

# The Worlds First White Box OLT

November 2017



# 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**

The Accton logo is displayed in a blue, sans-serif font.The Edge-core NETWORKS logo features the words "Edge-core" in a white, sans-serif font, with the first "E" and the final "E" highlighted in red. Below this, the word "NETWORKS" is written in a smaller, black, sans-serif font.

# The Worlds First White Box OLT

A better description could be “The  
Worlds First Open Disaggregated  
OLT”

# ASFvOLT16: 10G OLT

- Disaggregated 10G PON OLT for R-CORD infrastructure
- XGS-PON: Conforms with AT&T XGS-PON Spec in OCP Telco Working Group
- 16 x XFP 10G PON
- 4 x QSFP28 100Gb
- Broadcom DNX Qumran switch silicon, Broadcom Maple PON silicon
- Agent for interface to vOLT-HA virtual OLT control software on servers in R-CORD
- Samples Q2 2017: Production Q4 2017

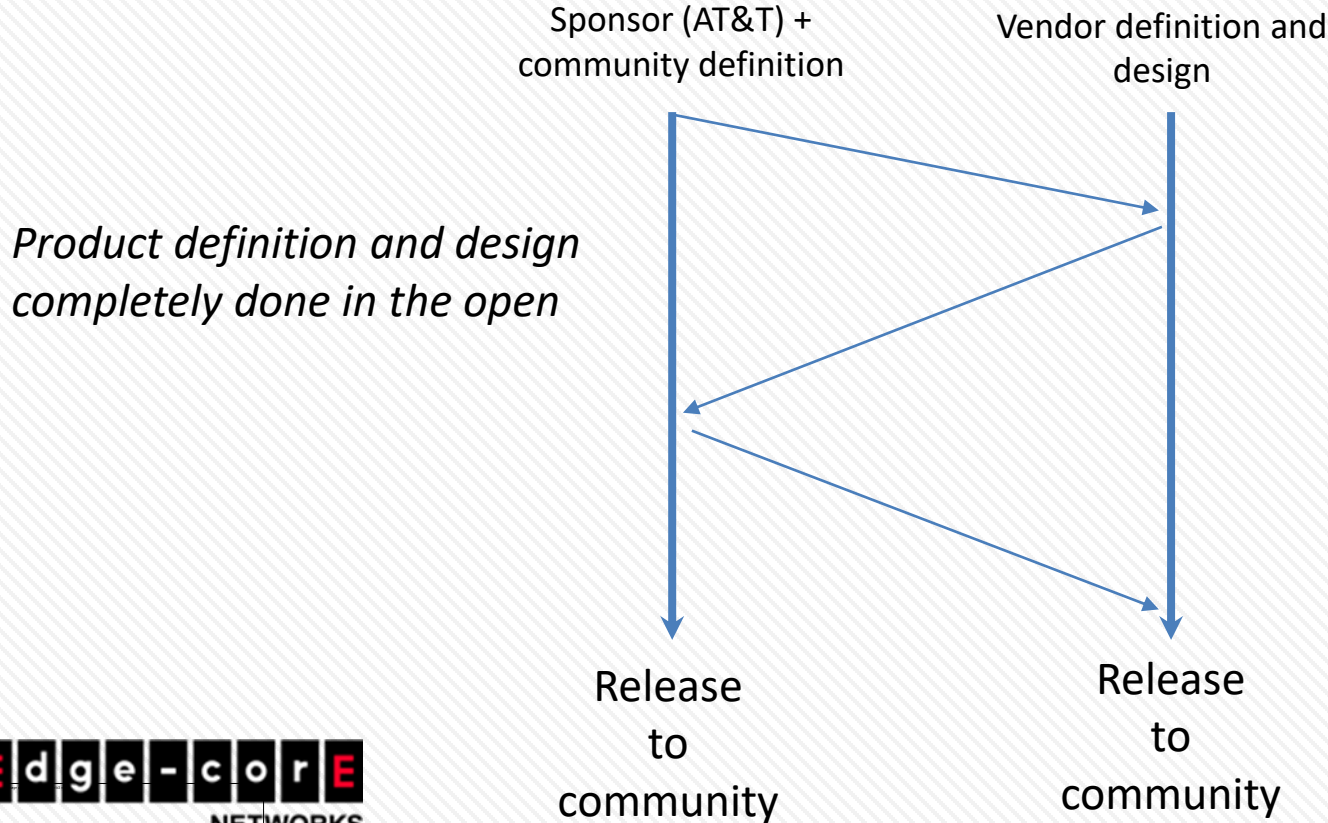


# Open Disaggregated OLT

“Open”

Open Indicates Open Source software components  
AND Open Source hardware design

# Open Hardware Design



# Open Source Design Contributions to OCP



## OCP-ACCEPTED™ DC and Telecom Products

- |                            |            |
|----------------------------|------------|
| • 1G Rack Mngmt 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 |            |

## Design Contributions

- |                          |             |
|--------------------------|-------------|
| ▪ 100G OMP800 Chassis    | Tomahawk    |
| ▪ 100G OMP1600 Chassis   | Tomahawk    |
| ▪ 25G TOR Switch         | Tomahawk    |
| ▪ 64 x 100G Spine Switch | Tomahawk II |

## Partner Designs, Edgecore Product

- |                  |          |
|------------------|----------|
| ▪ Wedge40-16X    | Facebook |
| ▪ Wedge100-32X   | Facebook |
| ▪ Wedge100BF-32X | Barefoot |
| ▪ Wedge100BF-65X | Barefoot |



TELECOM INFRA PROJECT

Design Contribution

Nov 8, 2017

- AS7816-24C

## AT&T Spec, Edgecore Design Contribution

- ASFvOLT16 10G OLT BCM Qumran & Maple

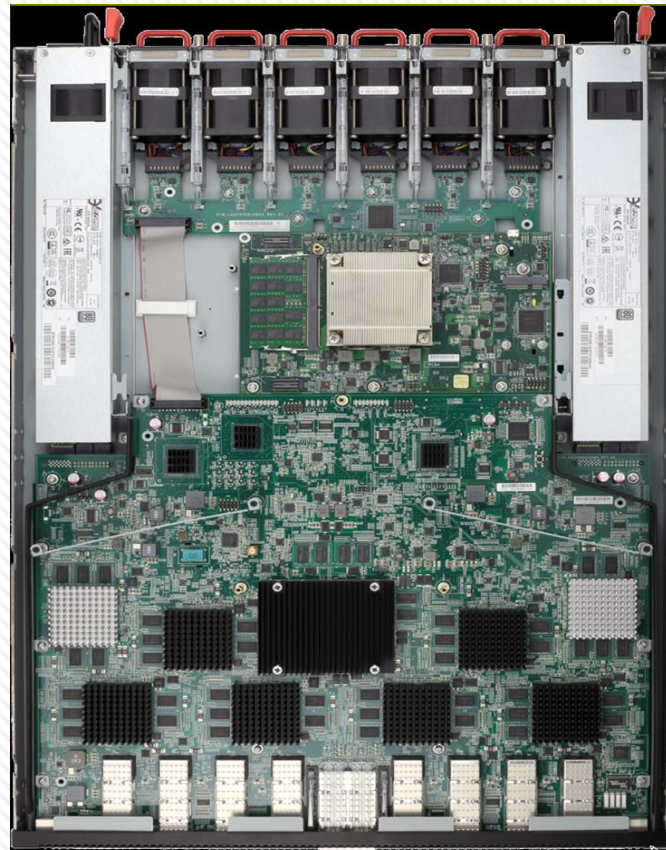
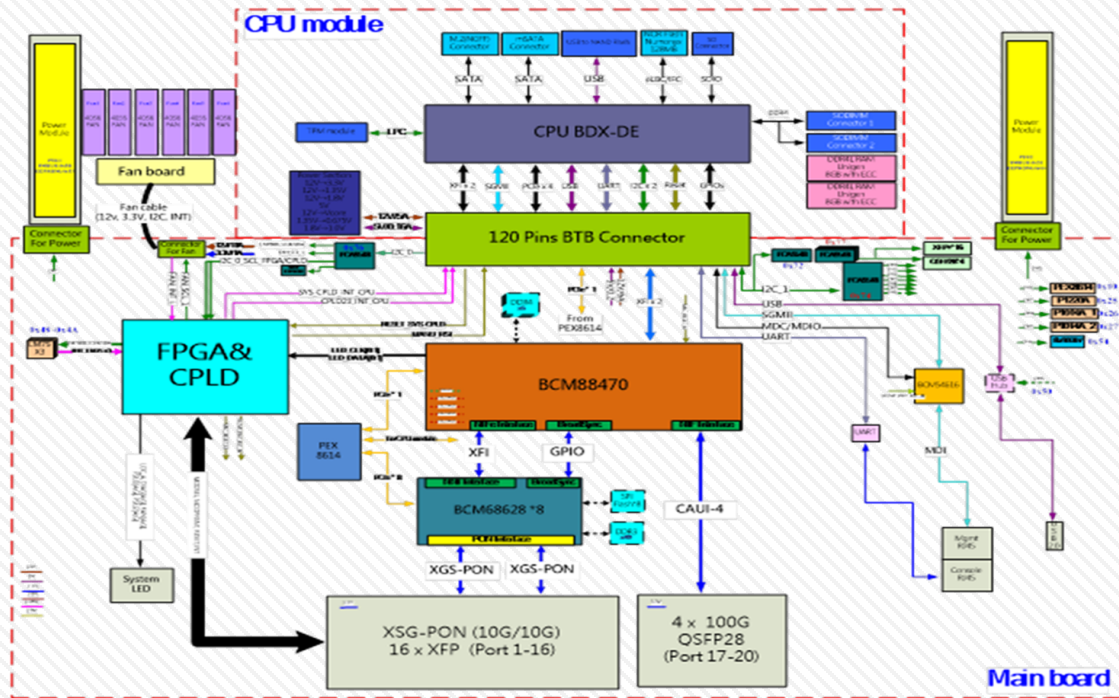
## OCP-ACCEPTED™ Access Products

- |                            |        |
|----------------------------|--------|
| ▪ 1G PoE Switch            | Helix4 |
| ▪ 802.11ac Wave1 Wi-Fi APs | BCM    |

## Design Contributions

- |                            |     |
|----------------------------|-----|
| ▪ 802.11ac Wave2 Wi-Fi APs | QCA |
|----------------------------|-----|

# ASXvOLT16 Hardware Overview





# “The Worlds First Open Disaggregated OLT”

- “Disaggregated”
- Disaggregated indicates the software has been somehow separated from the hardware
  - Does not necessarily indicate “Open Source”
  - Does not indicate where this separation has taken place

# Disaggregated Software

## Enabling Deliverables

### Diagnostics



Open BMC  
Vendor BMC



Open Network Linux



ubuntu core

RedFish  
HW Mgr API

OOM

sFlow Agent

## 1. Commercial Disaggregated Software Partners

### Enterprise



### Packet Broker



### Data Center Fabric



### Service Provider



## 2. Open Source Software

SAI

SONiC



# Edgecore vOLT Software for CORD

CORD Controllers

VOLTHA

VOLTHA Agent

OOM  
Open Optical  
Monitor

Redfish  
HW Mgr API

sFLOW

BAL API

ONIE

DIAGS

Broadcom  
QAX SDK

Broadcom  
Maple SDK

Open Network Linux

ONLP

BIOS

Switch Hardware

*Agents  
& APIs*

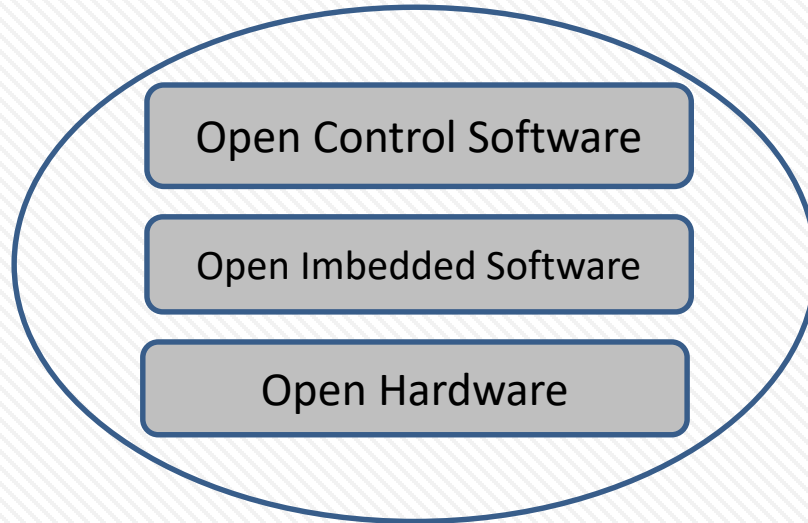
*OS &  
Abstractions*

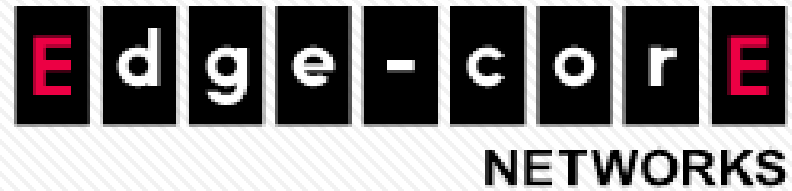
*HW  
BSP*

# Open Disaggregated OLT

Community Developed !

ASXvOLT16 OLT





**Thank You**