Huawei ME60 Series
Multi-Services Control Gateway

HUAWEI TECHNOLOGIES CO., LTD.

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Product Overview

Huawei ME60 series Multiservice Control Gateway is perfect as service point of presence (SPOP) of IP/MPLS network, BRAS node of broadband service access, or core node of campus networks, by delivering industry-leading performance, monetization capabilities and excellent service evolution to boost customers' service development.

As a service management and offering platform with high performance, the ME60 meets various requirements for service operation mechanisms. ME60 ensures smooth and reliable running of various services. Based on the solutions with ME60, customers are able to construct a future-oriented and intelligent broadband IP network, which can greatly reduces the TCO of the network.

Product Appearance

The ME60 series includes the ME60-X16, ME60-X8 and ME60-X3:

ME60-X16

ME60-X8

ME60-X3

Product Highlight

» Leading Performance

The ME60 platform supports up to 240G subscriber access line card, and the industry's largest capacity 160G CGN service board. ME60 has up to 256K concurrent subscribers per chassis, which provides flexibility to meet various requirements in ultra bandwidth era. In addition, the ME60 provides a unique BNG Pool solution using hot backup technology which ensures service always online.

» Excellent Experience

The ME60 provides a powerful session setup rate, which is up to 300 subscribers per second on each single slot, and up to 1200 subscribers per second on each single chassis. NAT Session setup rate is up to 2M per second with CGN board, which delivers reliable non-stop services and excellent experience to subscribers.

» Monetized Services

Value-added features improve customers' experience of IPTV or OTT video service. Value-added services such as BoD and DAA cooperate with HQoS to create monetization opportunities.

» Smooth Evolution and Investment Protection

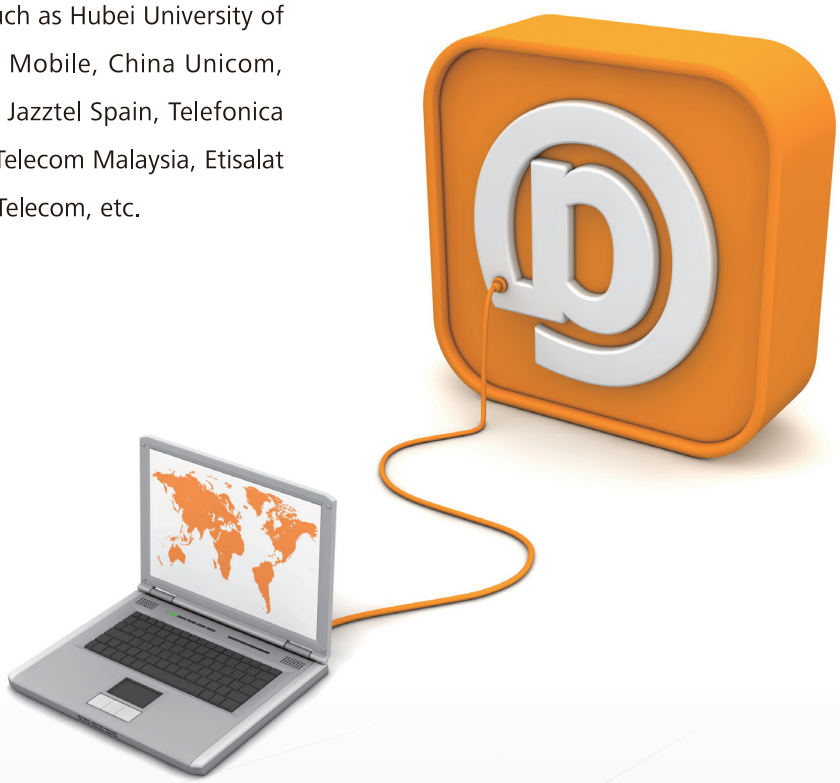
The ME60 provides various joint interface types including COA, Diameter, COPS etc. The ME60 platform supports various port types ranging from 64Kbps to 100Gbps, which provides the most flexibility to meet different requirements. The traditional networks are able to be migrated to IP-based network by utilizing the existing old devices. The ME60 provides a convenient ALL-IP

unified platform with evolutionary capability with various legacy ports.

ME60 supports abundant IPv6 access technologies and large capacity CGN solution, which solves the issue that lacks of IPv4 addresses, and provide comprehensive IPv4 to IPv6 smooth evolution solutions.

» Sustained Lead of BNG Market

According to the third party report from OVUM, Huawei BRAS was awarded 36% market share in 2012, continuing to lead the BNG market. ME60 has been deployed in global leading campus, enterprise and operators such as Hubei University of Technology, China Telecom, China Mobile, China Unicom, Vodafone Italy, Vodafone Germany, Jazztel Spain, Telefonica O2, Saudi Telecom Company (STC), Telecom Malaysia, Etisalat UAE, Philippine Globe, Russia Volga Telecom, etc.



Product Specification

Attribute	ME60-X16	ME60 -X8	ME60 -X3
Switching Capacity	25.2 Tbps /12.58 Tbps	12.58 Tbps /7.08Tbps	1.08 Tbps
Slots	22 slots, including 2 MPUs, 4 SFUs and 16 LPUs	11 slots, including 2 SRUs, 1 SFUs and 8 LPUs	5 slots, including 2 MPUs and 3 LPUs
Dimension (W×D×H)	442mm×650mm ×1420mm(32U)	442mm×650mm × 620 mm (14U)	442mm×650mm ×175 mm (DC 4U) 442mm×650mm ×220 mm (AC 5U)
Maximum power consumption	4610W(120G) 7970W(240G)	2340W(120G) 4100W(240G)	1070W(AC) 920W(DC)
Weight in full configuration	246kg (120G) 279kg (240G)	119kg (120G) 136kg (240G)	42kg (DC) 52kg (AC)
Interface type	• OC-192c/STM-64c POS • OC-48c/STM-16c POS • OC-3c/STM-1c POS • OC-12c/STM-4c ATM • OC-3c/STM-1c ATM • 100GE-WAN/LAN • 10GE-WAN/LAN • GE/FE • E3/CT3 • CE1/CT1		
BRAS	• User access protocol: PPPoE, PPPoEoA, IPoE, IPoEoA, PPPoA 802.1X, and ND • User authentication protocol: PAP, CHAP, MSCHAP, RADIUS and HWTACACS • User accounting protocol: RADIUS, HWTACACS and COPS • User authorization protocol: RADIUS, HWTACACS and COPS • Policy protocol: COPS, COA		

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L2TP	• Session number: up to 64K/per slot, up to 128K/per chassis • Tunnel number: up to 16K/per slot, up to 16K/per chassis		
IPv4	Static routing protocol and dynamic routing protocols such as RIP, OSPF, IS-IS, and BGP-4.		
IPv6	Various technologies for transition from IPv4 to IPv6: • Manual tunnel configurations, automatic tunnel configurations, IPv6-to-IPv4 (6-to-4) tunneling, Generic Routing Encapsulation (GRE) tunneling, and Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) tunneling. • IPv4 over IPv6 tunneling and IPv6 Provider Edge Router (6PE). • IPv6 static routing protocol. • IPv6 dynamic routing protocols such as RIP Next Generation (RIPng), OSPFv3, IS-ISv6, and BGP4+. • IPv6 neighbor discovery and path Maximum Transmission Unit (PMTU) discovery. • Transmission Control Protocol Version 6 (TCP6), ping IPv6, traceroute IPv6, socket IPv6, static IPv6 Domain Name System (DNS), specifying the IPv6 DNS server, Trivial File Transfer Protocol (TFTP) IPv6 client, and IPv6 policy-based routing. • Internet Control Message Protocol Version 6 (ICMPv6) Management Information Base (MIB), User Datagram Protocol Version 6 (UDP6) MIB, TCP6 MIB, and IPv6 MIB.		
MPLS	• LDP over TE, VPLS, H-VPLS, policy-based routing in VPN. • MPLS L2VPNs in either Martini or Kompella mode. • VLL/VPLS access L3VPNs. • QinQ, MPLS/BGP L3VPN, and inter-AS VPN Option A/B/C. • Asynchronous Transfer Mode (ATM) E1, Inverse Multiplexing over ATM (IMA), and Time-Division Multiplexing (TDM) PWE3. • MPLS-TP		
Layer 2 feature	• IEEE802.1q, IEEE802.1p, IEEE 802.3ad, and IEEE 802.1ab. • Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), RRPP, DHCP+, VLAN switching, and user binding.		

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Reliability	• BGP GR, IS-IS GR, and OSPF GR. • LDP GR, Resource-Reservation Protocol (RSVP) GR, and Non-Stop Forwarding (NSF). • VLL/VPLS/L3VPN GR/NSF. • Multicast NSF. • BGP/IS-IS/OSPF/LDP/RSVP-TE/PIM/ISSU Non-Stop Routing (NSR). • In-Service Software Upgrade (ISSU). • Fast convergence of Interior Gateway Protocols (IGPs), BGP, and multicast routing • IP/LDP/VPN/TE/VLL FRR. • IP Auto FRR. • BFD for the static routing protocol and protocols such as IS-IS, RSVP, LDP, TE, Label Switched Path (LSP), PW, OSPF, BGP, VRRP, PIM, and RRPP. • RRPP. • MPLS OAM and Ethernet OAM, Y.1731. • Backup of service routers, PW redundancy, and PWE3 end-to-end protection. • E-Trunk, E-APS, E-STP. • 1+1 or 1:1 intra/ inter -chassis warm or hot backup of CGN service		
QoS	• Weighted Random Early Detection (WRED), DS-TE capability with a maximum of eight CTs, five-level H-QoS scheduling, VLL/PWE3 QoS, and MPLS H-QoS. • The last mile QoS. • Multicast replication of IPoE access users		
Multicast	• IGMPv1, IGMPv2, IGMPv3, IGMP snooping, multicast VPN, and IPv6 multicast. • Static multicast routes. • Multicast routing protocols: PIM-DM, PIM-SM, PIM-SSM, Multicast source Discovery Protocol (MSDP), and Multiprotocol BGP (MBGP). • Support deployment of both multicast and TE. • Multicast CAC		
Security	• ACL filtering, URPF, GTSM, DHCP Snooping, • Anti-ARP attack,anti-DOS attack • MAC address limitation, bonding between MAC and IP • SSH, SSH v2		

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iVSE	• Fast channel change (FCC) and Retransmission (RET) of BTV programs on L3/L3VPN networks • Video Quality of Experience (VQE), including Media Delivery Index (MDI) and V-MOS 2.0 • Distributed quality monitoring of BTV and VOD programs on L3/L3VPN/L2VPN networks • Integrated quality monitoring of BTV and VOD programs on L3 networks • Interconnection with other Huawei devices in providing IPTV services • Simple Object Access Protocol (SOAP) • Entitlement Control Message Protocol (ECMP) • Dynamic Inspection Protocol (DIP) • Processing FCC requests scheduled by the Request Routing Server (RRS) • Selective transmission of video data through FCC		
CGN	• NAT444, NAT64 • Distributed deployment or integrated deployment • Re-allocation or dynamic allocation of ports • VPN NAT • NAT ALG (FTP/ICMP/PPTP/RTSP/SIP) • Port forwarding • NAT server • Web user's authentication • DS-Lite • L2-Aware NAT		

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NO WARRANTY

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