Alphion

Product Brief

ASEE-1982

XGSPON Subscriber End Equipment (1x10GE, 4GE+1POTS+ 802.11 ax*)

Feature Summary

- ITU-T G.9807.x compliant, BBF.247 ready
- BBF TR.156 VLAN Model compliant
- Desktop or Wall mountable
- One XGSPON port
- Four 10/100/1000 BASE-T Adaptive Ethernet RJ-45 port
- One 10/100/1000/2.5GE/5GE/10GE BASE-T Adaptive Ethernet Port
- One FXS RJ-11 port
- USB 2.0 Host ports
- Wi-Fi6 Access Point (AP) 802.11ax*, 2x2 MIMO internal antennas for both 2.4GHz/5GHz bands
- Supports support Dynamic MAC address learning.
- Supports Layer2 Features such as Dynamic MAC address learning, 802.1d bridging, 802.1q VLAN, IGMP v1/v2/v3 snooping & forwarding and MLD Snooping & forwarding.
- Supports up to 8 priority COS queues for scheduling upstream frames and mapping of 802.1p bits to the COS queues
- Supports SP, WRR and SP+WRR scheduling in the upstream and SP scheduling in the downstream.
- Supports the classification of upstream service flows based on ports
- Supports traffic filtering based on various parameters in Ethernet frames
- Supports forwarding of both IPv4 and IPv6 frames.
- Supports assignment of IPv4 address for device Management using DHCP client
- Supports NTP client and DNS Client
- Supports firmware upgrade via TR-069 with support for TR-098 and TR-181 data models
- Supports System registration and authentication functions such as PON MAC-based registration and LOID-based registration
- Supports downstream/upstream FEC checksum, frame encryption/decryption in AES mode (64/128 bit)
- Support dynamic bandwidth allocation (DBA)
- PON interface loopback is supported
- Optical power parameters are reported
- Supports loop detection and recovery of the Ethernet LAN ports
- Supports dual software images with encoded checksum - working binary image & alternative binary image for image rollback
- Support Dying Gasp alarm
- Power ON/OFF, RESET buttons

Applications

The Alphion Subscriber End Equipment Model ASEE-1982 is a 10G XGSPON product that has the characteristics of high reliability, good QoS guarantee, management and flexible networking. It is best suited for FTTH residential applications such as High speed broadband sharing, Web and online games, Printer & peripheral sharing and PC files sharing.

Standards supported

All functions and performance indicators of the ASEE-1982 device meet ITU-T and IEEE recommendations/specifications/standards. ASEE-1982 is fully FSAN (G.9807.x), supporting XGSPON systems (9.95328 Gbps Downstream and 9.95328 Gbps Upstream). Supports 802.1p QOS, 802.1q VLAN and IEEE 802.3 standards.

Security

The ASEE-1982 comes with the latest XGSPON standard based security features that includes built-in XGSPON AES Encryption both upstream and downstream encryption and two keys encryption, registration based authentication, OMCI based secured mutual authentication using pre shared security key (PSK), Message integrity using MIC, built- in XGEM Payload encryption and built-in 64/32 bit Encryption message indicators in the message origination headers of upstream and downstream messages. The device also supports Firewall functionality and port-based 802.1x Authentication.

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Flexible Management

The ASEE-1982 can be Dual managed remotely from any XGSPON OLT via ITU-T G.988 OMCI channel and TR-069 with multiple data-models such as TR-098 and TR-181, Telnet for provisioning, diagnostics, monitoring, and software upgrade. It also supports Telnet, CLI and Web based UI for local provisioning and software upgrade. The device also supports standard performance counters for traffic related statistics.

SPECIFICATIONS

XGSPON Uplink interface

Standard:	Fully ITU-T G.9807.x, G.984 and G.988 compliant
Line rate:	XGSPON - Downstream: 9.95328 Gbps, Upstream: 9.95328 Gbps
Connector:	SC/APC, single-mode-fiber;
Wavelength:	Transmit: 1270 nm; Receive: 1577nm
Tx Output power:	+4 dBm
Rx Sensitivity:	-28dBm
Rx Overload:	-9 dBm
OLS/OTM:	G.984.2Amd2 incl. RX & TX power, Dying GASP
TC layer:	FEC checksum (both US and DS), 64-bit/128-it AES decryption (both US and DS)

10G Ethernet interfaces

Type:	One 10GE port; RJ-45 connector
Standard:	IEEE 802.3u, 802.3ab, 802.3bz, 802.3an
Link	100/1000/2500/5000/100000 Base-T rate and full/half-duplex auto-negotiation and MDI/MDIX auto-sensing

1G Ethernet interfaces

Type:	Four GE port; RJ-45 connector
Standard:	IEEE 802.3, 802.3u, 802.3ab, IEEE 802.3az, 802.3x
Link	10/100/1000 Base-T rate and full/half-duplex auto-negotiation and MDI/MDIX auto-sensing

Voice interfaces

Type:	1xFXS port
Connector:	RJ-11 connector

Wi-Fi WLAN interfaces*

Standard:	802.11ax, dual band, 2.4/5 GHz
Transceiver:	2.4 GHz - 2x2 MIMO(40 MHz) internal antennas (3 dBi) 5 GHz - 2x2 MIMO(160 MHz) internal antennas (3 dBi)
EIRP:	2.4GHz - 26 dBm; 5GHz - 27 dBm
Speed:	2.4GHz – 574 Mbps; 5GHz – 2.4 Gbps

USB Interface

Type:	USB 3.0 host port
Power load:	5V, 1A max.

Power

AC Adapter:	Input: 100-240VAC, 50/60Hz Output: 12VDC, 2A
DC Connector:	Standard Barrel connector
Power (Max):	20W

Physical

Temperature:	Operating: 0 °C to 40 °C,
Humidity (RH):	10% to 95% non-condensing
Mounting	Desktop mounting & Server rack mounting
LED Indicators:	Power, XGSPON Link/Activity, LOS, Internet, 1GE, 10GE, Phone
Dimensions:	180mm x 170mm x 31mm (WxDxH)
Switches:	Power, reset.

Management

Local:	Web UI, Telnet and CLI
Remote:	G.984.4/988 OMCI, Telnet and TR-069

Regulatory Compliances

EMC	FCC compliant with CFR 47 Part 15 Class B
Safety	CISPR 32 Class B, IEC60950-1, EN60950-1, IEC60825-1/2, GB4943
Environmental	ETSI EN 300 019-1-3.cl3.2 (V2.3.2), ETSI EN 300 119 and ETS 300 753
Certifications	RoHS

** Optional – Contact Alphion sales.*

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