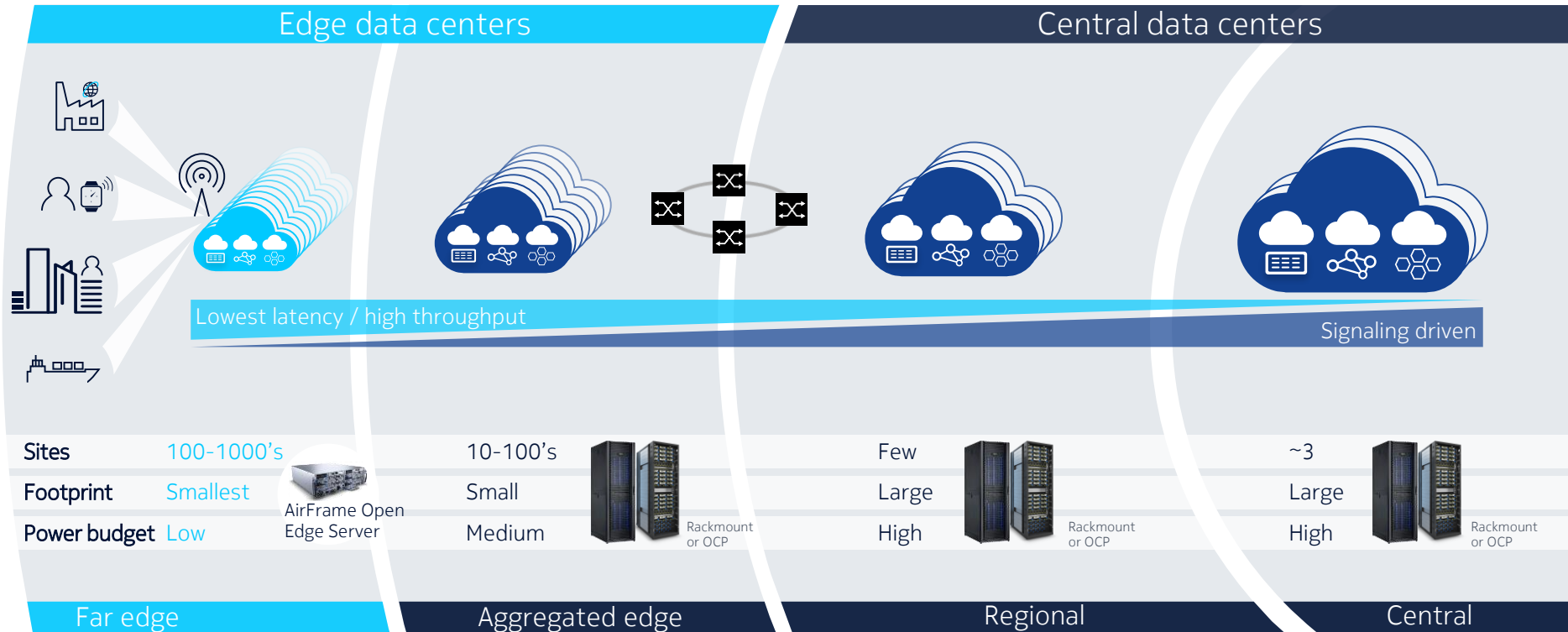


Nokia AirFrame open edge server – 5G performance in compact size
First data center solution designed for far edge

NOKIA

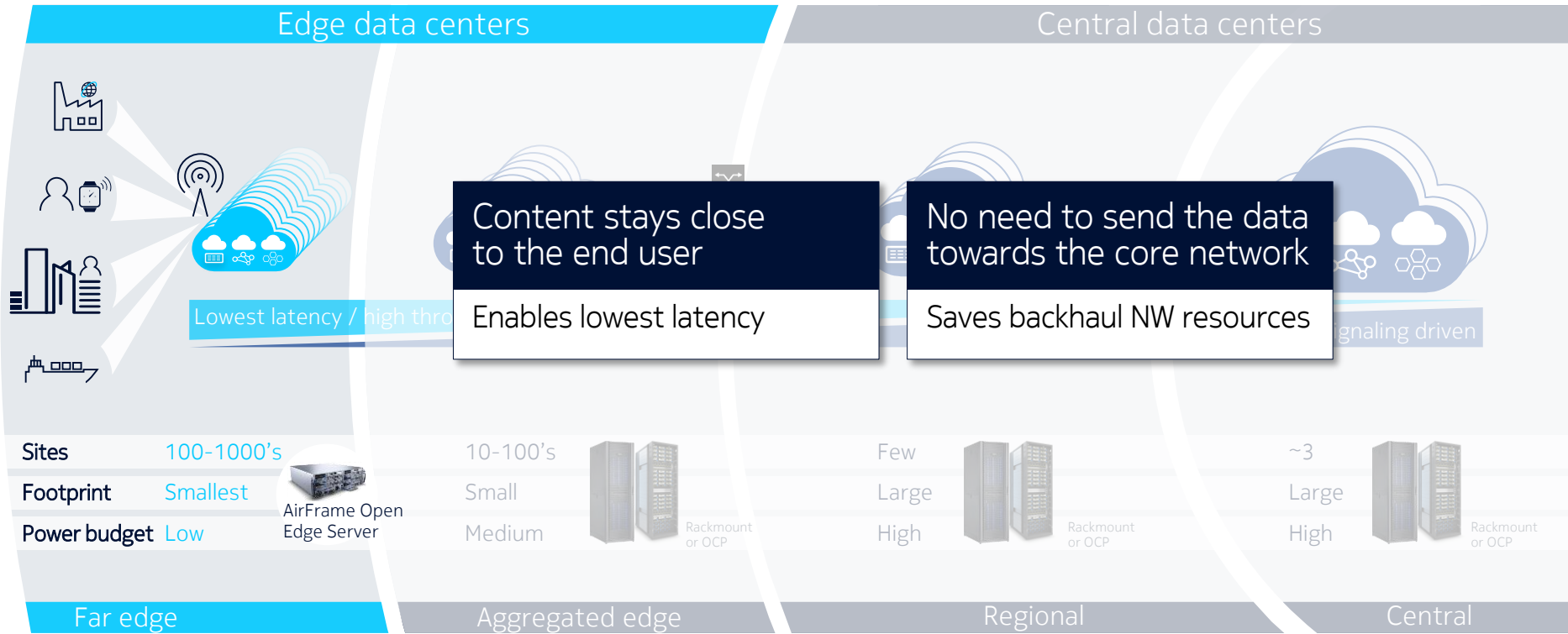
Managing the lowest latency/cost trade off with a layered architecture

First data center solution designed for the edge



Managing the lowest latency/cost trade off with a layered architecture

First data center solution designed for the edge



AirFrame open edge server: 5G performance in compact size

First x86 solution designed to fully support edge / far-edge cloud deployments

Ultra-small footprint



DIMENSIONS

- 133.5 (3RU) x 444 x 460 mm (H x W x D)
- Ca. 20.0 kg / 44.1 lbs. (Chassis with PSU's and RMC)

ARCHITECTURE

- 19" compatible: fits in any 600mm cabinet
- Compact form factor: ranging from 2RU to 5RU high chassis
- Sleds either 1RU or 2RU high
- Fully front-operated (cabling, open rack-like tool less serviceability)
- Support for high end accelerators
- High availability: No SPOFs, redundant fans, hot swap storage
- Redundant fans; air flow configurable front to rear/rear to front

POWER

- 2N redundant AC & DC power supplies
- Power fed to sleds through backplane
- 400W per 1U sled

MANAGEMENT

- All sleds managed through single interface in RMC unit
- On board BMC (in server sleds)

Environmental

- Full NEBS compliancy, seismic zone 4 [GR-63-Core, GR-1089-Core]
- Extended operating temperature range: -5C..+45C [ETSI EN300 019-1-3 Class 3.2]

COMMODITY

support on server sleds

- Memories, disks and NICs from common AirFrame portfolio

AirFrame open edge server – 1U

Intel Xeon® SP next gen

Ultra-small footprint



Dimensions, weight*

- 44 x 210 x 430 mm (H x W x D)
- 6.0 kg / 13.2 lbs.**

Memory

- DIMM slots: 6 typical (8 max)
- DIMM type: 16GB / 32GB - DDR4 RDIMM 2933 MHz

Management

- IPMI v2.0 Compliant, on board BMC
- Access through RMC unit

Storage

- 2x 2,5" Hot-plug bays for NVMe and SATA devices 9,5/7mm; SATA SSDs: 480GB, 960GB, 1,92TB 3dwpd
- 2x internal M.2 2280 (and/or 22110) devices: 480GB 1dwpd

Security

- TPM 1.2/ 2.0

Processor (single socket)

- Intel® Xeon® SP, 20 cores, 2,5GHz (tbd)

Chipset

- Intel® C621/C627

Thermal

- Max. CPU TDP support: 205W
- Four redundant dual rotor fans per node; air flow front to rear/rear to front

Expansion Slots

- 1x PCIe Gen3 x8 OCP mezzanine car: Mellanox ConnectX-5, 2x 25GE SFP28
- 1x PCIe Gen3 x16 FHHL PCIe card: Mellanox ConnectX-5, 2x 25GE SFP28

*) Preliminary information; **) Server node with typical commodity

Open real-time cloud infrastructure SW – for high performance requirements

Time-to-market advantage with latest stable OpenStack for continuous delivery

Performance

- Real-time kernel and hypervisor
- Networking acceleration

Availability

- Carrier grade high availability incl. auto recovery
- Sub-second reaction time in the case of failures

Scalability

- From single node to multi-rack clouds
- Single pane of glass operability



OPNFV compatible offering - leverage and scale open source

AirFrame Data center: Scalable compute from central to the edge

Deployability at the far edge

- Fits to existing radio sites
- Scales depending on processing capacity needs
- Bringing OCP benefits to edge deployments



AirFrame open edge server

Scalability



OpenRack v2 compliant high density server and storage systems (21")



AirFrame OpenRack

Open Compute Project (OCP) compliant hardware for larger datacenter capacities






Rackmount server and storage systems for standard 19" racks



AirFrame rackmount

Fit for various datacenter use cases with flexible scalability

AirFrame products - technical positioning

	OpenEdge server 	Open rack design 	Rackmount 
Form factor	3U - 19" - any 600 rack	20U - Open rack design	1U/2U -19" - deep racks
Scalability	1 CPU up to 50 CPU	ca.20 CPUs...Hyperscale DC	Case dependent
CPU architecture	Intel® Xeon® SP 1-socket	Intel® Xeon® SP 2-socket	Intel® Xeon® SP 2-socket
Connectivity	Upto 4x 25GE per server	Upto 4x 25GE per server	Upto 4x 25GE per server
Storage	In-server	Centralized; In-server	Variety of options
Power design	Efficiency in wide scalability	PUE optimized	Server centric
Environmental design	NEBS, Extended temp range	NEBS	NEBS
Open design, OCP compatibility	OCP principles applied	Full OCP	
Front serviceability only	Full	Full	
Acceleration	Radio / other		

Nokia AirFrame open edge server – 5G performance in compact size

First data center solution designed for the edge

Summary



Designed for low latency and high throughput

Infrastructure SW built for real-time applications

Highest performance with acceleration for demanding workloads

Based on OCP design principles

Superior serviceability

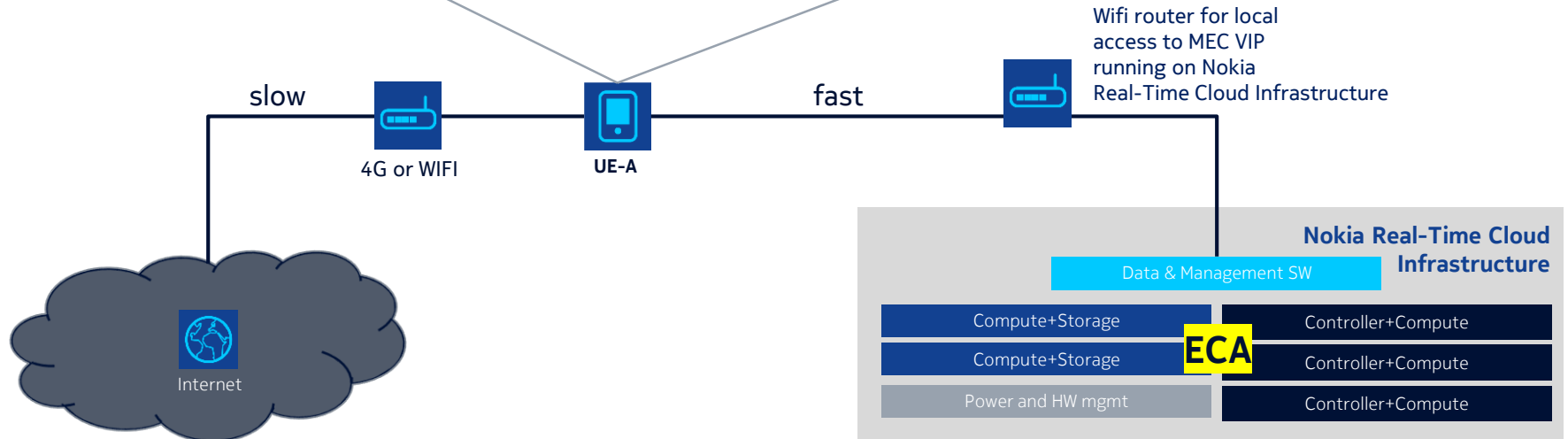
Works in harsh environments (NEBS, seismic)



a)



b)



The image features the Nokia logo in a light blue, semi-transparent font, centered horizontally across the frame. The background is a blurred, close-up view of electronic components, likely a printed circuit board (PCB), with various chips and connectors visible. The overall color palette is dominated by shades of blue and white, creating a high-tech, digital atmosphere.

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