Alphion

Product Brief

ASEE-1443

Subscriber End Equipment (1GE+1FE+1POTS+802.11b/g/n Wi-Fi)

Feature Summary

- ITU-T G.984 /IEEE802.3ah compliant
- Indoor wall or table mount
- One 10/100/1000Base-T
- One 10/100 Base-T
- One FXS POTS ATA RJ-11 port
- 802.11b/g/n 2Tx2R MIMO 2.4GHz Wi-Fi interface
- VoIP features: SIP, multiple voice codecs, T.38 Fax and various CLASS services
- 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 or password based activation and authentication
- IGMPv2/v3 snooping, proxy
- Dual managed by OMCI and/or remote management functions as TR-069

Applications

The Alphion Subscriber End Equipment Model ASEE-1443 has been optimized for small business and residential homes to provide triple play services.

Advanced High Bandwidth GPON/EPON technology

The ASEE-1443 is fully FSAN (ITU-T G.984) compliant 2.488 Gbps downstream and 1.244 Gbps upstream for GPON/ 1.25 Gbps US/DS EPON systems.

Quality of Service

The ASEE-1443 supports extensive QoS features, including ToS/DSCP to 802.1p 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 ASEE-1443 contains both 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 and application-layer gateway (ALG). Support for VPN 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 ASEE-1443 comes with the latest security features, including access control list (ACL), DMZ, and wireless encryption protocols such as WEP and (WPA-PSK).

Flexible Management

The ASEE-1443 is managed from the Alphion GPON / EPON OLT family 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 ASEE, or with a 3rd party NMS via North Bound Interface.

SPECIFICATIONS

GPON/EPON Uplink interface

Standard	Fully ITU-T G.984/IEEE 802.3ah 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 power	+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	Multiple GEM Ports per device, Broadcast & Multicast GEM Port. 802.1p mapper service Profile on U/S.
T-CONT	Multiple 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	one 10/100/1000 Base-T interface, One 10/100 Base-T Interface
Connector	RJ-45 connectors
Link	auto-negotiation and MDI/MDIX auto-sensing

Voice/Fax interface

Type	One POTS FXS
Connector	RJ-11 connector;
FXS	3 REN balanced ring, 55V RMS DTMF dialing, and Pulse Dialing

Wi-Fi WLAN interface

Standard	802.11b/g/n, 2.4GHz, MIMO:2x2 Multiple SSIDs 64 & 128 bit Wireless Encryption Protocol support (WEP) Wireless Protected Access support including Pre Shared Key (WPA-PSK) Radio Switched on/off function support WPS

Power

AC Adapter	Input: 100-240VAC, 50/60Hz Output: 12VDC, 1A
DC Connector	2-pin Power adaptor input
Control	Power ON/OFF pushbutton on rear
Power	less than 10W, Dying Gasp support

Physical

Temperature	0 °C to 50 °C
Humidity (RH)	5% to 95% relative humidity
Mounting	Desktop mounting & wall mounting
LED Indicators	Power, PON, GE, FE, FXS (POTS), WLAN & WPS
Dimension	199mm x 193mm x 34mm (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 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

VPN	VPN pass-through
Access control	ACL, DMZ,

VoIP

Protocols	SIP (RFC3261), MEGACO v2 (H.248) SDP (RFC2327), RTP (RFC3550/3551), DTMF & Tones (RFC283)
Supplementary Services	CLASS features- 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, echo cancellation, 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 Country specific ring tone generation Configurable Dial plan Metallic Loop Testing

Regulatory Compliances

Certification	CE certificate, FCC/UL compliant

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**Contact Sales for feature availability*

196 Princeton Hightstown Road,
Building 1A, Princeton Junction,
New Jersey 08550 USA

P: +1.609.936.9001
sales@alphion.com
www.alphion.com