

# AONT-1421

## GPON HGU ONT (4GE+2POTS)

### Feature Summary

- ◆ ITU-T G.984 & G.988 compliant
- ◆ Indoor wall or table mount
- ◆ Four 10/100/1000Base-T Ethernet RJ-45 port
- ◆ Two FXS POTS RJ-11 ports
- ◆ Fiber Management Tray
- ◆ VoIP features: Dual SIP, multiple voice codecs, T.38 Fax and various CLASS services Configurable ring tones.
- ◆ Supports feature rich VoIP application profiles for Caller ID, Call progress, Call Waiting, Call Transfer.
- ◆ Integrated router with features such as IPv4, IPv6, IPoE, PPPoE, NAT, DHCP, DNS, IP Filtering, IP forwarding, Static IP routing, IP QoS and Firewall
- ◆ Supports dual software image. Holds a working image & alternative image for image rollback
- ◆ Built-in L2 switch with dynamic bridging, (802.1q tagged, untagged, port based, priority tagged, 802.1ad double tagged)
- ◆ ToS/DSCP to 802.1p (Tag Control Information bits) mapping
- ◆ Serial number and password based activation and authentication
- ◆ IGMPv2/v3 snooping, proxy
- ◆ Dual managed by OMCI and/or remote management functions as TR-069



### Applications

The AONT-1421 has been optimized for small business and residential homes to provide triple play services. It can work in both bridge and Routed mode.

### Advanced High Bandwidth GPON technology

The AONT-1421 is fully FSAN (ITU-T G.984& G.988) compliant 2.488 Gbps downstream and 1.244 Gbps upstream GPON systems.

### Quality of Service

The AONT-1421 supports extensive QoS features, including ToS/DSCP to 802.1p mapping, and 802.1p to DSCP mapping, Traffic classification and QoS based on layer 3 and layer 4 header, prioritizable queues, ensures that tiered service offerings based on different bit-rates and QoS can be readily supported.

### Gateway

The AONT-1421 contains both L2 switch and L3 routing gateway with port forwarding, NAT and NATP address translation, built-in PPPoE support for HSI, and an integrated stateful packet inspection firewall and application-layer gateway (ALG). Included as part of the gateway function are DHCP client, DHCP server and DNS server for IPv4 and IPv6.

### Security

The AONT-1421 comes with the latest security features, including access control list (ACL), DMZ.

### Flexible Management

The AONT-1421 is managed from the AOLT-4000 series and OLT via OMCI. The AOLT in turn is managed with either Alphion Element Management System (A EMS) that provides configuration, profile based provisioning, event and fault management and performance monitoring for the AONT, or with a 3rd party NMS via northbound interface.

# SPECIFICATIONS

## GPON Uplink interface

|                |   |
|----------------|---|
| Standard       | Fully ITU-T G.984& G.988 compliant  |
| Line rate      | Downstream: 2.488 Gbps; Upstream: 1.244 Gbps  |
| Connector      | SC/APC, single-mode-fiber   |
| Link Budget    | Class B+ ITU G.984.2 Amd1   |
| Wavelength     | Transmit: 1310nm; Receive: 1490nm   |
| Tx Output pwr  | +0.5 to +5.0 dBm launch power   |
| WBF            | Support G.984.5 Blocking filter as an option  |
| Rx Sensitivity | -27dBm  |
| Rx Overload    | -8 dBm  |
| TC layer       | AES (128-bit key), US and DS FEC  |
| DBA            | DBRu mode 0 and mode 1  |
| GEM port-IDs   | 128 GEM Ports per device, Broadcast & Multicast GEM Port. 802.1p mapper service Profile on U/S. |
| T-CONT         | Multiple (32) T-CONT per device. Flexible mapping between GEM Ports and T-CONT.                 |
| Activation     | Activation with automatic discovered SN and password in conformance with ITU-T G.984.3          |

## Ethernet interface

|           |  |
|-----------|--|
| Type      | Four 10/100/1000 Base-T interface          |
| Connector | RJ-45 connectors                           |
| Link      | auto-negotiation and MDI/MDIX auto-sensing |

## Voice/Fax interface

|           |  |
|-----------|--|
| Type      | Two POTS FXS   |
| Connector | RJ-11 connectors;  |
| FXS       | 3 REN balanced ring, 55V RMS DTMF dialing, and Pulse Dialing,FSK |

## Power

|              |                                       |
|--------------|---------------------------------------|
| AC Adapter   | 12V (feed via external AC/DC Adapter) |
| DC Connector | 2-pin Power adaptor input             |
| Control      | Power ON/OFF pushbutton on rear       |
| Power        | less than 20W, Dying Gasp support     |

## Physical

|                |   |
|----------------|---|
| Temperature    | -5 °C to 50 °C  |
| Humidity (RH)  | 5 %to 95% relative humidity   |
| Mounting       | Desktop or wall mounting  |
| LED Indicators | Power, Optical, GPON, LAN1-LAN4, Phone, Internet, WPS USB, 2.4 GHz WI-Fi, |
| Dimension      | 236mm x 156mm x 36mm (HxWxD)  |

## OAM

|          |  |
|----------|--|
| Remote   | Standard OMCI as per ITU-T G.984.4 and G.983.2 , Compliant to TR-069, Provisioning of all services by subset of TR-098 and TR-104 Alarm and AVC report, Performance monitoring |
| Download | Remote software image download over OMCI as well as activation and rebooting Dual Software images with integrity check and automatic rollback                                  |

## L2 features

|               |  |
|---------------|--|
| Bridging      | 802.1d bridging,   |
| Rate Limiting | Broadcast/Multicast Rate limiting  |
| VLAN          | VLAN Tagging/untagging per Ethernet Port<br>VLAN Stacking (Q-in-Q) and VLAN Translation        |
| Multicast     | IGMPv2/v3 & snooping, and IGMP snooping with Proxy report                                      |
| Qos           | 802.1p marking/re-marking; Class of service based on UNI, VLAN-ID, 802..1p bit and combination |

## Gateway features

|           |  |
|-----------|--|
| WAN       | Multiple WAN interfaces support, PPPoE client, IPoE with DHCP client or static IP, NAT/NAPT, Port Forwarding |
| LAN       | DHCP server, DNS relay, DDNS   |
| Routing   | Static IP routing  |
| Multicast | IGMP Proxy   |
| Others    | NTP, Universal Plug and Play (uPnP)  |
| QoS       | Traffic Classification and Qos based on Layer 3 and Layer 4 header   |

## IPv6 support

|          |   |
|----------|---|
| Features | Stateless Address Auto configuration (SLAAC), DHCPv6,PPPoEv6, DNSv6 |
|----------|---|

## Firewall

|                |           |
|----------------|-----------|
| Access control | ACL, DMZ. |
|----------------|-----------|

## VoIP

|                        |   |
|------------------------|---|
| Protocols              | SIP (RFC3261),SDP( 2327), RTP (RFC3550/3551), DTMF & Tones (RFC283)   |
| Supplementary Services | caller ID, call transfer, call forwarding, call hold, Call Toggle, call waiting,, 3-way calling, distinctive ringing etc.   |
| Codec                  | ITU-T G.711 (μ & a-law), G.723.1, G.729a/b, G.726, echo cancellation (G.168), voice activity detection (VAD) and comfort noise generation (CNG), Static or dynamic jitter buffer. |
| Fax                    | T.38 FoIP, G.711 for FAX, modem connection  |
| IP address             | DHCP client or static IP configuration<br>Country specific ring tone generation<br>Configurable Dial plan<br>Metallic Loop Testing  |

## Regulatory Compliances

|               |              |
|---------------|--------------|
| Certification | CE Compliant |
|---------------|--------------|