Nokia ONT G-010G-T

Residential bridge ONT

The Nokia Optical Network Terminal (ONT) G-010G-T is the answer for home networking delivered by Gigabit Passive Optical Network (GPON). It is designed to connect individual users to the network for ultra-broadband services with gigabit speed.

The Nokia ONT G-010G-T provides a GPON interface to the subscriber and paves the way to deliver premium triple play services in a fiber to the home (FTTH) environment. The Nokia ONT G-010G-T is designed to take advantage of the Nokia award-winning management platforms, including the Nokia 5520 Access Management System (AMS) platform.

This residential bridge ONT is designed to deliver Ethernet services to the subscriber through FTTH on one 2.5 Gb/s Gigabit Ethernet (GigE) port.

It is a temperature non-hardened bridge ONT suitable for indoor deployments. Compliant with the standard ONT Management Control Interface (OMCI) definition, the G-010G-T ONT can be managed from a remote site using an AMS and can support the full range of fault, configuration, accounting, performance and security (FCAPS) functions.



Features

- Supports one 2.5 Gb/s GigE interface
- Wire speed data transfer for all packet sizes
- Per subscriber, per service bandwidth control
- Remotely managed by the Nokia 5520 AMS
- IP video with multistage Internet Group Management Protocol (IGMP) v2/v3 for channel change
- Supports received signal strength indication (RSSI) for lean operations and remote troubleshooting

Benefits

- Eco-sustainability is in line with “green” tendencies: low power consumption.
- IGMP snooping monitors the member joining-and-leaving activities at the Ethernet port, then selectively delivers the multicast streams.
- Advanced dynamic bandwidth management allows prioritization per service and user with the ability to burst up to the full line rate. This guarantees very high quality of service and future safety, and makes optimal use of electronics, fiber optics and distribution facilities.

Technical specifications

Physical

- Height: 89 mm (3.5 in)
- Width: 82 mm (3.2 in)
- Depth: 27 mm (1.1 in)
- Weight: 0.1 kg (0.22 lb)
- Wall or desk mount

Operating environment

- Temperature: -5°C to 45°C (23°F to 113°F)
- Relative humidity: 5% to 95%

Power requirement

- Local powering with 12 V input (feed uses external AC/DC adapter)
- Dying gasp support
- Power consumption: <4 W

GPON uplink

- Wavelength: 1490 nm downstream, 1310 nm upstream
- Line rate: 2.488 Gb/s downstream, 1.244 Gb/s upstream
- SC/APC optical connector
- Compliant with ITU-T G.984.2 Amd1, Class B+
  - ¬ +1 dBm to ~+5 dBm launch power, -28 dBm sensitivity and -8 dBm overload
- Compliant with ITU-T G.984.2 Amd1, Class C+ (optional)
  - ¬ +1 dBm to ~+5 dBm launch power, -30 dBm sensitivity and -8 dBm overload
- G.984.3-compliant dynamic bandwidth allocation (DBA) by piggyback
- G.984.3-compliant Advanced Encryption Standard (AES) in downstream
- G.984.3-compliant forward error correction (FEC) in both directions
- 802.1p fixed mapping to queues
  - ¬ Mapping of GPON Encapsulation Method (GEM) ports into a transmission container (T-CONT)
  - ¬ Remote software image download, activation and reboot

Ethernet interface

- IEEE 802.3-compliant 10M/100M/1G/2.5G Base-T port
- Medium dependent interface/medium dependent interface crossover (MDI/MDIX) automatic sense
- Data transfer at wire speed

Voice

- External integrated access device (IAD) needed to deliver voice services in FTTH environment

IP video service

- Supports IGMPv2 and IGMPv3 snooping
- G.984.3-compliant multicast
- Uses single GEM port ID for all video traffic (as mandated by G.984.3)
- Supports multicast GEM port and incidental broadcast GEM port

LED

- Power
- Alarm
- PON
- Ethernet

Safety and electromagnetic interference (EMI)

- Protection of over voltage/current

Regulatory compliance

- CE Mark
- RoHS 6
- CoC v6

About Nokia

We create technology that helps the world act together.

As a trusted partner for critical networks, we are committed to innovation and technology leadership across mobile, fixed and cloud networks. We create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Adhering to the highest standards of integrity and security, we help build the capabilities needed for a more productive, sustainable and inclusive world.

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