

# CX600-M2 Series Metro Services Platform Product Brochure



## Product Overview

Huawei CX600-M2 Series Metro Services Platform (MSP) is a high end Ethernet product .It focuses on Ethernet services access in metro area. It mainly locates at metro access and aggregation point.

CX600-M2 series is adapted to hardware forwarding mechanism and non-blocking switching technology, based on routing platform. CX600-M2 series focuses on DSLAM, MSAN, enterprise and BTS aggregation, and is the most cost-effective small UPE in the industry. CX600-M2 series supports 80/160G capacity, high-density interface and rich interface

types. With the compact design, CX600-M2 series is only 220mm depth to meet the requirement of access aggregation. Meanwhile, featuring carrier-class reliability, powerful L3 functions, and advanced HQoS, industry leading 1588v2 clock synchronization feature, superior scalability, interoperability, CX600-M2 series fully supports FMC universal service bearing.

The pictures of CX600-M2 series are as follows, including CX600-M2E, CX600-M2F.

### CX600-M2E



### CX600-M2F



## Key Features

### Large Capacity & All-type Interfaces with 220mm Depth

Adopting compact design, CX600-M2 series is 220mm depth and can be in the same rack or cabinet with access equipment (DSLAM, MSAN, etc). CX600-M2 series supports flexible interface type such as 40GE, 10GE, GE, FE, channelized STM-1, STM-4, STM-1, channelized E1, etc, meeting the requirement of universal scenario access.

### Intelligent & Powerful L3 Functions

Based on the unified mature multi-service platform VRP8, CX600-M2 series offers powerful L3 functions, supplies the most mature clock synchronization, such as ACR, Sync. Ethernet, and 1588v2, achieves GPS-grade clock for any mobile network. Meanwhile, CX600-M2 series integrates

intelligent functions for FMC applications, meeting the trend of intelligent service downward.

### Uniform Platform & Management

CX600-M2 series is uniform platform and uniform management with Huawei CX600 series. It supports end equipment plug & play, end-to-end service configuration. Working with the backbone and edge equipments such as CX600-X3/X8/X16 and ME60, CX600-M2 series helps operators to build metro that is multi-service bearing, network hierarchy clear, easy operation and maintenance.

CX600-M2 series can also interoperate with other vendor equipment, achieving seamless access at the edge and all the L3 functions interoperation with metro, effectively protecting operator's investment.





## Efficient OAM Features

CX600-M2 series support Ethernet OAM fault management including: Ethernet in the First Mile OAM (EFM OAM), conforming to IEEE 802.3ah and Connectivity Fault Management OAM (CFM OAM), conforming to IEEE 802.1ag.

Conforming to ITU-T Y.1731, the CX600-M2 series supports performance management by inserting the timestamp into 802.1ag LB messages to measure the delay, jitter, and packet loss ratio when the messages are transmitted. In this manner, the CX600-M2 series can detect the end-to-end performance of traffic in a specified time period and on a specified network segment.

Conforming to RFC2544, the CX600-M2 can measure the network performance index defined by RFC544 without testing instrument.

IP FPM can provide flexible service-oriented IP frame

measurement solution.

For Mobile Backhaul networks, especially the future oriented LTE network, CX600-M2 series adopt advanced Hierarchical L3 solution, deploying HVPN technology, which can guarantee efficiency, security, and reliability. L3 to edge solution makes the OAM more effective, and it can achieve E-to-E segment by segment fault demarcation and confirm each IP base station status.

Cooperating with performance management tools such as U2000, CX600-M2 series can provide SDH like network OAM, service oriented, intelligent warning, and refined positioning. Besides, the ISP can monitor the network status in real time through the NMS. The ISP then check whether the forwarding capacity of the network complies with the Service Level Agreement (SLA) signed with users and locate faults. The ISP does not need to carry out detection on the user side, which greatly decreases maintenance costs.

# Deployment Scenario

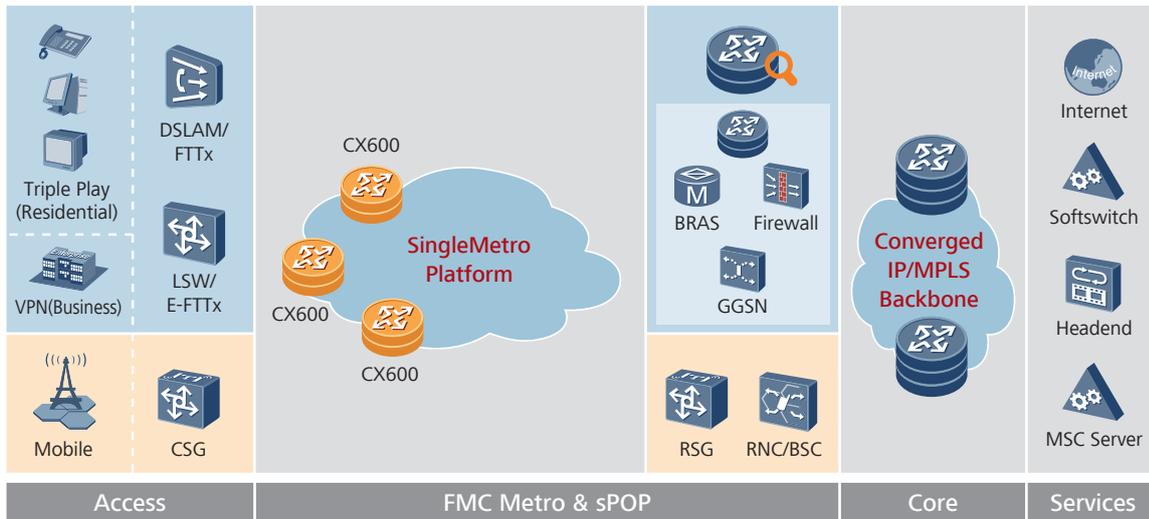
The typical deployment scenario of CX600-M2 series in Metro Ethernet solution is showed in the following picture. With deployed in MEN aggregation layer, the CX600-M2 series can carry Residential, VPN and Mobile services.

**Residential Service:** CX600-M2 series enables the MEN to have a residential hybrid approach of L3 service edge design, e.g. to form a distributed L3 edge for VoIP/IP/BTV/VoD whilst a centralized L3 edge for High Speed Internet (HSI) service. Generally, the CX600-M2 series can satisfy middle to large range coverage network requirement of Multi-Play services.

**VPN Service:** The CX600-M2 series support flexible L2 and L3 VPN deployed in the Metro,

providing intelligent solutions for different kinds of applications. With its Hierarchical QoS and reliable protection method, CX600-M2 series enable the carrier deliver different Service Level Agreements (SLA) for end-users.

**Mobile Service:** The CX600-M2 series is deployed between Base Transceiver Station (BTS) and Base Station Control (BSC) for 2G solution or between NodeB and Radio Node Controller (RNC) for 3G solution, providing an efficient and flexible transport tunnel with E2E PWE3. Besides that, CX600-M2 series can fully support Synchronous Ethernet-based clock synchronization mechanisms, as well as the 1588 Version 2 feature (clock and frequency), which can meet the future requirements for fixed mobile convergence and long-term evolution (LTE).



## Product Specifications

The main specifications of the CX600-M2 series are summarized in the following table.

Item	Description	
	CX600-M2E	CX600-M2F
Capacity	Switching capacity: 80 Gbps	Switching capacity: 160 Gbps
Fixed Port	2*10GE(SFP+) + 24*GE(SFP)	4*10GE(SFP+) + 40*GE(SFP)
Slots	2 for PICs	
Interface Types	10GE-LAN/WAN GE/FE OC-3c/STM-1c POS OC-12c/STM-4c POS Channelized STM-1 E1(75/120ohm)	40GE 10GE-LAN/WAN GE/FE OC-3c/STM-1c POS OC-12c/STM-4c POS Channelized STM-1 E1(75/120ohm)
Clock Transmission	Synchronous Ethernet, IEEE 1588v2	
L2 Ethernet	IEEE802.1q, IEEE802.1p, IEEE 802.3ad, IEEE 802.1ab, STP/RSTP/MSTP	
IPv4/IPv6 Routing Protocols	Static routing, RIP, OSPF/OSPFv3, IS-IS/IS-ISv6, BGPv4/BGP4+, IPv6 over IPv4 Tunnel, IPv6CP, IPv6 ACL/Telnet, 6PE&6vPE, IS-IS MT	
L2/L3 VPN	LDP over TE, VPLS/H-VPLS, Policy Routing to VPN, L2 VPN/VLL with Martini, VLL/VPLS access L3 VPN Instance, QinQ, MPLS/BGP L3 VPN, Inter-AS VPN, P2MP TE	
Multicast	IGMP v1/v2/v3, IGMP Snooping, IPv6 Multicast, Static Multicast Routing, PIM-SM/SSM, MBGP, NG MVPN	
QoS	WRED, H-QoS with 5 levels, VLL/PWE3 QoS	
Network Reliability	VLL/VPLS/L3VPN/BGP/IGP/Multicast Fast Convergence, IP/LDP FRR, TE FRR, VPN FRR, VLL FRR, Label BGP FRR, BFD for Static Routing, IS-IS, RSVP, LDP, TE, LSP, PW, OSPF, BGP, VRRP, PIM, Ethernet OAM(L2 LSA, 802.1ag, 802.1ah), RFC2544, Y.1731, PWE3 End to End Protection, P2MP BFD, E-RRRP	
OAM	Y.1731, IP FPM, MPLS OAM, 802.1ag, 802.3ah	
Dimensions (W×D×H)	442mm×220mm×89mm	442mm×220mm×89mm
Weight	8 KG (fully configured)	9 KG (fully configured)
Typical Power Consumption	<175 W	< 259 W
Environment	Long time Work temperature: -5°C to 65°C Short time Work temperature: -5°C to 65°C Restriction on temperature variation rate: 30°C/hour Long time work altitude: ≤3000 m	



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