



EA5800-X17&X15&X7&X2

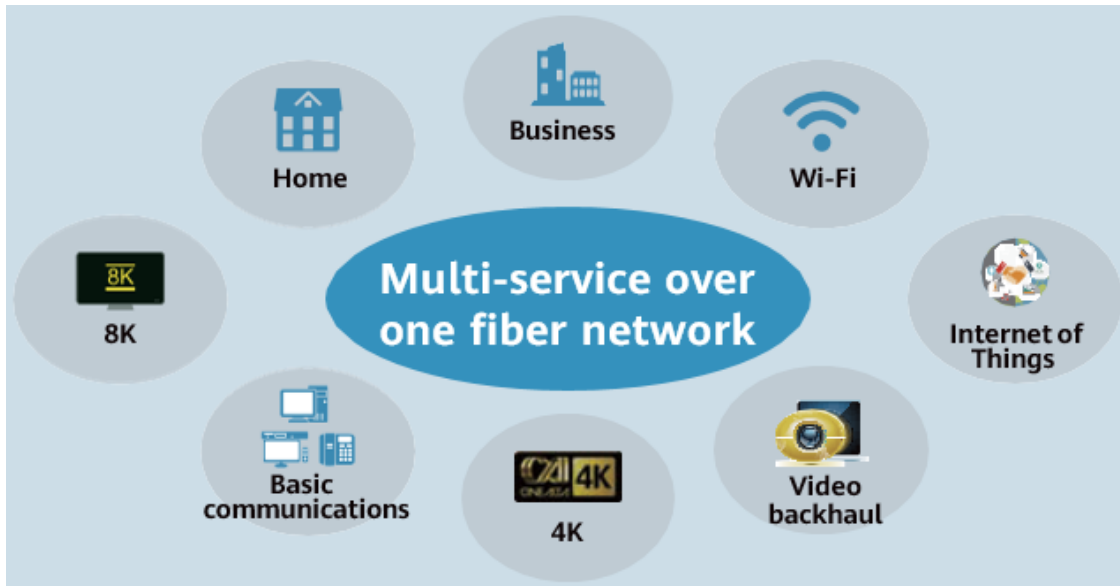
Product Description

The EA5800 is the industry's first smart aggregation OLT with a distributed architecture. It is positioned as the next-generation OLT for NG-PON.

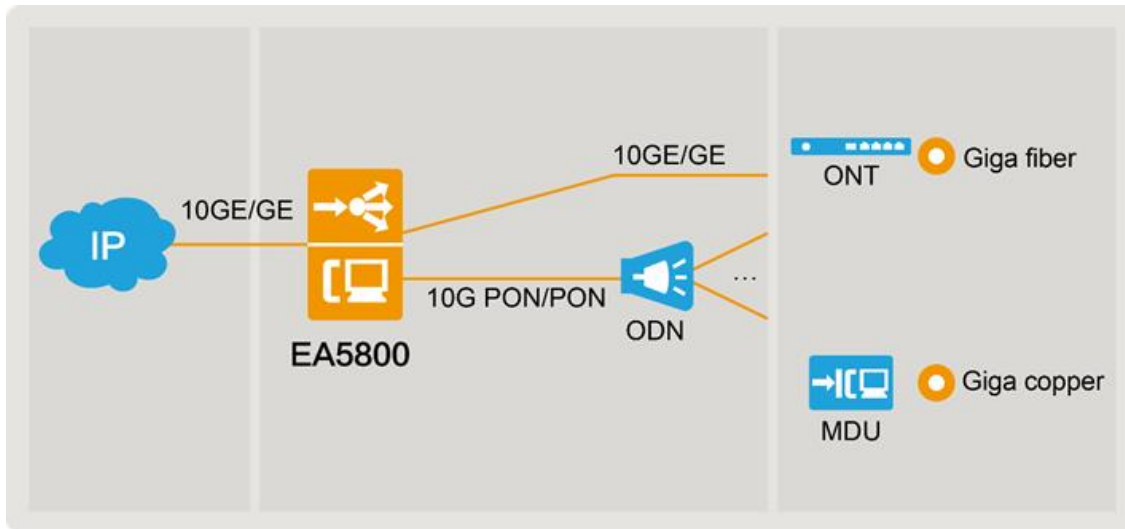
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Product Overview

Developed based on the distributed architecture, the EA5800 series multi-service access device is positioned as the next-generation OLT for NG-PON. With virtual access technology, it provides a unified carrying platform for multiple services over one fiber network, such as broadband, wireless, video, and video backhaul.



The EA5800 provides GPON, XG-PON, XGS-PON, P2P 10GE/GE access, and supports POL, FTTH, FTTB, and FTTC network construction modes. Thus it simplifies network architecture and reduces OPEX.

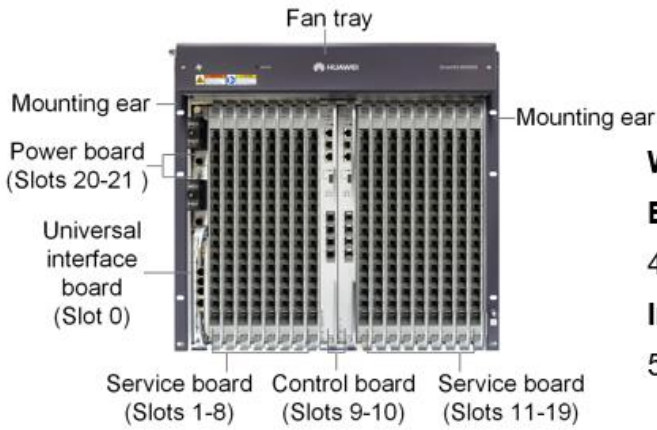


Product Appearance

The EA5800 supports four types of subracks. The only difference between these subracks relies on the service slot quantity (they have the same functions and network positions).

EA5800-X17 (large-capacity, ETSI)

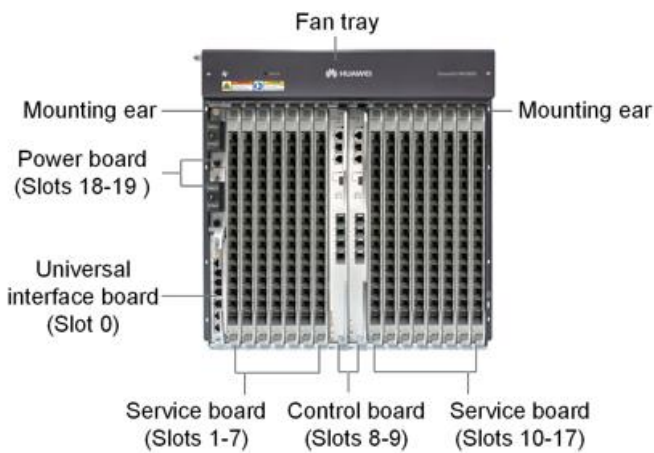
EA5800-X17 supports 17 service slots with backplane H901BPLB.



W x D x H
Excluding mounting brackets:
 493 mm x 287 mm x 486 mm
Including mounting brackets:
 535 mm x 287 mm x 486 mm

EA5800-X15 (large-capacity, IEC)

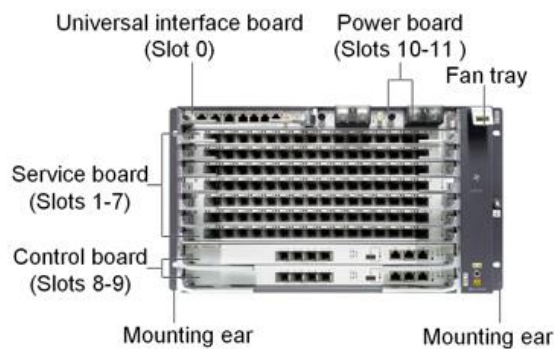
EA5800-X15 supports 15 service slots with backplane H901BPIB.



W x D x H
Excluding mounting brackets:
 442 mm x 287 mm x 486 mm
Including mounting brackets:
 482.6 mm x 287 mm x 486 mm

EA5800-X7 (medium-capacity)

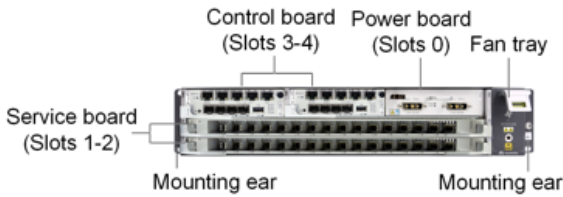
EA5800-X7 supports 7 service slots with backplane H901BPMB.



W x D x H
Excluding mounting brackets:
 442 mm x 268.7 mm x 263.9 mm
Including IEC mounting brackets:
 482.6 mm x 268.7 mm x 263.9 mm
Including ETSI mounting brackets:
 535 mm x 268.7 mm x 263.9 mm

EA5800-X2 (small-capacity)

EA5800-X2 supports 2 service slots with backplane H901BPSB.



W x D x H

Excluding mounting brackets:

442 mm x 268.7 mm x 88.1 mm

Including IEC mounting brackets:

482.6 mm x 268.7 mm x 88.1 mm

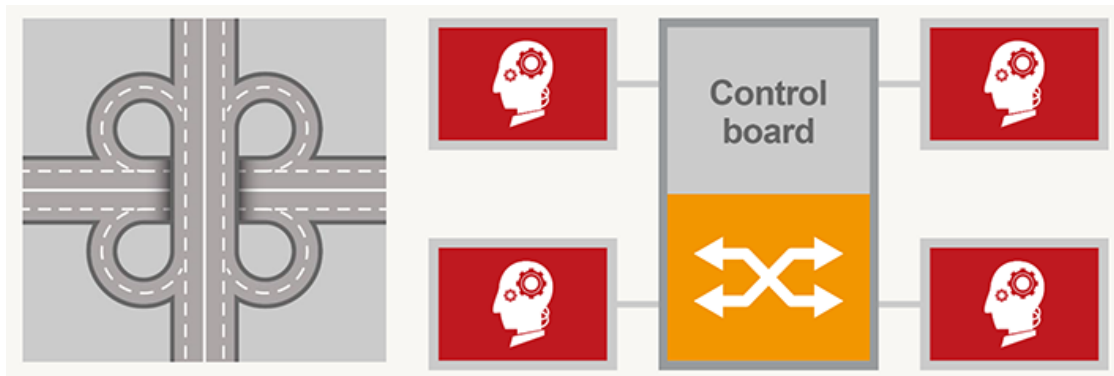
Including ETSI mounting brackets:

535 mm x 268.7 mm x 88.1 mm

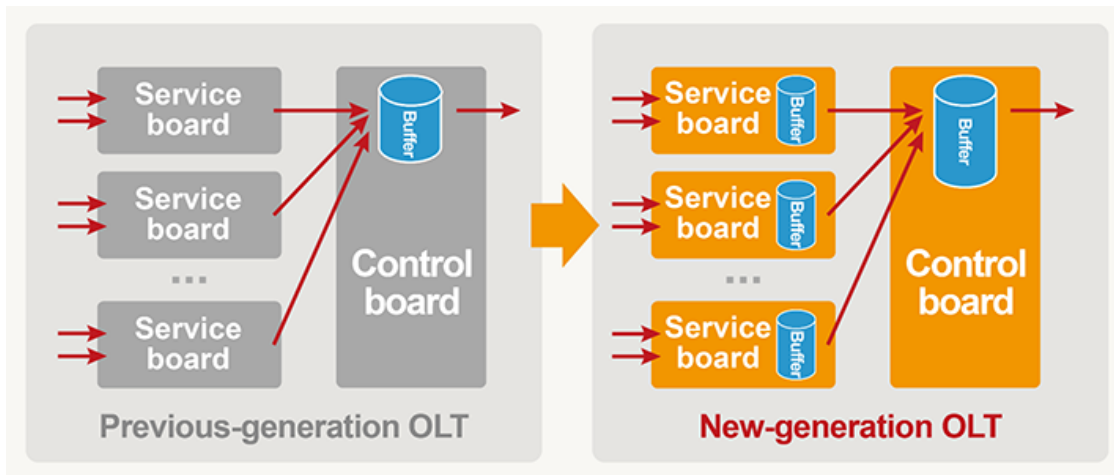
Product Highlights

Distributed Architecture: High Performing and Non-blocking

The EA5800 distributes service processing on the control board to every service board, improving system switching capacity and performance. Each slot can support a throughput of up to 200 Gbit/s, ensuring smooth services without interruption.

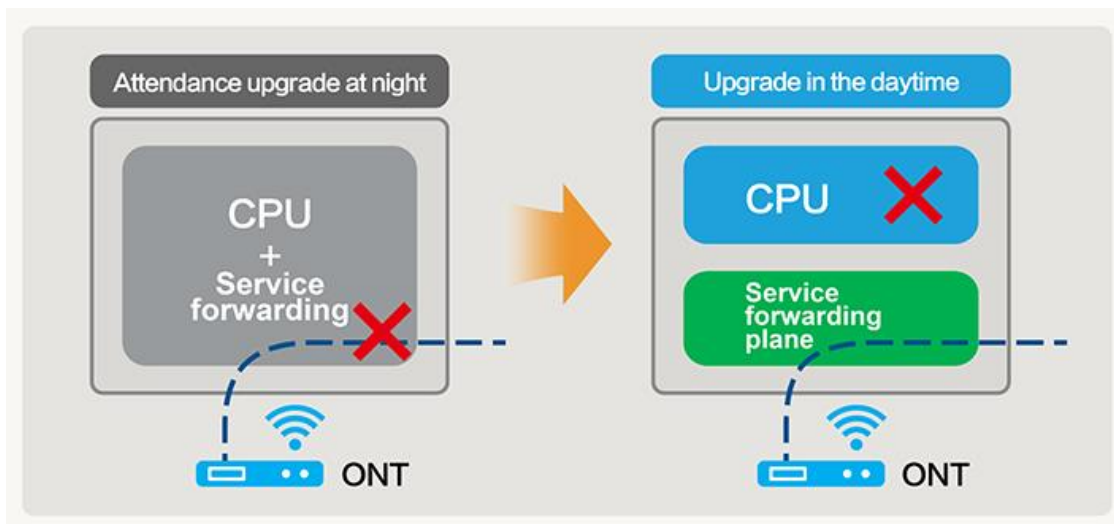


The EA5800 supports distributed caching for channel zapping and fast starting of HD videos.



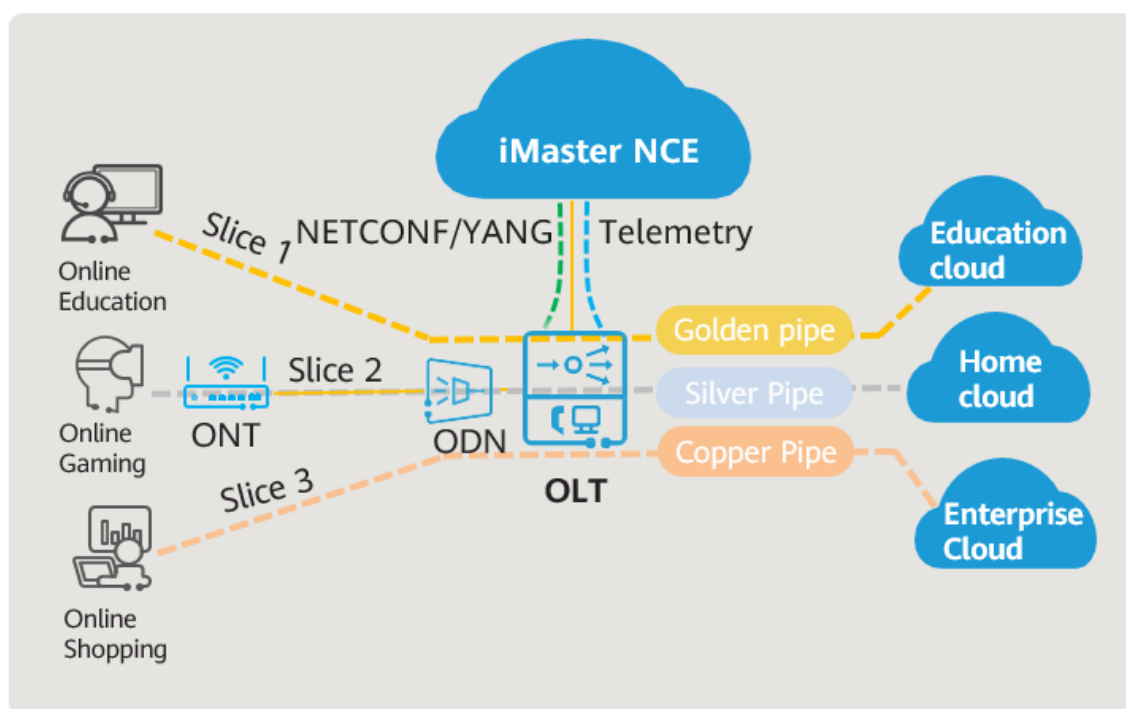
Software Hitless Upgrade: Upgrade Anytime

In the distributed architecture, control and forwarding are isolated, ensuring that services are not interrupted during device upgrades. This also reduces user complaints. Devices can be upgraded at daytime.



Slicing Technology

The E2E slicing technology provides differentiated bearing for services with different SLA requirements, achieving application-level bandwidth and latency commitment.



High Reliability

The EA5800 supports multiple protection mechanisms.

- Type B/type C dual-homing implements remote disaster recovery.
- 2 control boards and 2 power boards for redundancy.
- Dual-uplink protection.

Integrated Multiple Access Technologies

The EA5800 supports multiple access technologies, such as GPON, XG-PON, XGS-PON and P2P. Thus it is possible to carry multiple services on one optical network and save network construction costs.

Primary Features

Access features	
GPON/XG(S)-PON Access	10GE/GE P2P Access
Layer 2 features	
VLAN+MAC forwarding	SVLAN+CVLAN forwarding
PPPoE+	DHCP option82
Layer 3 features	
Static route	RIP/RIPng
OSPF/OSPFv3	IS-IS
BGP/BGP4+	ARP
DHCP relay	VRF
Multicast	
IGMP v2/v3	IGMP Proxy/Snooping
MLD v1/v2	MLD Proxy/Snooping
VLAN-based IPTV multicast	IPv4 PIM and PIM-SSM
QoS	
Traffic classification	Priority processing
trTCM-based traffic policing	WRED
Traffic shaping	HQoS
PQ/WRR/PQ+WRR	ACL
MPLS&PWE3	
MPLS LDP	MPLS RSVP-TE
MPLS OAM	MPLS BGP IP VPN
PW protection switching	Tunnel protection switching
TDM/ETH PWE3	
IPv6	
IPv4/IPv6 dual stack	IPv6 L2 and L3 forwarding
DHCPv6 relay	
System reliability	
GPON type B/type C protection	ERPS (G.8032)
BFD	10G GPON type B/type C protection
Monitor Link	Intra-board and inter-board LAG
Service overload control	MSTP
2 control boards and 2 power boards for redundancy protection	In-service board fault detection and rectification

In-service software upgrade (ISSU) of the control board	
Application security	
802.1x	AAA
Portal Authentication (V100R021C00 and later versions)	
Eco-friendly and energy-saving	
In compliance with the Code of Conduct v8 released by the European Commission(V100R021C10 and later versions)	
VXLAN (V100R018C00 and later versions)	
Virtual eXtensible LAN	
Slice (V100R021C00 and later versions)	
Service slicing	Dedicated network slicing(V100R021C10 and later versions)
Stack (V100R021C00 and later versions)	
Stack management	
Wi-Fi Management (V100R022C00 and later versions)	
CAPWAP service automatic provisioning	ONT(FIT AP)management
DHCPv4 server	DHCPv6 server(V100R022C10 and later versions)
STA access and roaming management	RF optimization
Load balancing	

Product Specifications

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
Supported cabinet	N63E-22, N66E-18	N66E-22	N66E-22	N63E-22
Board configuration	Control board slots: 9, 10 Service board or upstream interface board slots: 1–8, 11–19 Universal interface board slot: 0 Power board slots: 20, 21	Control board slots: 8, 9 Service board or upstream interface board slots: 1–7, 10–17 Universal interface board slot: 0 Power board slots: 18, 19	Control board slots: 8, 9 Service board or upstream interface board slots: 1–7 Universal interface board slot: 0 Power board slots: 10, 11	Control board slots: 3, 4 Service board or upstream interface board slots: 1–2 Does not support the universal interface board. Power board slot: 0
Dimensions (W x D x H) (mm)	Excluding mounting ears: 493 x 287 x 486 Including mounting ears: 535 x 287 x 486	Excluding mounting ears: 442 x 287 x 486 Including mounting ears: 482.6 x 287 x 486	Excluding mounting ears: 442 x 268.7 x 263.9 Including IEC mounting ears: 482.6 x 268.7 x 263.9 Including ETSI mounting ears: 535 x 268.7 x 263.9	Excluding mounting ears: 442 x 268.7 x 88.1 Including IEC mounting ears: 482.6 x 268.7 x 88.1 Including ETSI mounting ears: 535 x 268.7 x 88.1
Maximum weight	45 kg	35 kg	26 kg	9.4 kg

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
(including mounting brackets)				
Maximum input current	60 A	60 A	40 A	DC power supply: 20 A AC power supply: 8 A
Power supply mode	DC power support (dual backup)			DC power support (dual backup) AC power supply + battery for backup
Working voltage range	-38.4 V DC to -72 V DC			DC power supply: -38.4 V to -72 V AC power supply: 100-240 V
Rated voltage	-48 V/-60 V			DC power supply: -48 V/-60 V AC power supply: 110 V/220 V
Ambient temperature	-40°C to +65°C The EA5800 can start up at a lowest temperature of -25°C. NOTE The +65°C temperature refers to the highest temperature measured at the air intake vent of a service subrack.			
Ambient humidity	5%-95% RH			
Atmospheric pressure	70-106 kPa			
Altitude	< 4000 m. The air density varies with the altitude and will affect the heat dissipation of a device. Therefore, the working environment temperature of the EA5800 varies with the altitude.			
Switching capacity of the control board (load sharing mode)	MPLAE: 3.6 Tbit/s MPLBE: 8 Tbit/s MPLGE: 8.6 Tbit/s			248 Gbit/s
Maximum bandwidth per service slot (load sharing mode)	MPLAE: 100 Gbit/s MPLBE/MPLGE: 200 Gbit/s			40 Gbit/s
Maximum number of concurrent 4K video users	17000		7000	2000
Maximum number of IPv4 routing tables	65536			
Maximum number of IPv6 routing tables	16384			
IP addresses available for built-in DHCPv4 servers	65536(V100R022C10 and later versions)			
IP addresses available for built-in DHCPv6 servers	8192(V100R022C10 and later versions)			

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
Maximum number of ARP routing tables	131072			<ul style="list-style-type: none"> • Before the V100R018C10 version: 131072 • V100R019C00 and later versions: 32768
APs	4000(V100R022C10 and later versions)			512(V100R022C10 and later versions)
Portal authentication users	8704	7680	3584	1024
Maximum number of STAs	24000(V100R022C10 and later versions)			4096(V100R022C10 and later versions)
Switching/Forwarding delay	Short forwarding delay: The 100 Mbit/s Ethernet port sends the 64-byte Ethernet packets at a delay shorter than 20 μ s.			
Bit error rate (BER) in full load	A BER smaller than 10×10^{-10} for a port that transmits data in full load			
System reliability specifications	<p>System availability for the typical configuration: > 99.999%</p> <p>Mean time between failures (MTBF): about 45 years</p> <p>NOTE</p> <p>Due to different network environments and different boards used by devices, the preceding MTBF (45 years) of the EA5800 is only for reference. The average repair time for field replaceable units (FRUs) is about 2 hours. The preceding values are only for reference. For details, contact the related Huawei engineers.</p>			
Upstream ports (dual control boards for upstream transmission)	MPLAE/MPLBE: 8 x 10GE/GE MPLGE: 2 x 100GE + 4 x 10GE/GE			MPSAE/MPSFE: 4 x 10GE/GE + 4 x GE
GPON ports	272	240	112	32
XG-PON ports	272	240	112	32
XGS-PON ports	272	240	112	32
GE ports	816	720	336	96
10GE ports	136	120	56	16

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