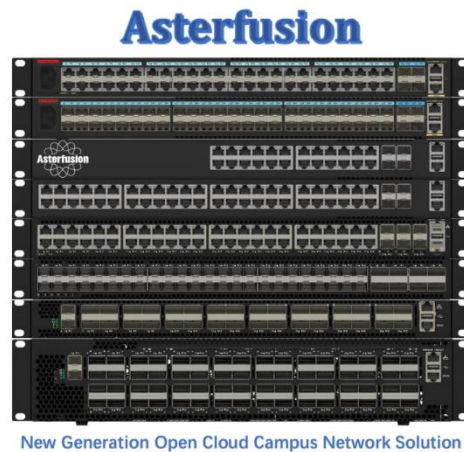


CX200-M Series Cloud Campus Switch



Asterfusion campus network switch parts model

Product Overview

Designed for the demands of the next generation of open and flexible cloud campus network, the CX--M series delivers managed layer 2, layer 3 switches with wire speed connectivity. The suite of platforms offers a variety of connection options for user desktops, POE appliances and IoT devices, which fulfill different deployment requirements from Small/medium business users, enterprises to carrier-level service providers.

In addition, all managed switches all come with Asterfusion in-house developed open AsterNOS software, which is an open source SONiC based, production-ready and feature rich NOS. It is a modular design and container-based application architecture, which makes the switch easy to expand new functionalities even by customers.

Asterfusion CX-M combines open campus network features with the state of the high performance and low power consumption merchant silicon to deliver critical services that automate deployment, configuration, visibility troubleshooting, and security. CX-M campus architecture encompasses spine, leaf and wireless infrastructure platforms, programmability, and an open AsterNOS that supports an expanding feature set and partner ecosystem of solutions.



Asterfusion Campus Hardware Model Specification		
Compact	CX204Y-48S-M	48x10G/1G SFP+, 4x25G SFP28, fixed 1xPSU, fixed 3xFANS, side-to-side airflow
	CX204Y-48GT-M	48x1GBase-T, 4x25G SFP28, fixed 1xPSU, fixed 3xFANS, side-to-side airflow
Standard	CX204Y-24GT-M-S	24x1GBase-T, 4x25G SFP28, fixed 1xPSU, fixed 3xFANS, side-to-side airflow
	CX204Y-24GT-M-SWP2	24x1GBase-T with 16xPoE+ (30w) and 8xPoE++(60w), 4x25G SFP28, fixed 1xPSU, 370w PoE budget, fixed 3xFANS, side-to-side airflow
	CX204Y-24GT-M-SWP4	24x1GBase-T with 16xPoE+ (30w) and 8xPoE++(60w), 4x25G SFP28, fixed 1xPSU, 740w PoE budget, fixed 3xFANS, side-to-side airflow
	CX204Y-48GT-M-S	48x1GBase-T, 4x25G SFP28, fixed 1xPSU, fixed 3xFANS, side-to-side airflow
	CX204Y-48GT-M-SWP4	48x1GBase-T with 40xPoE+ (30w) and 8xPoE++(60w), 4x25G SFP28, fixed 1xPSU, 740w PoE budget, fixed 3xFANS, side-to-side airflow
Enterprise	CX206Y-48GT-M-H	48x1GBase-T, 6x25G SFP28, hot-pluggable 2xPSU, hot-pluggable 3xFANS, front-to-power airflow
	CX206Y-48GT-M-HWP4	48x1GBase-T with 40xPoE+ (30w) and 8xPoE++(60w), 6x25G SFP28, hot-pluggable 2xPSU, 740w PoE budget, hot-pluggable 3xFANS, front-to-power airflow
	CX206Y-48GT-M-HWP8	48x1GBase-T with 40xPoE+ (30w) and 8xPoE++(60w), 6x25G SFP28, hot-pluggable 2xPSU, 1480w PoE budget, hot-pluggable 3xFANS, front-to-power airflow
	CX206P-48S-M-H	48x10G/1G SFP+, 6x100G SFP28, hot-pluggable 2xPSU, hot-pluggable 3xFANS, front-to-power airflow

Highlights

- Providing 1G copper/ 10G SFP+ downlinks and 10G SFP+ / 25G SFP28 / 100G QSFP uplinks for flexible options
- Excellent PoE Capability: Support both for POE+(802.3at) and 60W PoE++ (802.3bt)
- Preloaded with open and feature rich SONiC NOS, delivers an unprecedented, open, and flexible campus network
- Supports ZTP (Zero Touch Provisioning) for automate Installation
- Optimize noise and energy consumption with a muti-core ARM architecture.
- Programmability and smart management plane monitoring APIs
- More security, less interfere, no flooding
- Offering the best price–performance ratio

Features

● **Preloaded AsterNOS Operating System**

Enabling simple, plug-and-play deployments, Asterfusion CX-M campus switch is delivered as an integrated, turnkey solution. It shipped with AsterNOS operating system, which is a feature-rich and high-quality enterprise NOS distribution of SONiC. It provides a container-based application development and deployment which makes the switch easy to expand new functionalities even by customers. Compared with community SONiC, AsterNOS has made a lot of improvements in terms of ease of use, stability and feature enhancement, making open-source software ready to use in real production environments, which help to build a new generation of open cloud campus network for users.

● **High-Density Multi-GE Access Interface and Delivering Abundant Features**

The CX-M series provides a variety of ports of different rates and types, like 1GE RJ45, 10GE SFP+, 25GE/10GE SFP28/SFP+, and 100G/QSFP28, which can both achieve wire-speed forwarding.

Support IPv4/IPv6 dual stack and comprehensive layer 2 and layer 3 networking features, satisfied the interconnection of the underlying physical network.

Support rich QoS features, include priority mapping based on 802.1P and DSCP, Inband and Outband traffic limiting, and queue scheduling based on the PQ/DWRR.

Support multi-stage scheduling technology such as WDRR (Weighted Deficit Round Robin)/SP (Strict Priority) and TD (Tail Drop)/WRED (Weighted Random Early Detection) ECN (Explicit Congestion Notification) to prevent congestion. It provides differentiated and high-quality services for voice, video, Internet, etc.

● **Comprehensive Network Security Policy**

The CX-M series has rich security features, supports DHCP Snooping, dynamic ARP inspection, ND Snooping, IPSGv4/v6, etc. effectively preventing DoS-/TCP- related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks on campus networks.

Supports port isolation technology and ACL policies in Inband and Outband directions, offers users with a safer and more flexible networking solution.

Supports 802.1x authentication and MAB authentication for printers, IP phones, etc., to limit access by unauthorized devices. Its diverse security features can fully meet security challenges faced by traditional campus networks and provide users with a safe and reliable campus network environment.

● **Innovative Energy-saving Design**

The design of the CX-M series switches incorporates high energy efficiency in order to reduce the impact on the environment.

It adopts ARM multi-core processor as the main control chip, and coordinates with the selection of low-power components. Furthermore, Asterfusion optimizes the switch in terms of noise and energy consumption. For example, the system sets a default initial fan speed and then adjusts the fan speed intelligently according to the ambient temperature., achieving efficient heat dissipation while reducing noise.

In addition, when the Ethernet interface is idle for a period of time, the system will set the interface to the energy-saving mode, and then resume the normal working mode when the interface needs to forward

data, achieving energy saving. Green Ethernet power-saving features and low noise design significantly reduce the power consumption.

- **Excellent PoE Capability**

The CX-M series provide PoE power supply models and supports a maximum of 48-port 30W PoE+ (802.3at), of which 8 ports can be configured as 60W PoE++ (802.3bt) ports, which provide remote power supply for PD devices such as IP phones, wireless APs, cameras, etc.

Support Fast PoE and Perpetual PoE, realize the power supply to PD devices within seconds after the switch is powered on.

Supports a series of safety mechanisms, such as short-circuit protection, over-current protection, over-voltage protection, and over-temperature protection. When the power supply is abnormal, the power supply to the PD device is stopped.

- **High Reliability**

The CX-M series ensures the robustness of the network through a variety of high-reliability designs, including Hot-swappable redundant power modules and redundant fan modules to ensure the high reliability of the system

Support static LAG, dynamic LACP link aggregation, and ECMP route load balancing, ensuring high and reliable networking.

Supported the Monitor Link interface linkage technology. When the uplink interface fails, the downlink interface synchronously down. Thereby, the topology protocol on the downstream device is triggered to switch links.

Support BFD bidirectional forwarding detection, and realizes rapid route convergence by linking with OSPF, BGP, ISIS and other routing protocols.

- **Automate Installation and Easy Management**

Furthermore, support varied management interfaces, including console port/inband network ports/outband network port/USB port.

Support ZTP (Zero Touch Provisioning)

Support CLI (Command Line Interface), web management, Telnet and FTP connection.

Support SNMPv1/v2/v3, SSH2.0, SSL and OAM.

- **Warranty**

The Asterfusion CX-M switches is backed by a 2-year limited hardware warranty. Multiple extended support options, including advanced replacement and 24x7 support services, are available. Contact us for complete details.

Hardware Specification

Table 1 Hardware specifications of the CX-M for compact unit series-

Product Model	CX204Y-48GT-M	CX204Y-48S-M
Interface	48*1GE RJ45 4*25GE/10GE SFP28/SFP	48*10GE SFP+ 4*25GE/10GE SFP28/SFP+
Management Interface	1*RS232 RJ45, 1*GE RJ45 Management network port, 1*USB2.0	
Management	Local or remote CLI command line Interface, RPC remote call Interface	
Dimensions (W * D *H)	440mm*220mm*44mm	440mm*220mm*44mm
Weight	4kg	4kg
Manage CPU Architecture	Chip built-in CPU	Marvell CN9130
CPU Architecture	ARM	ARM
CPU Clock Speed	2-core,1.5 GHz	4-core, 2.2 GHz
Flash storage	32 GB EMMC	32 GB EMMC
Electrical Characteristics	Maximum power consumption 72W	Maximum power consumption 130W
	Power module*1, fan module*3	Power module*1, fan module*3
	100~240V AC input	100~240V AC input
Working Environment	Working temperature: 0~45°C	
	Relative humidity: 5%~90% (non-condensing)	

Table 2 Hardware specifications for standard unit series-

Product Model	CX204Y-24GT-M-S	CX204Y-24GT-M-SWP2	CX204Y-24GT-M-SWP4
Interface	24*1GE RJ45 4*25GE/10GE SFP28/SFP+	24*1GE RJ45 4*25GE/10GE SFP28/SFP+	24*1GE RJ45 4*25GE/10GE SFP28/SFP+
P o E + Interface	/	24*30W 802.3at (RJ45 Interface 1 to 24)	24*30W 802.3at (RJ45 Interface 1 to 24)
PoE ++ Interface (Optional)	/	8*60W 802.3bt (RJ45 Interface 1 to 8)	8*60W 802.3bt (RJ45 Interface 1 to 8)
PoE Power Budget	/	370W	740W
Management Interface	1*RS232 RJ45 1*GE RJ45 Management port 1*USB2.0		
Management	Local or remote CLI command line Interface, RPC remote call Interface		
Dimensions (W * D *H)	440mm*290mm*44mm		



Manage CPU Architecture	Chip built-in CPU	Chip built-in CPU	Chip built-in CPU
CPU Architecture	ARM	ARM	ARM
CPU core and Clock Speed	2-core,1.5 GHz	2-core,1.5 GHz	2-core,1.5 GHz
Flash Storage	32 GB EMMC	32 GB EMMC	32 GB EMMC
Electrical Characteristics	Maximum power consumption 63W (Without PoE)	Maximum power consumption 66 W (without PoE)	
	Power module*1, fan module*3		
	100~240V AC input		
Working Environment	Working temperature: 0~45°C		
	Relative humidity: 5%~90% (non-condensing)		

Table 3 Hardware specifications for standard unit series-

Product Model	CX204Y-48GT-M-S	CX204Y-48GT-M-SWP4
Interface	48*1GE RJ45 4*25GE/10GE SFP28/SFP+	48*1GE RJ45 4*25GE/10GE SFP28/SFP+
P o E + Interface	/	48*30W 802.3at (RJ45 Interface 1 to 48)
PoE ++ Interface (Optional)	/	8*60W 802.3bt (RJ45 Interface 1 to 8)
PoE Power Budget	/	740W
Management Interface	1*RS232 RJ45, 1*GE RJ45 Management network port, 1*USB2.0	
Management	Local or remote CLI command line Interface, RPC remote call Interface	
Dimensions (W * D *H)	440mm*290mm*44mm	440mm*290mm*44mm
Manage CPU Architecture	Chip built-in CPU	Chip built-in CPU
CPU Architecture	ARM	ARM
CPU core and Clock Speed	2-core,1.5 GHz	2-core,1.5 GHz
Flash Storage	32 GB EMMC	32 GB EMMC
Electrical Characteristics	Maximum power consumption 72W (without PoE)	Maximum power consumption 77 W (without PoE)
	Power module*1, fan module*3	
	100~240V AC input	
Working Environment	Working temperature: 0~45°C	
	Relative humidity: 5%~90% (non-condensing)	

Table 4 Hardware specifications for enterprise unit series-

Product Model	CX206Y-48GT-M-H	CX206Y-48GT-HPW4-M	CX206Y-48GT-M-HWP8	CX206P-48S-M
Interface	48*1GE RJ45, 6*25GE/10GE SFP28/SFP+	48*1GE RJ45, 6*25GE/10GE SFP28/SFP+	48*1GE RJ45, 6*25GE/10GE SFP28/SFP+	48*10GE SFP+ 6*100GE/40GE QSFP28/QSFP+
P o E + Interface	/	48*30W 802.3at (RJ45 port 1 to 48)	48*30W 802.3at (RJ45 port 1 to 48)	/
PoE ++ Interface (Optional)	/	8*60W 802.3bt (RJ45 port 1 to 8)	8*60W 802.3bt (RJ45 port 1 to 8)	/
PoE Power Budget	/	740W	1480W	/
Management Interface	1*RS232 RJ45, 1*GE RJ45 Management network port, 1*USB2.0			
Management	Local or remote CLI command line Interface, RPC remote call Interface			
Dimensions (W * D *H)	440mm*470mm*44mm			
Manage CPU Architecture	Chip built-in CPU	Chip built-in CPU	Chip built-in CPU	Marvell CN9130
CPU Architecture	ARM	ARM	ARM	ARM
CPU core and Clock Speed	2-core, 1.5 GHz	2 -core, 1.5 GHz	2 -core, 1.5 GHz	4-core, 2.2 GHz
Flash storage	32 GB EMMC	32 GB EMMC	32 GB EMMC	32 GB EMMC
Electrical Characteristics	Maximum power consumption 126W (without PoE)	Maximum power consumption 131W (without PoE)	Maximum power consumption 135W (without PoE)	Maximum power consumption 150W
	Hot-plug power module 1+1, Hot-plug fan module 2+1			
	100~240V AC or 36~72V DC input			
Working Environment	Working temperature: 0~45℃			
	Relative humidity: 5%~90% (non-condensing)			

Software Specification

L2	Ethernet	<ul style="list-style-type: none"> ● LLDP ● Layer 2 port isolation ● Link aggregation ● VLAN broadcast traffic suppression ● VLAN multicast traffic suppression ● VLAN unknown unicast traffic suppression
	VLAN	<ul style="list-style-type: none"> ● 4096 VLANs ● VLAN member tagged mode ● VLAN member untagged mode ● VLAN interface ● Voice VLAN
	MAC	<ul style="list-style-type: none"> ● Max 32K MAC addresses ● Dynamic learning ● Static configuration ● MAC flapping detection ● MAC aging ● MAC scan
L3	IPv4	<ul style="list-style-type: none"> ● DHCP relay ● DHCP server ● Routing policies ● IPv4 routes ● Policy-based routing ● MAC trigger(v4)
	IPv6	<ul style="list-style-type: none"> ● Basic IPv6 functionalities ● MAC trigger(v6) ● ND ● ND snooping ● ND proxy ● DHCPv6 snooping ● DHCPv6 relay ● SLAAC ● IPv6 routes
	ARP	<ul style="list-style-type: none"> ● Dynamic ARP ● Static ARP ● ARP aging and update ● Free ARP ● ARP to host ● ARP proxy

		<ul style="list-style-type: none"> ● ARP detect
	Routing Protocols	<ul style="list-style-type: none"> ● Static route ● BGP ● OSPF ● IS-IS ● ECMP ● Route policy ● Up to 32K FIBv4 entries ● Up to 16K FIBv6 entries
VRF	VRF	<ul style="list-style-type: none"> ● VRF instance (v4/v6) ● Ping based-on VRF ● SSH based-on VRF
Reliability	Reliability	<ul style="list-style-type: none"> ● Track ● SLA ● BFD ● Monitor link
Security	802.1X authentication	<ul style="list-style-type: none"> ● 802.1x authentication ● MAC address authentication
	Protection	<ul style="list-style-type: none"> ● IPSG for IPv4 ● IPSG for IPv6 ● IPSG user capacity ● DAI ● SAVI ● COPP protection
QoS/ACL	QoS	<ul style="list-style-type: none"> ● Traffic classification based on ACLs ● Traffic filtering ● Traffic policing ● Traffic remark ● Traffic shaping ● Priority queuing ● SP, DWRR ● WRED ● ECN
	ACL	<ul style="list-style-type: none"> ● Packet filtering at Layer 2 to Layer 4, filtering out invalid frames based on the source MAC address, destination MAC address, source IP address, destination IP address, TCP/UDP port number, protocol type, and VLAN ID

System and Network Management	Management UI	<ul style="list-style-type: none"> ● CLI
	Easy Management	<ul style="list-style-type: none"> ● Console ● SSH ● SCP ● SFTP ● ZTP ● Reboot/ upgrade with configuration ● SNMP v2&v3 ● NTP
	AAA	<ul style="list-style-type: none"> ● TACACS authentication ● RADIUS authentication
	Monitoring	<ul style="list-style-type: none"> ● Running configuration information ● Hardware information
POE (Only available on PoE models)	PoE+ Management	<ul style="list-style-type: none"> ● PoE+ Power Supply on/off ● PoE+ Power Supply switching in delay