

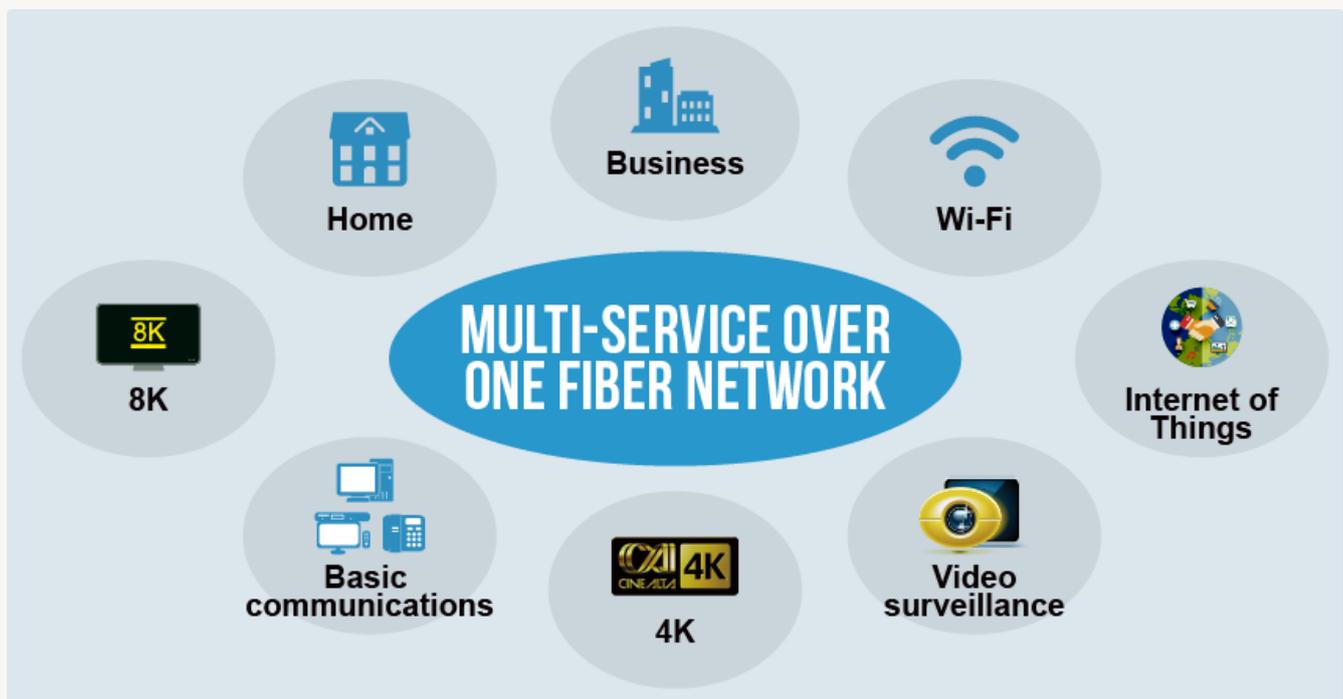
# EA5800

## Product Datasheet

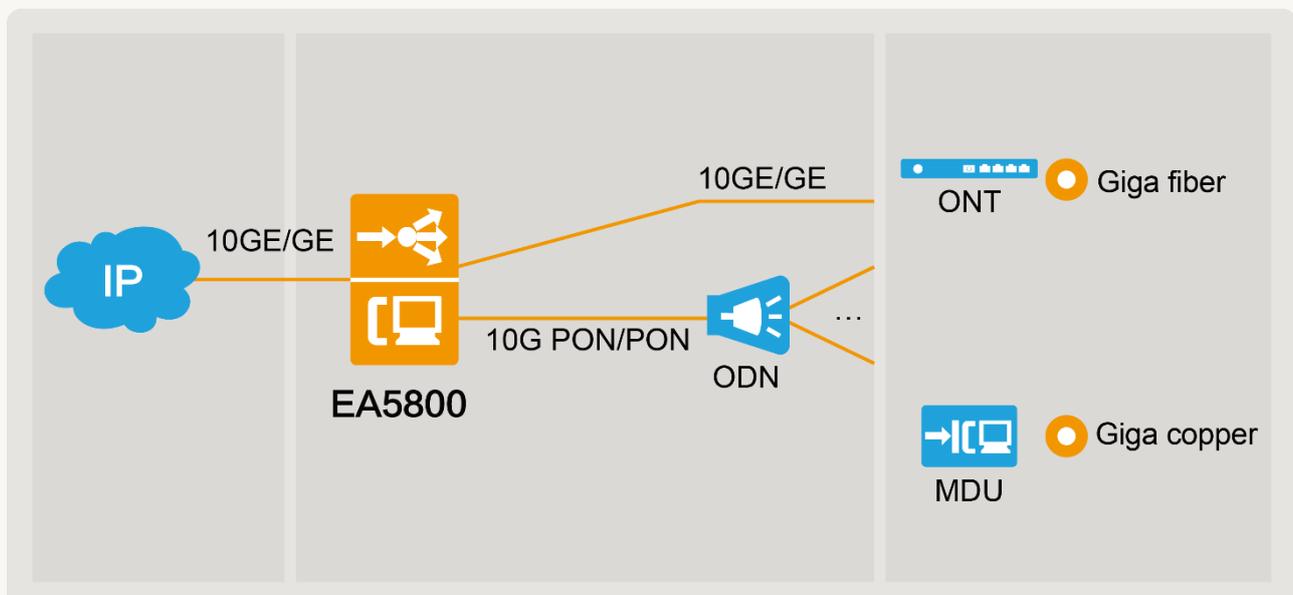


# Product Overview

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



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

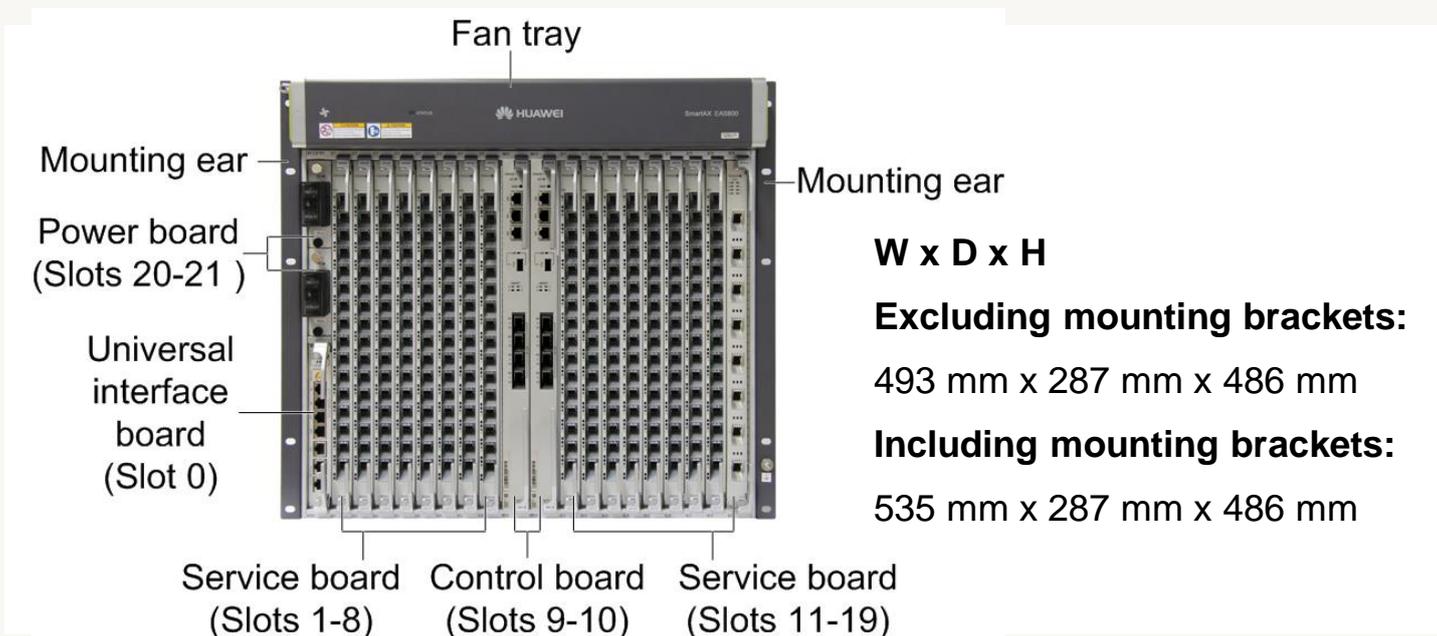


# Product Appearance

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.



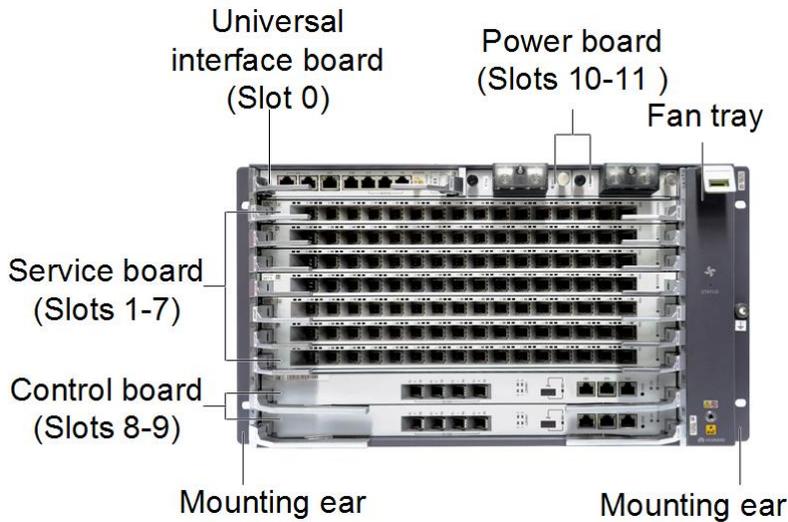
## EA5800-X15 (large-capacity, IEC)

EA5800-X15 supports 15 service slots with backplane H901BPIB.



## 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:**

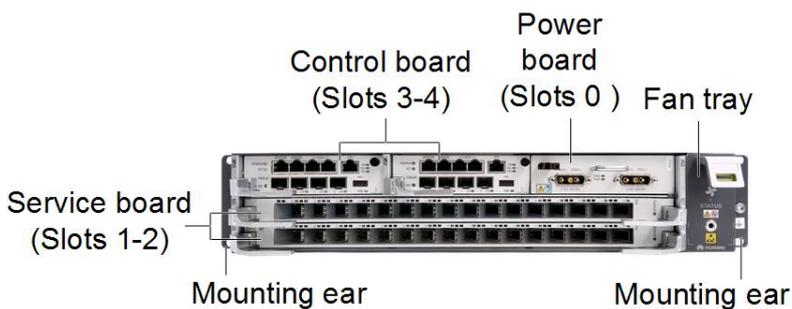
482.6 mm x 268.7 mm x 263.9 mm

**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

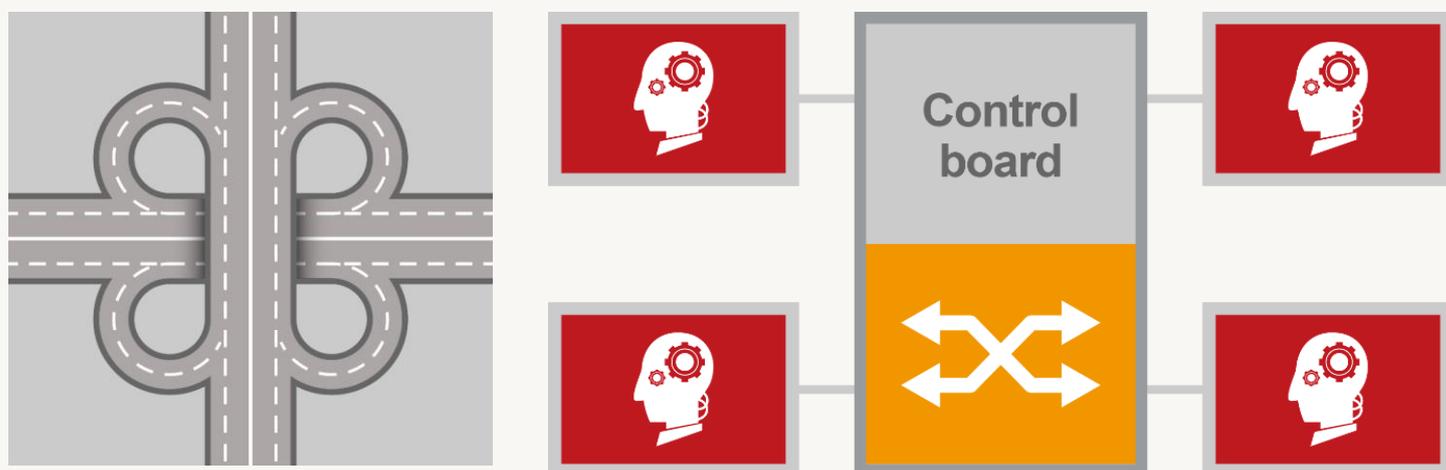
**Including ETSI mounting brackets:**

535 mm x 268.7 mm x 88.1 mm

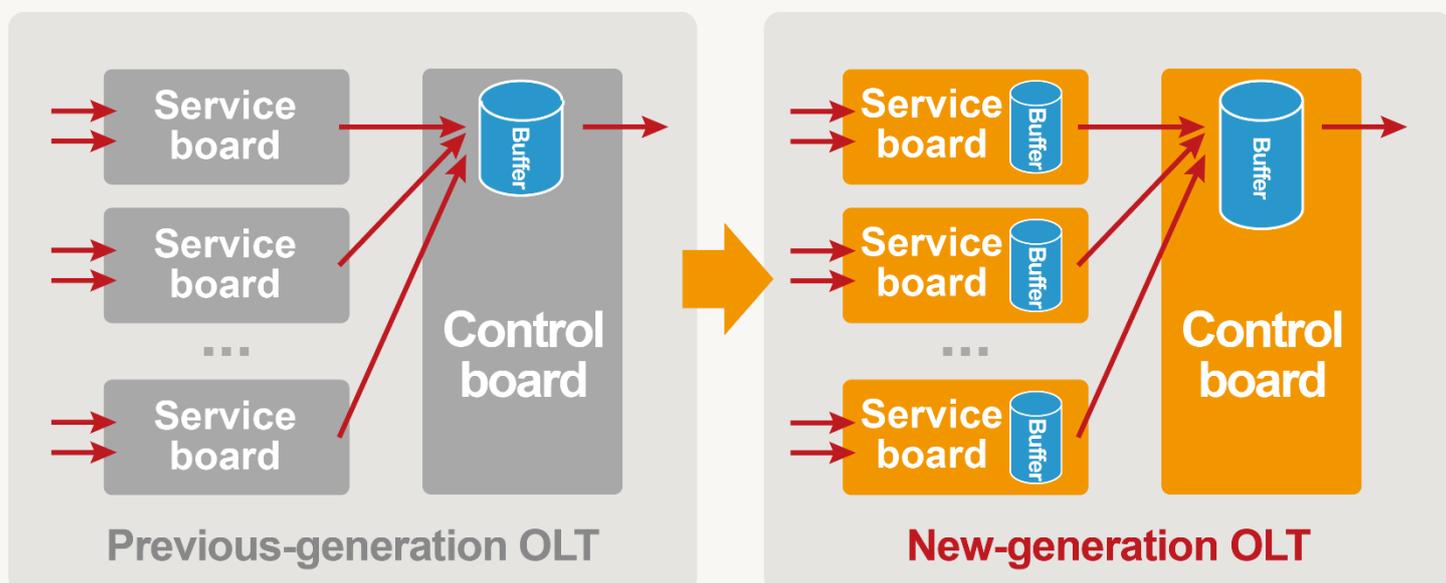
# Product Highlights

## 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.

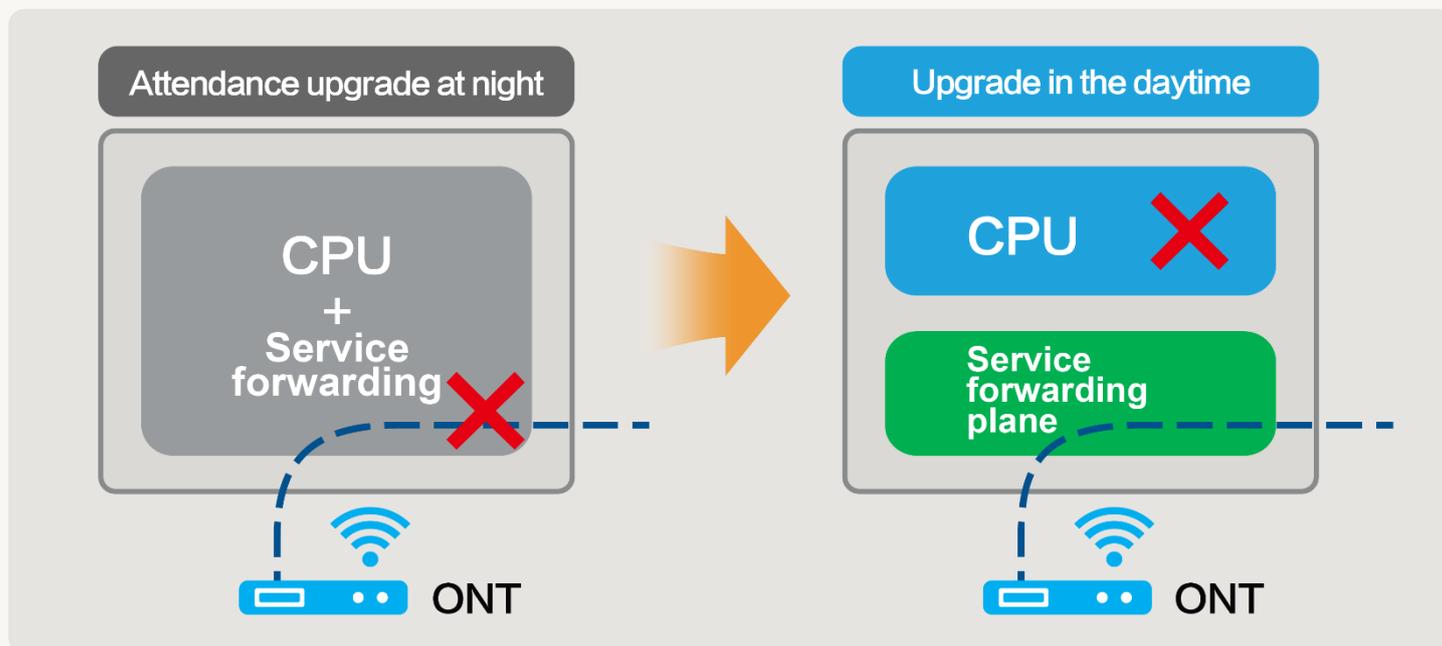


The EA5800 supports distributed caching for channel zapping and fast starting of HD videos.



# 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.



## 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.

# Technical Specifications

## Physical Specifications

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
Supported cabinet	N63E-22, N66E-18	N66E-22	N66E-22	N63E-22
Maximum weight (including mounting brackets)	45 kg	35 kg	26 kg	9.4 kg
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 for backup)			DC power support (dual for 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 V to 240 V
Rated voltage	-48V/-60V			DC power supply: -48 V/-60 V AC power supply: 110 V/220 V

## Physical Specifications

Ambient temperature	-40°C to +65°C* The EA5800 can start up at a lowest temperature of –25°C . *The +65°C temperature refers to the highest temperature measured at the air intake vent.
Ambient humidity	5% RH to 95% RH
Atmospheric pressure	70 kPa to 106 kPa
Altitude	< 4000m** **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.

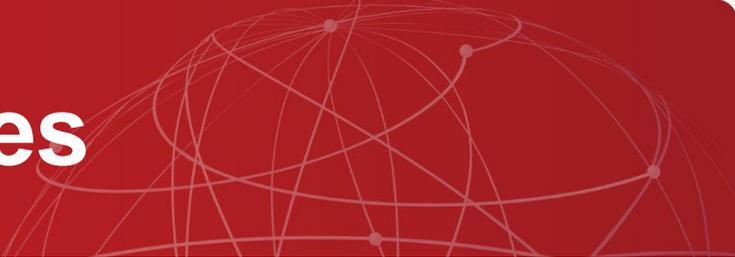
## Maximum Number of Service Ports in a Subrack

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
GPON ports	272	240	112	32
XG-PON ports	272	240	112	32
XGS-PON ports	272	240	112	32
GE/FE ports	816	720	336	96
10GE ports	136	120	56	16

# System Specifications

Item	EA5800-X17	EA5800-X15	EA5800-X7	EA5800-X2
Switching capacity of the control board (load sharing mode)	MPLAE: 3.6 Tbit/s MPLBE: 8 Tbit/s			248 Gbit/s
Maximum bandwidth per service slot (load sharing mode)	MPLAE: 100 Gbit/s MPLBE: 200 Gbit/s			40 Gbit/s
Maximum number of concurrent 4K video users	16000		8000	2000
Maximum number of MAC address	262143			
Maximum number of IPv4 routing tables	65536			
Maximum number of IPv6 routing tables	16384			
Maximum number of ARP tables	131072			<ul style="list-style-type: none"> <li>• Before the V100R018C10 version: 131072</li> <li>• V100R019C00 and later versions: 32768</li> </ul>
Switching/Forwarding delay	Short forwarding delay: The 100 Mbit/s Ethernet port sends the 64-byte Ethernet packets at a delay shorter than 20 $\mu$ s.			
Bit error rate (BER) in full load	A BER smaller than 10 e-7 for a port that transmits data in full load			
System reliability specifications	<p>System availability for the typical configuration: &gt; 99.999%</p> <p>Mean time between failures (MTBF): about 45 years. *</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>			

# Primary Features



## 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

## System reliability

- GPON type B/type C protection
- 10G GPON type B protection
- BFD
- ERPS (G.8032)
- MSTP
- Monitor Link  
(V100R018C10 and later versions)
- Intra-board and inter-board LAG
- In-service software upgrade (ISSU) of the control board
- 2 control boards and 2 power boards for redundancy protection
- In-service board fault detection and rectification
- Service overload control

## IPv6

- IPv4/IPv6 dual stack
- IPv6 L2 and L3 forwarding
- DHCPv6 relay

## 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
- Tunnel protection switching
- TDM/ETH PWE3
- PW protection switching

## Eco-friendly and energy-saving

In compliance with the Code of Conduct v5 released by the European Commission

## VXLAN

Virtual eXtensible LAN

## SRv6 (V100R019C10 and later versions)

Segment Routing IPv6

# Standards Compliance

## EMC standards

IEC 61000-3-2	ETSI ES 201 468
IEC 61000-3-3	ETSI EN 300 386
IEC 61000-4-2	ETSI EN 300 132-2
IEC 61000-4-3	ETSI EN 300 253
IEC 61000-4-4	VCCI V-3
IEC 61000-4-5	EN 55024
IEC 61000-4-6	EN 55032
IEC 61000-4-11	ITU-T K.20
IEC 61000-4-29	CISPR 24
EN 61000-3-2	CISPR 32
EN 61000-3-3	ITU-T K.11
EN 61000-4-2	ITU-T K.20
EN 61000-4-3	ITU-T K.44
EN 61000-4-4	
EN 61000-4-5	
EN 61000-4-6	
EN 61000-4-29	

## Environment protection standards

2011/65/EU (RoHS)  
EN 50581:2012  
EC NO. 1907/2006 (REACH)  
2012/19/EU (WEEE)

## Environment standards

ETS 300 019 1-1  
ETS 300 019 1-2  
ETS 300 019 1-3  
ETS 300 019 2-1  
ETS 300 019 2-2  
IEC 60068-2  
IEC 60721-2-6  
IEC 60721-3-1  
IEC 60721-3-2  
IEC 60721-3-3  
ETSI EN 300 753

## Security standards

EN 60950-1  
EN 60825-1  
EN 60825-2  
IEC 60825-1  
IEC 60825-2  
IEC 60950-1

## Reliability standards

MIL-HDBK-217F  
BELLCORE TR-332/SR-332

## PON interface standards

ITU-T G.984.1  
ITU-T G.984.2  
ITU-T G.984.3  
ITU-T G.984.4

ITU-T G.987.1  
ITU-T G.987.2  
ITU-T G.987.3  
ITU-T G.988  
ITU-T G.9807.1

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