



OCP Contributions IC Meeting 9/5/2019

An **Accton Group** Company

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Updates To Previous Specification(s)

- Overview of Deutsche Telekom OpenGPON-OLT Specification
- Overview of Edgecore ASGvOLT-64 product specification and design contribution. Seeking “OCP Accepted” for design contribution
- Overview of Edgecore AS7926-40/80X Aggregation Router Specification
- Overview of Edgecore AS7926-80X product specification and design contribution. Seeking “OCP Accepted” for design contribution

Deutsche Telekom OpenGPON-OLT Specification

- Specifies 32 port and 64 port GPON OLT versions
- Specifies Central Office temperature conditions 0-40C
- Suggests switch silicon and GPON MAC to be used
 - Broadcom Qumran-AX and Maple

Main Block Diagram (64 port version)

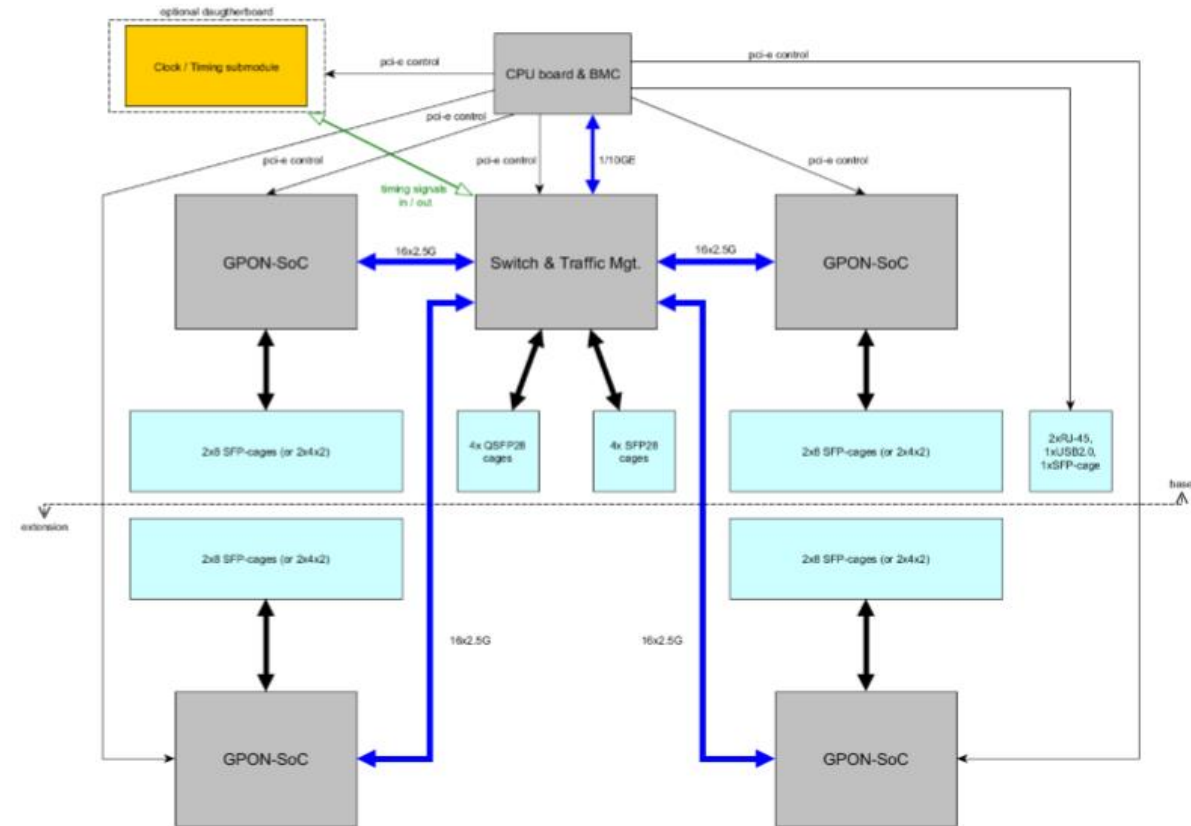
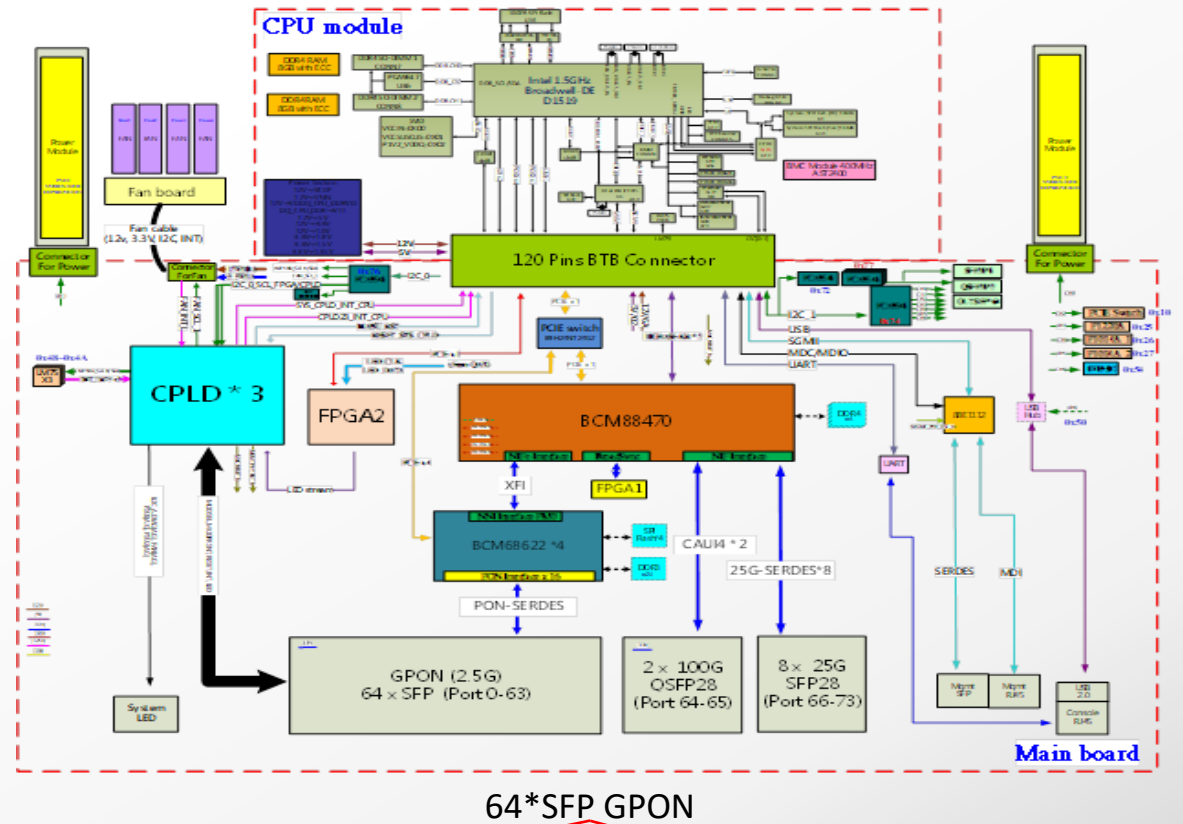


Figure 10 - Main system Block diagram (64 port version)

Edgecore ASGvOLT-64

- 64 port GPON OLT compliant to Deutsche Telekom OpenGPON-OLT
 - 64*SFP GPON, 2*QSFP28, 8*SFP28
- Support for ONF SEBA software solution
- Support for commercial OLT NOS options



64*SFP GPON



2*QSFP28

8*SFP28

SFP/RJ45
Management

Console
USB

Edgecore ASGvOLT-64

Design Contribution Contains:

- **HW Components:**

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

- **Software Components:**

- ONIE
- Open Network Linux
- OCP Baseline Redfish Profile
- Open Optical Monitoring (OOM)
- Open OLT Driver (ONF SEBA)

Edgecore ASGvOLT-64 OCP Tenants

Most important guiding principle : Efficiency

- Minimize energy consumption and cost: 64 port version shares common functions (CPU) over twice as many PON-ports than 32 port version & requires fewer uplinks per PON.
Side effect : fewer uplinks mean fewer interfaces in the fabric/backbone.

Scale :

- sufficient port number with reasonable density to handle many thousand customers /rack.
- automatically commissioned, provisioned and maintained remotely by Zero Touch Provisioning mechanisms of ONIE and a BMC to provide for remote supervision and disaster recovery.

Source: DT Presentation "The Open GPON OLT A contribution of Deutsche Telekom to the Open compute Project" Amsterdam Summit 2018

Edgecore ASGvOLT-64 OCP Tenants

We call for Openness :

- open source Linux distribution such as ONL as OS; BMC shall use OpenBMC or similar.
- Today proprietary HW-driver layer is “normal” BUT an open access to these API/SDK layers is required.
- No restrictions shall limit possibilities for innovative open network solutions. Interfaces to the device shall be fully open, non-proprietary and standardized.

This OCP contribution designed to have substantial Impact :

- first incarnation of an open GPON OLT with state of the art silicon, sufficient flexibility and maturity
Shall allow a viable lifecycle in a telco network.
- Shall be carrier grade for international application
- Single box solution but flexible deployment options, transceivers, factory choice of CPU types, optional time&sync

Source: DT Presentation “The Open GPON OLT A contribution of Deutsche Telekom to the Open compute Project” Amsterdam Summit 2018

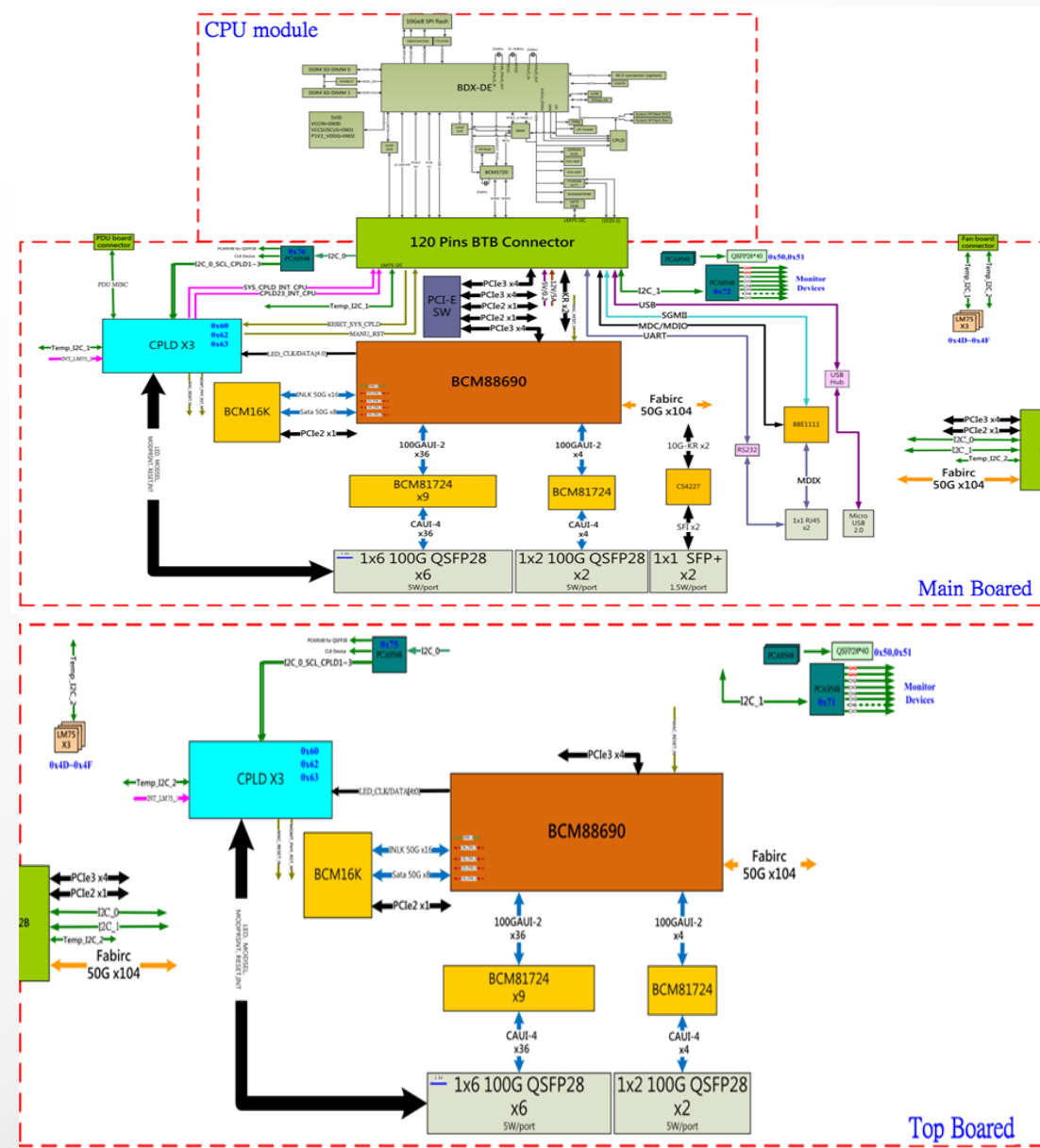
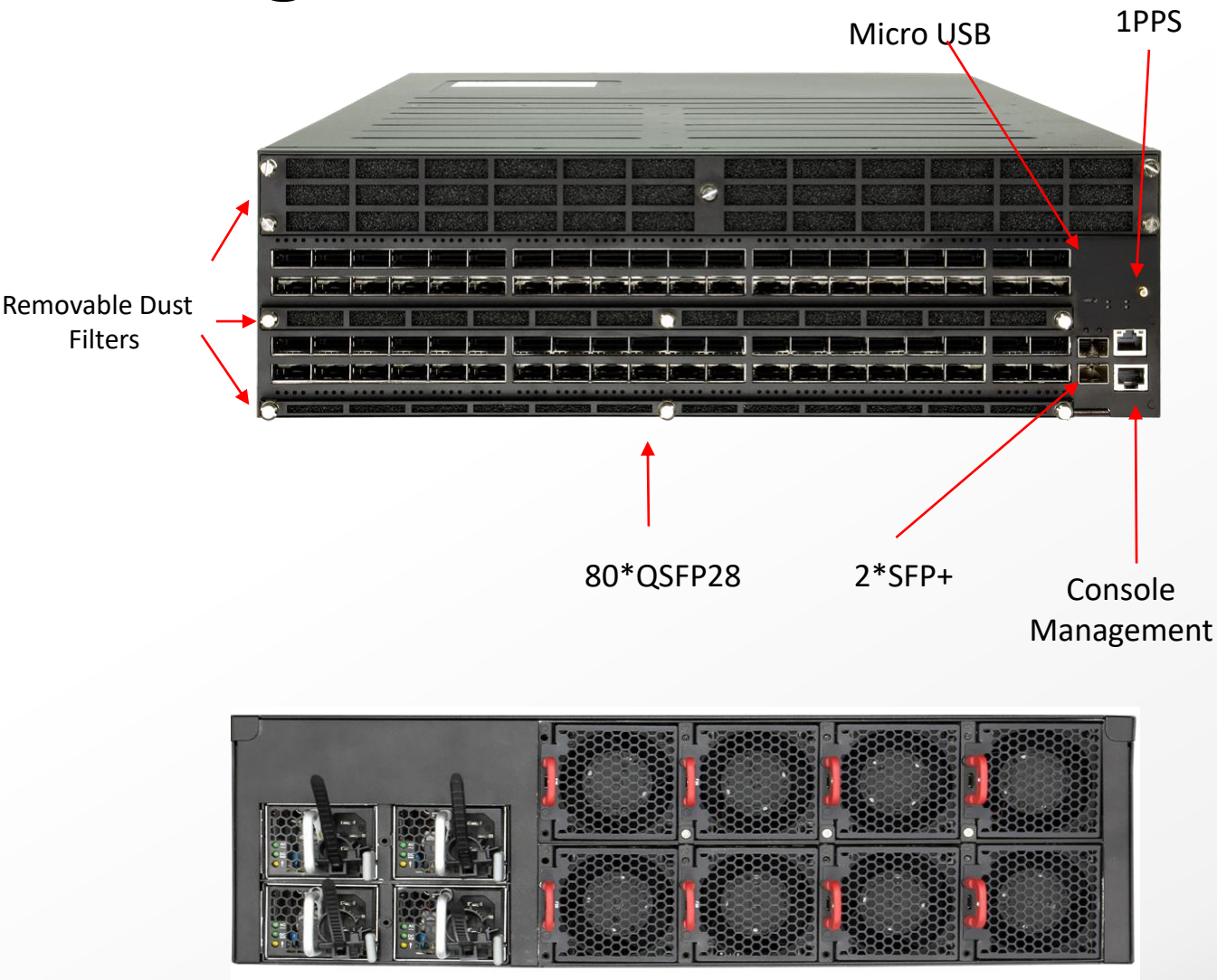
Overview of Edgecore AS7926-40/80X Aggregation Router Specification

- Initial draft specification called out two configurations based upon Broadcom Jericho 2 silicon
- 40*100G
- 80*100G variants
- NEBS 3
- Modular CPU
- BMC support

Edgecore AS7926-80X

- Inputs taken from initial draft specification and incorporated into AS7926-80X specification
 - 80*100G switch based on Jericho 2
 - 3RU
 - NEBS Level 3 support
 - Removable dust filters, 0-55C
 - Support for expandable TCAM entries and statistics

Edgecore AS7926-80X



Edgecore AS7926-80X

Design Contribution Contains:

- **HW Components:**

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

- **Software Components:**

- ONIE
- Open Network Linux
- OCP Baseline Redfish Profile
- Open Optical Monitoring (OOM)

Edgecore AS7926-80X OCP Tenants

- Scale
 - This product supports scale out deployments in it's hardware design as well as software NOS options. Hardware support includes serviceable redundant and removeable FRUs for PSUs, Fans, and dust filters. Software scale out support includes consistent low level management through Redfish and associated management tools. Modern cloud based data plane provisioning and management is provided with support of modern NOS options.
- Openness
 - This HW design and many SW components are completely open allowing consumers to have diversity in their supply chain if desired. This openness also allows integration of custom software features if desired into modern NOS options without relying on vendor specific roadmap(s).
- Impact
 - First "Open" aggregation routing platform to challenge existing closed proprietary solutions. Many proprietary solution are based upon the same silicon this product will open up different open source and commercial NOS options to customers.



NETWORKS

www.edge-core.com

THANK YOU