

- 1 XGS-PON port
- 1 LAN 10Gigabit Ethernet port
- 4 LAN Gigabit Ethernet ports
- 1 FXS port for analogue phone connection¹
- USB 3.0
- Dual-band Wi-Fi (802.11a/b/g/n/ac/ax)
- EasyMesh technology
- Smart home controller²



NTX series ONTs are high performance multifunctional subscriber terminals designed to access modern telephony, IPTV, OTT and Internet services.

PON technology

XGS-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 10 Gbps in downlink and 10 Gbps in uplink direction. The use of XGS-PON technology in access networks allows providing end users with access to IP-based services.

Universal devices

The integrated router with four 1G ports and one 10G port ensures high-speed connection of network devices. The FXS port enables access to 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
- VoIP¹
- Online entertainment and educational programmes
- Smart home system management

Smart home controller²

The device includes a Smart home controller that supports Z-Wave radio communication with sensors and devices.

Advantages of EasyMesh technology

- Network intelligence: a self-organizing and self-optimizing network collects information and responds to network conditions for maximum performance
- Efficient load balancing: allows devices to switch to a better connection and avoid interference
- Scalability: allows adding multi-vendor Wi-Fi EasyMesh access points

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

NTX-RG-5520-Wax, NTX-RG-5520-Wax-Z and NTX-RG-5521-Wax subscriber terminals support the 802.11ax standard that provides data rates up to 2400 Mbps and delivers modern high-speed services to subscriber equipment via the wireless network. Two integrated Wi-Fi controllers ensure simultaneous dual-band operation in 2.4 GHz and 5 GHz.

Interfaces configuration

	WAN	LAN	FXS	Wi-Fi	USB	Smart home interface
NTX-RG-5520-Wax	1 × GPON	4 × 1G	—	802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz	1 × USB 2.0 1 × USB 3.0	no
NTX-RG-5521-Wax	1 × GPON	4 × 1G	1	802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz	1 × USB 2.0 1 × USB 3.0	no
NTX-RG-5521-Wax-Z	1 × GPON	4 × 1G	1	802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz	1 × USB 2.0 1 × USB 3.0	yes

¹ Only for NTX-RG-5521-Wax and NTX-RG-5521-Wax-Z.

² Only for NTX-RG-5521-Wax-Z.

Features and capabilities

PON interface parameters

- 1 × 10G/10G XGS-PON
- SC/APC connector type
- Transmission media: SMF 9/125 fiber-optic cable, G.652
- Maximum operating distance: 100 km
- Transmitter: 1270 nm DFB Pulse Mode Output Transmitter
 - Data rate: 9953 Mbps
- Average power output: +4..+6 dBm
- Receiver: 1577 nm APD/TIA CW Mode Digital Receiver
 - Data rate: 9953 Mbps
 - Receiver sensitivity: -28 dBm, BER≤1.0x10⁻¹⁰
 - Receiver optical overload: -8 dBm

LAN interface parameters

- 1 × Ethernet 100/1000/2.5G/5G/10GBASE-T (RJ-45)
- 4 × Ethernet 10/100/1000BASE-T (RJ-45)

FXS interface parameters¹

- 1 × FXS
- SIP
- Audio codecs: G.729 (A), G.711(A/U), G.723.1
- Fax codecs: G.711, T.38
- Loop resistance: up to 2 kOhm
- DTMF
- Caller ID

Wireless interface parameters

- 802.11a/b/g/n/ac/ax
- Frequency range 2400–2483.5 MHz, 5150–5350 MHz, 5650–5850 MHz²
- EasyMesh
- Simultaneous Dual Band
- CCK, BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM, 1024QAM modulation

Operating channels

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

Data rate³

2.4 GHz:

- 802.11b: up to 11 Mbps
- 802.11g: up to 54 Mbps
- 802.11n: up to 300 Mbps (40 MHz channel)
- 802.11ax: up to 574 Mbps (40 MHz channel)

5 GHz:

- 802.11a: up to 54 Mbps
- 802.11n: up to 300 Mbps (40 MHz channel)
- 802.11ac: up to 866 Mbps (80 MHz channel)
- 802.11ax: up to 1201 Mbps (80 MHz channel)
- 802.11ax: up to 2402 Mbps (160 MHz channel)

Maximum power output of the transmitter²

2.4 GHz:

- 802.11b (1 Mbps): 21 dBm
- 802.11b (11 Mbps): 21 dBm
- 802.11g (54 Mbps): 19 dBm
- 802.11ax (MCS0): 21 dBm
- 802.11n (MCS7): 19 dBm
- 802.11ax (MCS11): 17 dBm

5 GHz:

- 802.11a (6 Mbps): 26 dBm
- 802.11ax (MCS0): 24 dBm
- 802.11n (MCS7): 22 dBm
- 802.11ac (MCS9): 20 dBm
- 802.11ax (MCS11): 19 dBm

USB interface parameters

- 1 × USB 2.0
- 1 × USB 3.0

Smart home interface⁴

- Radio interface for Smart home system management

Physical specifications

- Power supply via 12 V/3 A DC power adapter
- Power consumption: no more than 30 W
- Operating temperature: from +5 to +40 °C
- Relative humidity: up to 80 %
- Dimensions (W × H × D): 265 × 40 × 200 mm, desktop case

Functional specifications

- 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)
- Quality of Service (QoS)
- IGMP Snooping
- IGMP Proxy
- UPnP, SMB, FTP/FTP-alg, Print Server
- VLAN in compliance with IEEE 802.1Q
- VPN in L2TP mode
- L2TP over IPSec

¹ Only for NTX-RG-5521-Wax and NTX-RG-5521-Wax-Z.

² Frequency ranges, number of channels and maximum transmitter power will vary according to the rules of radio frequency regulation in your country.

³ The maximum wireless transmission data rate depends on the IEEE 802.11n/ax 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.

⁴ Only for NTX-RG-5521-Wax-Z.

Features and capabilities (continuation)

Security features

- Rate limiting on ports
- FEC coding

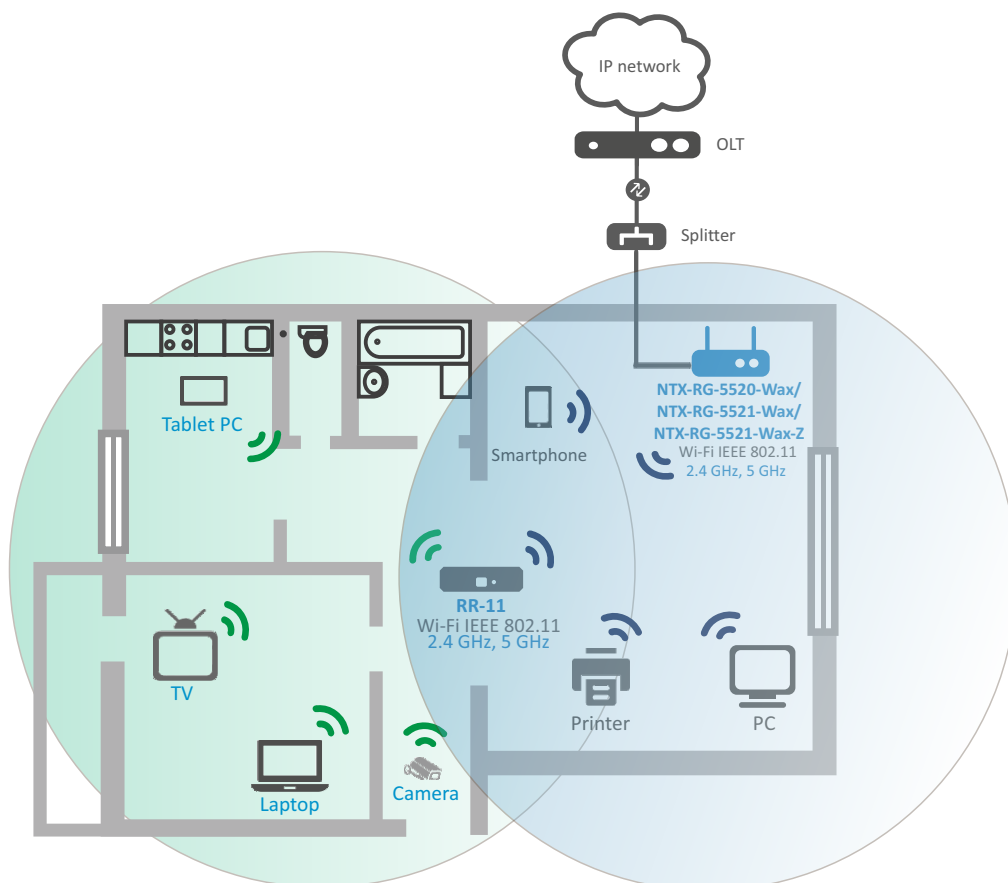
Configuration and monitoring

- According to TR-142:
 - Remote management via OMCI
 - Remote management via TR-069
- Local management via web
- Firmware updating via OMCI, TR-069, HTTP, TFTP

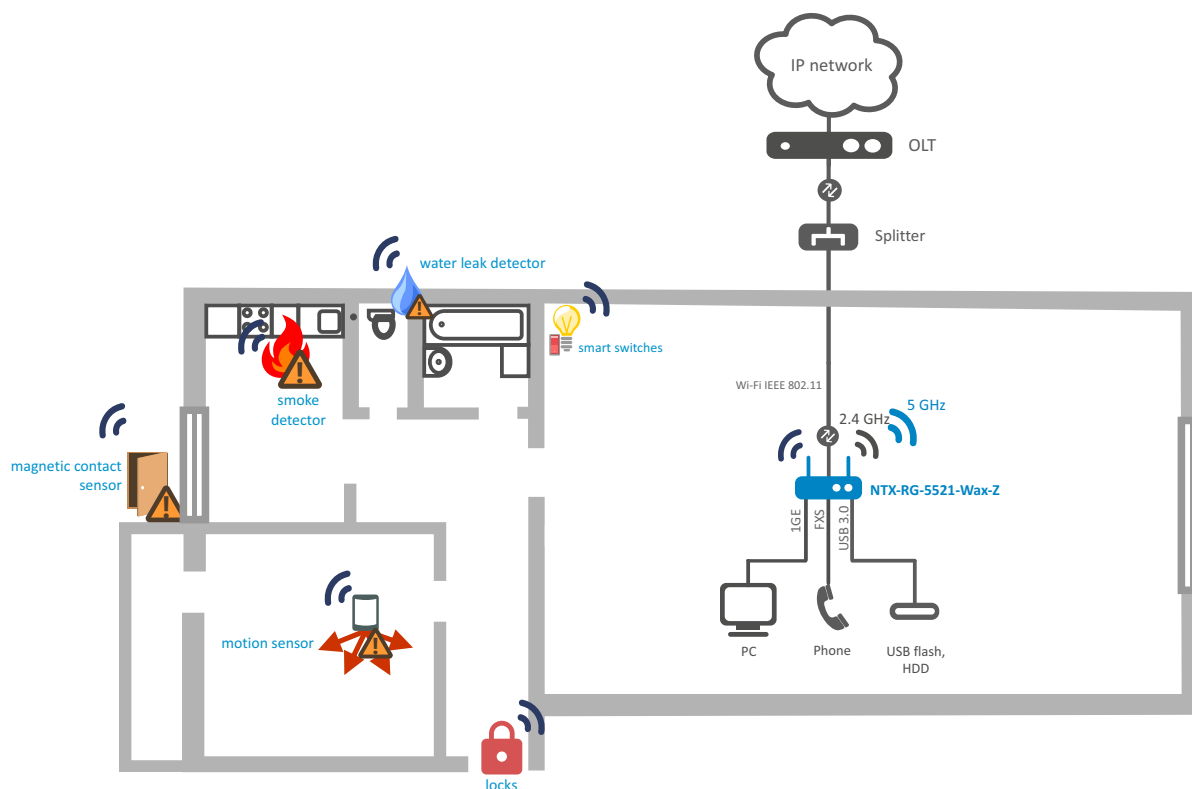
Standards

- ITU-T G.9807.1 — XGS-PON
- ITU-T G.988 OMCI specification
- IEEE 802.1D
- IEEE 802.1Q
- IEEE 802.1P

EasyMesh technology application diagram



Smart home technology application diagram



Ordering information

Name	Description
NTX-RG-5520-Wax	NTX-RG-5521-Wax-Z, 1 × 10G/10G XGS-PON, 1 × 100/1000/2.5G/5G/10GBASE-T (RJ-45), 4 × 10/100/1000BASE-T (RJ-45), 1 × USB2.0, 1 × USB 3.0, Wi-Fi (802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz)
NTX-RG-5521-Wax	NTX-RG-5521-Wax-Z, 1 × 10G/10G XGS-PON, 1 × 100/1000/2.5G/5G/10GBASE-T (RJ-45), 4 × 10/100/1000BASE-T (RJ-45), 1 × FXS, 1 × USB2.0, 1 × USB 3.0, Wi-Fi (802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz), Smart home interface
NTX-RG-5521-Wax-Z	NTX-RG-5521-Wax-Z, 1 × 10G/10G XGS-PON, 1 × 100/1000/2.5G/5G/10GBASE-T (RJ-45), 4 × 10/100/1000BASE-T (RJ-45), 1 × FXS, 1 × USB2.0, 1 × USB 3.0, Wi-Fi (802.11ax, 2*2 – 574 Mbps – 2.4 GHz + 802.11.ax, 2*2 – 2400 Mbps – 5 GHz), Smart home interface

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About ELTEX

ELTEX Enterprise is a leading Russian developer and manufacturer of communications 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.