



SmartAX EA5821

Multi-service Access Module





Product Overview

The SmartAX EA5821 is a multi-service access module launched by Huawei Technologies Co, Ltd. The EA5821 applies to fiber to the building (FTTB) or fiber to the curb (FTTC) network applications for providing data and multicast services for community users. The EA5821 applies to video surveillance scenarios.

EA5821, 24GE, PoE



EA5821, 24GE



EA5821, 8GE





Product Highlights

10G GPON Upstream Transmission

- 10G GPON provides a higher bandwidth to meet service requirements.
- The 10G GPON transmission complies with ITU-T Recommendation G.987 and ITU-T Recommendation G.988, and provides asymmetric transmission rates in the upstream direction and the downstream direction.
- 10G GPON networks can coexist with the current GPON networks to fully use the existing optical distribution network (ODN) resources.

Intelligent PoE Power Supply

The EA5821 supports an intelligent power over Ethernet (PoE) function.

With the intelligent PoE function, the EA5821 can transmit data to and supply power for terminal devices such as an outdoor access point (AP) simultaneously over an Ethernet cable. In this manner, users do not need to provide a separate power supply system for the terminal devices.

A Rich Variety of Services

The EA5821 support a rich variety of services, such as data and multicast services, and quality of service (QoS) assurance solutions.

- Supports high-performance multicast services.
- Supports IPv6 features.
- Provides effective QoS management.

Rich and Complete Specifications

The EA5821 provides multiple specifications. Carriers can choose the ideal one according to the user density, which best balances the input and output. The following table lists the configurations of the EA5821.

Port Configuration	Control Board	Control Board	Uplink port
8GE	H826XPUB	HS22EPGD	Provides one small form-factor pluggable (SFP) port to support the following upstream transmission modes: • 10G GPON (asymmetric) • GPON
24GE	H825XPUB	HS22EPGE	
24GE, PoE	H825XCWA	HS22EPGP	

Comprehensive Management and Maintenance

The EA5821 support multiple high efficient management and maintenance functions, such as remote software commissioning, acceptance, upgrade and patch installation, and fault location.

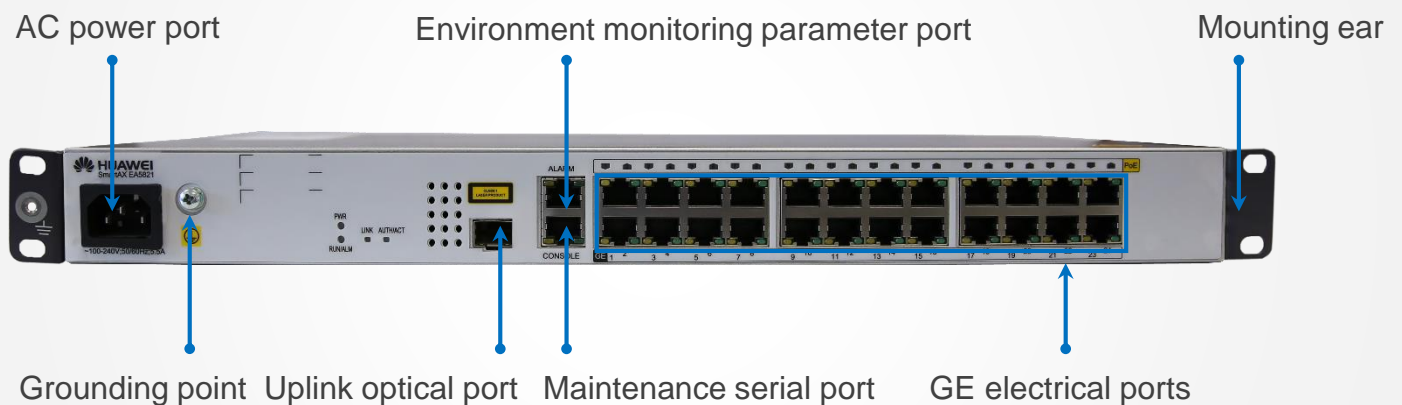
- Supports one-stop deployment and plug-and-play. When transmitting services upstream through a PON port, the EA5821 support offline deployment and plug-and-play. It automatically obtains configuration data from the iManager U2000 network management system (U2000) and reports its status to the U2000 after going online. The configuration data automatically takes effect.
- Supports remote batch upgrade. The EA5821 provides a software-and-patch integrated package for one-stop upgrade, and supports automatic batch upgrade and rollback in case of an upgrade failure.
- Supports zero-touch routine maintenance. The EA5821 supports precise fault locating and remote troubleshooting, compressive information collection, and device self-check and diagnosis.
- Supports network performance monitoring. The EA5821 supports network optimization and user monitoring.

High-Reliability Design

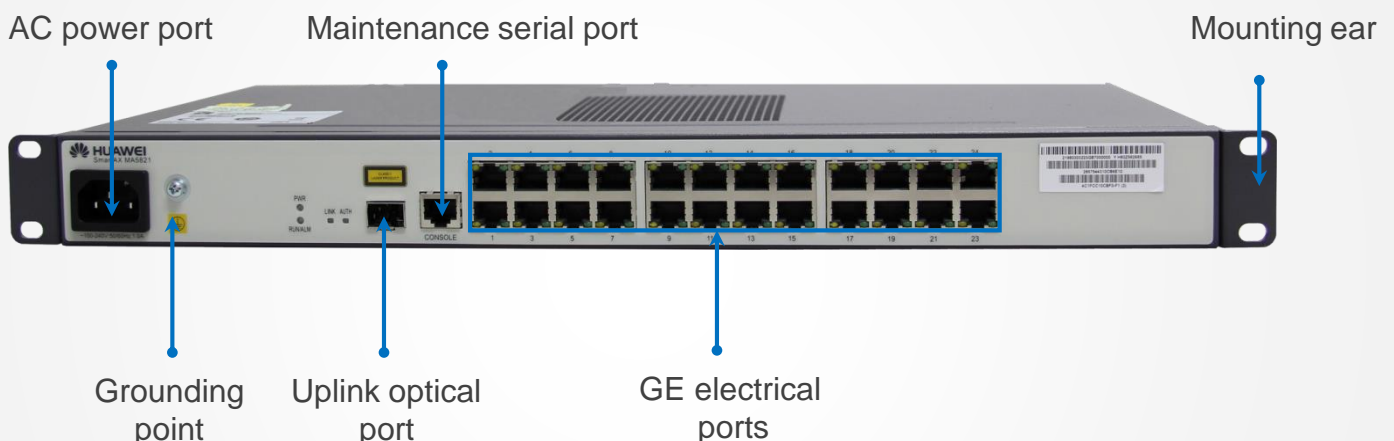
- Complies with carrier-class reliability specifications.
- Passes the electrostatic discharge (ESD) test.
- Provides surge protection and anti-interference functions.
- Complies with the following surge protection standards:
 - AC power port: 6 kV common mode; 6 kV differential mode.
 - User port: 4 kV common mode for GE ports.
- Uses derating designs for electronic components, improving system reliability.
- Uses an anticorrosion design and fewer lines routed across the surface of a board to achieve a proper heat dissipation effect (producing a temperature difference to prevent condensation).

Product Hardware

EA5821, 24GE, PoE



EA5821, 24GE



Port Description

Port	Silkscreen	Description
AC power port	None	Connects to 110 V or 220 V AC power.
Ground point	None	Connects the device to the ground.
Uplink port	None	Provides 10G GPON and GPON upstream transmission using an SFP uplink optical port.
Maintenance serial port	CONSOLE	Provides local maintenance. Supports system configuration using tools, such as HyperTerminal, through CLI.
Maintenance network port	None	Supports local device management through any service port.
GE electrical ports	None	Provides gigabit Ethernet adaptive access rates of 10 Mbit/s, 100 Mbit/s and 1000 Mbit/s. The GE electrical ports support PoE function.
Environment monitoring parameter port	ALARM	Connects to Boolean value sensor for monitoring the digital parameter.



Technical Specifications

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Dimensions (Without the Mounting Brackets)	Dimensions (With the Mounting Brackets)
442 mm x 220 mm x 43.6 mm	482.6 mm x 220 mm x 43.6 mm
Weight	
8 GE	2.02 kg
24 GE	2.18 kg
24 GE, PoE	3.75 kg

Technical Specifications

Ambient Temperature	Ambient Humidity	Atmospheric Pressure	Altitude
24 GE, PoE: –40° C to + 65° C *	5%RH to 95%RH	70 kPa to 106 kPa	≤ 4000 m **
Others: –40° C to + 55° C *			

* The device can start up at -25° C and run at -40° C.

** The air density varies with the altitude, which affects the heat dissipation of a device. Therefore, the working environment temperature of the cabinet varies with the altitude.

Power Supply Mode		Working Voltage Range	
220 V AC		100 V AC to 240 V AC	
Static Power Consumption		Maximum Power Consumption	
8GE	12.3 W	8GE	14.2 W
24GE	14 W	24GE	23 W
24GE, PoE	29 W	24GE, PoE	434 W
Maximum input current			
8FE		0.5 A	
24GE		1 A	
24GE, PoE		5.5 A	



Primary Function List

Networking Protection

Type B Protection

Upstream transmission modes

- 10G GPON
- GPON

Multicast

- IGMP v2/v3
- IGMP Proxy
- IGMP Snooping
- MLD Proxy
- MLD Snooping
- Multicast CAC

Layer 2 management

- MAC address management
- Virtual local area network (VLAN) management
- Flow Bundle
- SVLAN+MAC forwarding
- Transparent transmission of protocol packets

QoS

- Priority processing
- Traffic management
- Traffic Policing
- Congestion management
- Access control list (ACL) policies

User security

- Policy Information Transfer Protocol (PITP)
- DHCP Option82
- 802.1x authentication
- Relay agent info option (RAIO)
- Anti-MAC address transfer
- Anti-MAC address spoofing
- Anti-IP address spoofing

Fault diagnosis

- Point-to-Point Protocol over Ethernet (PPPoE) dialup service emulation
- Dynamic Host Configuration Protocol (DHCP) dialup service emulation
- Multicast emulation



Nameplate Description

The EA5821 in different models can be differentiated from the model printed on the nameplate attached on the top of the device. The following shows nameplates using the 24-port EA5821 as an example.



NOTE

- Model printed on the nameplate of the EA5821 (24 GE access, PoE): EA5821-24GE POE.
- Model printed on the nameplate of the EA5821 (GE access): EA5821-XGE, X indicates the number of ports.

