ASXvOLT16

Edge-core

NETWORKS

Specification and Design Contribution

Jeff Catlin
Accton and Edgecore

- Leading Network ODM
- > 3,300 employees worldwide, > 700 network engineers
- High volume manufacturing facilities in China and Taiwan

- Go-to-market subsidiary of Accton
- Full portfolio of traditional and open network products
- Leading contributor of network designs to OCP
Most Network Design Contributions to OCP

**OCP-ACCEPTED™ DC and Telecom Products**
- 1G Rack Mgmt Switch Helix4
- 10G TOR Switch Trident II
- 40G Spine Switch Trident II
- 100G TOR & Spine Switch Tomahawk
- 100G TOR & Spine Switch XPliant
- 10G/100G Edge Switch Qumran
- Open Rack Switch Adapter

**Partner Designs, Edgecore Product**
- Wedge40-16X Facebook
- Wedge100-32X Facebook
- Wedge100BF-32X Barefoot
- Wedge100BF-65X Barefoot

**Design Contributions Pending IC approval**
- 100G OMP800 Chassis Tomahawk
- 100G OMP1600 Chassis Tomahawk
- 25G TOR Switch Tomahawk
- 64 x 100G Spine Switch Tomahawk II

**OCP-ACCEPTED™ Access Products**
- 1G PoE Switch Helix4
- 802.11ac Wave1 Wi-Fi APs BCM
- 802.11ac Wave2 Wi-Fi APs QCA

**AT&T Spec, Edgecore Product Specification and design**
- ASXvOLT16 10G OLT BCM Qumran & Maple
Open Networking Software Partners

Enterprise
- Pluribus Networks
- PICA
- ADARA
- Brain4Net

Packet Broker
- ixia
- NETSCOUT

Data Center Fabric
- BROADCOM
- CUMULUS
- snaproute
- big switch networks
- Open Network Linux
- SONiC
- Open Switch
- CORD

Service Provider
- DRIVENETS
- ip infusion
- rtbrick
- exaware
- VOLTA Networks

Commercial

Open Source
ASXvOLT16

• The ASXvOLT16 meets the AT&T Open XGS-PON NFV 1RU OLT specification version 1.3

• Edgecore Networks is contributing the design specification and entire design package

• Seeking “OCP Accepted” status for the product and specification
ASXvOLT16 Design Contribution

• The following material is included in the design package:
  • BOM indicating component description, vendor part number, and quantity used
  • Code used for CPLD/FPGA devices
  • Schematic files in pdf format
  • Gerber files
  • Mechanical STEP files
  • Mechanical assembly drawings
  • Product specification
ASXvOLT16 Overview

• 20 Layer main PCB with major components including
  • Broadcom “Qumran AX” silicon BCM88470
  • Broadcom “Maple” XGS-PON Silicon BCM68628

• Modular CPU card with major components including
  • Intel x86 Broadwell-DE CPU
  • Optional BMC plug-in module

• Rendant design supporting
  • Redundant hot swappable power supplies
  • Redundant hot swappable fan modules
  • Back to front / Front to back airflow options
ASXvOLT16 Overview

Front

Rear
ASXvOLT16 Software

• Numerous Open Source software components available
  • ONIE
  • Open Network Linux
  • Open Optical Monitoring (OOM) API
  • Support for RedFish REST API
  • Support for Broadcom open GPON API
    • BRCM QAX and Maple SDK (closed)
  • Support for VOLTHA Agent
Thank You