Asterfusion CX306P-48S Switch

High-Performance TOR (Top-of-Rack) or Leaf switch for Cloud, NVME and AI networking scalability with 48 x 10GE SFP+ 6 x 100GE/40GE QSFP28/QSFP +interfaces

Highlights:

- Compact 1RU standards-based open network switch with SONiC enterprise distribution AsterNOS software preloaded.
- 1+1Redundant Power Supply
- 3+1Redundant Fan Modules
- Supports VXLAN, EVPN, DCTCP, DCQCN features for medium and large data centers and large enterprise networks.

Product Overview

The Asterfusion CX306P-48S switch is an advanced best-in-class, open-source network platform that provides 1.08 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.

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,etc. are provided to deliver low-latency, zero packet loss, non-blocking Ethernet. Furthermore, it supports features like BFD to provide fast failure detection which simplifies network operation even under heavy traffic usage.

CX306P-48S can be deployed leaf switch supporting 10/1GbE to servers with 100GbE uplinks, 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 CX306P-48S 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.

Interface flexibility

Asterfusion CX306P-48S switch can be deployed as a top- of- rack (ToR) or leaf switch supporting 10/1GbE to servers with 100GbE uplinks, each 100G QSFP28 port can be configured 40G as well as 4x 25GbE or 4x 10GbE via breakout cables.

Automate installation and Easy Deployment

Asterfusion CX306P-48S 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 CX306P-48S 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 detail.

CX306P-48S Switch Technical Specification

Switching performance	CPU	Multi-core x86
	Ports	6 x 100G/40G+ 48 x 10G/1G
	Capacity	1.08 Tbps
	Forwarding Rate	2.4Bps
	Packet Buffer	24MB
CPU	Memory/ GB	8GB
	SSD /GB	64GB，m SATA
Management Port	USB3.0	1
	Serial Console（RJ-45）	1/1
	Management Port	1 x RJ45 Ethernet 1G/100M
Power	Input Voltage (AC/DCW)	550 (AC/DC)
	Max. Power Consumption(W)	400
Physical and Environmental	Dimensions (HxWxD, mm)	440 x 44 x 515
	Rack Space	1RU
	Fan	3+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

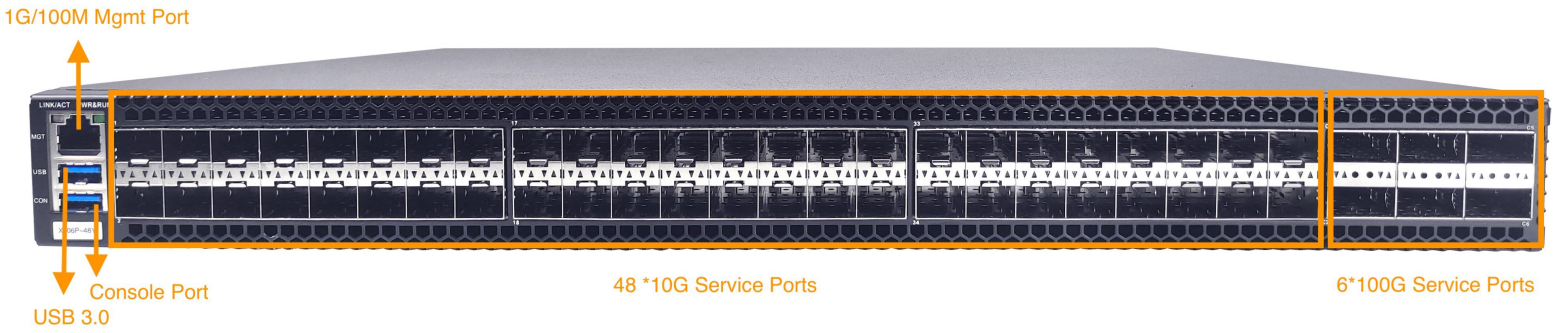
FEATURES

L2 Switching	**VLAN**	● 4096 VLAN ● VLAN access mode ● VLAN trunk mode ● VLAN-based MAC learning
	LAG/LACP	● Maximum 256 aggregation groups ● Maximum 128 interfaces per aggregation group
	MAC	● Max 32K MAC addresses ● Dynamic learning ● Static configuration ● MAC entry priority ● MAC aging
	LLDP	● Neighbor discovery & aging ● Layer 2 mode ● Layer 3 mode ● TX only, RX only and TX/RX ● Custom TLV
	Spanning Tree	● STP ● MSTP
	Jumbo Frame	● 9K
L3 Switching	**IPv4 / IPv6**	● Forwarding ● IPv6 NDP ● IPv6 ND proxy
	ARP	● Static ARP ● Dynamic ARP ● ARP aging and update ● Free ARP ● ARP proxy
	Routing Protocols	● Static route ● BGP ● MP-BGP ● OSPF ● IS-IS
	Multipath	● ECMP up to 64-way ● Resilient hash

	DHCP	● DHCPv4/v6 ● DHCPv4/v6 server ● DHCPv4/v6 relay
	Monitoring link	● Uplink/downlink status triggering
Virtualization	**VXLAN**	● Encapsulation/ decapsulation ● VTEP ● Overlay L2 forward ● Overlay L3 gateway ● L3 distributed gateway ● ARP suppression
	BGP EVPN	● VXLAN tunnel automatic establishment/tear down ● Virtual network routing dynamic population ● Distributed gateway ● Symmetry IRB ● ARP suppression ● VM migration
High Reliability	**System**	● Features deployed in container ● Configuration database
	VLAG/MC-LAG	● Virtual tunnel based Multi-Chassis LAG ● Physical link based Multi-Chassis LAG
	BFD	● Static routing ● BGP ● OSPF
	Network Quality Analysis	● SLA ● Mirror-on-drop
Security Protection Policies	**Access List**	● ACL for IPv4/v6 ● DSCP mapping and labeling ● ACL on ingress ● ACL on egress
	Control Plane Protection	● IPv4 CoPP ● IPv6 CoPP ● Traffic shaping
	AAA	● TACACS+

QoS	**Basic Feature**	• Multi queue scheduling • DSCP mapping queue • Bandwidth policy • Bandwidth guarantee • Tail drop • WRED
	Data Center Feature	• PFC • ECN • ETS • DCBX
	Advancing Data Center Feature	• QCN • DCQCN • DCTCP • RoCEv2
Easy Network Operation	**Management UI**	• CLI • RESTful API • gRPC north bound
	DevOps	• Ansible
	Easy Management	• SSH on RJ45 management ports • System status monitoring via BMC • ONIE Install • ZTP • Online Upgrade • NTP • SNMP
	Monitoring	• SPAN • ERSPAN • Syslog • CRM

- **Front panel**



- **Back panel**

About Asterfusion

Asterfusion Networks is the leading provider of Open Networking infrastructure solutions. We provide an open, disaggregated and highly programmable network fabric for next generation data centers with simplified management and white-box economics. The company is committed to developing supported and trusted cloud and programmable hardware switches based on Innovium, Marvell and Tofino Chips for data centers, as well as offering the SONiC commercial network operating systems. Both are inspired by and based on open-source community frameworks and projects, enabled as feature-rich commercial, secure, and fully supported solutions, with a high level of quality assurance. Based on our highly software-defined architectures, open and transparent operating systems, and hardware platforms that break through traditional limitations to enable networks to be more open, agile, 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