

Product Highlights

Port Configurations

- CX532P-N:
32 x 100G QSFP28
- CX564P-N:
64 x 100G QSFP28
- CX664D-N:
64 x 200G QSFP56
- CX732Q-N:
32 x 400G QSFP-DD
- CX864E-N:
64 x 800G OSFP
- Wired speed L2 and L3 forwarding

Hardware

- ~500ns port-to-port latency
- Compact 1RU/2RU fixed units
- N+1 Redundant fans
- 1+1 Redundant power supplies
- ZR/ZR+ module supported

AsterNOS

- SONiC based enterprise distribution
- Single binary for all models
- Standard L2/L3 features

Product Applications

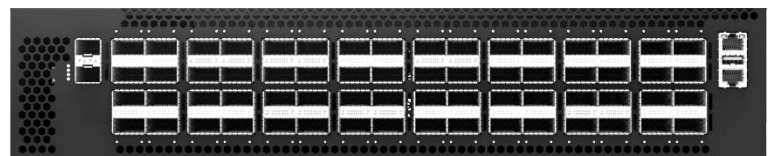
- AI training & inference fabric
- Cloud data center
- High performance computing
- Distributed storage

Overview

As data traffic surges driven by AI, 5G, and cloud computing, the demand for high-speed, low-latency networking solutions has skyrocketed. Asterfusion CX-N series ultra-low latency switches are at the forefront of this evolution, addressing the needs of high-performance applications such as AI training and inference. CX-N series switches deliver bandwidth scalable from 100G to 800G, while achieving ~500ns latency based on Marvell Teralynx ASIC. Built with energy-efficient ASICs, they ensure high throughput and reliability with minimal power consumption, making them essential for next-generation data centers.



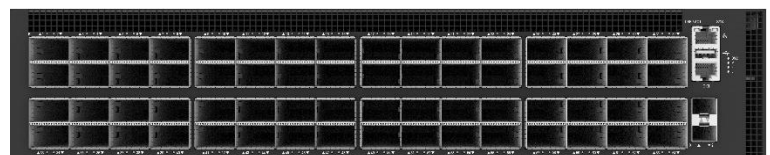
CX532P-N



CX564P-N/CX664D-N



CX732Q-N



CX864E-N

The CX864E-N delivers up to 51.2 Tbps throughput, achieving industry-leading 800GbE port density within a single-chip architecture. To meet the rigorous demands of modern AI/ML fabrics, the CX864 incorporates advanced telemetry, adaptive routing, and granular congestion control mechanisms. By optimizing traffic distribution and eliminating network bottlenecks, the platform significantly reduces Job Completion Time (JCT) and accelerates the execution of both AI training and inference workloads.

Combined with AsterNOS, the CX-N series deliver advanced features for cloud data center, DCI, and AI fabrics.

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, Layer-3 and virtualization functionalities across all products, which makes it possible that customers can have consistent experience on campus switches, data center switches, and routers. For details of the latest AsterNOS version for data center switches, visit: <https://asternos.com/community/space/aidc-fabric/home>

Flowlet-Based Adaptive Routing and Packet Spray

The CX864E-N features flowlet-based adaptive routing, detecting inter-packet gaps to partition elephant flows into granular flowlets. By dynamically rebalancing traffic across paths, it eliminates traditional ECMP link imbalances in AIDC environments, ensuring reduced Job Completion Time (JCT) and maximum fabric utilization for RoCEv2-intensive AI/ML workloads. Additionally, the CX864E-N supports Packet Spray for maximum fabric efficiency, enabling optimized performance when paired with NICs capable of out-of-order reassembly.

Prometheus Exporter and Grafana Monitoring Solution

As a containerized operating system based on the Linux kernel, AsterNOS is well compatible with open source operation, maintenance and management solutions. We provide AsterNOS Exporter, which runs as a container in the operating system. It can collect the operating status of the switch in real time and send the collected metrics to the Prometheus server, and the standard Grafana dashboard will display it on the front end.

Asterfusion Optics and Cables

Asterfusion switches support a wide range of 10G, 25G, 100G, 200G, 400G and 800G ports. For details about the different optical modules compatible with Asterfusion switches, visit:

<https://cloudswit.ch/product-category/optical-transceivers/>

Interface

- 10G/25G/40G/100G/200G /400G/800G
- Interface Statistics
- Jumbo Frames (9216 Bytes)
- Digital Optical Monitoring (DOM)
- Virtual Interfaces

Layer 2 & Layer 3

- 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 Features

- 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 Queueing
- DWRR Scheduling
- WRED
- Policing/Shaping
- Rate limiting
- ECN
- PFC
- PFC Watchdog
- DCBX
- RoCEv2
- Easy RoCE (One-step RoCE Configuration)
- Fast CNP

AIDC Intelligent

Features

- Adaptive Routing and Switching (ARS)
- Packet Spray
- Load Balance based on QP
- Static/Dynamic Intelligent Routing
- In-band Network Telemetry (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

- 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.8275.1, ITU-T G.8275.2, SMPTE-2059-2, AES67
- PTP Clock Type: GrandMaster, BC, OC, TGM, T-BC, T-BC-P, T-TSC, T-TSC-P
- SyncE
- AsterNOS Exporter (Prometheus)
- Grafana Dashboard



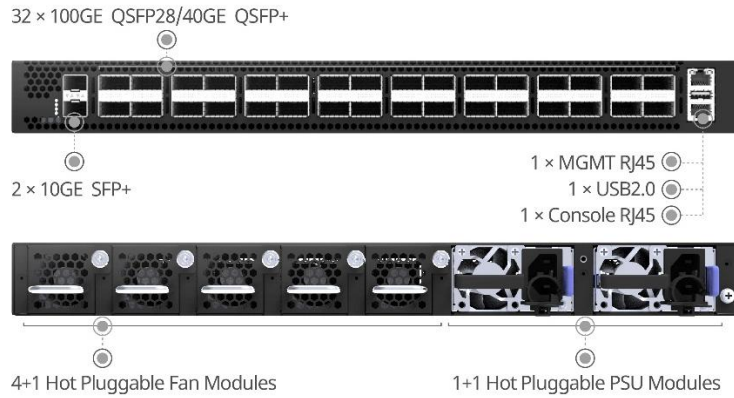
Specifications

Product Model		CX532P-N	CX564P-N	CX664D-N
Network interface	200GE(QSFP56)	-	-	64
	100GE(QSFP28)	32	64	-
	10GE(SFP+)	2	2	2
Switching chip	Chip model	Marvell Teralynx		
	Switching capacity	3.2Tbps	6.4Tbps	12.8Tbps
Control and manage CPU (COMe)	CPU	Broadwell DE D-1508		
	Memory	16GB DDR4, extensible to 96GB		
	SSD	256GB M.2 SATA		
Management interface	USB	1xUSB2.0		
	Console	1xConsole RJ45		
	MGMT	1xMGMT GE RJ45		
Electrical characteristics	Fan redundancy (Hot-pluggable)	4+1	3+1	3+1
	Power redundancy (Hot-pluggable)	1+1	1+1	1+1
	Input voltage	100-240V AC 36-72V DC		
	Maximum power consumption	710W	850W	950W
Dimensions	Height	1U	2U	
	Dimensions (WxHxD, mm)	440x44x515	440x88x560	
Operating conditions	Operating temperature	Front-to-Rear: 0 – 40°C / Rear-to-Front: 0 – 35°C		
	Relative humidity	5% - 90% (non-condensing)		

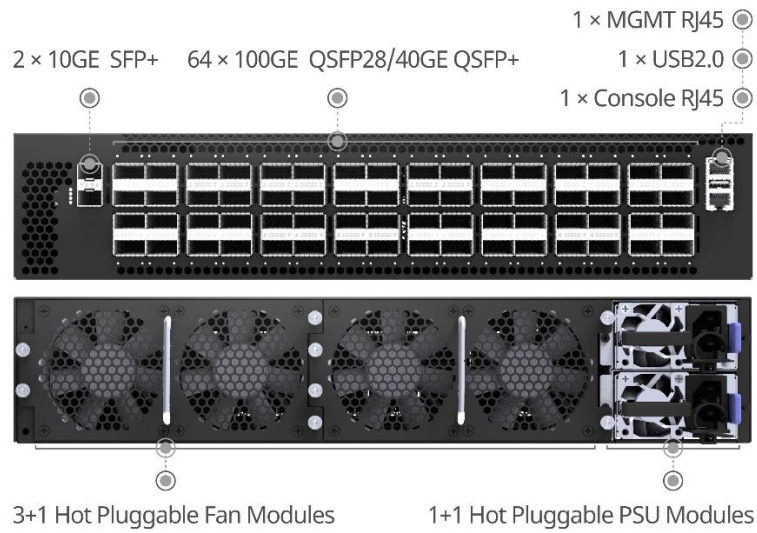


Product Model		CX732Q-N	CX864E-N
Network interface	800GE(OSFP)	-	64
	400GE(QSFP28)	32	-
	10GE(SFP+)	2	2
Switching chip	Chip model	Marvell Teralynx	
	Switching capacity	12.8Tbps	51.2Tbps
Control and manage CPU (COMe)	CPU	Broadwell DE D-1508	Intel Xeon
	Memory	16GB DDR4, extensible to 96GB	32GB DDR4
	SSD	256GB M.2 SATA	256GB M.2 SATA
Management interface	USB	1xUSB2.0	
	Console	1xConsole RJ45	
	MGMT	1xMGMT GE RJ45	
Electrical characteristics	Fan redundancy (Hot-pluggable)	5+1	3+1
	Power redundancy (Hot-pluggable)	1+1	1+1
	Input voltage	200-240V AC 200V-320V DC	
	Maximum power consumption	970W	2400W (with full ports of 800G-SR8)
Dimensions	Height	1U	2U
	Dimensions (WxHxD, mm)	440x44x515	440x87x650
Operating conditions	Operating temperature	0 - 40°C	
	Relative humidity	5% - 90% (non-condensing)	

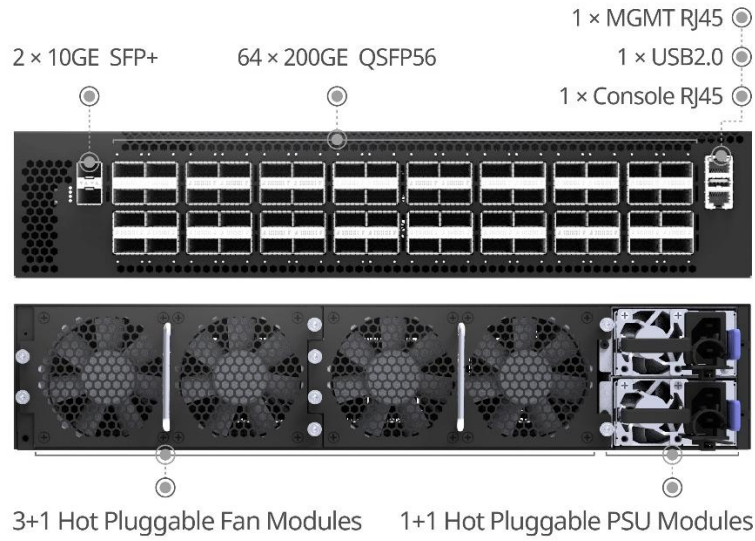
Panel Illustration



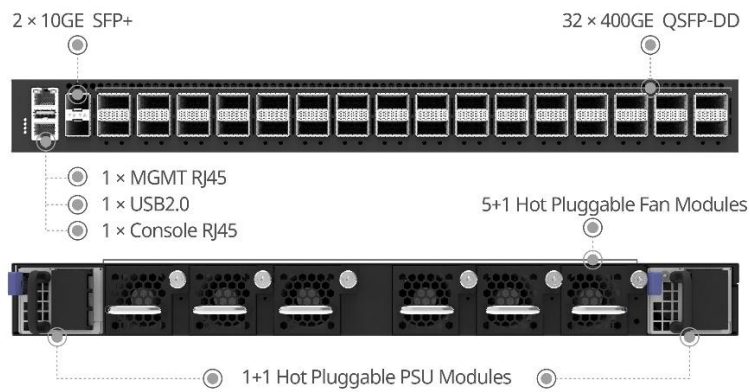
CX532P-N



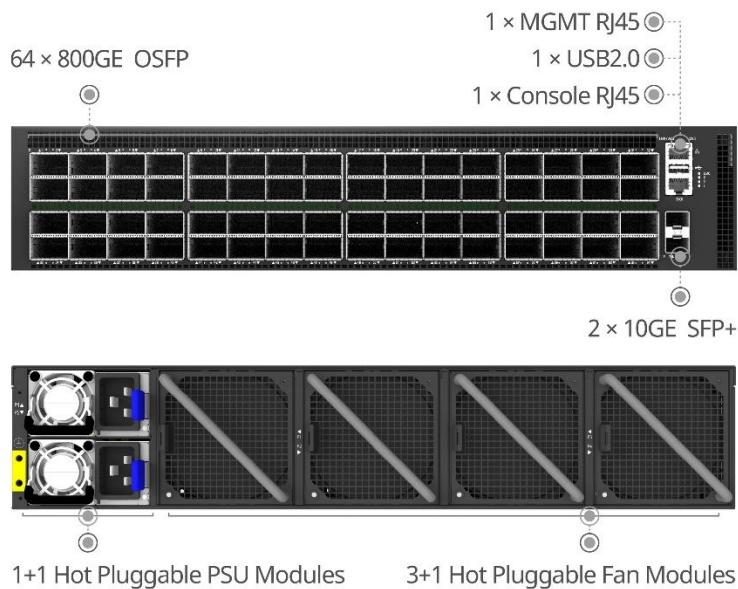
CX564P-N



CX664D-N



CX732Q-N



CX864E-N



Ordering Information

Part Number	Description
CX532P-N	Ultra-low latency AIDC switch system, 32x100G QSFP28, hot-pluggable 1+1 PSU, hot-pluggable 4+1 FANs, front-to-power airflow
CX564P-N	Ultra-low latency AIDC switch system, 64x100G QSFP28, hot-pluggable 1+1 PSU, hot-pluggable 3+1 FANs, front-to-power airflow, 2RU height
CX664D-N	Ultra-low latency AIDC switch system, 64x200G QSFP56, hot-pluggable 1+1 PSU, hot-pluggable 3+1 FANs, front-to-power airflow, 2RU height
CX732Q-N	Ultra-low latency AIDC switch system, 32x400G QSFP-DD, hot-pluggable 1+1 PSU, hot-pluggable 5+1 FANs, front-to-power airflow
CX864E-N	Ultra-low latency AIDC switch system, 64x800G OSFP, hot-pluggable 1+1 PSU, hot-pluggable 3+1 FANs, front-to-power airflow, 2RU height
Optional Components	
HW-WNT-1Y- CX532P-N	Hardware platform warranty for CX532P-N series, 1 Year
AsterNOS-UG-1Y- CX532P-N	Major version upgrade of AsterNOS for CX532P-N series, 1 Year
HW-WNT-1Y- CX564P-N	Hardware platform warranty for CX564P-N series, 1 Year
AsterNOS-UG-1Y- CX564P-N	Major version upgrade of AsterNOS for CX564P-N series, 1 Year
HW-WNT-1Y- CX664D-N	Hardware platform warranty for CX664D-N series, 1 Year
AsterNOS-UG-1Y- CX664D-N	Major version upgrade of AsterNOS for CX664D-N series, 1 Year
HW-WNT-1Y- CX732Q-N	Hardware platform warranty for CX732Q-N series, 1 Year
AsterNOS-UG-1Y- CX732Q-N	Major version upgrade of AsterNOS for CX732Q-N series, 1 Year
HW-WNT-1Y- CX864E-N	Hardware platform warranty for CX864E-N series, 1 Year
AsterNOS-UG-1Y- CX864E-N	Major version upgrade of AsterNOS for CX864E-N series, 1 Year