



OPEN NETWORKING

SONiC-POWERED
SWITCHES
& ROUTERS

2026 Product Brochure



Website 

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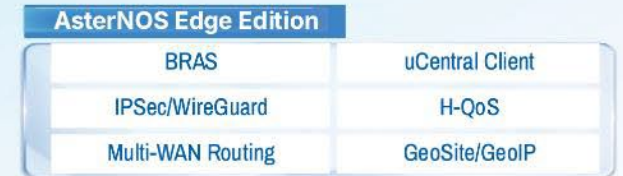
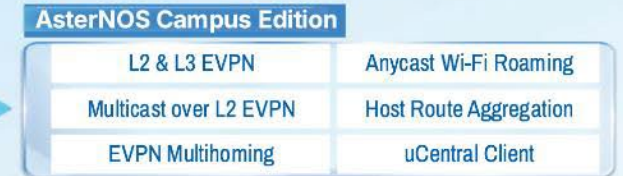
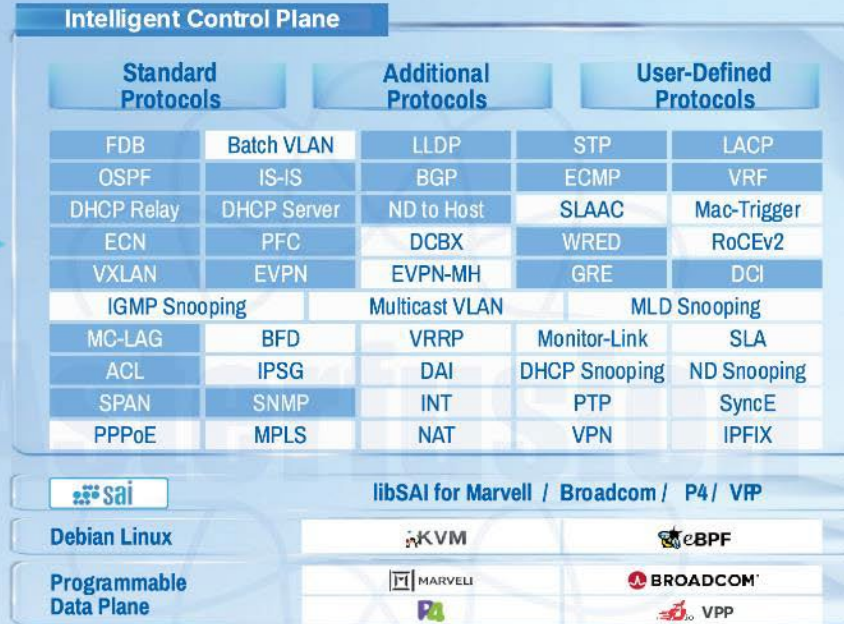
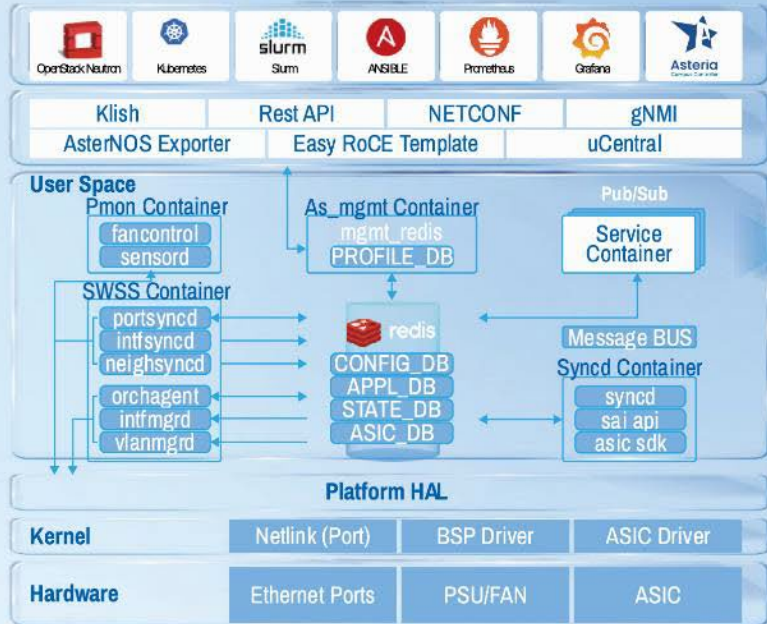
01

SOFTWARE

Enterprise SONiC

AsterNOS-The World's Premier Enterprise SONiC

3 Commercial Editions



Turnkey Solutions

1G-1.6T switches with validated, platform-specific SONiC software for integrated hardware and software delivery.

Simple and Affordable Licensing

One-time perpetual license with no annual subscription fees, reducing long-term total cost of ownership.

Professional Support with SLA

SLA-backed technical support with quarterly major feature updates, functional enhancements and frequent minor releases.

Broad ASIC Compatibility

Support multiple hardware platforms including Marvell, Broadcom, P4 and VPP, ensuring vendor flexibility and long-term investment protection.

Field-Proven Deployments from Edge to Core

Three mature editions for AI & Data Center, Enterprise & Campus, and Router & Gateway, proven across AI Fabric, hyperscale, enterprises.

The Industry's First SONiC for Router & Gateway

Combining SONiC control plane with VPP data plane to deliver high-performance routing, secure VPN, and full automation cost-effectively.



02

AIDC & CLOUD

AIDC & Cloud Switch

AI Inference Performance: RoCE vs. InfiniBand DeepSeek-R1 671B as example

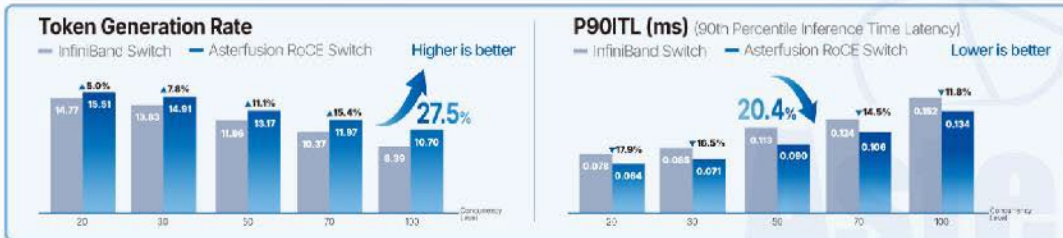
Setup: CX864E-N Switch | 16x H20 GPUs | 400G CX-7 NICs

↓ **20.4%**

P90 Latency

↑ **27.5%**

Token Gen Rate



Storage Performance: RoCE vs. InfiniBand

Setup: CX532P-N Switch | NVMe-oF | 4KB/8KB Workloads

↓ **6.3%**

Read Latency

↓ **10.1%**

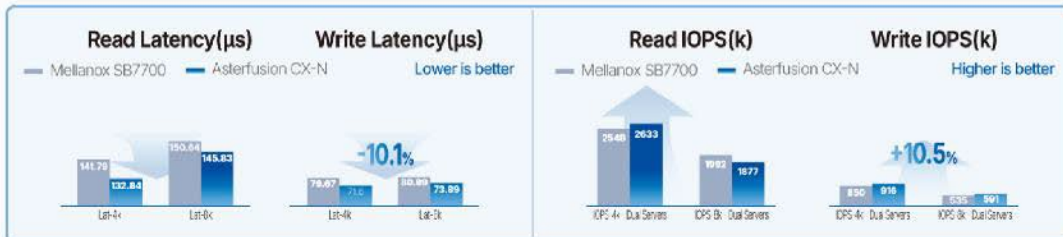
Write Latency

↑ **6.1%**

Concurrent Read IOPS

↑ **10.5%**

Concurrent Write IOPS



Enterprise AI SONiC

Unified ASIC & NOS Architecture:

Consistent ASIC pipeline and NOS architecture across training, inference, storage, front-end & management networks, delivering a unified experience.

Advanced AI Networking Stack:

INT-driven Routing, Adaptive Routing and Switching, Packet Spray & WCMP for optimized load balancing.

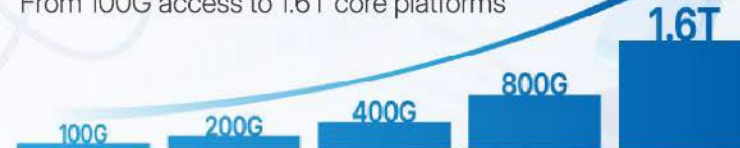
Rich Northbound APIs:

Seamless integration with management and orchestration systems through northbound APIs, including REST API, NETCONF and gNMI.

Powering AI Fabric

Full Portfolio Coverage:

From 100G access to 1.6T core platforms



Ultra-Low Latency:

Single-switch forwarding latency as low as 500ns, with ~2µs end-to-end latency.

Power-Efficient Platforms:

800G switch with maximum power consumption of 2400W (full ports of 800G-2SR4).

AIDC & Cloud Switches



Powered by Teralynx from Marvell

Model Name	CX9128E-N	CX864E-N	CX764QO-N	CX764QD-N	CX732Q-N	CX664D-N	CX564P-N	CX532P-N
Product Image								
Port Configuration	128x 800G MPO	64x 800G OSFP 2x 10G SFP+	64x 400G OSFP 2x 10G SFP+	64x 400G QSFP-DD 2x 10G SFP+	32x 400G QSFP-DD 2x 10G SFP+	64x 200G QSFP56 2x 10G SFP+	64x 100G QSFP28 2x 10G SFP+	32x 100G QSFP28 2x 10G SFP+
Max. 1.6T Ports	64	-	-	-	-	-	-	-
Max. 800G Ports	128	64	-	-	-	-	-	-
Max. 400G Ports	256	128	64	64	32	-	-	-
Max. 200G Ports	512	256	128	128	64	64	-	-
Max. 100G Ports	1024	512	256	256	128	64	64	32
Max. 40G Ports	-	-	-	-	64	64	64	32
Max. 25G Ports	-	512	-	512	128	128	136	112
Max. 10G Ports	-	2	-	2	130	130	138	114
Switching Capacity	102.4 Tbps	51.2 Tbps	25.6 Tbps	25.6 Tbps	12.8 Tbps	12.8 Tbps	6.4 Tbps	3.2 Tbps
Forwarding Rate	-	28800 Mpps	28800 Mpps	28800 Mpps	7600 Mpps	7600 Mpps	7600 Mpps	6300 Mpps
Cut-through Latency	<450 ns		~560 ns				~500 ns	
Packet Buffer	256 MB		200+ MB				70 MB	
Switching Chip Model	Marvell Teralynx 100		Marvell Teralynx 10		Marvell Teralynx 7			
CPU				Intel Xeon-D or Marvell OCTEON 10				
Memory	32GB DDR4	32GB DDR4	16GB/32GB DDR4	16GB/32GB DDR4				16GB DDR4
Storage	256GB M.2 SATA							
Management Interfaces	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port							
Hot-swap PSUs	4 (3+1)	2 (1+1)	2 (1+1)	2 (1+1)	2 (1+1)	2 (1+1)	2 (1+1)	2 (1+1)
Hot-swap Fans	4 (3+1)	4 (3+1)	4 (3+1)	4 (3+1)	6 (5+1)	4 (3+1)	4 (3+1)	5 (4+1)
Airflow Direction	-	Front-to-Rear				Front-to-Rear / Rear-to-Front		
Input Voltage (AC/DC)	-	200~240V AC/200~320V DC				100~240V AC/36~72V DC/180~300V DC		
PSU Rating	-	AC 3200W	AC 2700W	AC 2700W	AC 1200W	AC 1300W / DC 1300W	AC 1300W / DC 1300W	AC 800W / DC 800W
Power (Typ/Max)	-	1780W / 2400W	1560W/2150W	1500W/2100W	680W / 970W	630W / 950W	550W / 850W	470W / 710W
Dimensions	-	440 x 87 x 650 mm	440 x 87 x 650 mm	440 x 87 x 640 mm	440 x 44 x 515 mm	440 x 87.7 x 560 mm	440 x 87.7 x 560 mm	440 x 44 x 515 mm
Chassis & Weight	4U / -	2U / 25kg (55.1 lbs)	2U / -	2U / 23kg (50.71 lbs)	1U / 12kg (26.46 lbs)	2U / 16kg (35.27 lbs)	2U / 16kg (35.27 lbs)	1U / 12kg (26.46 lbs)
Operating Temperature	0 - 40°C (32 - 104°F)				Front-to-Rear: 0 - 40°C (32 - 104°F) / Rear-to-Front: 0 - 35°C (32 - 95°F)			
Relative Humidity	5% - 90% (non-condensing)							

Data Center Switches



Powered by Presteria from Marvell

Model Name	CX732Q-N-V2	CX532P-N-V2	CX308P-48Y-N-V2
Product Image			
Port Configuration	32x 400G QSFP-DD, 2x 10G SFP+	32x 100G QSFP28, 2x 10G SFP+	8x 100G QSFP28, 48x 25G SFP28
Max. 400G Ports	32	-	-
Max. 200G Ports	62	-	-
Max. 100G Ports	120	32	8
Max. 40G Ports	32	32	8
Max. 25G Ports	120	120	80
Max. 10G Ports	122	122	82
Max. 1G Ports	-	120	80
Switching Capacity	12.8 Tbps	3.2 Tbps	2.0 Tbps
Forwarding Rate	5600 Mpps	2800 Mpps	2600 Mpps
Cut-through Latency	~1500 ns	~1400 ns	~1400 ns
Packet Buffer	48 MB	24 MB	24 MB
Switching Chip Model	Marvell Presteria (Falcon)	Marvell Presteria (Falcon)	Marvell Presteria (Falcon)
CPU	Intel Xeon-D or Marvell OCTEON 10	Intel Xeon-D or Marvell OCTEON 10	Intel Xeon-D or Marvell OCTEON 10
Memory	16GB DDR4	16GB DDR4	16GB DDR4
Storage	256GB M.2 SATA	256GB M.2 SATA	256GB M.2 SATA
Management Interfaces	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port
Hot-swap PSUs	2 (1+1)	2 (1+1)	2 (1+1)
Hot-swap Fans	6 (5+1)	5 (4+1)	4 (3+1)
Airflow Direction	Front-to-Rear	Front-to-Rear / Rear-to-front	Front-to-Rear / Rear-to-front
Input Voltage (AC/DC)	100~240V AC/180~300V DC	100~240V AC/36~72V DC/180~300V DC	100~240V AC/36~72V DC/180~300V DC
PSU Rating	AC 1200W / DC -	AC 550W / DC 550W	AC 550W / DC 550W
Power (Typ/Max)	720W / 1000W	340W / 495W	272W / 480W
Dimensions	440mm x 44mm x 515mm	440mm x 44mm x 515mm	440mm x 44mm x 515mm
Chassis & Weight	1U / 12kg (26.46 lbs)	1U / 12kg (26.46 lbs)	1U / 10.5kg (23.15 lbs)
Operating Temperature	Front-to-Rear: 0 – 40°C (32 – 104°F) / Rear-to-Front: 0 – 35°C (32 – 95°F)		
Relative Humidity	5% - 90% (non-condensing)		

Interface

- 10G/25G/40G/100G/200G/400G/800G/1.6T
- Interface Statistics
- Jumble Frame (9216 Bytes)
- Digital Optical Monitoring (DOM)
- Virtual Interfaces

Layer 2 & Layer 3 Features

- 4096 VLANs
- MSTP
- LLDP
- LACP
- IPv4/v6 Dual Stack
- ARP, NDP
- SVI
- Routing Protocols: Static, OSPF v2/v3, BGP, MP-BGP, IS-IS
- Policy Based Routing (PBR)
- Route Map
- ECMP
- DHCPv4/v6

Virtualization Features

- VRF

- Static/Dynamic VXLAN
- VXLAN Centralized/Distributed Gateway
- EVPN Type 1/2/3/4/5
- VXLAN Cross-connect
- VXLAN Multicast Underlay
- Inter-VRF Route Leaking
- Anycast Gateway
- Symmetric IRB
- DCI

Multicast

- Multicast Route
- IGMP v1/v2/v3
- IGMP Querier
- IGMP Snooping
- PIMv4, PIM-SM

Quality of Service (QoS)

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification
- Strict Priority/DWRR Queue Scheduling
- WRED
- Policing/Shaping

- Rate Limiting
- ECN
- PFC
- PFC Watchdog
- DCBX
- RoCEv2
- Easy RoCE (One-step Configuration)
- Fast CNP

AIDC Intelligent Features

- Adaptive Routing and Switching(ARS)
- Packet Spray
- Load Balance based on QP
- Static/Dynamic Intelligent Routing
- INT
- AIDC Dashboard

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Storm Suppression
- TACACS+
- RADIUS
- CoPP

Reliability

- MC-LAG
- VRRPv2/v3
- EVPN MultiHoming
- Monitor Link
- BFD

Management

- Asteria Controller
- Console, SSH, Telnet, REST API, NETCONF
- Industry Standard CLI (Klish)
- ZTP
- Syslog
- sFlow
- SNMPv1/v2/v3
- SPAN/ERSPAN
- PTP Profile: IEEE 1588v2, ITU-T G.8275.2, SMPTE-2059-2, AES67
- PTP Clock Type: GrandMaster, BC, OC, T-GM, T-BC, T-BC-P, T-TSC, T-TSC-P
- SyncE
- AsterNOS Exporter (Prometheus)
- Grafana Dashboard



03

ENTERPRISE & CAMPUS

Why Choose Our Campus Switches



Pre-loaded Enterprise SONiC

10 ns

Class C Level PTP Accuracy

≤ 10ms

Wi-Fi Roaming Latency



Unified Management

- **Leaf-Spine Architecture**
Layer 3 Anycast gateway with VXLAN + BGP EVPN, scaling to 65,535 Wi-Fi access points. AC-free design enables seamless roaming with zero service interruption.
- **SONiC + VPP Gateway**
Industry's first SONiC + VPP campus gateway, delivering 100 Gbps performance with full L2-L7 features including NAT, BRAS, HQoS, and VPN.
- **Unified Management**
OpenWiFi-compatible controller for wireless, wired Ethernet, gateway, and PON — all in one pane of glass.
- **Broadcast-Grade Phase Alignment**
Built-in line-rate Class C PTP for frame-accurate phase alignment and audio lip-sync across SMPTE ST 2110 media fabrics — accelerating SDI-to-IP migration at open SONiC economics.



Enterprise & Campus Switches



Enterprise Core Switches

Model Name	CX732Q-M-H	CX532P-M-H	CX308P-48Y-M-H	CX306P-48Y-M-H
Product Image				
Port Configuration	32 x 400GE QSFP-DD 2 x 10GE SFP+	32 x 100GE/40GE QSFP28 2 x 10GE SFP+	8 x 100GE/40GE QSFP28 48 x 25GE/10GE SFP28	6 x 100GE/40GE QSFP28 48 x 25GE/10GE SFP28
Management Interface	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port			
CPU	Pentium D1508	Pentium D1508	Pentium D1508	Pentium D1508
Memory	16GB DDR4	16GB DDR4	16GB DDR4	16GB DDR4
Storage	256GB M.2 SATA	256GB M.2 SATA	256GB M.2 SATA	128GB M.2 SATA
Switching Chip Model	Marvell Prestera (Falcon)	Marvell Prestera (Falcon)	Marvell Prestera (Falcon)	Marvell Prestera (Falcon)
Switching Capacity	12.8 Tbps	3.2 Tbps	2.0 Tbps	2.0 Tbps
Input Voltage	100-240V AC / 36-72V DC			
Maximum Power Consumption	1000W	480W	480W	480W
Dimensions	440mm x 44mm x 515mm	440mm x 44mm x 515mm	440mm x 44mm x 515mm	440mm x 44mm x 515mm
Weight	12.4kg (27.34 lbs)	12kg (26.46 lbs)	11.1kg (24.47 lbs)	10.6kg (23.37 lbs)
Power Supplies	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs
Fans	5+1 Hot Pluggable Fans	4+1 Hot Pluggable Fans	3+1 Hot Pluggable Fans	3+1 Hot Pluggable Fans
Air Flow	Front-to-Rear / Rear-to-Front	Front-to-Rear / Rear-to-Front	Front-to-Rear / Rear-to-Front	Front-to-Rear / Rear-to-Front
Operating Temperature	0 – 40°C (32 – 104°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	10% - 90% (non-condensing)	10% - 90% (non-condensing)	10% - 90% (non-condensing)	10% - 90% (non-condensing)
Variants	PTP	PTP	PTP	PTP, GNSS, 1~2 DPUs, 1~2 AI Inference

Enterprise & Campus Switches



Enterprise Aggregation Switches

Model Name	CX202P-24Y-M-H	CX206P-48S-M-H	CX206P-24S-M-H	CX202P-24S-M-H	CX202P-16S-M-H
Product Image					
Port Configuration	2 × 100GE/40GE QSFP28 24 × 25GE/10GE SFP28	6 × 100GE/40GE QSFP28 48 × 10GE SFP+	6 × 100GE/40GE QSFP28 24 × 10GE SFP+	2 × 100GE/40GE QSFP28 24 × 10GE SFP+	2 × 100GE/40GE QSFP28 16 × 10GE SFP+
Management Interface	1× RJ45 Console Port, 1× RJ45 MGMT Port, 1× USB 2.0 Port				
CPU	OCTEON CN9130	OCTEON CN9130	OCTEON CN9130	OCTEON CN9130	OCTEON CN9130
Memory	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4
Storage	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC
Switching Chip Model	Marvell Prestera (Aldrin 3)	Marvell Prestera (Aldrin 2)	Marvell Prestera (Aldrin 2)	Marvell Prestera (Aldrin 2)	Marvell Prestera (Aldrin 2)
Switching Capacity	800 Gbps	1.09 Tbps	1.09 Tbps	1.09 Tbps	1.09 Tbps
Input Voltage	100-240V AC / 36-72V DC				
Maximum Power Consumption	168W	187W	165W	165W	165W
Dimensions	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm
Weight	8.6kg (18.96 lbs)	9.1kg (20.06 lbs)	9kg (19.84 lbs)	9kg (19.84 lbs)	9kg (19.84 lbs)
Power Supplies	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs
Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans
Air Flow	Front-to-Rear	Front-to-Rear	Front-to-Rear	Front-to-Rear	Front-to-Rear
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)
Variants	PTP	PTP	PTP	PTP	PTP

Enterprise & Campus Switches



Enterprise Access Switches

Model Name	CX204P-4Y48MT-M-H	CX206Y-48MT-M-H	CX206Y-24MT-M-H	CX206Y-48GT-M-H	CX206Y-24GT-M-H
Product Image					
Port Configuration	4 × 100GE/40GE QSFP28 4 × 25GE/10GE SFP28 48 × 2.5GE RJ45	6 × 25GE/10GE SFP28 48 × 2.5GE RJ45	6 × 25GE/10GE SFP28 24 × 2.5GE RJ45	6 × 25GE/10GE SFP28 48 × 1GE RJ45	6 × 25GE/10GE SFP28 24 × 1GE RJ45
PoE++ / PoE+ Port	8 × PoE++ (Ports 1-8) 40 × PoE+ (Ports 9-48)	8 × PoE++ (Ports 1-8) 40 × PoE+ (Ports 9-48)	8 × PoE++ (Ports 1-8) 16 × PoE+ (Ports 9-24)	8 × PoE++ (Ports 1-8) 40 × PoE+ (Ports 9-48)	8 × PoE++ (Ports 1-8) 16 × PoE+ (Ports 9-24)
PoE Budget	740W or 1440W	740W or 1440W	740W	740W or 1440W	740W
Management Interface	1× RJ45 Console Port, 1× RJ45 MGMT Port, 1× USB 2.0 Port				
CPU	OCTEON CN9130	Cortex-A55	Cortex-A55	Cortex-A55	Cortex-A55
Memory	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4
Storage	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC
Switching Chip Model	Marvell Prestera (AlleyCat 5P)	Marvell Prestera (AlleyCat 5X)	Marvell Prestera (AlleyCat 5X)	Marvell Prestera (AlleyCat 5X)	Marvell Prestera (AlleyCat 5X)
Switching Capacity	800 Gbps	210 Gbps	210 Gbps	210 Gbps	210 Gbps
Input Voltage	100-240V AC / 36-72V DC				
Maximum Power Consumption	246W (Without PoE)	70W (Without PoE)	70W (Without PoE)	70W (Without PoE)	70W (Without PoE)
Dimensions	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 470mm
Weight	9kg (19.84 lbs)	8.3kg (18.30 lbs)	8.3kg (18.30 lbs)	8.3kg (18.30 lbs)	8.3kg (18.30 lbs)
Power Supplies	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs
Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans	2+1 Hot Pluggable Fans
Air Flow	Front-to-Rear	Front-to-Rear	Front-to-Rear	Front-to-Rear	Front-to-Rear
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)
Variants	PTP, PoE	PTP, PoE	PTP, GNSS, PoE	PTP, PoE	PTP, GNSS, PoE

Enterprise & Campus Switches



Campus Aggregation & Access Switches

Model Name	CX204P-16Y-M-E	CX204P-24S-M-E	CX204Y-24MT-M-S	CX204Y-48GT-M-S	CX204Y-24GT-M-S
Product Image					
Port Configuration	4 × 100GE/40GE QSFP28 16 × 25GE/10GE SFP28	4 × 100GE/40GE QSFP28 24 × 10GE SFP+	4 × 25GE/10GE SFP28 24 × 2.5GE RJ45	4 × 25GE/10GE SFP28 48 × 1GE RJ45	4 × 25GE/10GE SFP28 24 × 1GE RJ45
PoE++ / PoE+ Port	-	-	8 × PoE++ (Ports 1-8) 16 × PoE+ (Ports 9-24)	8 × PoE++ (Ports 1-8) 40 × PoE+ (Ports 9-48)	8 × PoE++ (Ports 1-8) 16 × PoE+ (Ports 9-24)
PoE Budget	-	-	740W	740W	370W or 740W
Management Interface	1× RJ45 Console Port, 1× RJ45 MGMT Port, 1× USB 2.0 Port				
CPU	OCTEON CN9130	OCTEON CN9130	Cortex-A55	Cortex-A55	Cortex-A55
Memory	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4
Storage	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC
Switching Chip Model	Marvell Prestera (Aldrin 3)	Marvell Prestera (Aldrin 2)	Marvell Prestera (AlleyCat 5X)	Marvell Prestera (AlleyCat 5X)	Marvell Prestera (AlleyCat 5X)
Switching Capacity	1.09 Tbps	1.09 Tbps	180 Gbps	180 Gbps	180 Gbps
Input Voltage	100-240V AC / 36-72V DC				
Maximum Power Consumption	125W	125W	66W (Without PoE)	50W (Without PoE)	40W (Without PoE)
Dimensions	440mm × 44mm × 470mm	440mm × 44mm × 470mm	440mm × 44mm × 290mm	440mm × 44mm × 290mm	440mm × 44mm × 290mm
Weight	9kg (19.84 lbs)	9kg (19.84 lbs)	3.6kg (7.94 lbs)	3.8kg (8.38 lbs)	3.6kg (7.94 lbs)
Power Supplies	1+1 Hot Pluggable PSUs	1+1 Hot Pluggable PSUs	1 Fixed Power Module	1 Fixed Power Module	1 Fixed Power Module
Fans	Front-to-Rear	Front-to-Rear	Right-to-Left	Right-to-Left	Right-to-Left
Air Flow	3 Fixed Fan Modules	3 Fixed Fan Modules	3 Fixed Fan Modules	3 Fixed Fan Modules	3 Fixed Fan Modules
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)
Variants	PTP	PTP	PTP, PoE	PoE	PTP, PoE

Enterprise & Campus Switches



Entry Level Access Switches

Model Name	CX104S-8MT24GT-M-S	CX102S-8MT-M-S	CX102S-16GT-M-S	CX102S-8GT-M-S
Product Image				
Port Configuration	4 x 10GE SFP+ 8 x 2.5GE RJ45, 24 x 1GE RJ45	2 x 10GE SFP+ 8 x 2.5GE RJ45	2 x 10GE SFP+ 16 x 1GE RJ45	2 x 10GE SFP+ 8 x 1GE RJ45
PoE++ / PoE+ Port	8 x PoE++ (Ports 9-16) 16 x PoE+ (Ports 17-32)	8x PoE++ (Ports 1-8)	8x PoE++ (Ports 1-8)	8x PoE++ (Ports 1-8)
PoE Budget	370W or 740W	150W	150W	150W
Management Interface	1x RJ45 Console Port, 1x RJ45 MGMT Port, 1x USB 2.0 Port	1x RJ45 Console Port, 1x USB 2.0 Port	1x RJ45 Console Port, 1x USB 2.0 Port	1x RJ45 Console Port, 1x USB 2.0 Port
CPU	Cortex-A55	Cortex-A55	Cortex-A55	Cortex-A55
Memory	4GB DDR4	4GB DDR4	4GB DDR4	4GB DDR4
Storage	32GB EMMC	32GB EMMC	32GB EMMC	32GB EMMC
Switching Chip Model	Marvell Prestera (AlleyCat 5Y)	Marvell Prestera (AlleyCat 5Y)	Marvell Prestera (AlleyCat 5Y)	Marvell Prestera (AlleyCat 5Y)
Switching Capacity	86 Gbps	72 Gbps	72 Gbps	72 Gbps
Input Voltage	100-240V AC / 36-72V DC			
Maximum Power Consumption	50W (Without PoE)	19W (Without PoE)	21W (Without PoE)	18W (Without PoE)
Dimensions	440mm x 44mm x 290mm	215mm x 44mm x 310mm	215mm x 44mm x 310mm	215mm x 44mm x 310mm
Weight	3.6kg (7.94 lbs)	2.2kg (4.85 lbs)	2.2kg (4.85 lbs)	2.2kg (4.85 lbs)
Power Supplies	1 Fixed Power Module	1 Fixed Power Module	1 Fixed Power Module	1 Fixed Power Module
Fans	Right-to-Left	Front-to-Rear	Front-to-Rear	Front-to-Rear
Air Flow	3 Fixed Fan Modules	2 Fixed Fan Modules	2 Fixed Fan Modules	2 Fixed Fan Modules
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)	5% - 90% (non-condensing)
Variants	PoE	PTP, PoE	PTP, 1~2 DPUs, PoE	PTP, PoE

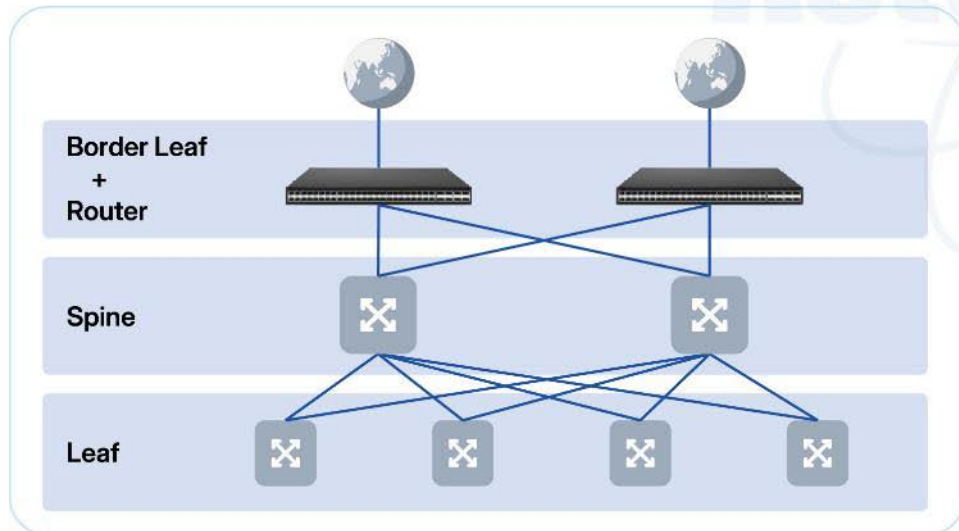
Integrated Smart Switch CX306P-48Y-M-H

Application Scenarios

Scenario 1: Enterprise/Campus Network:

Border Leaf with Embedded DPU Routing.

- Routing/NAT
- MS/Filter
- NetFlow
- ...

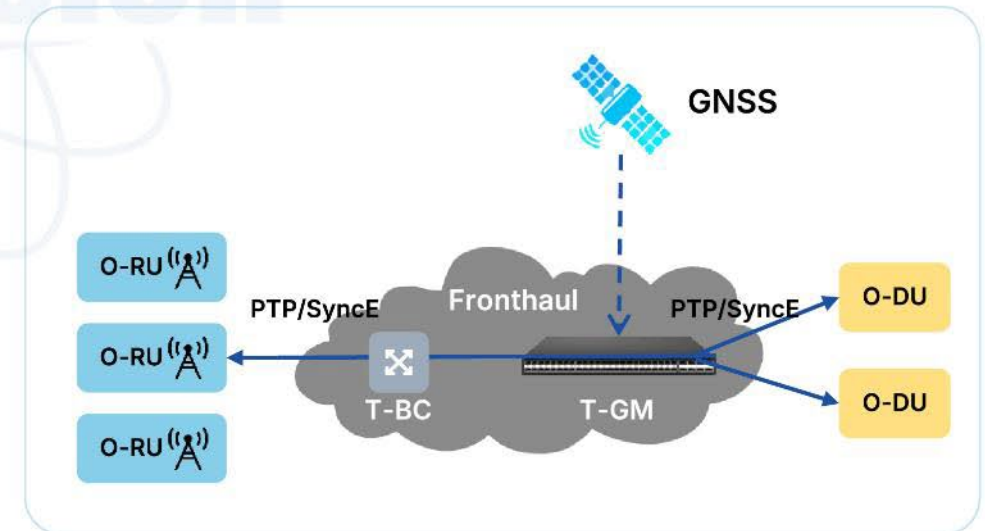


Scenario 2: Telecom Infrastructure:

O-RAN Fronthaul Transport Switch with Integrated T-GM.



- ① 1PPS
- ② GNSS antenna input
- ③ 10MHz
- ④ ToD RJ45 port



AsterNOS for Enterprise & Campus Switches



Software Features & Capabilities

Interface

- 1G/2.5G/10G/25G/40G/100G/400G
- Interface Statistics
- Jumble Frame (10218 Bytes)
- Digital Optical Monitoring (DOM)
- Virtual Interfaces

Layer 2 & Layer 3 Features

- 4096 VLANs
- Voice VLAN
- STP, RSTP, MSTP
- QinQ
- LLDP
- LACP
- IPv4/v6 Dual Stack
- ARP, NDP
- SVI
- Routing Protocols: Static, OSPF v2/v3, BGP, MP-BGP
- Policy Based Routing (PBR)
- Route Map
- ECMP
- DHCPv4/v6

Virtualization

- GRE
- VRF
- Static/Dynamic VXLAN
- VXLAN Centralized/Distributed Gateway
- EVPN Type 1/2/3/4/5
- VXLAN Cross-connect
- VXLAN Multicast Underlay
- Inter-VRF Route Leaking
- Anycast Gateway
- Symmetric IRB

Multicast

- Multicast Route
- IGMP v1/v2/v3
- IGMP Querier
- IGMP Snooping
- PIMv4, PIM-SM

Quality of Service (QoS)

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

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Storm Suppression
- TACACS+
- RADIUS
- CoPP
- DAI
- IPSGv4/v6
- 802.1x Authentication
- MAC Authentication Bypass (MAB)
- Portal Authentication
- Dynamic VLAN Assignment
- MACSec

Reliability

- MC-LAG
- VRRPv2/v3
- EVPN MultiHoming
- Monitor Link
- BFD

Management

- Asteria Controller
- Console, SSH, Telnet, REST API, NETCONF
- Industry Standard CLI (Klish)
- ZTP
- Syslog
- sFlow
- SNMPv1/v2/v3
- SPAN/ERSPAN
- PTP Profile: IEEE 1588v2, ITU-T G.8275.2, SMPTE-2059-2, AES67
- PTP Clock Type: GrandMaster, BC, OC, T-GM, T-BC, T-BC-P, T-TSC, T-TSC-P
- SyncE

Access Point






WiFi 7/6E/6 Access Point

Model Name	AP7360	AP7341E	AP7330	AP6241E	AP6240	AP6031	AP6020	AP6020W
Product Image								
WiFi Standard	WiFi 7 (802.11be)	WiFi 7 (802.11be)	WiFi 7 (802.11be)	WiFi 6E (802.11ax)	WiFi 6E (802.11ax)	WiFi 6 (802.11ax)	WiFi 6 (802.11ax)	WiFi 6 (802.11ax)
WiFi Protocol	802.11a/b/g/n/ac/ax/be	802.11a/b/g/n/ac/ax/be	802.11a/b/g/n/ac/ax/be	802.11a/b/g/n/ac/ax/be	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax/be*	802.11a/b/g/n/ac/ax
Max Data Rate	18 Gbps	9.8 Gbps	9.3 Gbps	8.2 Gbps	8.2 Gbps	2.975 Gbps	2.975 Gbps	2.975 Gbps
Spatial Streams	12-Stream (2.4G 4x4; 5G 4x4; 6G 4x4)	8-Stream (2.4G 4x4; 5G 2x2; 6G 2x2)	6-Stream (2.4G 2x2; 5G 2x2; 6G 2x2)	8-Stream (2.4G 2x2; 5G 4x4; 6G 2x2)	8-Stream (2.4G 2x2; 5G 4x4; 6G 2x2)	4-Stream (2.4GHz 2x2; 5GHz 2x2)	4-Stream (2.4G 2x2; 5G 2x2)	4-Stream (2.4G 2x2; 5G 2x2)
Channel Width	20/40/80/160/320 MHz	20/40/80/160/320 MHz	20/40/80/160/320 MHz	20/40/80/160 MHz	20/40/80/160 MHz	20 / 40 / 80 / 160 MHz	20/40/80/160 MHz	20/40/80/160 MHz
Multiple SSIDs	8 (2.4G) + 8 (5G) + 8 (6G)	8 (2.4G) + 8 (5G) + 8 (6G)	8 (2.4G) + 8 (5G) + 8 (6G)	8 (2.4G) + 8 (5.1G) + 8 (6G)	8 (2.4G) + 8 (5.1G) + 8 (6G)	8 (2.4G) + 8 (5G)	8 (2.4G) + 8 (5G)	8 (2.4G) + 8 (5G)
Network Ports	10G SFP+, 10G WAN, 2.5G LAN	10G SFP+, 10G WAN	10G SFP+, 2.5G WAN, 2.5G LAN	2.5G WAN, 1G LAN	2.5G WAN, 1G LAN	1 x 1000Mbps WAN	1 x 1G WAN, 1 x Serial	1 x 1G WAN, 4 x 1G LAN
Extra Interfaces	—	—	—	—	—	-	—	2xPassthrough, USB, Serial
Antenna Type	Built-in Omnidirectional	External Omnidirectional	Built-in Omnidirectional	External Omnidirectional	Built-in Omnidirectional	Built-in Omnidirectional	Built-in Omnidirectional	Built-in Omnidirectional
Antenna Gain	2.4G: 1.7dBi; 5G/6G: 4dBi	2.4G: 6dBi; 5G/6G: 6dBi	2.4G: 1.7dBi; 5G/6G: 4dBi	2.4G: 4dBi; 5G/6G: 4dBi	2.4G: 4dBi; 5G/6G: 4dBi	2.4GHz: 2x6dBi; 5GHz: 2x6dBi	2.4G: 4dBi; 5G: 4dBi	2.4G: 1.7dBi; 5G: 2.9dBi
Power Supply	DC 54V 1A; PoE 802.3bt	DC 54V 1A; PoE 802.3bt	DC 12V 3A; PoE 802.3bt	DC 12V 3A; PoE 802.3bt	DC 12V 3A; PoE 802.3at	DC 12V/2A; PoE 802.3at	DC 12V 1.5A; PoE 802.3at	DC 12V 1.5A; PoE 802.3at
Max Consumption	< 60W (Max)	< 54W (Max)	< 36W (Max)	< 30W (Max)	< 28W (Max)	< 16W (Max)	< 16W (Max)	< 18W (Max)
Dimensions (mm)	220 x 220 x 42	243.2 x 218.3 x 68.3	208 x 208 x 46	295 x 231 x 80	Φ218 x 54.6 (Round)	304 x 181 x 88	186 x 186 x 37	160 x 86 x 29
Installation	Indoor Ceiling-mount	Outdoor (w/ optional GPS)	Indoor Ceiling-mount	Outdoor (w/ optional GPS)	Ceiling-mounted	Outdoor Pole or Wall-mount	Ceiling-mounted	Wall-plate (Panel)
Operating Temp	-10°C to 55°C	-40°C to 70°C	-10°C to 55°C	-30°C to 55°C	-20°C to 55°C	-20°C to 55°C	-10°C to 55°C	-20°C to 40°C
Storage Temp	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C

All Aps support Asterfusion's OpenWiFi Enterprise Edition.

PON Access Point

Model Name	AP7020F	AP6020F	AP6020WF
Product Image			
WiFi Standard	WiFi 7 (802.11be)	WiFi 6 (802.11ax)	WiFi 6 (802.11ax)
WiFi Protocol	802.11a/b/g/n/ac/ax/be	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax
Max Data Rate	3.6 Gbps	2.975 Gbps	2.975 Gbps
Spatial Streams	4-Stream (2.4G 2x2; 5G 2x2)	4-Stream (2.4G 2x2; 5G 2x2)	4x4 Streams (2.4G 2x2; 5G 2x2)
Channel Width	20/40/80/160 MHz	20/40/80/160 MHz	20/40/80/160 MHz
Multiple SSIDs	8 (2.4G) + 8 (5G)	8 (2.4G) + 8 (5G)	8 (2.4G) + 8 (5G)
Network Ports	1 x XGSPON, 4 x 1G LAN	1 x GPON, 4 x 1000Mbps LAN	1 x GPON, 4 x 1000Mbps LAN
Extra Interfaces	—	1 x USB serial	—
Antenna Type	Built-in Omnidirectional	Built-in Omnidirectional	Built-in Omnidirectional
Antenna Gain	2.4GHz: 2x4dBi; 5GHz: 2x4dBi	2.4GHz: 2x3dBi; 5GHz: 2x4dBi	2.4GHz: 2x3dBi; 5GHz: 2x3.3dBi
Power Supply	DC 12V/2A; PoF 48V; DC 48V 1A	DC 12V/1.5A; PoF 48V; DC 48V 1A	PoF 48V; DC 48V 1A
Max Consumption	< 16W (Max)	< 18W (Max)	< 14W (Max)
Dimensions (mm)	190 x 190 x 50	190 x 190 x 50	86 x 86 x 48
Installation	Ceiling-mounted	Ceiling-mounted	Panel
Operating Temp	-10°C to 55°C	-10°C to 55°C	-10°C to 45°C
Storage Temp	-40°C to 70°C	-40°C to 70°C	-40°C to 70°C

Wi-Fi / Radio Features

- Support for Wi-Fi 7 (802.11be) with backward compatibility
- Advanced multi-user technologies: OFDMA, MU-MIMO, BSS Coloring
- Fast roaming support: 802.11k / 802.11v / 802.11r
- Multicast-to-Unicast conversion
- Multiple SSID support
- Client isolation (based on SSID and VLAN)
- DFS (Dynamic Frequency Selection)
- ACS (Automatic Channel Selection)
- Configurable RF on/off
- Configurable per-radio client capacity
- Configurable radio parameters: Channel selection, Channel bandwidth, MIMO mode, Transmit power

Network Features

- VLAN support (IEEE 802.1Q)
- VXLAN tunneling (encapsulation)
- DHCP Client and DHCP Server
- Static management IP address
- Access Control Lists (ACL)
- LLDP (Link Layer Discovery Protocol)
- Optical module detection (SFP/SFP+ monitoring)
- Quality of Service (QoS): Traffic rate limiting, Priority-based traffic scheduling

Security Features

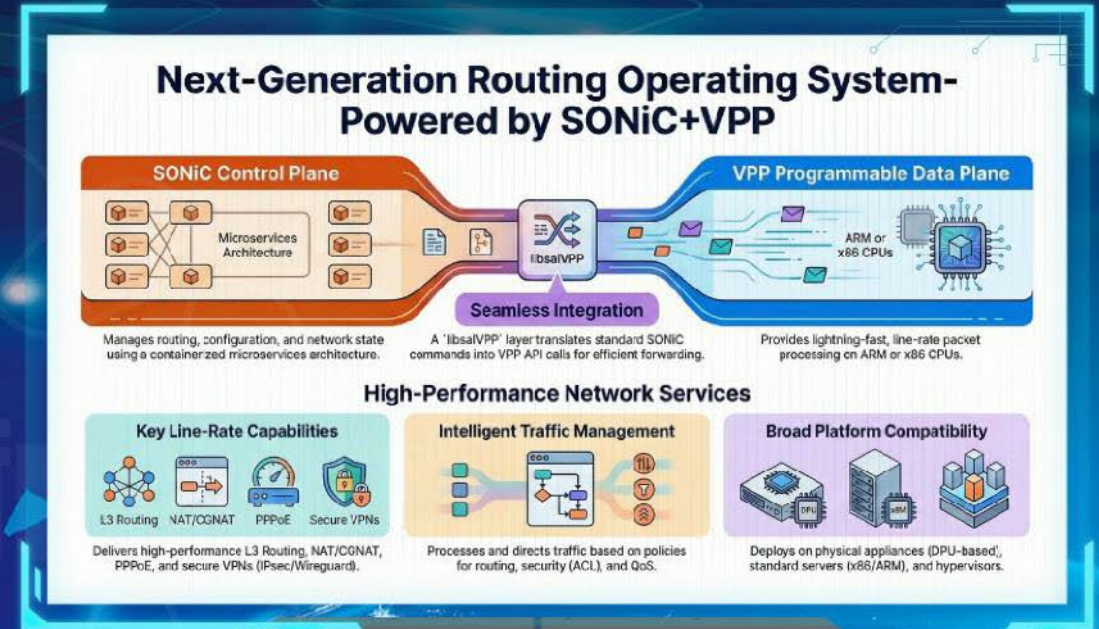
- Comprehensive wireless security: WPA / WPA2 / WPA3 / SAE
- AAA (Authentication, Authorization, Accounting): Portal authentication (Portal 2.0), RADIUS authentication, MAC authentication, Dynamic VLAN assignment, Accounting support
- Emergency SSID (fail-safe SSID for network access)

Management & Maintenance

- NTP (Network Time Protocol)
- Standard uCentral interface for reporting: AP status and inventory, Client information, Health and performance metrics
- Device lifecycle management: Firmware upgrade, Reboot and factory reset, Patch deployment
- ZTP (Zero Touch Provisioning)
- Secure remote access via SSH
- Cloud-based packet capture
- System logging and Syslog client support
- Client event tracking, including: Association / disassociation, DHCP events, Access rejection
- One-click log collection
- OpenWiFi 4.2 Compatible

High-Performance Open Routing

- **SONiC + VPP**
SONiC-based Control Plane + VPP as Data Plane.
- **Advanced Features**
VPN (IPsec/WireGuard), CGNAT/MAP-E/MAP-T, HQoS, PPPoE Server, GeoSite/GeoIP based routing and security control.
- **Flexible Deployment**
ARM-based appliance with Marvell OCTEON CN102/103, x86 Platform.
- **Rich Management API**
Klish, REST API, NETCONF, uCentral for OpenWiFi.



SONiC & VPP

Pre-loaded
Open Routing Stack

Marvell OCTEON 10

High-Performance
DPU Engine



Enterprise Edge Router Series



Pre-loaded AsterNOS-VPP

Model Name	RT2508-4S4M8	RT2700-2P2S	RT3608-2P2S	RT3616-4P4S
Product Image				
Processor	1 x Marvell OCTEON 10 CN102XX 8 Core ARM64 N2 @2.5GHz	1x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1 x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1 x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz
Network Interfaces	4 x 10GE SFP+, 4 x 2.5GE RJ45 (Supports PoE++ Option), 8 x 1GE RJ45(Supports PoE+ Option)	2 x 100GE QSFP28 2 x 10GE SFP+	2 x 100GE QSFP28 2 x 10GE SFP+	2x 2x 100GE QSFP28 2x2x 10GE SFP+
Management Interfaces	1 x USB3.0, 1 x Console RJ45	1 x USB3.0, 1 x Console RJ45, 1 x MGMT RJ45	1 x USB3.0, 1 x Console RJ45, 1 x MGMT RJ45	2 x USB3.0, 2 x Console RJ45, 2 x MGMT RJ45
NOS	Pre-loaded perpetual licensed AsterNOS-VPP Software and 1-year upgrade subscription			
Routing with 2M routes	50 Gbps	100 Gbps	100 Gbps	2 x 100 Gbps
ACL Filtering with 10K ACLs	50 Gbps	100 Gbps	100 Gbps	2 x 100 Gbps
IPsec Enc and Dec	50 Gbps	80 Gbps	80 Gbps	2 x 80 Gbps
Memory	16GB DDR5 (Max 48GB)	16GB DDR5 (Max 48GB)	16GB DDR5 (Max 48GB)	2 x 16GB DDR5 (Max 48GB)
Storage	64GB eMMC 5.1	120GB NVME SSD	120GB NVME SSD	2 x 120GB NVME SSD
Expansion Slots	M.2 E Key (WiFi 6E / 7), M.2 B Key (5G / LTE) M.2 M Key (AI / NVMe SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / PTP / SSD)
AI Capabilities	Up to 160 TOPS elastic AI computing performance Up to 100 TFLOPS @ bFP16			
Power Supply	1 x Fixed PSU (AC 100-240V) 1 x 150W (w/o PoE), 1 x 270W(PoE)	1 Fixed PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V)
Fan	2 x Fixed Fan Modules	2 x Fixed Fan Modules	1+1 Hot Pluggable Fan Modules	2+1 Hot Pluggable Fan Modules
PoE Support	Optional (Max 150W Budget)	—	—	—
Dimensions	44mm x 220mm x 310mm / Half-width 1U	44x220x310 mm / Half-width 1U	44mm x 440mm x 470mm / 1U	44mm x 440mm x 470mm / 1U
Installation	Desktop / Rack-mount	Rack-mount	Rack-mount	Rack-mount
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 95% (non-condensing)	5% - 95% (non-condensing)	5% - 95% (non-condensing)	5% - 95% (non-condensing)
Energy Consumption	< 60W (Full configuration)		< 100W (Full configuration)	< 200W (Full configuration)

Interface

- 1G/2.5G/10G/40G/100G
- Interface Statistics
- Jumble Frame (9122 Bytes)
- Digital Optical Monitoring (DOM)
- LAN / WAN Interface
- WiFi Interface
- Virtual Interfaces

Layer 2 & Layer 3 Features

- 4096VLANs
- STP, MSTP
- QinQ
- LLDP
- BGP,MP-BGP
- OSPF v2/v3
- IS-IS
- RIP v1/v2
- Policy Based Routing (PBR)
- Static Routing
- Route Map
- VRF
- ECMP

Multicast

- IPv4/IPv6 Multicast Routing
- IGMP Snooping & Querier
- PIM-SSM & ASM
- PIM SPT
- PIM over Phy/VLAN/LAG

MPLS

- Static LSP
- MPLS LDP
- VPWS
- VPLS
- L3VPN

IP Service

- ARP, NDP
- DHCPv4/v6
- DNS
- Source and Destination NAT
- CGNAT
- MAP-E
- MAP-T

Tunnel

- Static/Dynamic VXLAN
- IPsec VPN(Hardware offload)
- Wireguard VPN
- PPPoE(Client & Server)

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Storm Suppression
- DAI
- 802.1x Authentication
- Portal Authentication
- Stateless/Stateful ACL
- GeoIP/GeoSite ACL
- Stateful Packet Inspection(SPI)
- IPSG v4/v6
- Unicast Reverse Path Forwarding (uRPF)

Quality of Service (QoS)

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification

- Strict Priority/DWRR Queue Scheduling
- Policing/Shaping
- Rate Limiting
- HQoS (Subscriber/User/User-group, Service-Level)

Reliability

- MC-LAG
- VRRPv2/v3
- BFD
- Monitor Link
- SLA
- Routing Track

Management

- Console, SSH, Telnet
- RestAPI, uCentral
- Industry Standard CLI(Klish)
- ZTP
- Syslog
- SNMP v1/v2/v3
- SPAN/ERSPAN
- Netflow/IPFIX
- AsterNOS Exporter (Prometheus)

Asteria-Unified Full-Stack Campus Network Controller



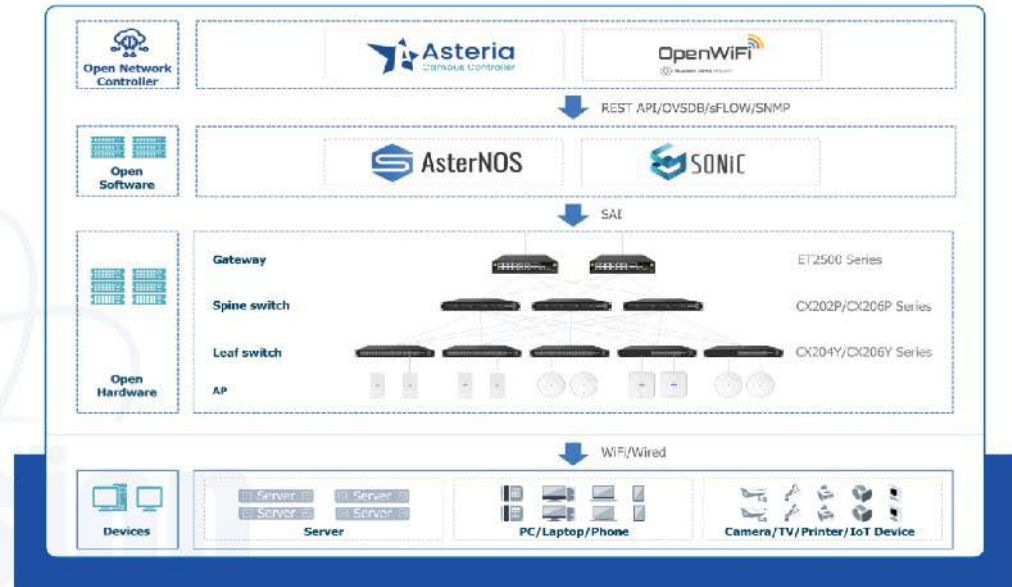
A TIP-based OpenWiFi compatible platform providing seamless orchestration for complex wired, wireless, and PON infrastructures.

- MSP Friendly Architecture:**

SaaS on Cloud or On-premises installation with multi-tenant and multi-site management, which is suitable for Managed Service Providers' business mode.

- Unified Full-Stack Visibility:**

Drag-and-drop customizable dashboard covering overall network health, device diagnostics, GPON stick status, and terminal information.



- Zero Touch Provisioning and Rapid Service Activation:**

Using built-in templates to pre-design topology, the devices can quickly obtain automatically generated configurations after power-on.

- Integrated Service Suite:**

Built-in AAA server and NAC system without 3rd-party license, supporting 802.1X, MAB, Portal authentication (account password or OAuth2.0) with custom portal pages.



04

DPU PLATFORMS

DPU Bare Metal Platforms



Open Networking Appliance | Ready for Custom Integration

Model Name	ET2508-4S4M8	ET2700-2P2S	ET3608-2P2S	ET3616-4P4S	ET3212A	ET3424A
Product Image						
Processor	1x Marvell OCTEON 10 CN102XX 8 Core ARM64 N2 @2.5GHz	1x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1x Marvell OCTEON TX2 CN9670 (24-Core)@2.2G	2x Marvell OCTEON TX2 CN9670 (24-Core)@2.2G
Network Interfaces	4 x 10GE SFP+, 4 x 2.5GE RJ45 8 x 1GE RJ45(PoE Optional)	2 x 100GE QSFP28 2 x 10GE SFP+	2 x 100GE QSFP28 2 x 10GE SFP+	2x 2x 100GE QSFP28 2x2x 10GE SFP+	2 x 100GE/40GE QSFP28/QSFP+ 12 x 10GE SFP+	2x 2x 100GE/40GE QSFP28/QSFP+ 2x 12x 10GE SFP+
Management Interfaces	1 x USB3.0 1 x Console RJ45	1 x USB3.0, 1 x Console RJ45 1 x MGMT RJ45	1 x USB3.0, 1 x Console RJ45 1 x MGMT RJ45	2 x USB3.0, 2 x Console RJ45 2 x MGMT RJ45	1 x USB2.0, 1 x Console RJ45 1 x MGMT RJ45	2 x USB2.0, 2 x Console RJ45 2 x MGMT RJ45
L3 Throughput	50 Gbps	100 Gbps	100 Gbps	2 x 100 Gbps	-	-
Memory	16GB DDR5 (Max 48GB)	16GB DDR5 (Max 48GB)	16GB DDR5 (Max 48GB)	2 x 16GB DDR5 (Max 48GB)	24GB DDR4(Max 192GB)	2x 24GB DDR4(Max 192GB)
Storage	64GB eMMC 5.1	120GB NVME SSD	120GB NVME SSD	2 x 120GB NVME SSD	64GB eMMC 5.1 2 x M.2 NVME	2 x 64GB eMMC 5.1 2 x 2 x M.2 NVME
Expansion Slots	M.2 E Key (WiFi 6E / 7) M.2 B Key (5G / LTE) M.2 M Key (AI / NVMe SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)
AI Capabilities	Up to 160 TOPS elastic AI computing performance Up to 100 TFLOPS @ bFP16					—
Power Supply	1 x Fixed PSU (AC 100-240V) 1 x 150W (w/o PoE) 1 x 270W(PoE)	1 Fixed PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V/DC 36-72V)	1+1 Hot Pluggable PSU (AC 100-240V/DC 36-72V)
Fan	2 x Fixed Fan Modules	2 x Fixed Fan Modules	1+1 Hot Pluggable Fan Modules	2+1 Hot Pluggable Fan Modules	2+1 Hot Pluggable Fan Modules	4+1 Hot Pluggable Fan Modules
PoE Support	Optional (Max 150W Budget)	—	—	—	—	—
Dimensions	44x220x310 mm / Half-width 1U	44x220x310 mm / Half-width 1U	44x440x470 mm / Standard 1U	44x440x470 mm / Standard 1U	44x440x560 mm / Deep 1U	44x440x560 mm / Deep 1U
Installation	Desktop / Rack-mount	Rack-mount	Rack-mount	Rack-mount	Rack-mount	Rack-mount
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 95% (non-condensing)	5% - 95% (non-condensing)	5% - 95% (non-condensing)	5% - 95% (non-condensing)	10% - 90% (non-condensing)	10% - 90% (non-condensing)
Energy Consumption	< 60W (Full configuration)		< 100W (Full configuration)	< 200W (Full configuration)	300W	500W

High-Performance SmartNIC Series



SmartNIC

Model Name	Helium EC2002P	Helium EC2004Y	RNIC802E
Product Image			
Main Chip	Marvell OCTEON TX2 CN9670 (DPU)	Marvell OCTEON TX2 CN9670 (DPU)	Altera Agilx AGIB027 (FPGA)
Cores/Logic	24-core ARM64	24-core ARM64	Quad-core ARM Cortex-A53
Host Interface	PCIe Gen4.0 x8	PCIe Gen4.0 x8	PCIe Gen5 x 16
Network Interface	2 x 100G QSFP28	4 x 25G SFP28	2 x 400G QSFP-DD
Throughput	120 Mpps (Max)	120 Mpps (Max)	Line Rate (up to 400G)
Memory	16GB-64GB DDR4	16GB-64GB DDR4	0-64GB DDR4 ECC
Storage	64GB eMMC 5.1	64GB eMMC 5.1	2Gbit Flash; MicroSD
NVMe Expansion	—	—	4 x M.2 x8 (Up to 8xSSD)
Offload Support	OVS, IPsec, SSL, 5G-UPF	OVS, IPsec, SSL, 5G-UPF	Custom RTL / P4
Software/OS	FusionNOS, DPDK, VPP	FusionNOS, DPDK, VPP	Quartus, Modelsim
Management	Micro USB, RJ45 Console	Micro USB, RJ45 Console	JTAG, USB-to-UART, 1G Management Port
Power Consum.	Max 60W; Typical 45W	Max 60W; Typical 45W	TDP 150W
Dimensions	111.15mm x 18.91mm x 194.35mm	111.15mm x 18.91mm x 178.48mm	111.15mm x 18.91mm x 218.48mm
Environment	0 – 35°C (32 – 95°F)	0 – 35°C (32 – 95°F)	0 – 35°C (32 – 95°F)



STANDALONE NETWORK OPERATING SYSTEMS

05

When you need our industry-leading Network Operating Systems to empower your existing infrastructure, Asterfusion offers a suite of independent software editions designed for seamless integration with third-party hardware.

Whether optimizing data centers with **AsterNOS for Broadcom**, accelerating user-space processing with **AsterNOS-VPP**, or orchestrating campus networks with **AsterAPNOS**, our software delivers enterprise-grade reliability and quarterly updates across validated white-box and server platforms.

Hardware Compatibility List (HCL)

Below are validated platforms for our suite.

Chipset Platform: Broadcom Trident 3 (TD3)

Software Features & Capabilities

Interface

- 10G/25G/40G/100G
- Interface Statistics
- Jumbo Frames (9216 Bytes)
- Digital Optical Monitoring (DOM)
- Virtual Interface

Layer 2 & Layer 3 Features

- 4096 VLANs
- MSTP
- LDCP
- LACP
- IPv4/v6 Dual Stack
- ARP, NDP
- SVI
- Routing Protocols: Static, OSPF v2/v3, BGP, MP-BGP, IS-IS

- Policy Based Routing (PBR)
- Route Map
- ECMP
- DHCPv4/v6

Virtualization Features

- VRF
- Static/Dynamic VXLAN
- VXLAN Centralized/Distributed Gateway
- EVPN Type 1/2/3/4/5
- Anycast Gateway
- Inter-VRF Route Leaking
- Routing Dynamic Population
- Symmetry IRB
- DCI

Quality of Service (QoS)

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification
- Strict Priority/DWRR Queue Scheduling
- WRED
- Policing/Shaping
- ECN
- PFC
- PFC Watchdog

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Storm Suppression
- TACACS+
- RADIUS
- CoPP

- **ACCTON:** AS7726-32X / DCS6500-48Z8C
- **CELESTICA:** DS2000 / DS3000
- **Community-Whitelisted TD3 Platforms**

Reliability

- MC-LAG
- VRRP v2/v3
- EVPN MultiHoming
- Monitoring Link
- BFD

Management

- Console, SSH, Telnet, REST API, NETCONF
- Industry Standard CLI(Klish)
- ZTP
- Syslog
- sFlow
- SNMP v1/v2/v3
- SPAN, ERSPAN
- AsterNOS Exporter (Prometheus)
- RoCE Status
- Grafana Dashboard

Hardware Compatibility List (HCL)

Below are validated platforms for the software suite:

Network Adapter Compatible List (VPP)

- **Intel:** Standard & QAT Devices
- **Broadcom:** NetXtreme S & E Series
- **Amazon:** Elastic Network Adapter (ENA)
- **Cisco:** Virtual Interface Card (VIC)
- **Google:** vNIC
- **Chelsio:** T4/T5
- **Marvell (Cavium):** Legacy Cavium Adapters
- **Marvell (QLogic):** FastlinQ QL41000 Series
- **Mellanox:** ConnectX Series (Support Pending)

Software Features & Capabilities

Interface

- Port Speed (NIC-dependent)
- Interface Statistics
- Jumble Frame (9122 Bytes)
- Digital Optical Monitoring (DOM)
- Virtual Interfaces

Layer 2 & Layer 3 Features

- 4096VLANs
- STP, MSTP
- QinQ
- LLDP
- BGP,MP-BGP
- OSPF v2/v3
- IS-IS
- RIP v1/v2
- Policy Based Routing (PBR)
- Static Routing
- Route Map
- VRF
- ECMP

Multicast

- IPv4/IPv6 Multicast Routing
- IGMP Snooping & Querier
- PIM-SSM & ASM
- PIM SPT
- PIM over Phy/VLAN/LAG

MPLS

- Static LSP
- MPLS LDP
- VPWS
- VPLS
- L3VPN

IP Service

- ARP, NDP
- DHCPv4/v6
- DNS
- Source and Destination NAT
- CGNAT
- MAP-E
- MAP-T

Tunnel

- Static/Dynamic VXLAN
- IPsec VPN
- Wireguard VPN
- PPPoE(Client & Server)

Security

- ACL for IPv4/v6
- Ingress/Egress ACL
- Storm Suppression
- DAI
- 802.1x Authentication
- Portal Authentication
- Stateless/Stateful ACL
- GeoIP/GeoSite ACL
- Stateful Packet Inspection(SPI)
- IPSG v4/v6
- Unicast Reverse Path Forwarding (uRPF)

Quality of Service (QoS)

- 8 Queues per Port
- 802.1p Based Classification
- DSCP Based Classification
- Strict Priority/DWRR Queue Scheduling

- Policing/Shaping
- Rate Limiting
- HCoS (Subscriber/User/User-group, Service-Level)

Reliability

- MC-LAG
- VRRPv2/v3
- BFD
- Monitor Link
- SLA
- Routing Track

Management

- Console, SSH, Telnet
- RestAPI, uCentral
- Industry Standard CLI(Klish)
- ZTP
- Syslog
- SNMP v1/v2/v3
- SPAN/ERSPAN
- Netflow/IPFIX
- AsterNOS Exporter (Prometheus)

Hardware Compatibility List (HCL)

Below are validated platforms for the software suite:

OpenWiFi Compatible AP Hardware

- Supporting various Wi-Fi 6/6E/7 enterprise platforms

Software Features & Capabilities

Wi-Fi / Radio Features

- Support for Wi-Fi 7 (802.11be) with backward compatibility
- Advanced multi-user technologies: OFDMA, MU-MIMO, BSS Coloring
- Fast roaming support: 802.11k / 802.11v / 802.11r
- Multicast-to-Unicast conversion
- Multiple SSID support
- Client isolation (based on SSID and VLAN)
- DFS (Dynamic Frequency Selection)
- ACS (Automatic Channel Selection)
- Configurable RF on/off
- Configurable per-radio client capacity
- Configurable radio parameters: Channel selection, Channel bandwidth, MIMO mode, Transmit power

Network Features

- VLAN support (IEEE 802.1Q)
- VXLAN tunneling (encapsulation)
- DHCP Client and DHCP Server
- Static management IP address
- Access Control Lists (ACL)
- LLDP (Link Layer Discovery Protocol)
- Optical module detection (SFP/SFP+ monitoring)
- Quality of Service (QoS): Traffic rate limiting, Priority-based traffic scheduling

Security Features

- Comprehensive wireless security: WPA / WPA2 / WPA3 / SAE
- AAA (Authentication, Authorization, Accounting): Portal authentication (Portal 2.0), RADIUS authentication, MAC authentication, Dynamic VLAN assignment, Accounting support
- Emergency SSID (fail-safe SSID for network access)

High Availability

- NTP (Network Time Protocol)
- Standard uCentral interface for reporting: AP status and inventory, Client information, Health and performance metrics
- Device lifecycle management: Firmware upgrade, Reboot and factory reset, Patch deployment
- ZTP (Zero Touch Provisioning)
- Secure remote access via SSH
- Cloud-based packet capture
- System logging and Syslog client support
- Client event tracking, including: Association / disassociation, DHCP events, Access rejection
- One-click log collection
- OpenWiFi 4.2 Compatible



06

OPEN PACKET BROKER

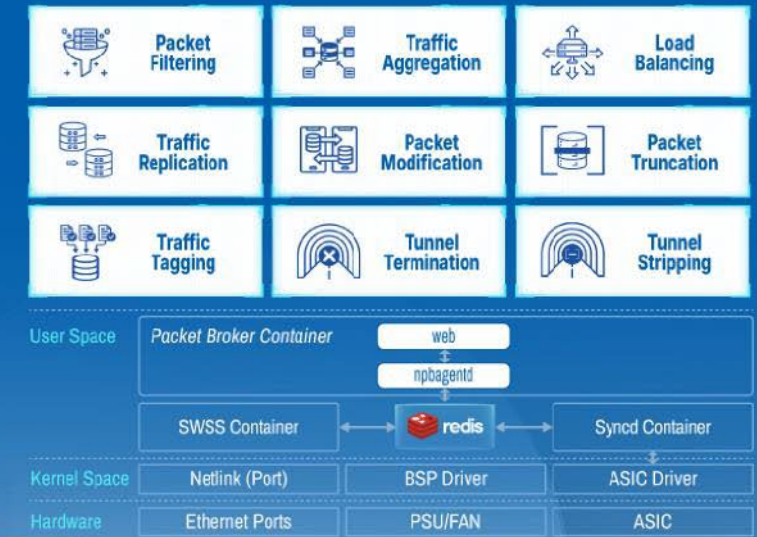
Open Packet Broker Powered by SONiC

PB-APP on AsterNOS

SONiC Powered NPB Solution, PB World first Packet Broker for 800G.

Key Features

- Active Inline Mode Deployment:**
 Move beyond passive monitoring to enable inline traffic orchestration.
- Advanced Packet Features Capability:**
 Leverage external DPU or DPU clusters to infinitely scale high-performance, complex packet features on-demand.
- Micro-Burst Mitigation with Flowlet:**
 Eliminate elephant-flow-induced congestion through flowlet-based load balancing.
- Tunnel-Aware Traffic Distribution:**
 Hashing on inner headers for efficient processing of encapsulated traffic.
- Unified Packet Broker Platform:**
 All-in-one design (ASIC + optional DPU) integrating advanced features.
- Secure at Line Rate:**
 MACsec encryption protects sensitive traffic at line rate.
- Operational Simplicity:**
 Automated configuration via Ansible and real-time observability with Prometheus Exporter.



PB-APP Preloaded HW Platforms



Standard Feature-Ready Platforms

Model Name	Port Configuration	Switching Capacity	Packet Buffer	Wildcard Filter*	Exact Match	Power Supplies	Rack Units
CX864E-N	64x 800G OSFP, 2x 10G SFP+	51.2 Tbps	200+ MB	Up to 48K		1+1 Hot-pluggable	2U
CX664D-N	64x 200G QSFP56, 2x 10G SFP+	12.8 Tbps	70 MB	Up to 21K		1+1 Hot-pluggable	2U
CX564P-N	64x 100G QSFP28, 2x 10G SFP+	6.4 Tbps	70 MB	Up to 21K		1+1 Hot-pluggable	2U
CX732Q-M-H	32x 400G QSFP-DD, 2x 10G SFP+	12.8 Tbps	48 MB	Up to 4.5K	256K	1+1 Hot-pluggable	1U
CX532P-M-H	32x 100G QSFP28, 2x 10G SFP+	3.2 Tbps	24 MB	Up to 4.5K	256K	1+1 Hot-pluggable	1U
CX308P-48Y-M-H	8x 100G QSFP28, 48x 25G SFP28	2.0Tbps	24 MB	Up to 4.5K	256K	1+1 Hot-pluggable	1U
CX202P-24Y-M-H	24x 25G SFP28, 2x 100G QSFP28	800 Gbps	8 MB	Up to 13K	256K	1+1 Hot-pluggable	1U
CX206P-48S-M-H	48x 10G SFP+, 6x 100G QSFP28	1.09 Tbps	6 MB	Up to 13K		1+1 Hot-pluggable	1U
CX206P-24S-M-H	24x 10G SFP+, 6x 100G QSFP28	1.09 Tbps	6 MB	Up to 4.5K		1+1 Hot-pluggable	1U
CX102S-16GT-M-SWP	16x 1G RJ45 PoE+, 2x 10G SFP+	72 Gbps	3 MB	Up to 3K		1 Fixed Power	Half-width 1U
CX102S-8GT-M-SWP	8x 1G RJ45 PoE+, 2x 10G SFP+	72 Gbps	3 MB	Up to 3K		1 Fixed Power	Half-width 1U

* Value ACL: Theoretical maximum ACL capacity under fully dedicated hardware resource allocation.

PB-APP Feature Lists



Standard Feature

Category	Feature	Description
Interfaces	Port Density	1G / 10G / 25G / 40G / 100G / 400G (Supports Breakout Mode)
	Physical Management	FEC, Loopback, DDM/DOM (Optical Power, Temp, Vendor Info)
	Port Characterization	Configurable Port Types: Service, Network, Tool, and Hybrid
Traffic Engineering	L2-L4 Load Balancing	Symmetric Hash (IPv4/v6, MAC, Port); Custom Hash Seeds; Flex/Static/Weight Modes
	Header Stripping	VXLAN, MPLS, GTP, GRE, ERSPAN, PPPoE, IPinIP, CFP
	Packet Modification	VLAN Tagging (Add/Mod/Del), 128B Truncation, L2/L3 Timestamping
Traffic Steering	Advanced Filtering	L2-L4 Match: MAC, IPv4/v6 Mask, EtherType, DSCP, TCP Flags, ICMP, VNI
	Matching Intelligence	Inner-layer matching (post-stripping), MPLS Inner Match, TX-direction filtering
	Forwarding Policies	SPAN, RSPAN, ERSPAN; N:M Replication; Redirect, Forward, & Drop
System & Ops	System Management	Web UI, CLI (Console/SSH/Telnet), RESTful API; License & Batch Config
	Monitoring & Alarms	Real-time Stats (Pkts/Bytes, Error/Drop); Temp, Fan, & PSU Alarms
	Ops & Integration	DevOps (Ansible), LLDP, PTP/NTP Sync, SNMP, Syslog, Prometheus

Advanced Feature-Ready Platforms



Advanced Feature-Ready Platforms

Model Name	ET3608-2P2S	ET3616-4P4S	ET3212A	ET3424A
Product Image				
Processor	1 x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1 x Marvell OCTEON 10 CN103XX 8 Core ARM64 N2 @2.5GHz	1 x Marvell OCTEON TX2 CN9670 (24-Core)@2.2G	2 x Marvell OCTEON TX2 CN9670 (24-Core)@2.2G
Network Interfaces	2 x 100GE QSFP28 2 x 10GE SFP+	2x 2x 100GE QSFP28 2x2x 10GE SFP+	2 x 100GE/40GE QSFP28/QSFP+ 12 x 10GE SFP+	2x 2x 100GE/40GE QSFP28/QSFP+ 2x 12x 10GE SFP+
Management Interfaces	1 x USB3.0, 1 x Console RJ45 1 x MGMT RJ45	2 x USB3.0, 2 x Console RJ45 2 x MGMT RJ45	1 x USB2.0, 1 x Console RJ45 1 x MGMT RJ45	2 x USB2.0, 2 x Console RJ45 2 x MGMT RJ45
L3 Throughput	100 Gbps	2 x 100 Gbps	-	-
Memory	16GB DDR5 (Max 48GB)	16GB DDR5 (Max 48GB)	24GB DDR4(Max 192GB)	2x 24GB DDR4(Max 192GB)
Storage	120GB NVME SSD	120GB NVME SSD	64GB eMMC 5.1 2 x M.2 NVME	2 x 64GB eMMC 5.1 2 x 2 x M.2 NVME
Expansion Slots	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)	M.2 B Key (5G/LTE) M.2 M Key (AI / SSD)
AI Capabilities	Up to 160 TOPS elastic AI computing performance Up to 100 TFLOPS @ bFP16			—
Power Supply	1+1 Hot Pluggable PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V)	1+1 Hot Pluggable PSU (AC 100-240V / DC 36-72V)	1+1 Hot Pluggable PSU (AC 100-240V / DC 36-72V)
Fan	1+1 Hot Pluggable Fan Modules	2+1 Hot Pluggable Fan Modules	2+1 Hot Pluggable Fan Modules	4+1 Hot Pluggable Fan Modules
Dimensions	44x440x470 mm / Standard 1U	44x440x470 mm / Standard 1U	44x440x560 mm / Deep 1U	44x440x560 mm / Deep 1U
Installation	Rack-mount	Rack-mount	Rack-mount	Rack-mount
Operating Temperature	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)	0 – 45°C (32 – 113°F)
Relative Humidity	5% - 95% (Non-condensing)	5% - 95% (Non-condensing)	10% - 90% (Non-condensing)	10% - 90% (Non-condensing)
Energy Consumption	< 100W (Full Configuration)	< 200W (Full configuration)	300W	500W
DPU ACL(48G)	Up to 10,000,000 Rules	Up to 20,000,000 Rules	Up to 10,000,000 Rules	Up to 20,000,000 Rules

Advanced Packet Broker Feature Lists



Advanced Feature

Category	Feature	Description
Traffic Processing & Forwarding	Deep Protocol & Pattern Intelligence	Multi-layer protocol parsing (VLAN/VXLAN/SSL) combined with sophisticated keyword and URL filtering for granular traffic visibility.
	Packet Truncation & Data Masking	Supports packet truncation and sensitive data desensitization.
	Hardware Packet Deduplication	High-performance hardware-based packet de-duplication with configurable matching fields.
	Packet Reassembly	Supports IP fragment reassembly and TCP session reassembly.
	Tunnel Termination & Encapsulation	Main stream tunnel Termination & encapsulation.
	NetFlow & Traffic Sampling	NetFlow generation and Packet sampling output.
4G/5G Mobile	Signaling Decoding & Decryption	Full stack 4G/5G signaling decoding (S1/S11/N2/N4/N11/N12) with NAS/5GS decryption (EEA/NEA1-3), NF topology discovery, and link quality diagnostics
	Subscriber-Aware Correlation & Filtering	Stateful 3G/4G/5G correlation with IMSI/IMEI/MSISDN tagging, GTP stripping, inner 5-tuple filtering, and VoLTE/SIP-based traffic distribution.
	Protocol-Wide Telemetry & Statistics	4G/5G signaling (S1/N2/N4/S11) and GTPU statistics, IPv6 monitoring, and PFCP/Diameter/IMSI telemetry.
Management & Analytics	Management Interfaces	CLI (Serial/SSH), REST API, and Web UI management interfaces.
	Hardware Statistics	Provides statistics for CPU usage, memory utilization, and interface throughput.
	Traffic Analytics	Supports rule hit counters, deduplication and reassembly statistics, and NetFlow analytics.

Integrated Smart Packet Broker CX306P-48Y-M-H

Dual-Engine Power for Unified Traffic Intelligence The CX306P combines the wire-speed efficiency of **Marvell ASIC** with the deep processing power of **dual Marvell OCTEON CN103 DPUs** in a single-machine solution.

4,500 Rules

Wildcard Filter

256,000 Rules

Exact Match

10,000,000 Rules

Single DPU ACL (48G)

Application Scenarios

Scenario 1: High-Performance Network Analysis

CPU/ASIC Runs **PB-APP** to offer standard packet broker features.

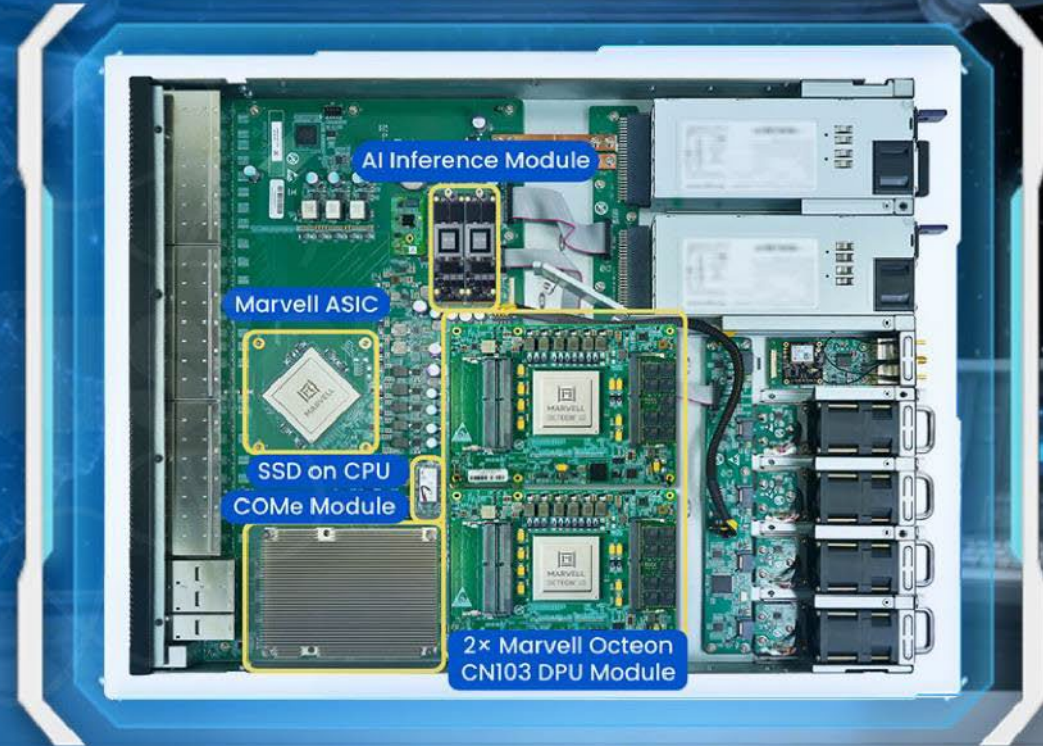
DPU Runs **FusionNOS** for advanced packet broker features.

Scenario 2: Open Development & AI-Driven Intelligence

CPU/ASIC Runs **PB-APP** to offer standard packet broker features.

DPU Runs **Standard Linux Distributions** for 3rd party application development.

DPU M.2 Slot support optional **AI inference engine** with up to 160 TOPS INT8 inference performance.



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Optical transceivers from 1G to 800G with superior performance, reliability and compatibility.



Interconnect Transceiver Module



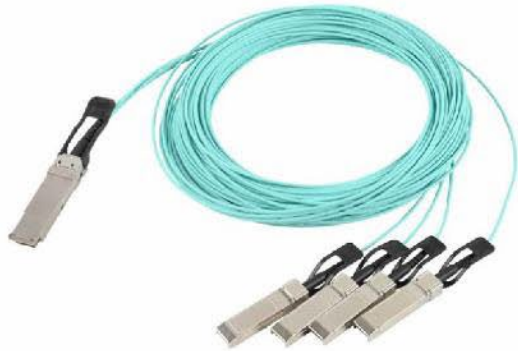
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Interconnect Cables Portfolio (1G-800G)



This cable is **100% compatible with our switches** and also works seamlessly with major industry brands, including Cisco, Juniper, Arista, HPE/Aruba, Dell, Huawei, Netgear, and TP-Link, ensuring plug-and-play reliability. It is available in **speeds from 10G to 800G**, covering all deployment needs from access to core networks.

AOC Cables



High-speed optical interconnect for longer reach and low latency.

AEC Cables



Active electrical cables for extended reach and improved signal integrity.

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Cost-effective copper interconnect for short-distance high-density deployment.

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