AONT-1523

GPON Gateway ONT (4GE+2POTS+1USB+WiFi)

Feature Summary

- ITU-T G.984 compliant
- Indoor wall or table mount
- Four 10/100/1000Base-T Ethernet RJ-45 ports
- Two FXS RJ-11 ports
- One USB 2.0 port
- 802.11b/g/n 2Tx2R WiFi interface
- VoIP features: SIP, multiple voice codecs, T.38 fax, and various CLASS services
- Integrated router with features such as IPv4, IPv6, IPoE, PPPoE, NAT, DHCP, DNS, IP Filtering, IP forwarding, Static IP routing, IP QoS and Firewall
- IPv6 ready logo certified
- Built-in L2 wire-speed switch with dynamic bridging, 256 MAC addresses, 4k VLANs (802.1q tagged, untagged, port based, priority tagged, double tagged)
- ToS/DSCP to 802.1p mapping
- Flexible traffic mapping, policing and shaping
- IGMPv2/v3 snooping, proxy and filtering, 256 multicast groups
- MLD snooping
- Web based GUI for local provisioning and software upgrade
- Dual managed by ITU-T G.988 OMCI and/or remote management functions as TR-069 and Telnet for provisioning, diagnostics, monitoring, and software upgrade

Applications

The AONT-1523 has been optimized for residential homes to provide triple play services.

Advanced GPON technology

The AONT-1523 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.

Quality of Service

The AONT-1523 supports extensive 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 individually prioritized queues, ensures that tiered service offerings based on different bit-rates and QoS can be supported.

Gateway

The AONT-1523 contains both wire-speed L2 switch and L3 routing gateway with port forwarding, NAT and NAPT address translation, built-in PPPoE support for HSI, and an integrated stateful packet inspection firewall with a configurable access control list (ACL) and application-level gateway (ALG). Support for VPN (L2TP, PPTP and IPSec) pass through is also provided. Included as part of the gateway function are DHCP client, DHCP server and DNS server for IPv4 and IPv6.

Security

The AONT-1523 comes with the latest security features, including MAC address spoofing protection, MAC/IP address port binding, per-port access control list (ACL) based on port, MAC address and Ether-type, DoS prevention, and wireless encryption protocols such as WEP, and WPA/WPA2.

Flexible Management

The AONT-1523 is managed from the AOLT-4000 and AOLT-4200 OLT via OMCI. The AOLT in turn is managed with either Alphion 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 NMS via northbound interface.

SPECIFICATIONS

GPON interface

Standard	Fully ITU-T G.984 compliant
Link Budget	28 dB (Class B+) ITU G.984.2 Amd1
Wavelength	transmit: 1310+/-20nm; receive: 1490+/-10nm
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
Distance	up to 20 km (depending on split ratio and reach extension)
OLS	per ITU-T G.984.2amd2
Connector	SC/APC
TC layer	AES (128-bit key) and FEC RS(255,239)
DBA	DBRu mode 0
GEM port	up to 32
T-CONT	up to 8

Ethernet interface

GE port	four RJ-45 connectors
Standard:	10/100/1000Base-T with rate and duplex auto-negotiation and MDI/MDIX auto sensing
Flow control	per 802.3x

Voice interface

POTS	two RJ-11 connectors
Interface	5 REN per line, loop start, balanced and unbalanced ringing, country specific impedance, DTMF dialing, metallic loop testing

WiFi interface

Standard	802.11b/g/n
Antenna	high gain, tilt and swivel design for optimal reception
Transceiver	2Tx2R MIMO, up to 30dBm EIRP, STBC, up to 270Mbps
Frequency	single band, 2.4GHz
SSID	up to 4, broadcast or hidden, user isolation between SSIDs
Security	WEP(128/64bit), WPA, WPA2, WPA-PSK, WPS/WLAN push button
Authentication	802.1x MAC, Radius
Filtering	MAC address per SSID
Throughput	≥1,700 fps (WLAN to LAN and vice versa)

Power

AC adapter	input: 100-240VAC, 50/60Hz; output: 12VDC, 1.5A
Control	power on/off switch

Physical

Temperature	0 to 50 °C
Humidity	5 to 95% non-condensing
Dimension	255mm(W) x 150mm(D) x 36.5mm(H)
Weight	0.64kg
Mounting	wall or table
Power consumption	13.5 watts (max)
LEDs	Power, GPON, LOS, Internet, VoIP1-2 LAN1-4, WLAN, WPS, USB

USB Interface

Standard	USB 2.0 host
Connector	type A receptacle

Software Features

L2 Features

Bridging	802.1d transparent bridging, 256MAC table, broadcast/multicast and DLF rate limiting
VLAN	4,095 VLANs, untagged, priority tagged, port based, 802.1q tagged VLAN, 802.1ad double tagged VLAN, VLAN translation
Multicast	IGMPv2/v3 snooping, 256 multicast groups
QoS	802.1p, IP ToS/DSCP to 802.1p mapping, 802.1p remarking
Scheduling	SP, WRR, WFQ
Congestion	RED, WRED

Gateway features for IPv4 and IPv6

WAN	PPPoE, DHCP client or static IP, NAT/NAPT, port forwarding, port triggering
LAN	DHCP server and relay agent, DHCP option 60, DNS relay
Routing	RIP v1/v2 and static IP routing

IPv6 support

Certification	IPv6 Ready Logo certified
Mode	Dual stack lite, 6rd

Firewall

Type	Stateful packet inspection
Filtering	DoS attack prevention, IP source/destination filtering, TCP/UDP port source/destination filtering, MAC source filtering
ALGs	FTP, SIP, H.323, RSTP
VPN	PPTP, L2TP, IPSec pass-through
Access control	DMZ, Parental Controls

VoIP

Protocols	SIP (RFC3261), SDP (RFC2327), RTP/RTCP (RFC3550/3605), RFC2833
CLASS	caller ID, call waiting, call forwarding, call transfer, 3-way conference, etc.
Codec	ITU-T G.711 (µ & a law), G.723.1, G.729a/b, echo cancellation, voice activity detection, silence suppression and comfort noise generation
Fax	ITU-T T.30, T.38
IP address	DHCP client or static IP configuration
IOP	Proven interoperability with major soft switch and voice gateway vendors

Management

Local	Web based GUI
Remote	ITU-T G.988 OMCI, TR-069, Telnet

Regulatory compliance

Certification	CE compliant
EMC	EN55022, CISPR-22 Class B
Safety	EN60950/UL60950
Laser safety	IEC-60825-1 Class 1 laser safety per G.664
Transient	EN/IEC61000-4-4(2001) level 2
Immunity	Radiated RF: EN/IEC61000-4-3(2002) level 2 Conducted RF: EN/IEC61000-4-6(2001) level 2
Surge	EN/IEC61000-4-5(2001) 0.5 KV (line) and 1.5 KV (earth)
ESD	EN/IEC61000-4-2(2001) contact level 2, air discharge level 3
Hazardous	RoHS6, WEEE