



Nokia 7368 ISAM ONT XS-250WX-A

Residential gateway ONT

The Nokia Intelligent Services Access Manager (ISAM) Optical Network Terminal (ONT) XS-250WX-A that has one 1 Gigabit/10 Gigabit Ethernet (GigE), four GigE and two plain old telephone service (POTS) ports is part of the industry-leading Nokia 7368 ISAM ONT product family. It is also compatible with the Nokia 7360 ISAM fiber to the x (FTTx) product line. The device has built-in concurrent dual-band Wi-Fi® 802.11b/g/n and 802.11ac networking that simplifies the home equipment experience. It can provide triple play services with voice, video and data with high-capacity Wi-Fi connectivity. The Nokia ONT terminates the 10 G symmetrical Passive Optical Network (XGS PON) fiber interface that is compliant with a Full Service Access Network (FSAN).

Overview

The Nokia 7368 ISAM ONT XS-250WX-A is designed to deliver triple play services (voice, video and data) to residential subscribers. The indoor ONT is compliant with ITU-T G.9807.1, supporting a line rate of 10 Gb/s downstream and 10 Gb/s upstream. Voice services are provided through two POTS ports with an integrated analog telephone adapter (ATA) that converts voice traffic into Session Initiation Protocol (SIP). Ethernet connectivity is available on one 10 GigE and four GigE ports. Service providers can deliver video using IP packets (IPTV) and rely on dual-band Wi-Fi to support the widest range of customer devices. The IEEE 802.11ac standard enables gigabit speeds on many newer devices, while the widely supported 802.11b/g/n standard can simultaneously connect to legacy devices.



Features

- Compliant with ITU-T G.9807.1 and supports a line rate of 10 Gb/s downstream and 10 Gb/s upstream
- Supports four 10/100/1000M Base-T interfaces
- Supports one 1/10 GigE Base-T interface
- Support two USB 3.0 interfaces
- Wireless IEEE 802.11b/g/n: 2.4 G and 5 G dual-band concurrent Wi-Fi
- Wireless IEEE 802.11ac: 5 G
- Voice interworking function from the analog POTS lines to the voice over IP (VoIP)/Ethernet layers
- Optics support received signal strength indication (RSSI)
- Network Address Translation (NAT) and firewall
- Supports virtual private network (VPN) pass-through for Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP) and IPSec
- Port forwarding and demilitarized zone/dynamic domain name system (DMZ/DDNS)

Benefits

- Enables operators to capture new revenues with services that require 10 Gb/s symmetrical
- Coexistence with GPON (ITU-T G.984.x), XGPON1 (ITU-T G.987.x) and NGPON2 (ITU-T G.989.x)
- Integrates the ONT and wireless access point functions to allow one less device in the home
- Delivers connectivity to Ethernet devices within the home
- Supports full triple play services including voice, video and high-speed internet access (HSIA)
- Allows service per port configurations
- Supports IP video distribution
- Supports easy to use USB 3.0 connections for external disk drives and home network attached storage (NAS)

- 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)
- Supports TR-069 auto-configuration server (ACS) based remote management
- Supports network management using Nokia 5520 Access Management System (AMS)

Technical specifications

Physical

- Height: 76.6 mm (3.0 in)
- Width: 190.3 mm (7.5 in)
- Length: 290.3 mm (11.4 in)
- Weight: 1.24 kg (2.7 lb)

Installation

- Desktop and wall mounting

Power requirements

- Local powering with +12 V input (feed using external AC/DC adapter): molex connector
- Dying gasp support
- Power consumption: ≤46 W

Operating environment

- Temperature (ambient): -5°C to 40°C (23°F to 104°F)
- Relative humidity: 5% to 95%, non-condensing

XGS PON uplinks

- Wavelengths: 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

Ethernet interfaces

- Four LAN 10/100/1000Base-T interfaces with RJ-45 connectors
- One LAN 1 G/10 G Base-T interface with RJ-45 connector
- 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/detagging per Ethernet port and marking/remarking of IEEE 802.1p
- IP type of service/differentiated services code point (ToS/DSCP) to IEEE 802.1p mapping for untagged frames
- Class of service (CoS) based on VLAN ID, IEEE 802.1p bit
- 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 (A and B)
- SIP (RFC 3261)
- ITU-T G.168 echo cancellation, voice activity detection (VAD) and comfort noise generation (CNG)
- 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)

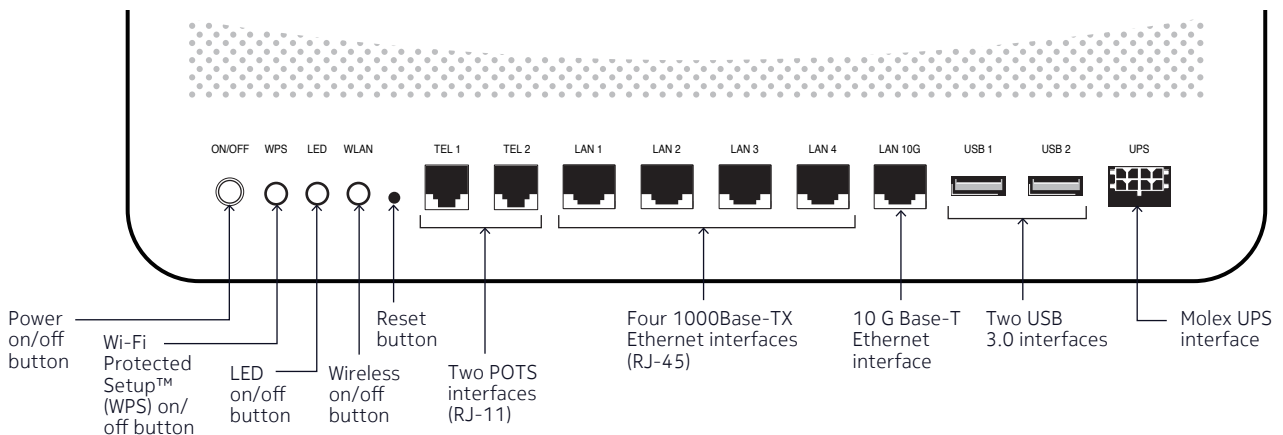
WLAN interfaces

- 3x3 802.11b/g/n
- 4x4 802.11ac
- 64-bit and 128-bit Wired Equivalent Privacy (WEP) support
- Wi-Fi Protected Access (WPA) support including Pre-Shared Key (WPA-PSK) and WPA2
- Media access control (MAC) filters
- 7 internal antennas: 3 for 2.4 G and 4 for 5 G

USB interface

- Two USB 3.0 interfaces

XS-250WX-A ONT connections



Residential gateways

- IPv4 and IPv6
- Point-to-Point Protocol over Ethernet (PPPoE) and IP over Ethernet (IPoE)
- NAT, application layer gateway (ALG), DMZ and firewall
- Port forwarding
- IP/MAC filtering
- Dynamic Host Configuration Protocol (DHCP)
- DNS proxy, DNS relay
- IGMP proxy
- UPnP
- TR-069 remote management

LEDs

- Power
- Battery
- PON
- Link
- Authorization
- Internet
- POTS 1-2
- VoIP
- WPS
- 2.4 G wireless
- 5 G wireless
- Data 1-4 (four GigE LEDs)
- Data 5 (one 1/10 GigE LED)

Safety and electromagnetic interference (EMI)

- FCC compliant
- UL 60950-1
- CE Mark