Trident 3 Based OCP Product Contributions

September 2018
Edgecore Networks is contributing new designs to “upgrade” the current AS7700-32X and AS7300-54X Tomahawk(+) product contributions with new Trident 3 based designs.

- Trident 3 Enhancements
  - Programmable Pipeline
  - 32MB packet Buffer
  - Increased number of MPLS push/pop label support
  - IPv6 VXLAN Support
  - 2X+ Route table size
  - 2x+ ACL table size
Current Tomahawk Based Products

AS7700-32X
Broadcom Tomahawk

AS7300-54X
Broadcom Tomahawk+

- 32 x QSFP28 Ports
- Console, Management USB
- System LEDs

- 48 x SFP28
- QSFP to SFP+ / break out LEDs
- Mini USB
- Management / Console
- System LEDs / reset switch
- 6 x QSFP+
New Trident 3 Based Switch Contributions

• 32x100G QSFP28 + 2x10G SFP+
  • Based on AS7700-32X OCP-ACCEPTED™ form factor with 2 additional 10G ports

• 48x25G SFP28 + 8x100G QSFP28 + 2x10G SFP+

• Additional features compared to Tomahawk
  • VXLAN Routing
  • Programmability
  • 32MB buffer vs 22MB TH+
  • Increased ACL and table scale

• CPU Module Options
  • Intel Atom C2538 Rangeley
  • Intel Xeon D-1518 with BMC
  • Intel C3558 Denverton
Edgecore AS7726-32X Overview

- 32 x QSFP 28 Ports
- 2 x SFP+
- Console, Management USB
- 650W PSU
- 5+1 Redundant Fans
- 650W PSU
- System LEDS
- Rest Button

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Edgecore AS7326-56X Overview

Front
- System LED
- 8x 100G QSFP28 port LED:
  - P1 to P46
  - P49 to P55
  - L1 to L4
- 2x 10G SFP+ Port:
  - P57
  - P58

Rear
- 48x 25G SFP28 Port
- 8x 100G QSFP28 Port: USB 2.0
  - P49 to P55
  - P50 to P56
- MGMT/Console
- micro-USB Console
- 650W PSU1
- FAN1 to FAN6
- 650W PSU2

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Edgecore AS7326-56X Block Diagram
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)
Contribution Schedule

• Overview presentation on contributions to community – 9/10/2018

• Design specification available for community review - 9/10/2018

• Design package available for review 9/24/2018
OCP Tenets

• Scale – The AS7726-32X and AS7326-56X allows for large scale deployments in data center environments. This is provided by the many choices of automated provisioning and management features and functions provided the various NOS options and in the ecosystem available for the products.

• Openness - The AS7726-32X and AS7326-56X are completely open designs with a complete hardware design package contributed to Open Compute. In addition to the open hardware these designs support numerous open source software options including SONiC and many NOS options available through ONF (Trellis, Stratum, etc.)

• Impact - The update of existing contributions to designs with the Trident 3 silicon provides many enhanced functions as well as new functions that are desired in datacenter environments.
Thank You