Open Aggregation Routers for a Converged Mobile Network
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Moving Towards a Converged Network

Open RAN

4G
RRU

5G
RRU

Others

Central Office

ODU/OCU

Data Center

4G Core

5G Core

Open aggregation routers can provide vendor agnostic aggregation and enable converged packet fronthaul at Open RAN hub.
Challenges for Service Providers

• The coexistence of 4G and 5G will bring another layer of complexity to the fronthaul network for service providers

• A scalable deployment model is needed as service providers begin transitioning from DRAN to Open RAN or CRAN

• Additional costs associated with deploying 5G network leads to a need to reduce costs whenever possible
Benefits of Open Aggregation Routers

- Aggregating fronthaul gateways will simplify hub site architectures and minimize resources using white box platforms

- Open aggregation routers will enable more flexible deployments by switching eCPRI and RoE to vDU/BBU or subtended fronthaul devices when needed

- Support the scalable deployment of a converged mobile network
Open Aggregation Routers allows flexible access network convergence, including aggregating fronthaul gateways.

- Large capacity with TSN capability to aggregate multiple sites.
- Enable an edge grand master at the hub site while operating with high accuracy fronthaul synchronization and timing requirements.
S9600-48X HW Specs

- 48 x 100GE QSFP28 ports
- GNSS, ToD, 1PPS and 10MHz
- Supports SyncE, IEEE 1588v2, and TSN (T-GM, T-BC, T-TC, and T-TSC)
- Intel® Broadwell-DE 8-Core 2.0GHz
- Broadcom Jericho2 Silicon
- 8GB Deep buffer
- Deliver high performance 4.8Tbps switching capacity
- Class C timing accuracy
- High density 100G ports and multiple timing interfaces
- 1+1 Redundant, Hot-Swappable PSU (AC/DC)
- 3+1 Redundant, Hot-Swappable Fans
- 2 x 10GE SFP+ Management Ports
- Micro USB for Console
  - USB 3.0
  - 1 x RJ45 Management Port
  - Console OOB
- 3+1 Redundant, Hot-Swappable Fans
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S9600-48X Block Diagram
S9600-48X in Fronthaul Aggregation

C-RAN

Cell Site

FHG - RoE

Hub Site

S9600-48X

FHG - RoE

4G BBU Pool

S9600-48X Backhaul

O-RAN

Cell Site

FHG - Low PHY

Hub Site

S9600-48X

5G DU/UC

S9600-48X Backhaul

CPRI

RoE

eCPRI

Ethernet

Conversion

OPEN POSSIBILITIES.
Other Use Cases for S9600-48X
Join UfiSpace at the Telco Project!

- Join the Telco Project for the latest open networking innovations for telecoms
- Attend our project calls to share your experiences and knowledge
- S9600-48X Specifications – Contributed!
- S9600-48X Design Package – In Progress!

Connect with Kei: kei.lee@ufispace.com


More info and solutions at Telco Project Wiki: [https://www.opencompute.org/wiki/Telcos](https://www.opencompute.org/wiki/Telcos)

Join our Telco Project mailing list: [https://ocp-all.groups.io/g/OCP-Telco](https://ocp-all.groups.io/g/OCP-Telco)
Thank you!