

## Asterfusion Bare Metal Programmable Switch X-T Series

### X564P-T



#### Highlights

- Compact 2RU OCP standard bare metal hardware
- 64 x 100G/40G (QSFP28) Ethernet interfaces
- Deployment-proven Intel Tofino programmable switching ASIC with P4 development support
- Open source software supported:
  - ONIE, SONiC and Stratum for switch
- Production ready enterprise SONiC distribution AsterNOS included

#### Product Overview

The Asterfusion X564P-T is a best-in-class, programmable switch bare metal that provides standards-based networking connectivity to meet the stringent requirements of high-performance enterprise and service provider data centers. It is a unique combination of a multi-core X86-based control/management plane, an Intel Tofino programmable switching chip based data forwarding plane. The AsterfusionX564P-T switch is optimized to make the networks more open, flexible, programmable, and powerful.

The Asterfusion X564P-T switch follows with OCP (Open Compute Project) standard. The community version of SONiC and Stratum can be installed with the pre-loaded white box install environment ONIE. We also provide our production-ready enterprise SONiC distribution AsterNOS that provides a complete quality assurance procedure, protocol and feature enhancement and control/management APIs for quick integration with orchestration controller such as Openstack etc., which greatly simplifies and eases the development and deployment of applications when using the Tofino switch.

After installing the software, the X564P-T can be deployed as a spine switch as well as smart gateway for tasks such

as traffic management, load balance and security processing with its ASIC level programmability enabling flexibility in dealing with different network application scenarios. When employed with more complex applications, such as those which need deep buffer, stateful processing or L7 processing, the pluggable DPU module can be chosen to provide high performance software data processing ability, where DPDK and VPP framework can be used to provide developers a quick start development environment in a similar way to the Intel X86.

## System Hardware Feature Highlights

- Barefoot Tofino programmable switching ASIC
- Wire-speed, full-duplex across all ports, Layer 2 and Layer 3 forwarding up to 4.9Tbps and Mpps
- Ethernet Interface:
  - 64 x 100G/40G(QSFP28) -Each port supports single-mode and multi-mode fibers (duplex or MPO/MTP) and copper transceivers or cables
  - Each port can be configured as 4x 25GbE or 4x 10GbE via breakout cables.
- Multi-core x86 CPU as a control and management plane
- 8GB DDR4(extended to 32G) 64G m.2 SATA
- All Ethernet ports on front; PSUs and fans accessible from rear
- Dual-redundant, load-sharing, hot-swappable PSUs
- **4+1 redundant**, hot-swappable fan modules

## Multiple Software Choices

- **AsterNOS: Enterprise NOS based on SONiC**

By default, we provide an enterprise distribution SONiC NOS with feature enhancement and quality assurance with complete code review and system testing. The current SONiC version is based on 202012 and SAI version 1.6.3

- **AsterNOS Framework :as P4 application development environment**

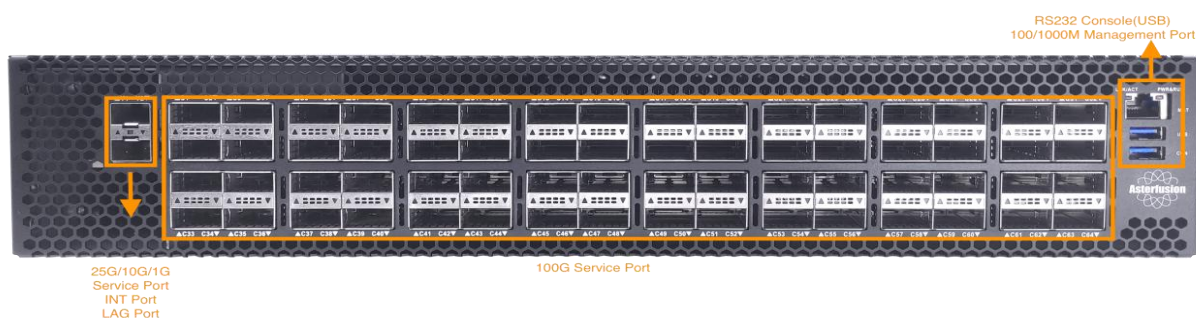
AsterNOS Framework integrates P4Runtime into a reduced-SONiC version in a docker container. By re-using the maturity and flexibility of SONiC architecture, developers can easily combine powerful management and control plane such as BSP, hardware driver, device management etc. from SONiC with P4 data plane programmability in a single software system.

- **Community version of SONiC**

Community version of SONiC can be installed with pre-loaded ONIE.

## System Architecture and Panel Illustration

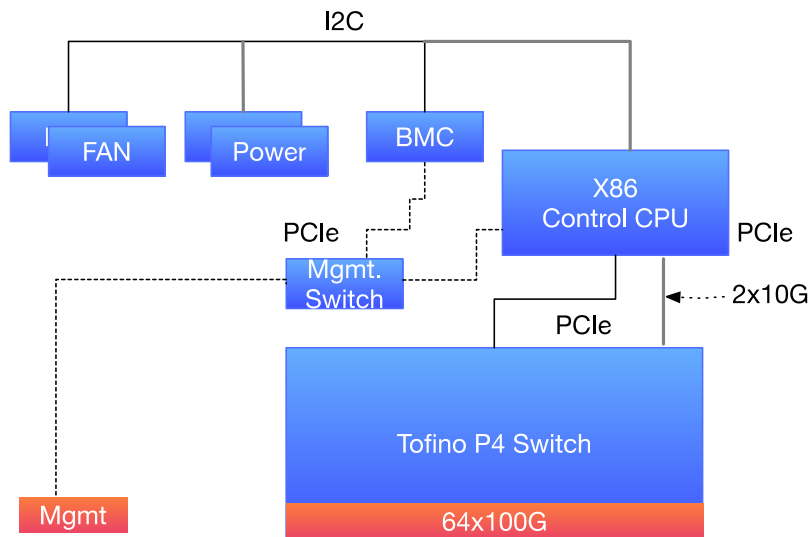
- **Front Panel**



● Rear Panel



● System Architecture



Order Information

X564P-T	Programmable bare metal switch, 64x100G, ONIE pre-installed, 4xFAN and 2 CRPS Power included
SW-AsterNOS-X564P-T	AsterNOS software
SVC-Basic-1Y-X564P-T	1 Year H/W warranty
PWR-CRPS-AC-1300-AF	1300w AC Power
PWR-CRPS-DC48-1300-AF	1300w DC-48v Power
FAN-III	FAN module