	ONT NTU-RG-5402G-W, 1 × GPON, 4 × LAN 10/100/1000BASE-T, 1 × USB, 2 × FXS, Wi-Fi (802.11n, 2*2 – 300 Mbps – 2.4 GHz)
Related software	
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.