

AS7900-32X 32x400G Switch

Edgecore Networks
Specification and Design Contribution

AS7900-32X

- Edgecore Networks is contributing the design specification and entire design package to Open Compute
- Seeking “OCP Accepted” status for the product and specification

AS7900-32X 400G Open Network Switch



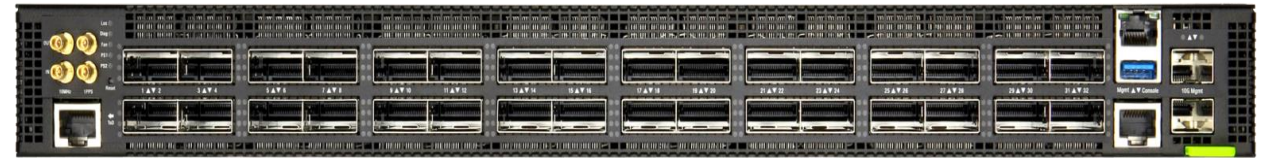
- 32 x 400G QSFP-DD
- 12.8Tbps switch silicon
Broadcom Tomahawk III
- 256 x 50G PAM4 SerDes technology
- Xeon D-1518 CPU with optional BMC
- AC, -48VDC, 12VDC power options
- Samples now GA end of 2018

CUMULUS

big switch
networks

SONiC

STRATUM



SONiC

CORD

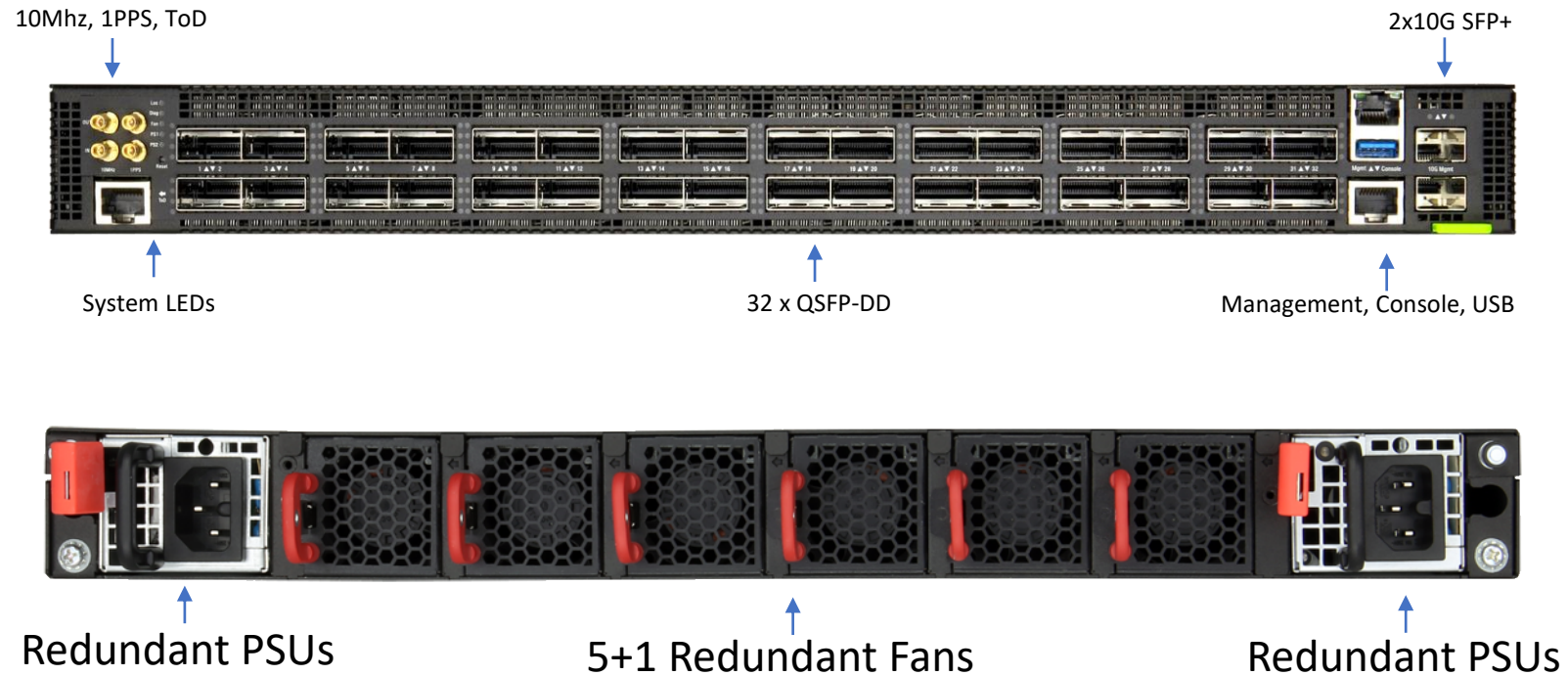


DMTF
Redfish

onie

OOM

AS7900-32X Overview

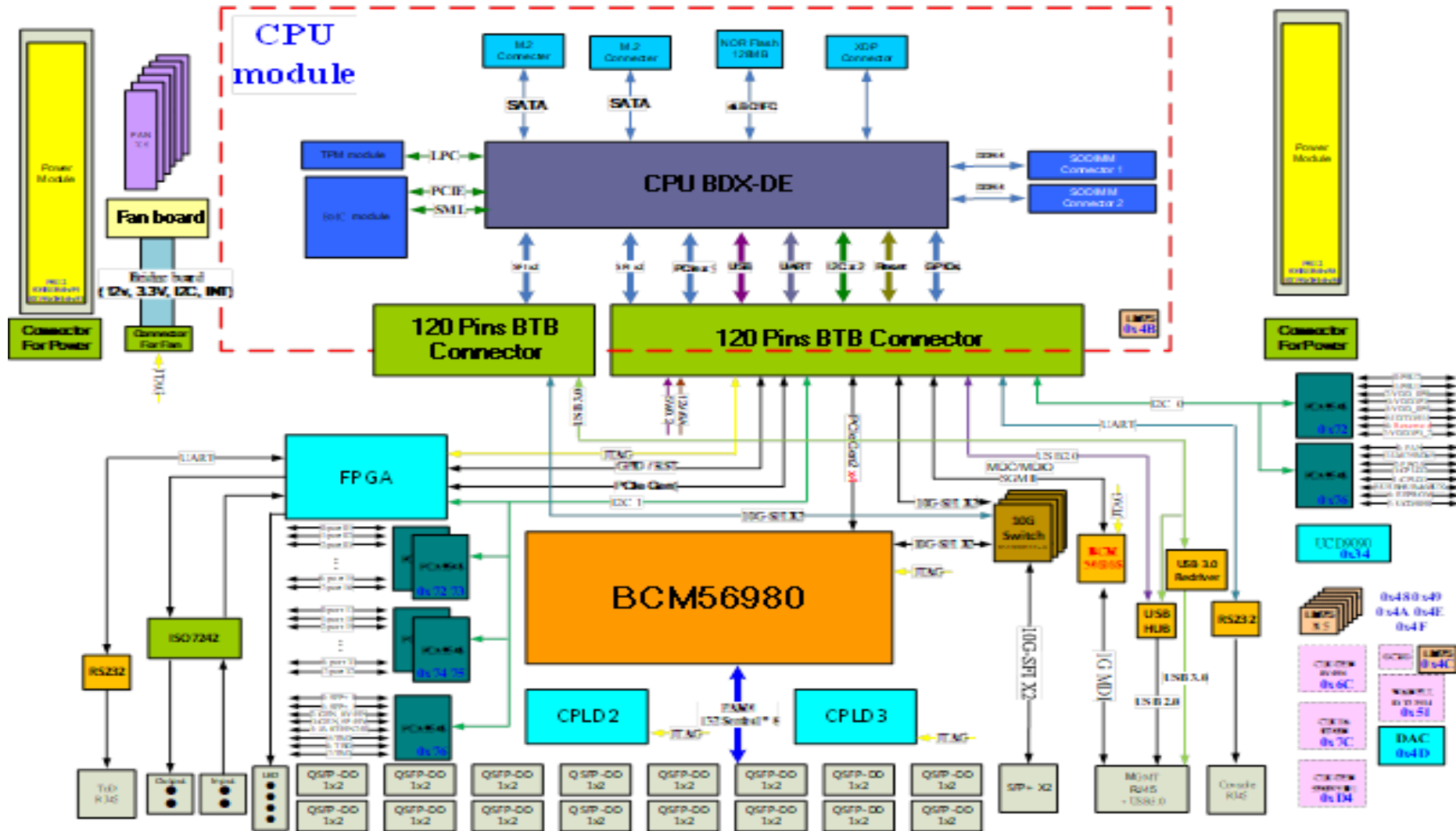


Color coded handles to indicate airflow

AS7900-32X Overview

- 24 Layer main PCB with major components including
 - Broadcom BCM56980 “Tomahawk III” silicon
 - 32 X 400G QSFP-DD ports
- Modular CPU card with major components including
 - Freescale T2080 CPU
 - Intel x86 Rangeley CPU
 - Intel x86 Broadwell-DEW CPU
 - Optional BMC plug-in module
- Efficient design supporting
 - Redundant hot swappable power supplies
 - Redundant hot swappable fan modules
 - Back to front / front to back airflow options

AS7900-32X Overview



What Is Being Contributed ?

Hardware

- Design Specification
- Complete Design Package
 - Schematics
 - Allegro .brd Files
 - Gerber Files
 - Mechanical STEP Files
 - Mechanical Assembly Drawings
 - Complete Bill of Material
 - CPLD Code in Binary and Source format
 - Test Plan

Software Support

- ONIE
- Open Network Linux
- OCP Baseline Redfish
- Open Optical Monitoring (OOM)
- SONiC
- Trellis, Stratum (ONF)

AS7900-32X OCP Tenants

- Efficiency
 - The AS7900-32X design is focused on high quality, lowest power, and lowest cost providing an efficient design. The AS7900-32X design is a single 24 layer PCB supporting at 32 QSFP-DD ports. The design is also PHY-Less providing for the lower power and highest quality (less components). The AS7900 reuses many components from previous accepted open designs such as common CPU module(s) for overall design efficiency.
- Scale
 - The AS7900-32X allows significant bandwidth scaling in generic leaf/spine architecture designs increasing the 100G capacity by a factor of 4x compared to what is available today.
- Openness
 - The AS7900-32X is a completely open design with all HW design files and product specification made publicly available. In addition the AS7900-32X supports a completely “open” SDN operating system built upon ONL and supporting many open source components.

Thank You