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, high port density with multi-speed combination
- N+1 Redundant fans
- 1+1 Redundant power supplies

AsterNOS

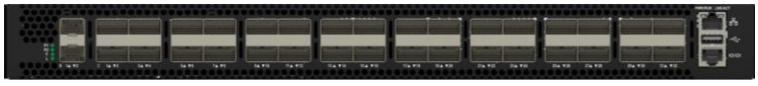
- SONiC based enterprise distribution
- Single binary for all models
- Standard L2/L3 features

Product Applications

- Cloud data center
- High performance computing
- Distributed storage
- AIDC

Overview

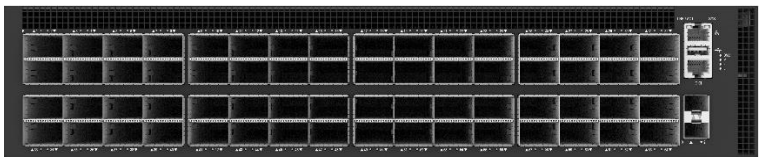
As data traffic surges driven by AI, 5G, and cloud computing, the demand for high-speed, low-latency networking solutions has skyrocketed. Asterfusion CX-N series ultra-low latency switches are at the forefront of this evolution, addressing the needs of high-performance applications such as AI training 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

Compliant with UEC standards, it features comprehensive open APIs, facilitating seamless integration for data centers and HPC clusters. As a vendor-neutral network device, it is compatible with heterogeneous GPUs and network cards from various vendors. With industry-leading low latency and high reliability, the Asterfusion CX864E-N Open Ultra Ethernet Switch stands as the premier choice for data centers in the AI era.

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://help.cloudswit.ch/portal/en/kb/asternos-for-data-center/versions

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/

Layer 2 Features

- 4096 VLANs
- Multiple Spanning Tree Protocol (MSTP)
- Link Aggregation Control Protocol (LACP)
- 128 LAG groups / 64 LAG members
- Multi-Chassis Link Aggregation (MC-LAG)
- Link Layer Discovery Protocol (LLDP)
- Jumbo Frames (9K Bytes)
- Storm Suppression
- Port Isolation
- Monitoring Link

Layer 3 Features

- Routing Protocols: OSPF, OSPFv3, BGP, MP-BGP, IS-IS
- Equal Cost Multipath Routing (ECMP)
- VRF
- Bi-Directional Forwarding Detection (BFD)
- Route Maps
- VRRP
- Policy Based Routing (PBR)
- AIDC Intelligent Routing

Virtualization Features

- VXLAN Routing and Bridging
- Anycast Gateway
- Distributed/Centralized Gateway
- Ethernet Auto Discovery
- Symmetry IRB
- EVPN Multi-homing

Security Features

- IPv4/IPv6 Ingress & Egress ACLs using User-defined fields
- Control Plane Policing (CoPP)
- Service ACLs
- TACACS+
- RADIUS

Quality of Service (QoS)

- 802.1p based classification
- DSCP based classification and Remarking
- Strict priority queueing
- DWRR Scheduling
- Port/Queue Based Traffic Shaping
- Rate limiting
- Explicit Congestion Notification (ECN)
- Per-Priority Flow Control (PFC)
- PFC Watchdog
- Data Center Bridging Extensions (DCBX)
- RoCEv2
- One-step RoCE Configuration

Management and Monitoring

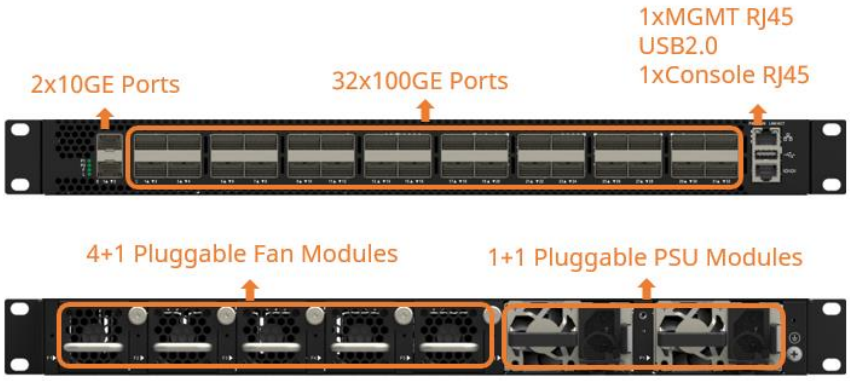
- Console, SSH, Telnet, REST API, NETCONF
- Management over IPv6
- Industry Standard CLI
- Syslog
- Zero Touch Provisioning (ZTP)
- PTP IEEE 1588v2 (TC and BC)
- Containerized Custom Tools
- SNMPv2, SNMPv3, SNMP Trap
- SPAN, ERSPAN
- sFlow
- In-band Network Telemetry (INT)
- Buffer Drop Capture
- High Delay Capture
- AsterNOS Exporter (Prometheus)
- Grafana Dashboard
- RoCE Status
- Prometheus Alarm & Alert

Specifications

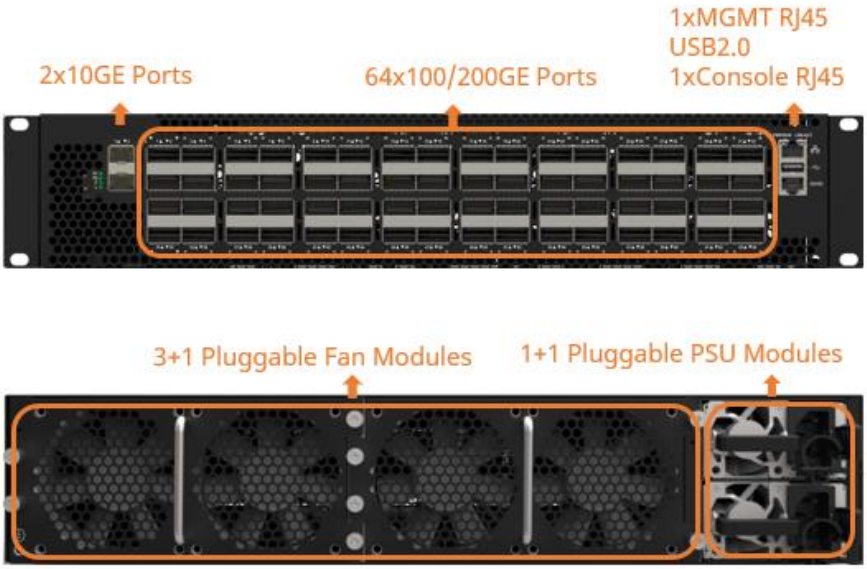
Product Model		CX532P-N	CX564P-N	CX664D-N
Network interface	200GE(QSFP56)	-	-	64
	100GE(QSFP28)	32	64	-
	10GE(SFP+)	2	2	2
Switching chip	Chip model	Marvell Teralynx		
	Switching capacity	3.2Tbps	6.4Tbps	12.8Tbps
Control and manage CPU (COMe)	CPU	Broadwell DE D-1508		
	Memory	16GB DDR4, extensible to 96GB		
	SSD	128GB/-, 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	820W	820W
Dimensions	Height	1U	2U	
	Dimensions (WxHxD, mm)	440x44x515	440x88x560	
Operating conditions	Operating temperature	0 – 45℃		0 – 40℃
	Relative humidity	10% - 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 SODIMM
	SSD	128GB/-, 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	100-240V AC 36-72V DC	100-240V AC HVDC 200V~320V
	Maximum power consumption	970W	2200W (with full ports of 800G-SR8)
Dimensions	Height	1U	2U
	Dimensions (WxHxD, mm)	440x44x515	440x88x650
Operating conditions	Operating temperature	0 – 40℃	
	Relative humidity	10% - 90% (non-condensing)	

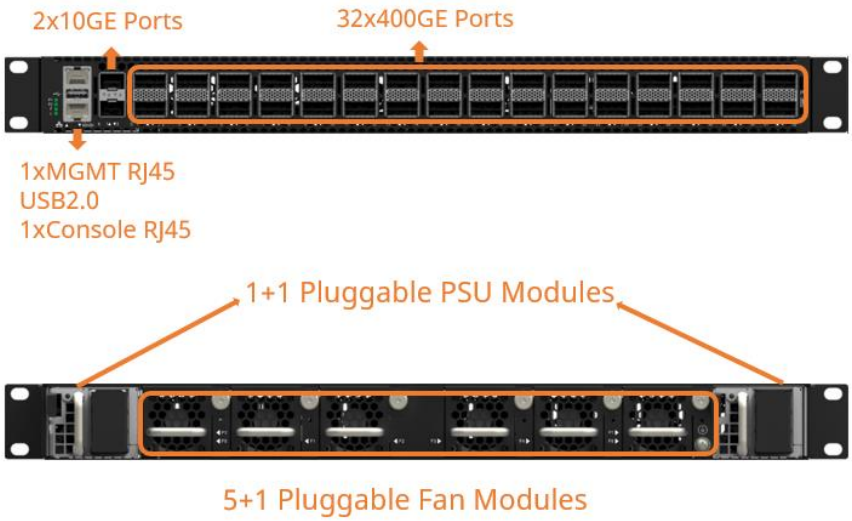
Panel Illustration



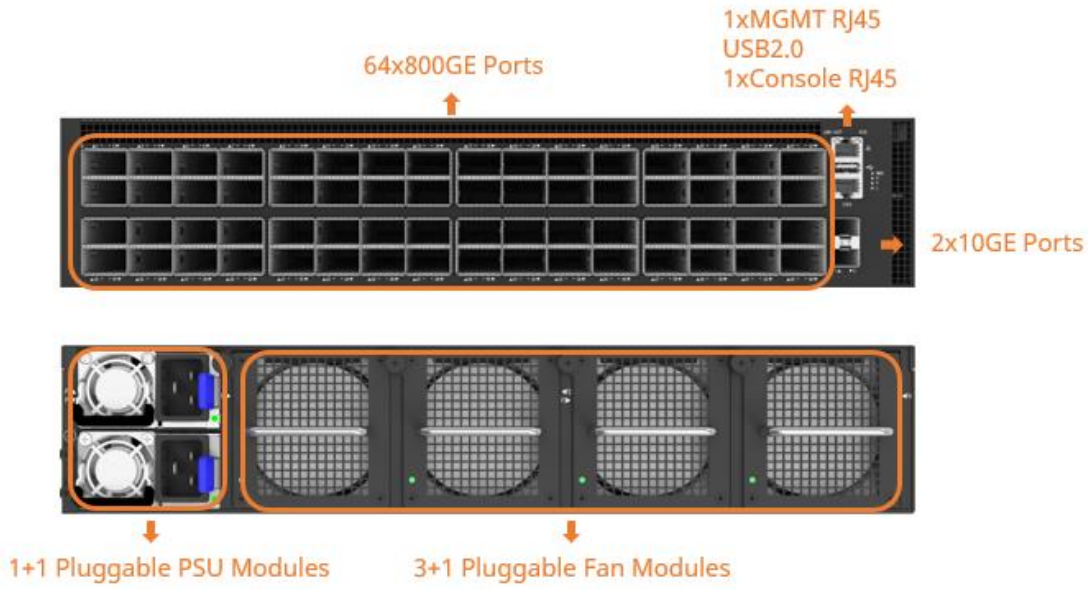
CX532P-N



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