

Asterfusion CX532P-N Switch

High-Performance low latency leaf switch for Cloud, NVME and AI networking scalability with 32 x 100G/40G (QSFP28) interfaces

Highlights

- Compact 1RU standards-based open network switch with SONiC enterprise distribution AsterNOS software preloaded
- Deployment-proven Innovium Teralynx switching ASIC and Intel Multi-core X86 as control CPU
- Industry leading ultra-low latency capability.
- 1+1 Redundant Power Supply
- 4+1 Redundant Fan Modules
- Supports VXLAN, EVPN, DCTCP, DCQCN features for medium and large data centers and large enterprise networks.



Product Overview

The Asterfusion CX532P-N switch is an advanced best-in-class, open-source network platform that provides 3.2 Tbps capacity, standards-based L2/L3 switching ability to stay ahead of evolving service demands driven by cloud computing requirements for medium to large cloud data centers, as well as private cloud, storage and AI interconnecting scenarios.

Built on the deployment-proven Innovium Teralynx switching ASIC, this open network switch is preloaded with AsterNOS, a feature-rich and high-quality assured enterprise NOS distribution of SONiC which is a container-based application development and deployment makes the switch easy to expand new functionalities even by users. It supports complete Layer 3 IPv4 and IPv6 routing protocols as well as functions such as VXLAN and EVPN for virtual network expansion. In addition to advanced data center functions, DCB, ECN, RoCE, DCTCP, and DCQCN are provided to deliver low-latency, zero packet loss, non-blocking Ethernet.

Furthermore, it supports features like INT to provide end-to-end network visibility and BFD to provide fast failure detection which simplifies network operation even under heavy traffic usage.

This powerful next-generation switch can be deployed as top of rack (ToR) switch supporting 10/25GbE to servers with 40/100GbE, or as a spine switch supporting 40/100GbE spine interconnects, enabling scale-out architectures and eliminating the need for costly, oversized chassis switches in the data center.



Operating System- AsterNOS

Enabling simple, plug-and-play deployments, the Asterfusion CX532P-N switch is delivered as an integrated, turnkey solution that is shipped with AsterNOS operating system, 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. AsterNOS also provides full set of RESTful APIs for switch daily configurations and operations which helps any applications can integrate the hardware gear as easy as software based virtual switches.

Asteria Fabric Controller (AFC)

The Asteria Fabric Controller (AFC) is a Cloud SDN Controller designed and developed by Asterfusion for seamless integration into OpenStack based cloud OS or standalone deployment turning clusters of switches into a single virtual fabric.

In-band Network Telemetry

To help customers build a "never fail" data center network, CX532P-N switch supports INT (In-band Network Telemetry) which provides accurate and comprehensive real-time network telemetry information including port interfaces, packet latency, packet queue lengths, etc. Cloud data center network administrators can leverage INT information to optimize their business applications and network operations, helping to build efficient, intelligent and highly resilient data center networks.

Interface flexibility

Asterfusion CX532P-N switch can be deployed as top of rack (ToR) switch supporting 10/25GbE to servers with 40/100GbE, or as a spine switch supporting 40/100GbE spine interconnects, and each QSFP28 port can be configured as 40/100GbE, or as 4x 25GbE or 4x 10GbE via breakout cables.

Industry-leading ultra-low latency

The Asterfusion CX532P-N offers industry-leading low latency switching capabilities as low as ~500ns in most application scenarios. Allowing it to more than satisfy the requirements of latency-sensitive applications, such as NVME, IoT, VR/AR/MR, high-frequency trading, big data analysis machine learning and etc.

Automate installation and Easy Deployment

The Asterfusion CX532P-N switch supports ZTP (Zero Touch Provisioning), which be able to retrieve configuration files from local or remote file servers and then load the configurations into the switches automatically.

In addition, ONIE (Open Network Install Environment) is also preloaded on the switch. With ONIE, it can automatically install, upgrade and manage different versions of network operating system software. This combination of ZTP and ONIE would allow data center administrators to cut down the OAM workload and hence significantly reduce the overall operational cost.

Warranty

The Asterfusion CX532P-N switch 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.



CX532P-N Switch Technical Specification

Switching Performance	Chip	Innovium Teralynx
	CPU	Multi-core x86
	Ports	32x 100G/40G (QSFP28)
	Capacity	3.2 Tbps
	Forwarding Rate	2030Mpps
	Packet Buffer	50MB
	Latency	<500ns
CPU	Memory/ GB	16G, maximum 128GB
	SSD /GB	64GB, maximum 512, m.2 SATA
Management Port	USB (Type A)	1
	Serial Console (RJ-45)	1/1
	Management Port	1 x RJ45 Ethernet 1G/100M
Power	Input Voltage(W)	600/600 (AC/DC)
	Max. Power Consumption(W)	330/540
Physical and Environmental	Dimensions (HxWxD, mm)	440/44/470
	Rack Space	1RU
	Fan	4+1, hot pluggable
	Hot-swappable PSU	1+1 hot pluggable
	Operating Temperature	0°C to 40°C
	Operating Humidity	5% to 90%(non- condensing)
Warranty	Warranty	2 years
Approvals	Certificate	CCC/CE



FEATURES

L2 Switching	VLAN	<ul style="list-style-type: none"> ● 4096 VLAN ● VLAN access mode ● VLAN trunk mode ● VLAN-based MAC learning
	LAG/LACP	<ul style="list-style-type: none"> ● Maximum 256 aggregation groups ● Maximum 128 interfaces per aggregation group
	MAC	<ul style="list-style-type: none"> ● Max 120K MAC addresses ● Dynamic learning ● Static configuration ● MAC entry priority ● MAC aging
	LLDP	<ul style="list-style-type: none"> ● Neighbor discovery & aging ● Layer 2 mode ● Layer 3 mode ● TX only, RX only and TX/RX ● Custom TLV
	Spanning Tree	<ul style="list-style-type: none"> ● STP ● MSTP
	Jumbo Frame	<ul style="list-style-type: none"> ● 9K
	L3 Switching	IPv4 / IPv6
ARP		<ul style="list-style-type: none"> ● Static ARP ● Dynamic ARP ● ARP aging and update ● Free ARP ● ARP proxy
Routing Protocols		<ul style="list-style-type: none"> ● Static route ● BGP ● MP-BGP ● OSPF ● IS-IS
Multipath		<ul style="list-style-type: none"> ● ECMP up to 64-way ● Resilient hash



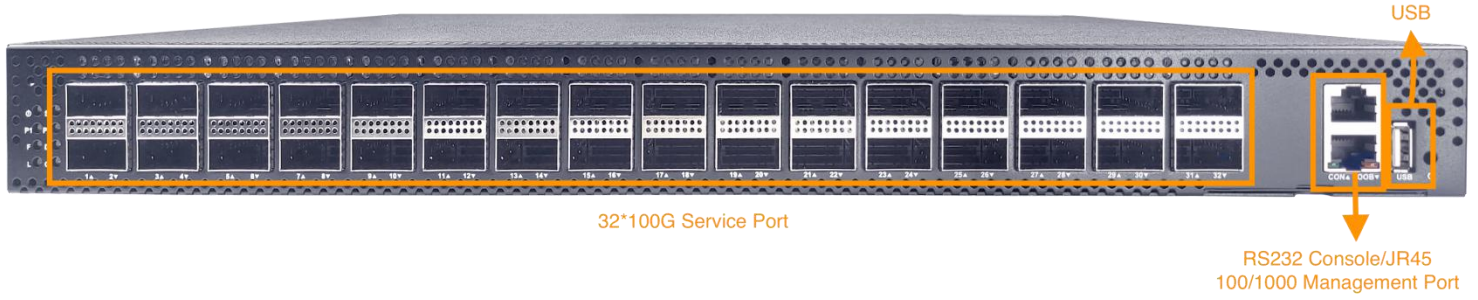
	DHCP	<ul style="list-style-type: none"> ● DHCPv4/v6 ● DHCPv4/v6 server ● DHCPv4/v6 relay
	Multi VRF	<ul style="list-style-type: none"> ● 256 VRF
	Monitoring link	<ul style="list-style-type: none"> ● Uplink/downlink status triggering
Virtualization	VXLAN	<ul style="list-style-type: none"> ● Encapsulation/ decapsulation ● VTEP ● Overlay L2 forward ● Overlay L3 gateway ● L3 distributed gateway ● ARP suppression
	BGP EVPN	<ul style="list-style-type: none"> ● VXLAN tunnel automatic establishment/tear down ● Virtual network routing dynamic population ● Distributed gateway ● Symmetry IRB ● ARP suppression ● VM migration
High Reliability	System	<ul style="list-style-type: none"> ● Features deployed in container ● Configuration database
	VLAG/MC-LAG	<ul style="list-style-type: none"> ● Virtual tunnel based Multi-Chassis LAG ● Physical link based Multi-Chassis LAG
	BFD	<ul style="list-style-type: none"> ● Static routing ● BGP ● OSPF
	Network Quality Analysis	<ul style="list-style-type: none"> ● SLA ● In-Network-Telemetry meta data ● Mirror-on-drop
Security Protection Policies	Access List	<ul style="list-style-type: none"> ● ACL for IPv4/v6 ● DSCP mapping and labeling ● ACL on ingress ● ACL on egress
	Control Plane Protection	<ul style="list-style-type: none"> ● IPv4 CoPP ● IPv6 CoPP ● Traffic shaping



	AAA	<ul style="list-style-type: none"> ● TACACS+
QoS	Basic Feature	<ul style="list-style-type: none"> ● Multi queue scheduling ● DSCP mapping queue ● Bandwidth policy ● Bandwidth guarantee ● Tail drop ● WRED
	Data Center Feature	<ul style="list-style-type: none"> ● PFC ● ECN ● ETS ● DCBX
	Advancing Data Center Feature	<ul style="list-style-type: none"> ● QCN ● DCQCN ● DCTCP ● RoCEv2
Easy Network Operation	Management UI	<ul style="list-style-type: none"> ● CLI ● RESTful API ● gRPC north bound
	DevOps	<ul style="list-style-type: none"> ● Ansible
	Easy Management	<ul style="list-style-type: none"> ● SSH on RJ45 management ports ● System status monitoring via BMC ● ONIE Install ● ZTP ● Online Upgrade ● NTP ● SNMP
	Monitoring	<ul style="list-style-type: none"> ● SPAN ● ERSPAN ● Syslog ● CRM



- Front panel



- Back panel





About Asterfusion

Asterfusion Data Technologies delivers one-stop open networking solution for 10G-400G whitebox switches based on Innovium Teralynx, Intel Tofino and Marvell OCTEON with SONIC based operating system for next generation data centers, campus and service providers. Based on highly software-defined architectures, open hardware platforms and transparent operating systems, Asterfusion enable networks to be more open, flexible, and programmable.

For more information on Asterfusion's products and solutions, please visit <https://cloudswit.ch/>. For sales inquiries, please send an email to bd@cloudswit.ch