

5G ORAN HUB

Introduction

In order to meet the needs of operators, integrators and other customers for the construction of 5G mobile communication networks, Nanjing DIGITGATE Communication Technology Co., Ltd. independently designs for 5G networks, develops and produces a HUB product for use with 4G/5G RRU base stations.

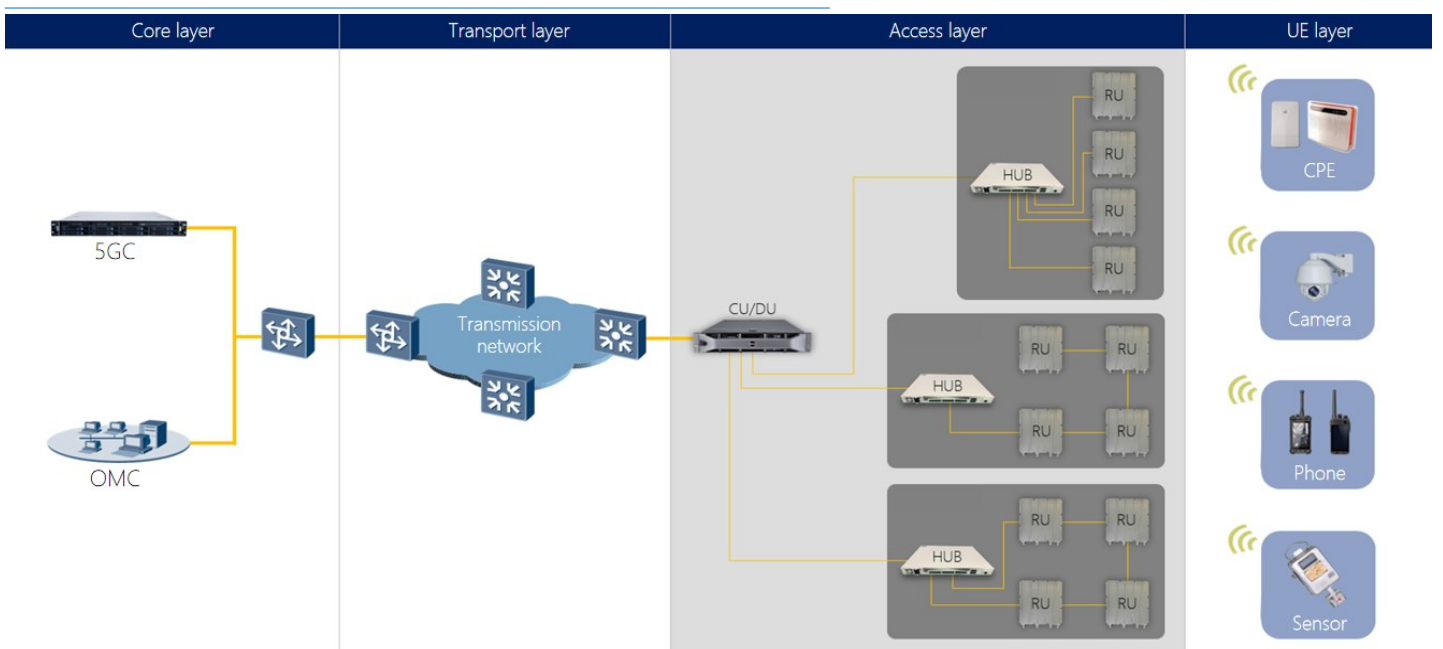
The HUB product follows the reference design proposed by the ORAN Alliance, and can be connected to the DU or RRU equipment of different equipment manufacturers through the CPRI/eCPRI interface. Help telecom operators, system integrators and service providers to enhance 5G indoor coverage, and quickly improve user experience in shops, office buildings, homes and other scenarios.



Features

- Follow the reference design proposal proposed by the ORAN Industry Alliance.
- It supports networking with DU and RRU devices through the eCPRI/CPRI interface.
- Support for providing long-distance photoelectric composite cable power supply for RU.

Architecture



INTERFACE

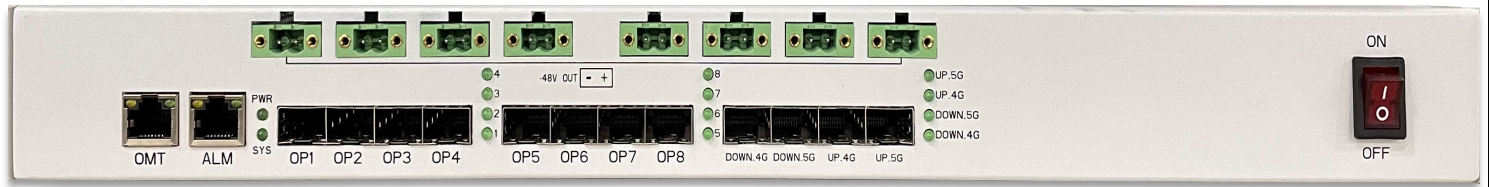
Equipped with 12 SFP/SFP28 optical ports, which can support a rate of 10Gbps or 25Gbps, and can support CPRI or eCPRI

* Interface description [OP1~OP8 To RRU] [DOWN 4G/DOWN 5G To HUB] [UP 4G/UP 5G To BBU/DU]

Equipped with 2 100Mbps Ethernet electrical ports

* Interface description [OMT For local debug] [ALM To an external alarm system]

Equipped with 8 DC -48V remote power supply ports, support RRU to use photoelectric composite cable for remote power supply, and the power supply distance of photoelectric composite cable is $\geq 200\text{m}$



PERFORMANCE

It can support 4G and 5G networks at the same time, and can support up to 8 RRUs (star network)

Supports 2-level chain cascading between HUBs, and supports independent 4G/5G cell splitting within the HUB chain of chain-level cascading

Within a single HUB, support splitting into 2 100MHz bandwidth 2T2R 5G cells, and support splitting into 2 20MHz bandwidth 2T2R 4G cells

Within a single HUB, support splitting into two 100MHz bandwidth 4T4R 5G cells

In a single HUB, all connected RRUs supporting the same carrier are combined into a 4G/5G cell

Under the chain-connected HUB, all connected RRUs supporting the same carrier are combined into a 4G/5G cell

SYNCHRONIZE

Supports extracting clock from the interface with DU as its own clock reference

Support to provide clock synchronization to the RRU through the interface, so that the RRU clock is synchronized to the baseband clock

Support in the case of HUB cascading applications, HUB extracts the clock from the interface with the upper-level HUB

Energy consumption

Support 220V mains power supply mode, working power supply supports 220V single-phase AC input, input voltage range: 176V~264VAC, frequency change range: 45Hz~65Hz

The static power consumption of the HUB <55W

Able to withstand possible more frequent power supply interruptions, and can be guaranteed to automatically restart within 5 minutes after power supply and transmission failures are restored

Supports power buffer mechanism, which can report power failure alarms immediately after power failure