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GLOBAL
SUMMIT

Francis Lam

Director, Intelligent Computing Product Management
Huawei Technologies

Ushering OCP to New Frontiers

Francis Lam
Director, Intelligent Computing Product Management
Huawei Technologies

Global Leader in Information and Communications Technology Solutions

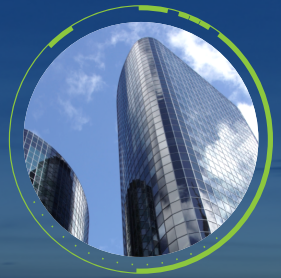
180,000
Employees

80,000
R&D employees

170+
Countries

15
R&D centers

No. 68
Interbrand's Top 100 Best Global Brands



No. 72
Fortune Global 500

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Vision and Mission

Bring digital to every person, home and organization for a fully connected, intelligent world.

Focusing on Smart Devices, Connectivity, Computing and Cloud

Smart Devices

Connection

Computing and Cloud

A Brand Admired and Trusted by Consumers

Consumers

Top 2
Global Smartphone shipments

206M
Units in 2018

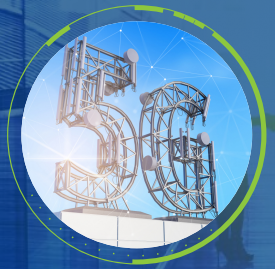
88%
Brand Awareness

Carrier Business: Industry Leader and Best Strategic Partner for Global Carriers

Global Carriers

180+ carriers

Using LTE-Advanced Pro (4.5G)



25,000+

5G base stations shipped

480+

NFV commercial contracts

110+ carriers

Using RuralStar to connect tens of millions of users in remote areas

Innovative Solutions Drives the Digitization of Fortune Global 500 Companies

Enterprises

300+
Financial institutions

160+
Smart cities

190+
Power companies

1,000+
Manufacturers

100+
Oil companies

Huawei works with **211** of the world's top 500 and **48** of the top 100

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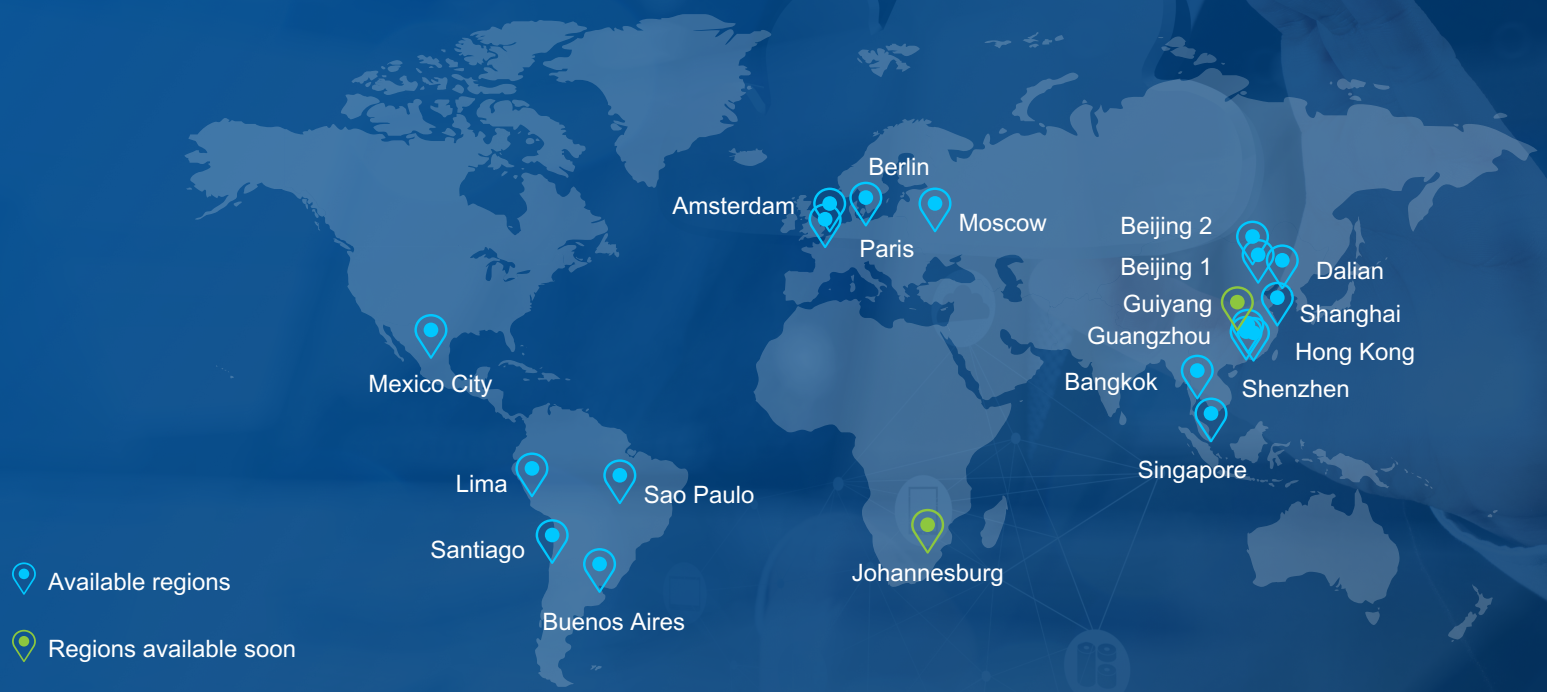
Huawei. Open. Together.

To Adopt OCP Solutions in Huawei Cloud Datacenters



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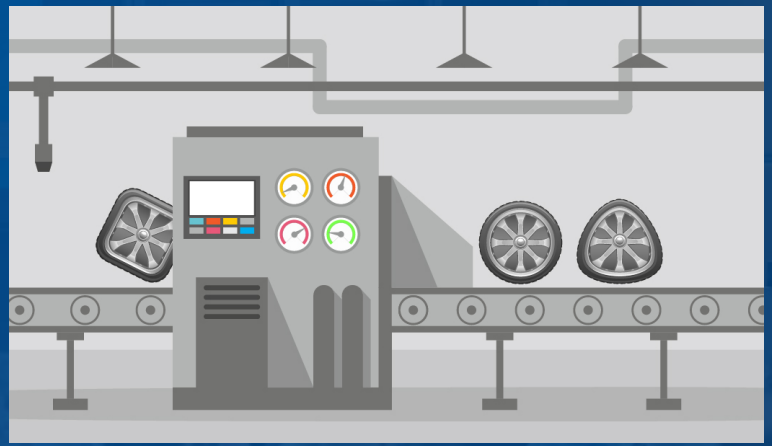
OCP Makes Sense



Stop re-inventing the wheels

Focus on what counts

Huawei Engagement with OCP

Build ICT solutions based on OCP building blocks

Contribute back to OCP communities

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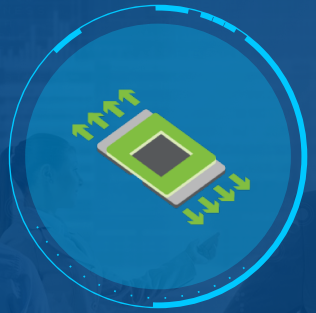
Huawei Project Participation

Open RMC

Advanced cooling solutions

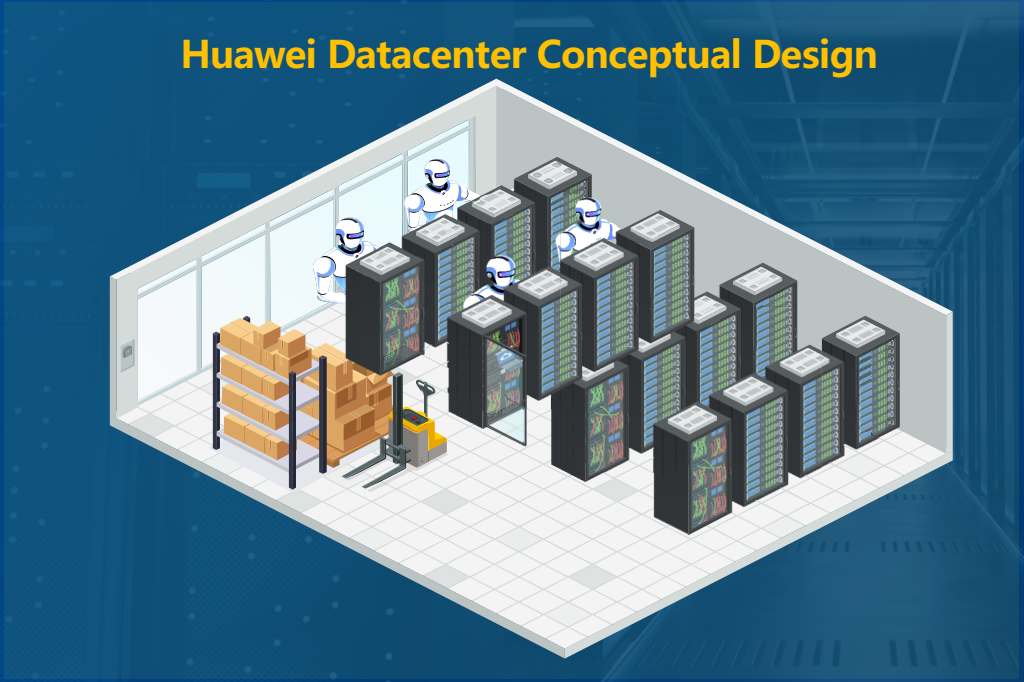


OCP Accelerator Module

NIC 3.0 card

Extension to Open Rack 2.0

Huawei Cloud Datacenter Requirements



- Deep L1/L2 co-design
- Fast deployment
- High rack density
- Future proof
- Autonomous robot maintenance

Extending Open Rack

Cable backplane for cable-less deployment and maintenance

Optional higher density liquid cooling solution

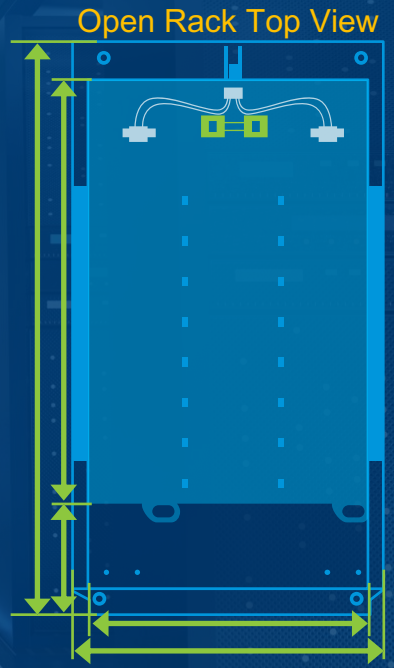
Rack Scale management

Open Rack Standard v2.1 as the foundation of our rack scale platform

Starting with Open Rack

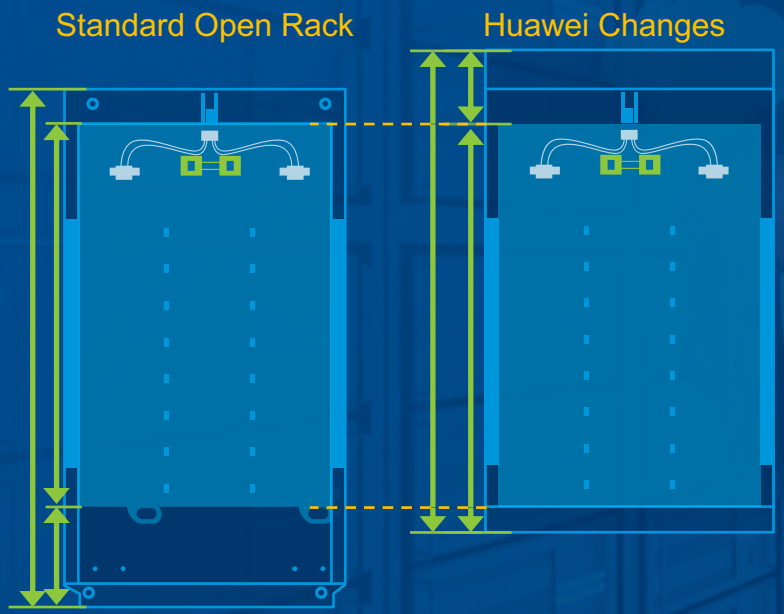
Standard Open Rack module form factor

Standard Open Rack 48VDC Power interconnect



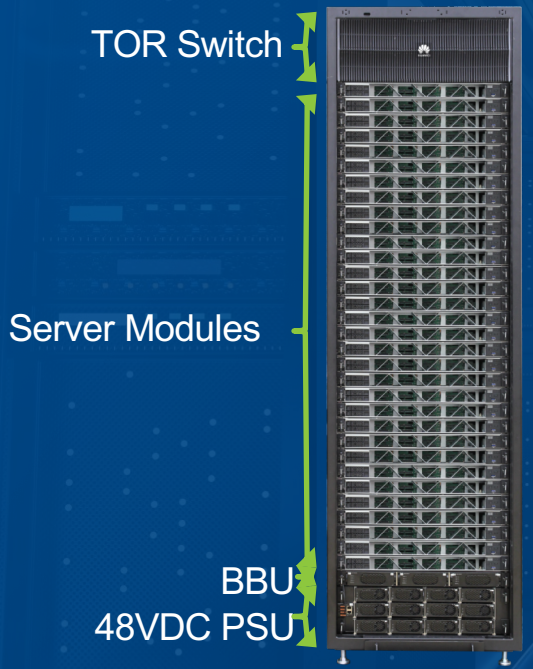
Extending Open Rack

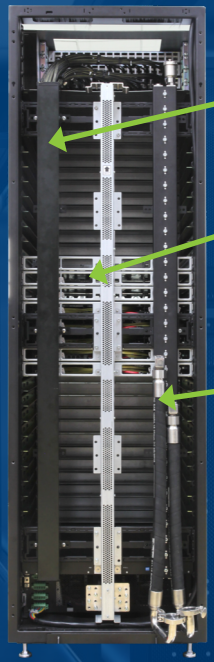
Simplify deployment and maintenance – further reduce TCO



- Extending rear rack space for blind-mate connectivity
- Replacing front-side cabling
- All FRUs are still front accessible

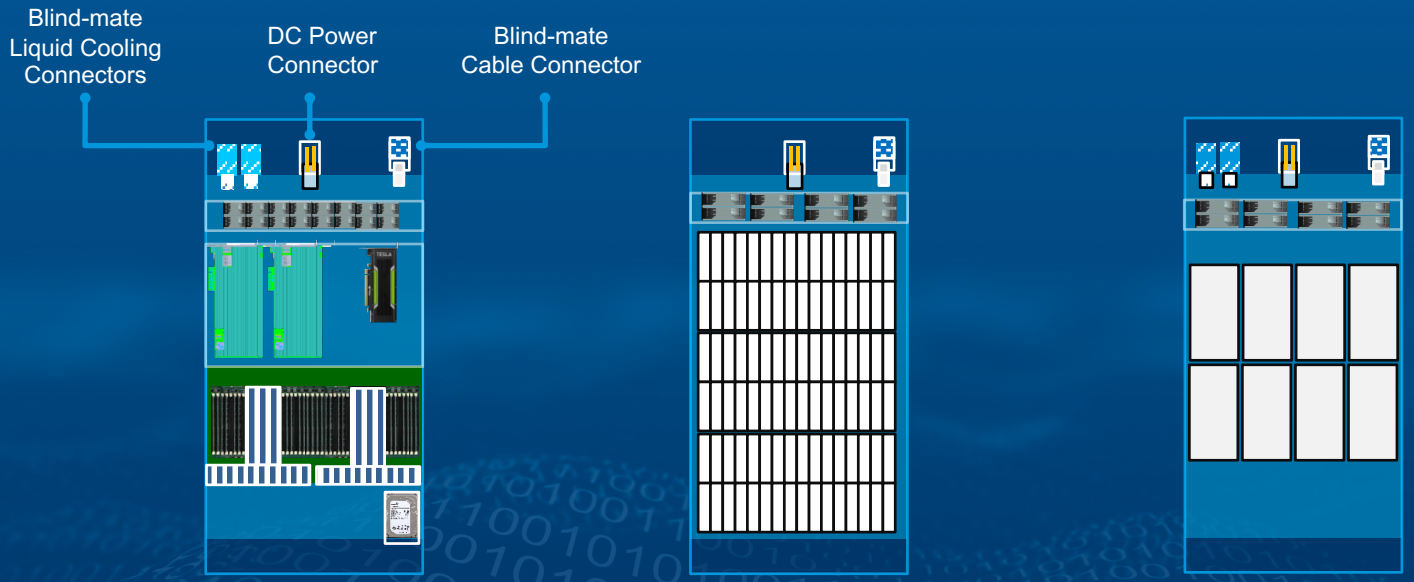
Open Rack Design for Huawei Cloud Datacenter



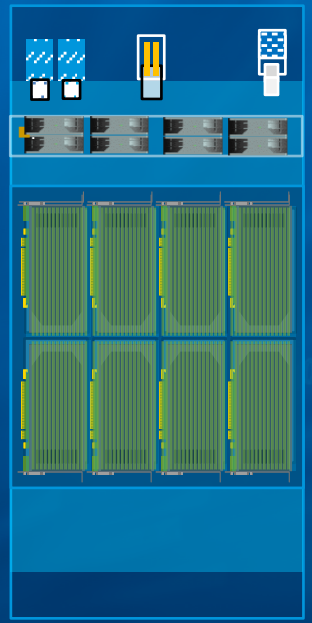


Conforms to Open Rack 2.0 Specification

Flexible Compute Module Concepts



To adopt Upcoming OCP Accelerator Module



Support broad range of Huawei-design or partner accelerators

Provide suggestion and feedback on specification to expand compatibility with Huawei accelerator devices

To adopt this specification in future accelerator module designs

Alignment with OCP Accelerator Module

High Power Capacity

3x Compute Density per Rack

Why ?

Support high power components such as high performance CPU and hardware accelerators

Reduce datacenter footprint

How?

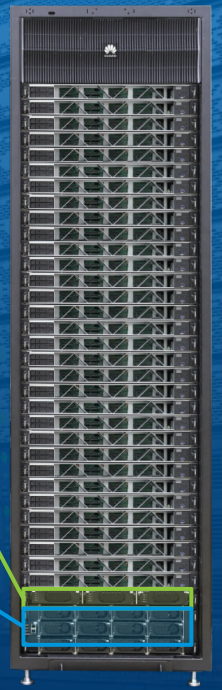
48VDC in standard depth Open Rack

98.1% Efficiency – Highest in industry

In-Rack Lithium Batteries – Eliminate UPS

One or multiple easily scalable 1U battery backup unit

Single power shelf supporting entire rack up to 33KW+



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Cable-free Deployment and Maintenance

Why ?

Simplify factory integration, installation and on-going maintenance

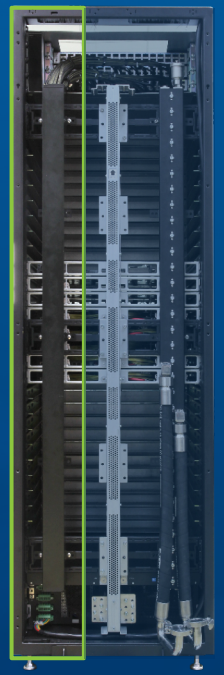
Enable fully autonomous robot FRU replacement

How?

High speed blind-mate cable tree backplane

Integrated management network connection

Alignment with Open Rack standard



Integrated Liquid Cooling

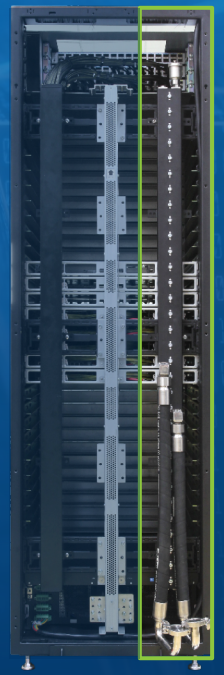
Why ?

- Higher compute density
- Maximize factory integration
- Minimize on-site engineering

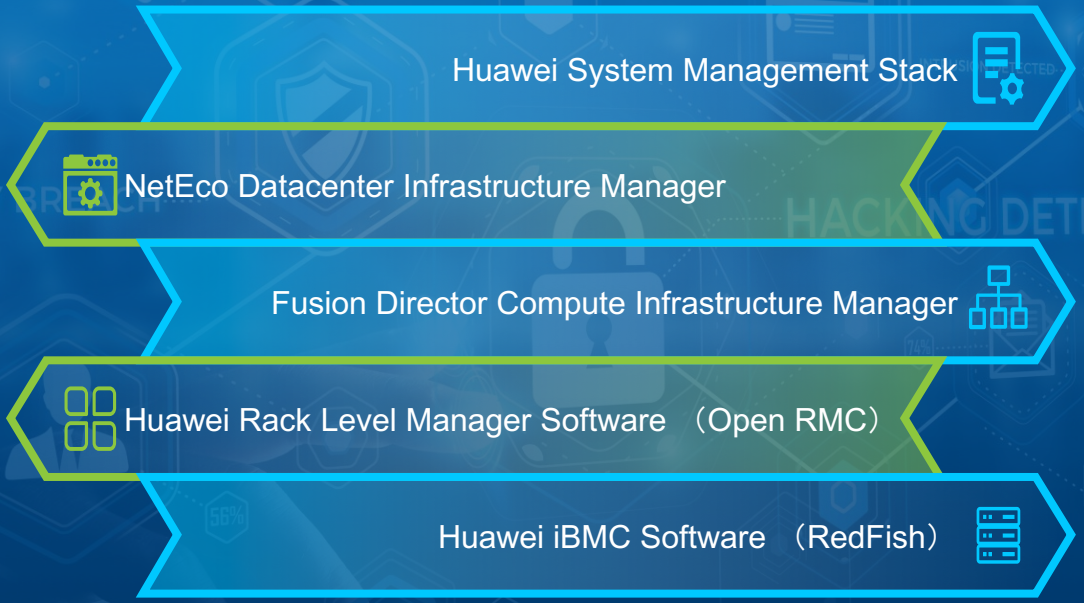
How?

- Blind-mate connection to integrated manifold
- In-rack coolant distribution unit
- Factory integration with fully enclosed secondary water loop

Alignment with OCP Advanced Cooling Solution



Intelligent Rack Level System Management



Alignment with Open RMC

Huawei Values

Partner Ecosystem

World-class Engineering

Intelligent Management

Unmatched Services

Innovative Chips

OCP building blocks and industry standard components

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OCP for Telecommunications Service Providers