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
AS7900-32X Overview

- 5+1 Redundant Fans
- Redundant PSUs
- Color coded handles to indicate airflow

- 32 x QSFP-DD
- 10Mhz, 1PPS, ToD
- 2x10G SFP+
- Management, Console, USB
- Redundant PSUs
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 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