# Nokia ONT XS-2437X-B

## Residential gateway ONT

The Nokia ONT XS-2437X-B is the solution for home networking that is delivered by 10 Gigabit symmetrical Passive Optical Network (XGS-PON). The device has built-in concurrent tri-band Wi-Fi® 7 networking with triple play capabilities that include voice, video and data. The XS-2437X-B supports Wi-Fi EasyMesh™, to create a whole home mesh network. This coverage can be expanded at any time by installing additional Wi-Fi EasyMesh-capable beacons to ensure seamless roaming throughout the home. The XS-2437X-B includes the Nokia Corteca Device Software which ensures the best possible Wi-Fi performance. The end-user experience is enhanced by the service provider's Wi-Fi management capabilities in the cloud and intuitive home user support using the Nokia WiFi Mobile App. The XS-2437X-B also supports application containers, that allow introducing new services, from cybersecurity to entertainment to productivity.

The Nokia ONT XS-2437X-B is a tri-band Wi-Fi 7 mesh system with Wi-Fi Alliance certified Wi-Fi EasyMesh, enhanced by Nokia value added features. The Nokia Corteca Device Software creates a self- healing, self-optimizing network and includes intelligent channel selection, band steering, client steering and backhaul management to provide the best Wi-Fi performance. As it is EasyMesh™ compliant, it provides interoperability and avoids vendor lock-in.

Optionally, the Nokia ONT XS-2437X-B can be managed by the Nokia Corteca Home Controller through TR-369/USP. The Home Controller gives help desk agents a real-time holistic view of the in-home network to assist them with easy identification and instantaneous resolution of issues. For the network administrators, it provides an end-to-end Wi-Fi network view and allows management of groups of Wi-Fi networks.



This Nokia indoor ONT is designed to deliver triple play services (voice, video and data) to residential subscribers. Voice services are provided through two plain old telephone service (POTS) ports with an integrated analog telephone adapter (ATA)

that converts voice traffic into Session Initiation Protocol (SIP). Connectivity to an existing public switched telephone network (PSTN) Class 5 switch is supported through SIP with direct interoperability of a variety of soft switches. Ethernet connectivity is available on one 10 Gigabit Ethernet (GigE) port and three 1 GE ports. Service providers can deliver video using IP packets (IPTV).

Relying on tri-band Wi-Fi allows for support of the widest range of customer products.

The IEEE 802.11be standard enables gigabit speeds on many newer devices, while the widely supported 802.11b/g/n/ac/ax standard can simultaneously connect to legacy devices.

## Features

- Three RJ-45 10M/100M/1G auto-negotiating interfaces
- One RJ-45 100M/1G/2.5G/5G/10G auto-negotiating interface
- Two POTS ports for carrier-grade voice services
- Tri-band concurrent Wi-Fi: 2.4 GHz, 5 GHz and 6GHz, with 4x4 MU-MIMO on each band
- Wireless IEEE 802.11b/g/n/ax/be on 2.4 GHz
- Wireless IEEE 802.11n/ac/ax/be on 5 GHz
- Wireless IEEE 802.11ax/be on 6 GHz
- Up to 320Mhz channel bandwidth
- Network Address Translation (NAT) and firewall
- Voice interworking function from the analog POTS lines to the voice over IP (VoIP) and Ethernet layers
- One USB 3.0 host port
- Optics support received signal strength indication (RSSI)
- Supports virtual private network (VPN) passthrough for Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP) and IPSec
- Port forwarding and demilitarized zone (DMZ)/ dynamic domain name system (DDNS)
- Supports Application Containers
- Nokia Corteca Device Software based on OpenWrt

## Benefits

- Integrates the ONT and wireless access point functions to allow for one less device in the home
- Delivers connectivity to Ethernet devices within the home
- Latest Wi-Fi 7 technology supports 320 MHz channel width and 4K QAM
- Multi-link operation (MLO) brings higher throughput and lower latency
- Tri-band, leveraging 2.4 GHz, 5 GHz and 6 GHz, with 4x4 MIMO on each band
- Comes equipped with Nokia Corteca Device Software
- Supports full triple play services, including voice, video and data
- Allows service-per-port configurations
- Supports IP video distribution
- Supports easy-to-use USB 3.0 connections for external disk drives
- Delivers voice services using VoIP
- Delivers video services efficiently with multicasting or unicasting
- Flexible video delivery options of Ethernet or wireless to set-top boxes (STBs)

# Technical specifications

### Physical

- Height: 221 mm (8.7 in)
- Width: 94 mm (3.7 in)
- Depth: 194 mm (7.6 in)
- Weight: 1.7 kg (3.7 lb)

### Installation

- Desk mountable
- Wall mountable with bracket

### Operating environment

- Temperature: -5°C to 45°C (23°F to 113°F)
- Relative humidity: 10% to 90%

### Power requirements

- Local powering with 12 V input (feed uses external AC/DC adapter) or optional UPS
- Dying gasp support
- Power consumption: < 48 W

### XGS PON uplinks

- Wavelength: 1260 nm–1280 nm upstream; 1575 nm–1580 nm downstream
- G.9807.1 XGS PON standards compliant: 4 dBm ~ 9 dBm launch power; -28 dBm ~ -9 dBm for receiving
- SC/APC connector
- 10 G burst mode upstream transmitter
- 10 G downstream receiver
- G.9807.1-compliant 10 GPON Encapsulation Method (XGEM) framing
- Flexible mapping between XGEM ports and T-CONT
- Advanced Encryption Standard (AES) 128
- Forward error correction (FEC)
- Activation with automatic discovered serial number and password
- Remote software image download
- Secure boot
- BOSA On Board (BOB) type laser, SC/APC connector

### Ethernet interfaces

- One RJ-45 100M/1G/2.5G/5G/10G auto-negotiating interface
- Three RJ-45 10M/100M/1G auto-negotiating interfaces
- Layer 2/Layer 3 Forwarding
- Ethernet port auto-negotiation or manual configuration with medium dependent interface/ medium dependent interface crossover (MDI/MDIX)
- Virtual switch based on IEEE 802.1q virtual LAN (VLAN)
- VLAN tagging/de-tagging in Ethernet interface and marking of IEEE 802.1P priority bit
- Class of service (CoS) based on VLAN ID, IEEE 802.1P priority bits
- Internet Group Management Protocol (IGMP) v2/v3 snooping

### POTS interfaces

- Two FXS ports for VoIP service with RJ-11 connectors
- Multiple codecs: ITU-T G.711, ITU-T G.729
- SIP (RFC 3261)
- ITU-T G.168 echo cancellation
- Services: caller ID, call waiting, call hold, 3-way call, call transfer, message waiting indication
- 5 ringer equivalence numbers (RENs) per line
- Dual-tone multi-frequency (DTMF) dialing
- Balanced sinusoidal ring signal, 55 V root mean square (RMS)

## WLAN interfaces

- 4x4 MIMO on 802.11b/g/n/ax/be (2.4 GHz)
- 4x4 MIMO on 802.11n/ac/ax/be (5 GHz)
- 4x4 MIMO on 802.11ax/be (6 GHz)
- Support Multi-User Multiple Input, Multiple Output (MU-MIMO)
- Support Multi-User Orthogonal Frequency Division Multiple Access (MU-OFDMA)
- Maximum effective isotropic radiated power (EIRP) on 2.4 GHz up to 1000 mW, on 5 GHz up to 2000 mW, on 6 GHz up to 1000 mW in LPI mode (SPI mode with 2000 mW plus AFC is HW ready)
- Wi-Fi Protected Access (WPA) support including Pre-Shared Key (WPA-PSK), WPA2 and WPA3
- Media access control (MAC) filters

## Rear LEDs

- POWER
- PON
- TEL

## Front LED

- Status

## USB interface

- One USB 3.0 interfaces

## Residential gateways

- IPv4 and IPv6
- Point-to-Point Protocol over Ethernet (PPPoE) and IP over Ethernet (IPoE)
- NAT, DMZ and firewall
- Dynamic Host Configuration Protocol (DHCP) and domain name system (DNS) proxy
- IGMP proxy
- TR-069 and TR-369
- TR-143

## Safety and electromagnetic interference (EMI)

- Protection of over voltage/current

## Regulatory compliances

- CE Mark
- FCC Mark
- Other certifications depending on variants

## Colors

- Colors of the housing, as well as the logos and texts, can change for specific variants

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