

# AONT-1010

## GPON Optical Network Terminal



### Feature Summary

- ◆ Small-form factor
- ◆ Indoor wall or table mount
- ◆ One 10/100/1000 Base-T Ethernet RJ-45 Ports
- ◆ Built-in L2 Switch
- ◆ Advanced VLAN Features
- ◆ 128 MAC Address and 16 VLAN group
- ◆ MAC address limiting
- ◆ Priority and rate controlled scheduling
- ◆ ToS/DSCP to 802.1p mapping
- ◆ GPON “dying gasp” support

### Applications

The AONT-1010 is a compact GPON ONT designed and optimized to provide triple play services for a single family residence. The AONT-1010 has one 10/100/1000 BaseT port that can be used to provide high speed data, voice and video services. The AONT-1010 supports a wire speed data interface that supports advanced L2 and VLAN features for providing rate and priority controlled high speed internet access. To enable VoIP access, the AONT-1010 supports interfacing external IAD box or Home Router with voice capability through the Ethernet Interface. AONT-1010 supports video contents delivered in the form of data (by multicast or unicast).

### High Bandwidth GPON

The AONT-1010 is fully FSAN (ITU-T G.984) compliant with a 1.244 Gb/s upstream and 2.488 Gb/s downstream, Class B+ GPON system. In addition, it supports downstream AES (128-bit key) and downstream and upstream FEC RS(255,239).

### Ethernet Quality of Service

The AONT-1010 has extensive Ethernet QoS features, including 802.3x flow control, DSCP to 802.1p mapping, upstream congestion control, and downstream traffic scheduling for premium or time sensitive content. Intelligent and robust buffer and queue management for Ethernet traffic, with individual prioritizable queues, ensures that tiered residential service offerings based on different bit-rates and QoS can be supported.

### Security

The AONT-1010 comes with the latest security features, including MAC address spoofing protection, MAC/IP address port binding, MAC/IP address limiting on a per port basis, Access Control List (ACL) based on port, MAC address and Ether-type, and DOS prevention.

### Small form-factor

A space conscious package for simplified wall or table mounting.

### Flexible Management

The AONT-1010 is managed from the AOLT-4000 OLT over the GPON's OMCI channel. The AOLT in turn is managed with either Alphion's Element Management System (AEMS) that provides configuration, profile based provisioning, event and fault management and performance monitoring for the AONT, or with a 3rd party EMS using SNMP or a legacy NMS.

# SPECIFICATIONS



## Optical Interfaces

Standard	GPON; Fully ITU-T G.984 compliant
Link Budget	28 dB (Class B+)
Wavelength	Upstream: 1310 nm; Downstream: 1490 nm
Line rate	Upstream: 1.244 Gb/s; Downstream: 2.488 Gb/s
Output power	+0.5 to +5.0 dBm
Sensitivity*	-27 dBm (at 10 dB extinction ratio)
Overload	-8 dBm
Connector	SC/APC

## GPON TC Layer

FEC & AES	AES (128-bit key) and FEC RS(255,239)
DBA	Yes
No. GEM Ports	Number is software dependent
No. TCONT/AllocID	Number is software dependent

## Data Interface

Type	10/100/1000 Base-T RJ-45 Ethernet interfaces
Rate & Duplex	Auto-negotiation
MDI/MDIX	Auto-sensing
VLAN Support	802.1Q with VLAN tag manipulation
MAC & VLAN Table	128 MAC Address and 16 VLAN IDs
Priority	802.1p, IP ToS/DSCP to 802.1p mapping

\*Measured at BER better than  $1 \times 10^{-10}$ , factoring in aging and worst case PMD.

## Environmental

Temperature	-5 to +50°C
Relative humidity	5% to 95% (non-condensing)

## Physical

H x W x D	125 mm x 96 mm x 32 mm
Powering	+12 VDC
Mounting	Wall and table mounting

## Compliance

EMC	EN55022, CISPR-22 Class B, ETSI 300 386
Safety	EN60950, UL60950, CE, Optical IEC-60825-1 Class B Laser safety per G.664
Transient	EN/IEC61000-4-4 (2001) Level 2
Radiant RF Immunity	EN/IEC61000-4-3 (2002) level 2
Conductive Immunity	EN/IEC61000-4-6 (2001) level 2
Surge	EN/IEC61000-4-5 (2001) 0.5KV (line) and 1.5KV (earth)
ESD	EN/IEC61000-4-2 (2001) Contact level 2 and air discharge level 3

The information contained herein is for informational purposes only. Technical claims listed depend on various technical assumptions. Your experience with these products may differ if you operate the products in an environment which is different from the technical assumptions. Alphion reserves the right to modify these specifications without any prior notice. Alphion makes no warranties, expressed or implied, on the information contained in this document.