

- 1×GPON port
- Gigabit router
- FXS port for analogue phone connection¹
- USB 2.0 port for USB drive or printer connection¹
- Wi-Fi 802.11 b/g/n
- Wi-Fi 802.11 a/n/ac

NTU series ONTs are high performance multifunctional subscriber terminals that are designed to access modern telephony, IPTV, OTT services as well as high-speed Internet. Furthermore, the NTU subscriber terminals allow carriers to offer their clients a wide range of services and features for networking.

PON technology

PON technology is one of the most effective last mile solutions today. The technology helps to reduce costs for cable infrastructure and ensures data rates of 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.

Universal device

The integrated gigabit router for 4 ports² of 10/100/1000BASE-T ensures high-speed connection of devices in a network. The FXS¹ port provides access to IP telephony services. The USB¹ port can be used for USB device connection (USB flash drive, external HDD, printer).

Provided services

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

ONT NTU interface configuration

	WAN	LAN	FXS	Wi-Fi	USB
NTU-52V	1×GPON	1×100M + 1×1G	1	—	1×USB2.0
NTU-RG-5402G-W	1×GPON	4×1G	2	802.11n, 2*2 – 300 Mbps, 2.4 GHz	1×USB2.0
NTU-RG-1421G-Wac	1×GPON	4×1G	1	802.11n, 2*2 – 300 Mbps, 2.4 GHz 802.11ac, 3*3 – 1.3 Gbps, 5 GHz	2×USB2.0
NTU-RG-5421G-Wac	1×GPON	4×1G	1	802.11n, 2*2 – 300 Mbps, 2.4 GHz 802.11ac, 2*2 – 866 Mbps, 5 GHz	1×USB2.0

¹ For NTU-52V, NTU-RG-5402G-W, NTU-RG-1421G-Wac and NTU-RG-5421G-Wac.

² For NTU-RG-5402G-W, NTU-RG-1421G-Wac and NTU-RG-5421G-Wac.



**NTU-RG-1421G-Wac/NTU-RG-5402G-W/
NTU-RG-5421G-Wac**



NTU-RG-5421G-Wac rev.B



NTU-52V

Application

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

Wireless connection

The NTU-RG-1421G-Wac and NTU-RG-5421G-Wac routers support the 802.11ac standard, enabling data rates of up to 1.3 Gbps and 866 Mbps, respectively, to deliver advanced high performance services to client equipment over a wireless network. Two integrated Wi-Fi controllers ensure simultaneous dual-band operation in 2.4 GHz and 5 GHz frequency bands.

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 — fiber-optic cable SMF — 9/125, G.652
- Maximum operating distance — 20 km
- Transmitter:
 - 1310 nm DFB Upstream Burst Mode Transmitter
 - Data rate: 1244 Mbps
 - Average Launch Power: +0.5..+5 dBm
 - Spectral Line Width: 1 nm (–20 dB)
- Receiver:
 - 1490 nm APD/TIA Downstream CW Mode Digital Receiver
 - Data rate: 2488 Mbps
 - Receiver Sensitivity: –28 dBm, BER≤1.0×10⁻¹⁰
 - Receiver Optical Overload: –4 dBm

LAN interfaces parameters

- NTU-52V**
- 1 port of Ethernet 10/100/1000BASE-T (RJ-45)
 - 1 port of Ethernet 10/100BASE-T (RJ-45)
- NTU-RG-1421G-Wac/NTU-RG-5402G-W/NTU-RG-5421G-Wac**
- 4 ports of Ethernet 10/100/1000BASE-T (RJ-45)

FXS interfaces parameters

- 1×FXS port for NTU-52V/NTU-RG-1421G-Wac/NTU-RG-5421G-Wac
- 2×FXS ports for NTU-RG-5402G-W
- SIP
- Audiocodecs: G.729 (A), G.711(A/U), G.723.1
- Fax transmission: G.711, T.38
- Loop resistance up to 2 kΩ
- Supported dialing technologies: pulse/frequency (DTMF)
- Caller ID issuing

Wireless module parameters

- NTU-RG-5402G-W**
- Supported standards: 802.11 a/b/g/n
 - MIMO 2×2
 - Frequency range: 2400–2483.5 MHz
 - Security: WEB; WPA/WPA2

Operating channels

- 802.11b/g/n: 1–13

Data rates¹

- 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 output power of the transmitter²

- 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 with OFDM
- NTU-RG-1421G-Wac/NTU-RG-5421G-Wac**
- Supported standards: 802.11 a/b/g/n/ac
 - Frequency range 2400–2483.5 MHz, 5150–5350 MHz, 5650–5850 MHz
 - Simultaneous Dual Band
 - Modulation: CCK, BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM

Operating channels

- 802.11b/g/n: 1–13
- 802.11a/n/ac: 36–64, 132–165

Data rates¹

- 802.11b: 1; 2; 5.5 and 11 Mbps
- 802.11g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps
- 802.11n: 300 Mbps (20 MHz channel)
- 802.11ac:
 - 1300 Mbps (80 MHz) for NTU-RG-1421G-Wac
 - 866 Mbps (80 MHz) for NTU-RG-5421G-Wac

Maximum output power of the transmitter²

- 802.11b (11 Mbps): 17 dBm
- 802.11g (54 Mbps): 15 dBm
- 802.11n (MCS7): 15 dBm
- 802.11ac (MCS0): 19 dBm

USB interface parameters

- 1×USB 2.0 port for USB device connection (NTU-52V/NTU-RG-5402G-W/NTU-RG-5421G-Wac)
- 2×USB 2.0 ports for USB device connection (NTU-RG-1421G-Wac)

Supported 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
- 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)
- QoS (Quality of Service)
- IGMP Snooping

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

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

Features and capabilities

Functional features

- IGMP Proxy
- UPnP, SMB, FTP-alg, Print Server
- VLAN in accordance with IEEE 802.1Q
- VPN in L2TP mode
- L2TP over IPsec

Security features

- Rate limiting per port
- FEC coding

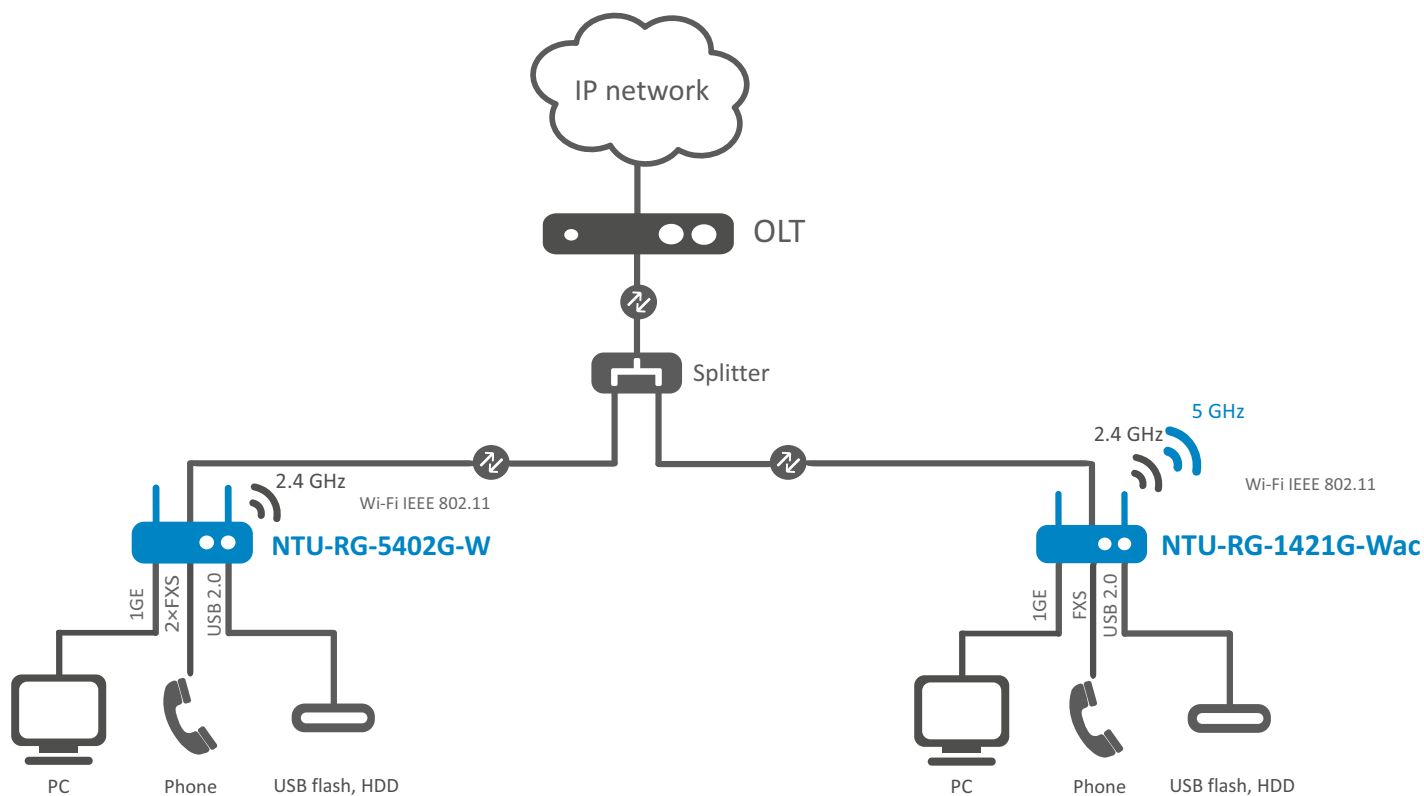
Configuration and monitoring

- 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

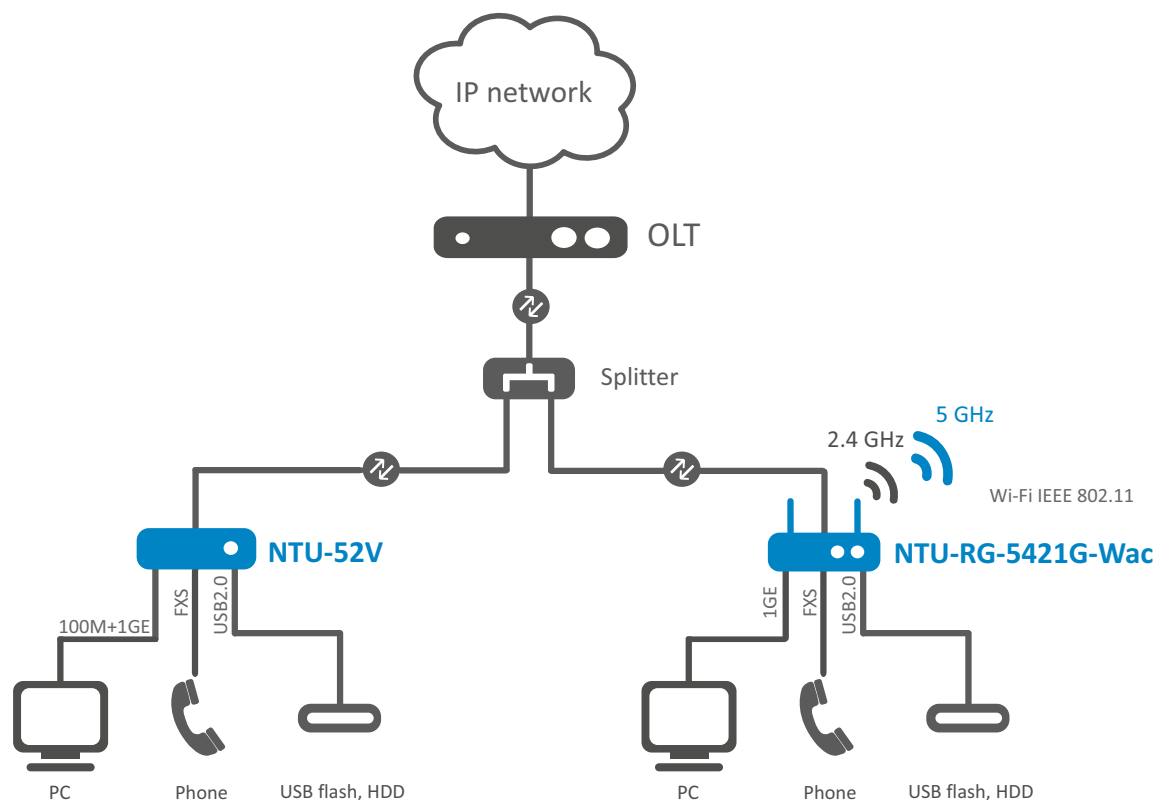
Physical parameters and environment conditions

- Dimensions (W × H × D):
 - NTU-52V — 147 × 24 × 110 mm, desktop case
 - NTU-RG-1421G-Wac — 187 × 32 × 120 mm, desktop case
 - NTU-RG-5402G-W — 187 × 32 × 120 mm, desktop case
 - NTU-RG-5421G-Wac — 187 × 32 × 120 mm, desktop case
 - NTU-RG-5421G-Wac rev.B — 234 × 34 × 133 mm, desktop case
- Power supply: 12 V, 2 A DC adapter
- Maximum power consumption:
 - NTU-52V — 10 W
 - NTU-RG-1421G-Wac — 18 W
 - NTU-RG-5402G-W — 18 W
 - NTU-RG-5421G-Wac — 18 W
- Operating temperature: from +5 to +40 °C
- Relative humidity: up to 80%

NTU-RG-5402G-W, NTU-RG-1421G-Wac Use Case



NTU-52V, NTU-RG-5421G-Wac Use Case




Ordering information

Name	Description
NTU-52V	ONT NTU-52V, 1×GPON port, 1 port of LAN 10/100BASE-T, 1 port of LAN 10/100/1000BASE-T, 1×FXS, 1×USB
NTU-RG-5402G-W	ONT NTU-RG-5402G-W, 1×GPON port, 4 ports of LAN 10/100/1000BASE-T, 2×FXS, 1×USB, Wi-Fi (802.11n, 2*2 — 300 Mbps, 2.4 GHz)
NTU-RG-1421G-Wac	ONT NTU-RG-1421G-Wac, 1×GPON port, 4 ports of LAN 10/100/1000BASE-T, 2×USB, 1×FXS, Wi-Fi (802.11n, 2*2 — 300 Mbps, 2.4 GHz + 802.11ac, 3*3 — 1.3 Gbps, 5 GHz)
NTU-RG-5421G-Wac	ONT NTU-RG-5421G-Wac, 1×GPON port, 4 ports of LAN 10/100/1000BASE-T, 1×USB, 1×FXS, Wi-Fi (802.11n, 2*2 — 300 Mbps, 2.4 GHz + 802.11ac, 2*2 — 866 Mbps, 5 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



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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.