

- 1 GPON port
- Gigabit router
- FXS phone ports
- USB 2.0 with network storage feature
- Wi-Fi 802.11a/b/g/n/(a/n/ac)¹



ONT NTU are high-performance network terminals which are designed for providing access to voice services, IPTV, OTT, high speed Internet. Also, with NTU-RG series optical network terminals, operators will be able to provide their subscribers with a wide range of local network operation services and capabilities.

PON Technology

PON Technology is the most modern and effective “last mile” solution. This solution reduces amount of cable cable and provides data transfer with downlink rate up to 2.5Gbps and uplink rate up to 1.25Gbps. PON-based solutions in access networks allow end users to have access to a set of services based on IP protocol.

Universal Devices

Integrated 4-port 10/100/1000 Base-T Gigabit router allows to create a high-performance connection for network devices. 2 x FXS ports enable VoIP services. USB port can be used for USB-enabled devices (USB flash drives, external HDD).



Supported services:

- High-speed Internet access
- Video streaming/ High Definition TV/IP TV, Video on Demand (VoD), Video conferencing
- VoIP
- Online educational and entertainment programs

Applications

- Providing of broadband access services to subscribers located in apartment houses, residential areas, campuses or suburban settlements
- Corporate network construction at large strategic enterprises, or in office buildings with high requirements in terms of security and data transfer rates

Wireless Connection

NTU-RG-1402G-W and и NTU-2W user routers allow you to connect Wi-Fi clients via IEEE 802.11b/g/n standard.

NTU-RG-1422G-Wac and NTU-RG-1422G-Wac user routers support 802.11ac standard, provide data transfer rates up to 1Gbps and deliver modern high-performance services to client equipment through the wireless network. Two integrated Wi-Fi controllers ensure the simultaneous dual band operation, i.e. 2.4 GHz and 5GHz.

ONT NTU Interface Configuration

ONT name	WAN	LAN	FXS	RF	Wi-Fi	USB
NTU-2V	1xGPON	1x100M + 1x1G	1			
NTU-2VC	1xGPON	1x100M + 1x1G	1	1		
NTU-2W	1xGPON	1x100M + 1x1G			802.11b/g/n	1xUSB2.0
NTU-RG-1402G-W	1xGPON	4x1G	2		802.11b/g/n	2xUSB2.0
NTU-RG-1421G-Wac	1xGPON	4x1G	1		802.11n, 2x2 -300Mbps - 2,4GHz 802.11ac,3x3 -1,3Gbps - 5GHz	2xUSB2.0
NTU-RG-1431G-Wac	1xGPON	4x1G	1		802.11n, 3x3 -450Mbps - 2,4GHz 802.11ac, 3x3 - 1,3Gbps - 5GHz	2xUSB2.0

¹For NTU-RG-1422G-Wac, NTU-RG-1432G-Wac

Technical characteristics:

PON Interface Specifications

- 1 GPON port
- Compliance with ITU-T G.984.2, ITU-T G.984.5 Filter, FSAN Class B+, SFF-8472
- SC/APC connector type
- Transmission medium: fibre optical cable SMF-9/125, G.652
- Maximum reach: 20km
- Transmitter: 1310nm DFB Upstream Burst Mode Transmitter
 - Data Rate: 1244Mb/s
 - Average Launch Power +0,5..+5 dBm
 - Spectral Line Width @ -20 dB 1nm
- Receiver: 1490nm APD/TIA Downstream CW Mode Digital Receiver
 - Data Rate: 2488Mb/s
 - Receiver Sensitivity -28 dBm With BER better than or equal to 1.0x10⁻¹⁰ (-30)
 - Receiver Optical Overload -4 dBm

CaTV Rx (NTU-2VC)

- 1550nm Downstream Linear CATV Video Receiver
- Optical Input Power: -8..+2 dBm
- Compound Second Order (CSO): -55 dB
- Compound Triple Beat (CTB): -55 dB
- Carrier to Noise Ratio (CNR): 46 dB
- RF Bandwidth: 47 to 870MHz
- RF Output: 17dBmV / ch with 4dB positive tilt
- RF Output Impedance: 75Ω

LAN Interface Specifications

NTU-2V, NTU-2VC, NTU-2W

- 1 x Ethernet 10/100/1000 Base-T (RJ-45) port
- 1 x Ethernet 10/100 Base-T (RJ-45) port

NTU-RG-1402G-W, NTU-RG-1421G-Wac, NTU-RG-1431G-Wac

- 4 x Ethernet 10/100/1000 Base-T (RJ-45) ports

FXS Interface Specifications

- 1 x FXS port (NTU-2V, NTU-2VC, NTU-RG-1421, NTU-RG-1431)
- 2 x FXS ports (NTU-RG-1402G-W)
- SIP protocol
- Audio codecs: G.729 (A), G.711(A/U), G.723.1
- Fax transmission: G.711, T.38
- Loop resistance: up to 2kΩ
- Dialing mode: pulse/frequency (DTMF)
- Caller ID broadcasting

Wireless Interface Specifications

NTU-2W, NTU-RG-1402G-W

- 802.11 b/g/n standards
- MIMO: 2x2
- Frequency range: 2400 – 2483,5 MHz
- Security of wireless connection: WEP, WPA/WPA2

Data transfer rate, Mbps¹

- 802.11b: 1, 2, 5,5 ,11 Mbps
- 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
- 802.11n: from 6,5 to 300 Mbps (from MCS0 to MCS15)

Maximum output power of the transmitter²

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

Modulation schemes

- IEEE 802.11b: DQPSK, DBPSK, CCK
- IEEE 802.11g: BPSK, QPSK, 16QAM, 64QAM, OFDM
- IEEE 802.11n: BPSK, QPSK, 16QAM, 64QAM c OFDM

NTU-RG-1421G-Wac, NTU-RG-1431G-Wac

- 802.11a/b/g/n/ac standards
- Frequency range: 2400 – 2483.5MHz, 5150 – 5350 МГц, 5650 – 5850MHz
- Simultaneous Dual Band
- CCK, BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM modulation

Active Channels

- 802.11b/g/gn: 1-13 (2412-2472 MHz)
- 802.11 a/ac: 36–64 (5180–5350MHz), 132–165 (5650–5850MHz)

Data transfer rate, Mbps

- 802.11b: 1; 2; 5,5 и 11 Mbps
- 802.11g: 6, 9, 12, 18, 24, 36, 48 и 54 Mbps
- 802.11n: 300 Mbps (20MHz channel), 450 Mbps (40MHz channel)
- 802.11ac: 1300 Mbps (80MHz)

Maximum output power of the transmitter²

- 802.11b (11 Mbps): 17dBm
- 802.11g (54 Mbps): 15dBm
- 802.11n (MCS7): 15 dBm
- 802.11ac (5 GHz): 19 dBm

USB Interface Specifications (NTU-RG)

- 1 x USB 2.0 port for USB-enabled devices (NTU-2W)
- 2 x USB 2.0 ports for USB-enabled devices (NTU-RG)

Physical specifications and ambient conditions

- Dimensions: 112x96x32mm, desktop design (NTU-2V)
- Dimensions: 187x120x32mm, desktop design (NTU-RG)
- Power. External power adaptor of direct current 12V/2A
- Power consumption:
 - NTU-2V: 5W max.
 - NTU-RG: 15W max.
- Operating temperature range: from +5°C to +40°C
- Relative humidity up to 80%

Supported standards

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

Performance Specifications

- TR-069 support
- 'Bridge' and 'Router' operation modes, incl. virtual router mode
- PPPoE support (auto, PAP, MSCHAP and CHAP authorization)
- PoE support (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
- IGMP Snooping
- IGMP Proxy
- SMB, FTP, DLNA, Print Server
- VLAN complying with IEEE 802.1Q

Security Features Support

- Port transfer rate limiting
- FEC coding

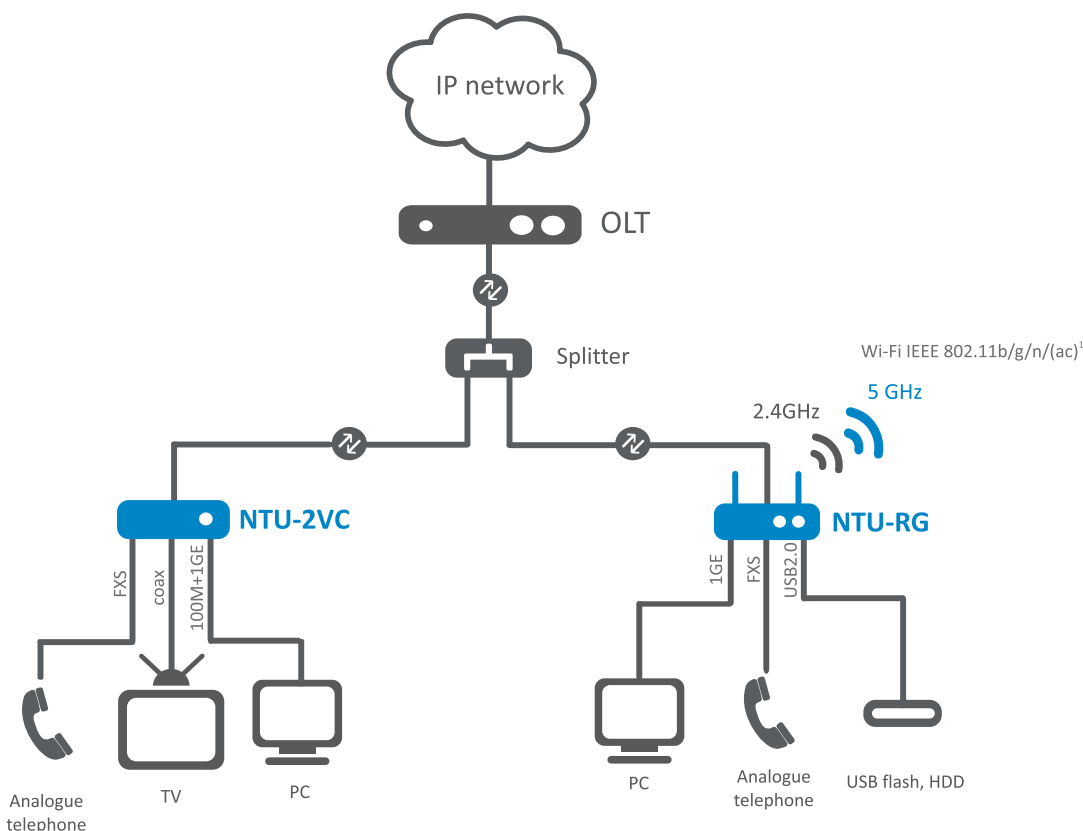
Configuration and Monitoring

- Due to TR-142:
 - Remote control via OMCI protocol
 - Remote control via TR-069 protocol
- WEB/CLI local control
- Software updates: OMCI, TR-069, HTTP, TFTP

¹ Maximal speed rate is defined due to IEEE 802.11n/ac standard specifications. The real speed rate will be a little different.







² Maximal power amount will be changed due to radio regulation rules of each country.

Scheme of using



¹For NTU-RG-1422G-Wac, NTU-RG-1432G-Wac

Ordering information

Name	Description	Image
NTU-2V	ONT NTU-2V, 1xPON, 1xLAN 10/100/1000Base-T, 1xLAN 10/100Base-T, 1xFXS	
NTU-2VC	ONT NTU-2VC, 1xPON, 1xLAN 10/100/1000 Base-T, 1xFXS, 1xRF	
NTU-2W	ONT NTU-2W, 1xPON, 1xLAN 10/100/1000 Base-T, 1xUSB, WiFi (802.11n, 2*2 - 300Mbps - 2.4GHz)	
NTU-RG-1402G-W	ONT NTU-RG-1402G-W, 1xPON, 4xLAN 10/100/1000 Base-T, 2xUSB, 2xFXS, WiFi (802.11n, 2*2 -300Mbps - 2,4GHz)	
NTU-RG-1422G-Wac	ONT NTU-RG-1421G-Wac, 1xPON, 4xLAN 10/100/1000 Base-T, 2xUSB, 2xFXS, WiFi (802.11n, 2*2 -300Mbps - 2,4GHz + 802.11ac, 3*3 - 1.3Gbps-5 GHz)	
NTU-RG-1432G-Wac	ONT NTU-RG-1431G-Wac, 1xPON, 4xLAN 10/100/1000 Base-T, 2xUSB, 2xFXS, WiFi (802.11n, 3*3 -450Mbps - 2,4GHz + 802.11ac, 3*3 - 1.3Gbps-5 GHz)	

Related Software

ACS-CPE-512	ACS-CPE-512 option of Eltex.ACS system for Eltex CPE autoconfiguration: 512 user devices
ACS-CPE-1024	ACS-CPE-1024 option of Eltex.ACS system for Eltex CPE autoconfiguration: 1024 user devices

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About Eltex

Eltex company is a leading Russian developer and manufacturer of telecommunication equipment with 25 years of history. Integrity of solutions and seamless integration capability into Customer infrastructure is a priority area of company development.