Product Highlights

PoE Models

- 8 x 2.5G RJ45
- Up to 60W PoE++
- Uplinks: 2 x 10G

- 24 x 2.5G RJ45
- Up to 60W PoE++
- Uplinks: 4 x 25G/10G

- 48 x 2.5G RJ45
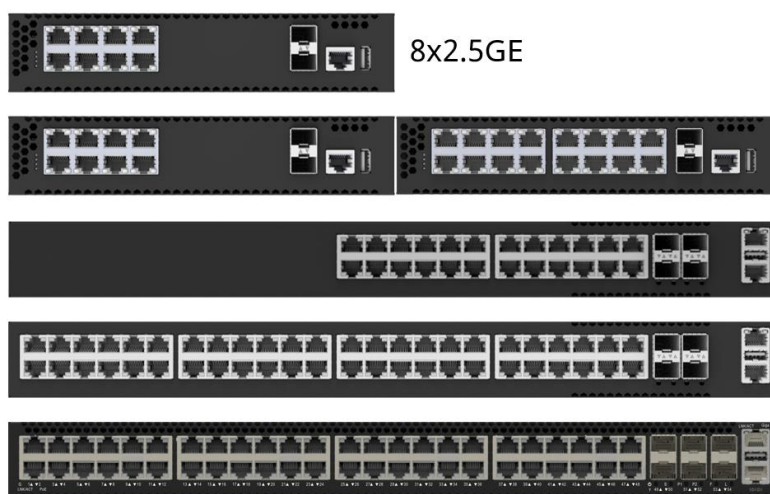- Up to 60W PoE++
- Uplinks: 6 x 25G/10G

Hardware

- Compact 1RU
- Integrated power supplies and fans
- Redundant fans
- Redundant power supplies
- PTP IEEE 1588v2 support

AsterNOS

- SONiC based enterprise distribution
- Single binary for all models
- Standard L2/L3 features
- Extensible with custom tools
- OpenLAN Switching compatible

Overview

The Asterfusion CX-M series access switches deliver wire speed network access and PoE power for enterprise campus scenarios. The CX102S/CX204Y/CX206Y series based on Marvell AlleyCat 5X and 5Y ASIC, offers a variety of port configurations with PoE and non-PoE options for desktops, printers, access points, cameras, IP phones, and IoT devices. PoE models offer 802.3af/at/bt services, up to 60W per RJ45 port with speeds ranging from 10Mbps to 2.5Gbps. Uplinks are compatible with 1G, 10G and 25G optical modules, which deliver a flexible and scalable topology design.
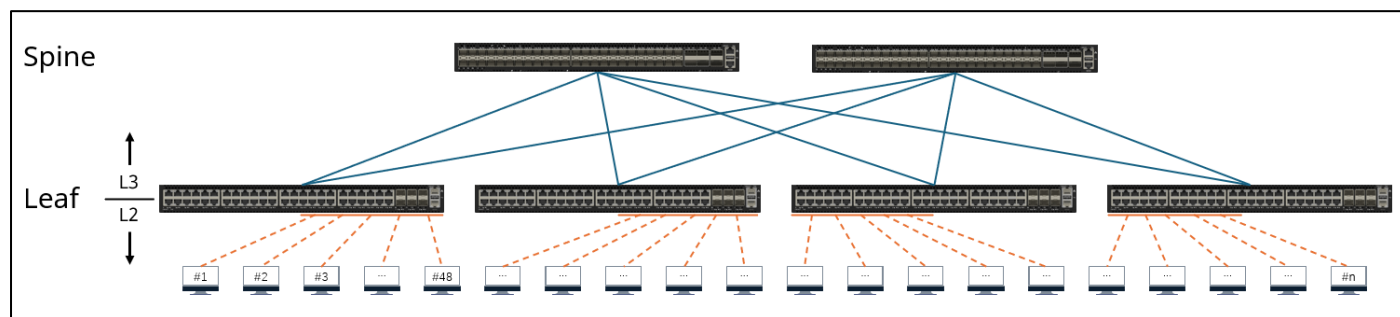

CX102S, 204Y and 206Y Portfolio

The CX-M series switches run AsterNOS, which is enterprise-ready SONiC distribution enhanced by Asterfusion. AsterNOS is a common binary for all series of Asterfusion switches including data center and campus network products, it provides comprehensive and standardized Layer-2 and Layer-3 features including VXLAN virtualization, QoS and security functionalities. In campus network, AsterNOS supports standard 802.1x and RADIUS authentication for access control. Along with security features such as Dynamic ARP Inspection (DAI) and IP Source Guard (IPSG), it protects campus network security in different dimensions.

Asterfusion's switches and Wi-Fi products are managed by Asteria Campus Controller, which is based on OpenWiFi and OpenLAN Switching standards, providing unified provisioning and maintenance experience for both wired and wireless networks.

Campus Pod Design

Conventional Layer-2 networks based on the Spanning Tree Protocol (STP) can be difficult to maintain and unable to fully utilize redundant interconnections. In modern enterprise networks, open architecture is leveraged to divide the network into Pods for campus buildings or floors. These Pods can be deployed as single devices, a MC-LAG system or a Leaf Spine design for better scalability instead of stacking.

Layer-3 Leaf Spine Campus Pod Design

For elimination of broadcast storm and port security considerations, moving the Layer-3 boundary to Leaf switches (or so-called access layer) can help. It allows for multiple new redundant topology options as already proved in data centers. If using a Leaf Spine design, uplinks benefit from Equal Cost Multi-Path (ECMP) for load balancing of user traffic and increased redundancy from multiple active paths.

AsterNOS

AsterNOS is a common software for all Asterfusion products. It is an enterprise distribution of SONiC which is based on Linux kernel and Switch Abstract Interface (SAI) for multi-vendor merchant silicon adaptability. AsterNOS provides rich, standard Layer-2 and Layer-3 functionalities, including VXLAN virtualization across all products, which makes it possible that customers can also choose data center products (25G or even 100G models) as spine or super spine layer within campus networks to expand the throughput and scalability.

Asteria Campus Controller

Asteria Campus Controller is Asterfusion's management plane solution for the entire campus network including wired and wireless components. The Controller is lightweight designed that can be deployed on-premises or on cloud, even directly deployed in specific switches. It offers topology pre-design, Zero Touch Provisioning (ZTP), configuration batch modification, network monitoring and health check for campus network. By using OpenWiFi and OpenLAN Switching architecture and standards, it is also possible to manage any standard 3rd party hardware to achieve unified management plane of entire network.

Layer 2 Features

- 4K VLANs
- Voice VLAN
- Multiple Spanning Tree Protocol (MSTP)
- QinQ
- Link Aggregation Control Protocol (LACP)
- Multi-Chassis Link Aggregation (MC-LAG)
- VLAN Trunking
- Link Layer Discovery Protocol (LLDP)
- LLDP Enhancements for PoE
- Port Isolation
- Jumbo Frames (9216 Bytes)
- IGMP Snooping
- Storm Control
- Monitor Link

Layer 3 Features

- IPv4/v6 Dual Stack
- Routing Protocols: OSPF v2/v3, BGP, MP-BGP
- Policy Based Routing
- Resilient ECMP
- ARP-to-Host
- VRF
- Bi-Directional Forwarding Detection (BFD)
- IGMP v2/v3
- Route Map
- VRRP
- GRE

Virtualization Features

- VXLAN Centralized/Distributed Gateway
- EVPN Type 2/3/5

Security Features

- Service ACLs

- ACL Logging and Counters
- Control Plane Policing (CoPP)
- Dynamic ARP Inspection (DAI)
- IP Source Guard v4/v6
- DHCPv4/v6 Relay
- DHCPv4/v6 Snooping
- ND Snooping
- 802.1x Authentication
- Portal Authentication
- MAC Authentication Bypass (MAB)
- Dynamic VLAN Assignment
- TACACS+
- RADIUS

Quality of Service（QoS）

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification
- Strict priority queueing
- DWRR Scheduling
- Policing/Shaping
- Rate Limiting

Management and Monitoring

- Asteria Campus Controller
- Industry Standard CLI
- Zero Touch Provisioning (ZTP)
- SNMP v1/v2/v3
- sFlow
- Port Mirroring
- Syslog
- Log Management
- PTP IEEE 1588v2 (TC and BC)
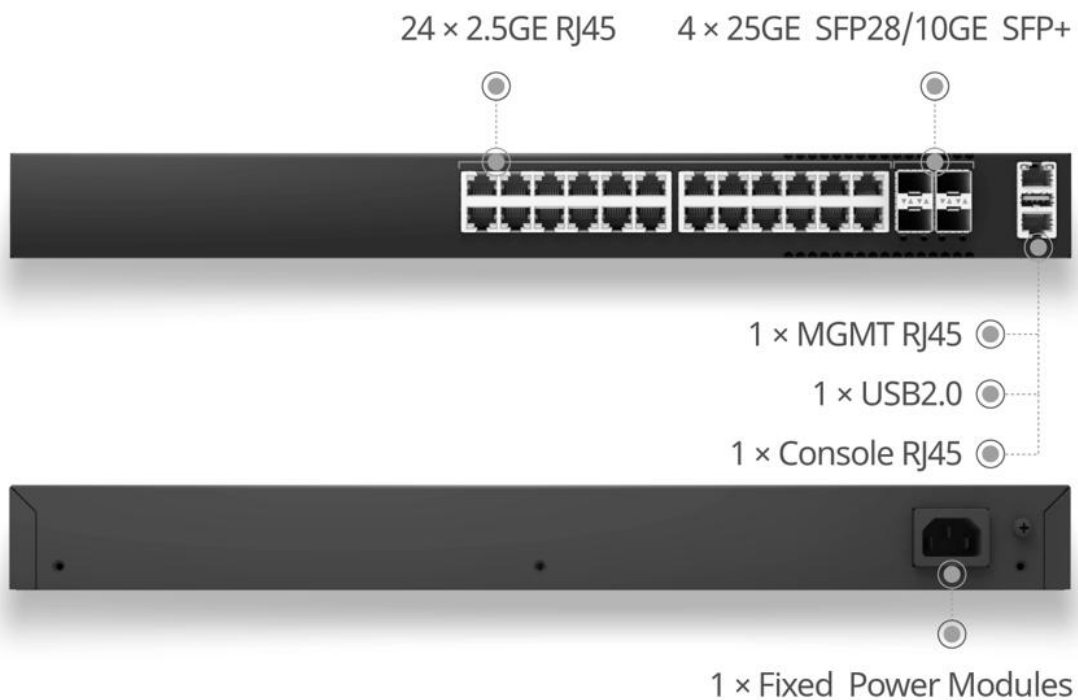- Containerized Custom Tools

Specifications

Product Model		CX102S-8MT-M-S(WP)	CX204Y-24MT-M-S(WP4)	CX206Y-48MT-M-H(WP8)
Network interface	25GE(SFP28)	-	4	6
	10GE(SFP+)	2	-	-
	2.5GE(RJ45)	8	24	48
	PoE++ port	8	8 (port 1 to 8)	
Switching chip	Chip model	Marvell Prestera (AlleyCat 5Y)	Marvell Prestera (AlleyCat 5X)	
	Switching capacity	72Gbps	180Gbps	210Gbps
CPU	CPU	Cortex-A55		
Flash	Flash	32GB EMMC		
Management interface	USB	1xUSB2.0		
	Console	1xConsole RJ45		
Dimensions	Dimensions (WxHxD mm)	215x44x310	440x44x290	440x44x370
Electrical characteristics	Maximum power consumption	37W	66W	131W
	PoE budget (Optional)	150W	740W	1440W
	Power and fan	1x fixed PSU 2x fixed FANs	1x fixed PSU 3x fixed FANs (right-to-left)	1+1 PSUs 2+1 FANs Hot Pluggable
	Input voltage	100-240V AC		
Operating conditions	Operating temperature	0-45℃		
	Relative humidity	5%-90% (non-condensing)		

Panel Illustration

8 × 2.5GE PoE+/PoE++
2 × 10GE SFP+
1 × USB2.0
1 × Console RJ45
2 × Fixed Fan Modules
1 × Fixed Power Modules

CX102S-8MT-S

24 × 2.5GE RJ45
4 × 25GE SFP28/10GE SFP+
1 × MGMT RJ45
1 × USB2.0
1 × Console RJ45
1 × Fixed Power Modules

CX204Y-24MT-S

48 × 2.5GE RJ45

6 × 25GE SFP28/10GE SFP+

1 × MGMT RJ45

1 × USB2.0

1 × Console RJ45

2+1 Hot Pluggable Fan Modules

1+1 Hot Pluggable PSU Modules

CX206Y-48MT-H

Ordering Information

Part Number	Description
CX102S-8MT-M-S	Standard access/leaf switch, 8x2.5GBase-T, 2x10G/1G SFP+, fixed 1xPSU, fixed 2xFANs, front-to-rear airflow
CX102S-8MT-M-SWP	Standard access/leaf switch, 8x2.5GBase-T PoE++(60w), 2x10G/1G SFP+, fixed 1xPSU, 150wPoE budget, fixed 2xFANs, front-to-rear airflow
CX204Y-24MT-M-S	Standard access/leaf switch, 24x2.5GBase-T, 4x25G/10G SFP28, fixed 1xPSU, fixed 2xFANs, side-to-side airflow
CX204Y-24MT-M-SWP4	Standard access/leaf switch, 24x2.5GBase-T with 16xPoE+ (30w) and 8xPoE++(60w), 4x25G/10G SFP28, fixed 1xPSU, 740w PoE budget, fixed 2xFANs, side-to-side airflow
CX206Y-48MT-M-H	Enterprise access/leaf switch, 48x2.5G RJ45, 6x25G/10G SFP28, hot pluggable 2xPSU, 3xFANs, front-to-rear airflow
CX206Y-48MT-M-HWP8	Enterprise access/leaf switch, 48x2.5GBase-T with 40xPoE+ (30W) and 8xPoE++ (60W), 6x25G/10G SFP28, 1480w power budget, hot pluggable 2xPSU, 3xFANs, front-to-rear airflow

Optional Components	
MT1604-CX1	4-core DPU module inside CX102 family, OpenWrt or Ubuntu w/t ntop open source version preloaded
MPTPKT-CX	PTP card for CX1 family and ET2500
HW-WNT-1Y-CX102S-M	Hardware platform warranty for CX102S-M series, 1 Year
AsterNOS-UG-1Y-CX102S-M	Major version upgrade of AsterNOS for CX102S-M series, 1 Year
HW-WNT-1Y-CX204Y-M	Hardware platform warranty for CX204Y-M series, 1 Year
AsterNOS-UG-1Y-CX204Y-M	Major version upgrade of AsterNOS for CX204Y-M series, 1 Year
HW-WNT-1Y-CX206Y-M	Hardware platform warranty for CX206Y-M series, 1 Year
AsterNOS-UG-1Y-CX206Y-M	Major version upgrade of AsterNOS for CX206Y-M series, 1 Year

Warranty and Service Support

Asterfusion CX-M series switches come with 2-year Basic H/W service and warranty, preloaded perpetual licensed AsterNOS and 1-year AsterNOS upgrade subscription.

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