

Sparq-2025-P 5G Private Network Solution for Stadiums and more

Private 5G Network Stadium Architecture



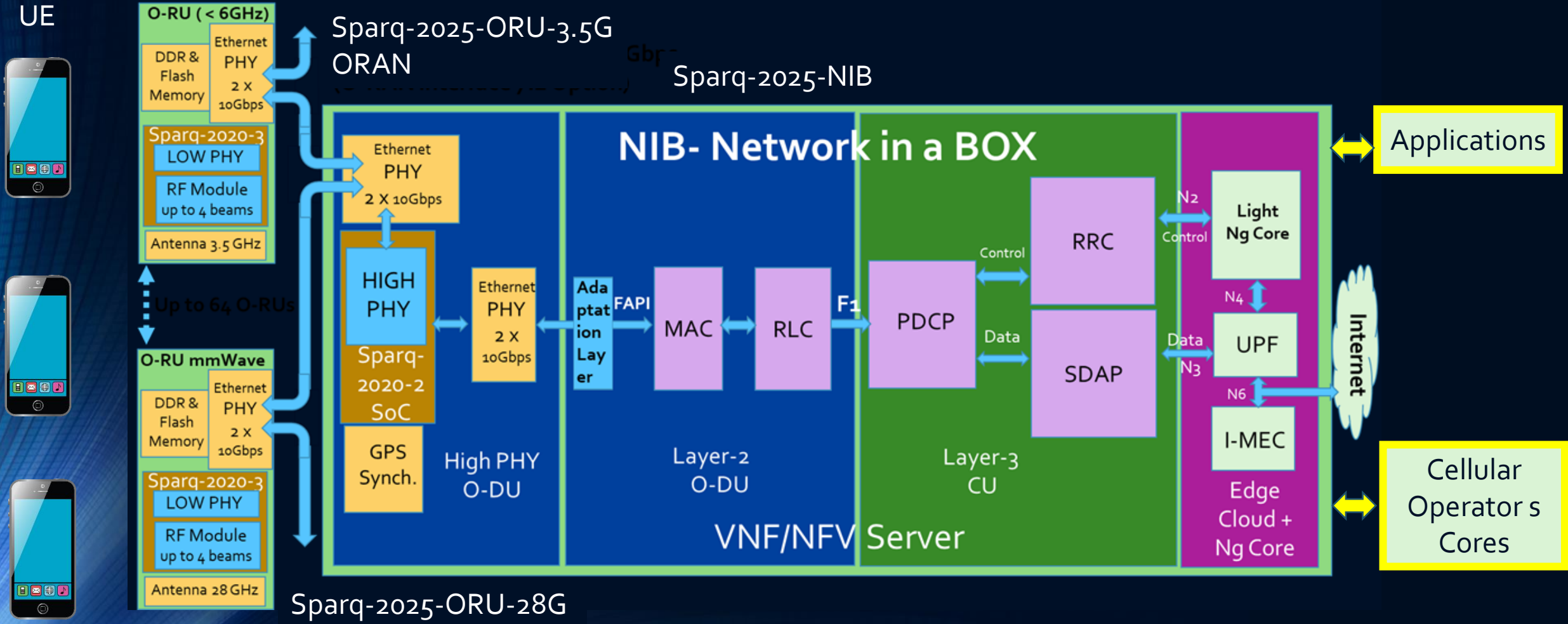
One NIB with 2 x DU/CUs drives 6 x O-RUs at 3.5GHz – 100MHz BW

Each O-RU with internal beam forming antennas with 4 dual pol beams 12 x 22 deg of 500 Mbps at (100MHz 256 QAM)

Each DU/CU will support 8Gbps capacity for total 5G capacity of 16 Gbps

11,000 spectators in the tribunes and 18,000 spectators in field events

Sparq-2025P – Private 5G Network



Solution Advantages

- Supports 20000 UEs
- 20 Gbps Capacity
- **Low Latency (< 1msec)**
- **High UE Location Accuracy (1 cm)**
- Based on own SoC
- SA and NSA
- Scalable

Increased
Quality of
Experience

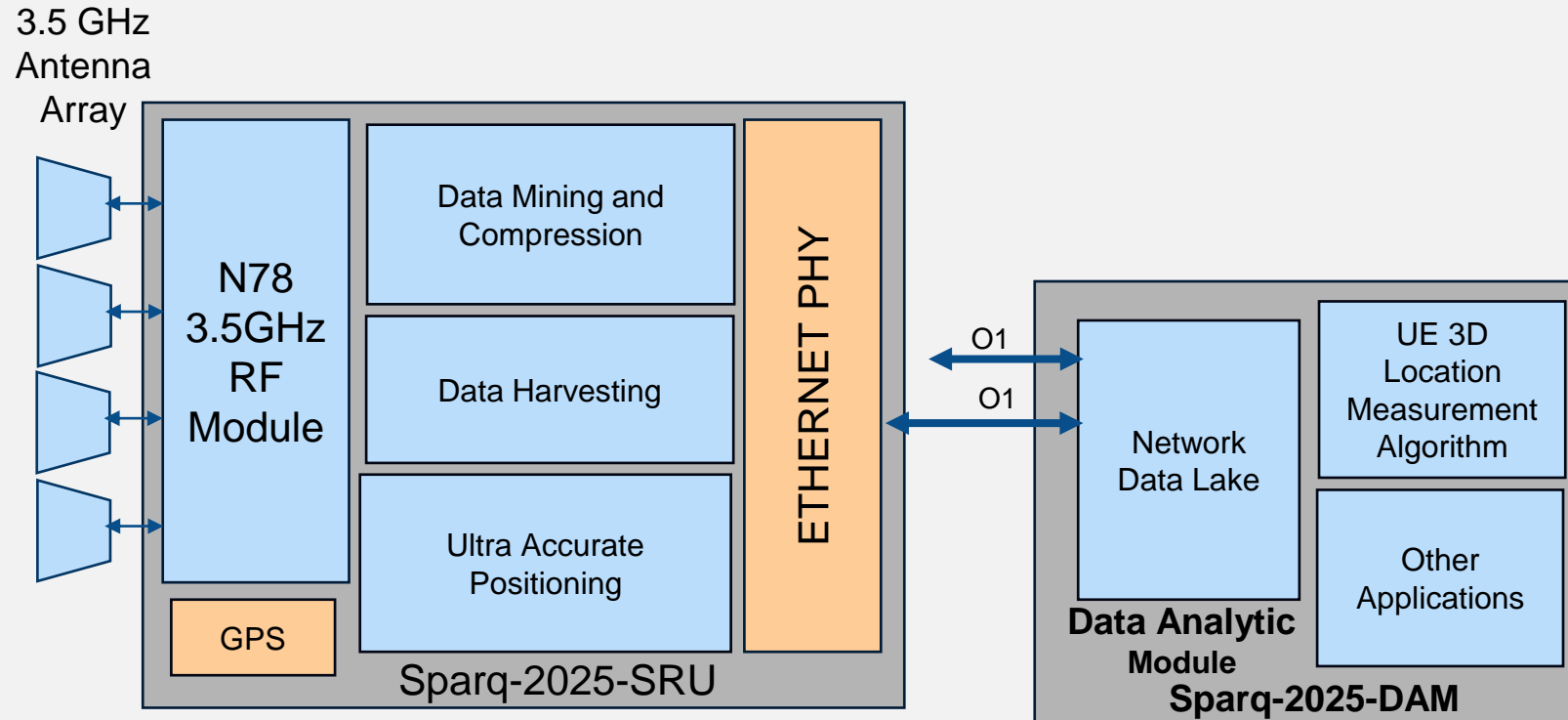
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Enable new
types of
applications

Support
Additional Use
Cases

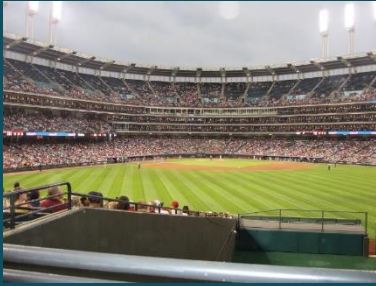
Sparq-2025-SRU Smart RU



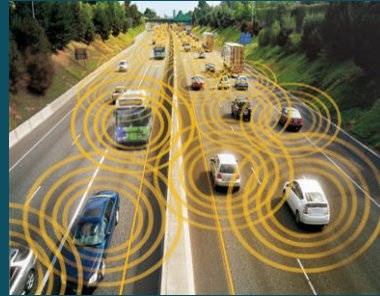
1 cm UE location accuracy module

Network Data Harvesting for AI training Datasets and Digital Tweens

Supporting Additional Use Cases



Sports Stadiums



V2X Connected Cars



Drones



Remote Surgery



Automated Factory



AR/VR/XR



Emergency Recovery



On-Line Gaming



Robotics



Tactile Internet



Autonomous Warehouses



IoT

RunEL Interest in:

- After participation in : IoRL, 5 Genesis, Affordable 5G, 6G Brains, BeGreen, 6G Optic.
- **HORIZON-JU-SNS-2024-STREAM-B-01-01: System Architecture - Standardization and Follow-up/PoCs**
- **HORIZON-JU-SNS-2024-STREAM-B-01-02: Wireless Communication Technologies and Signal Processing – Standardisation and Follow-up/PoCs**
- **HORIZON-JU-SNS-2024-STREAM-B-01-03: Communication Infrastructure Technologies and Devices – Standardisation and Follow-up/PoCs**
- **HORIZON-JU-SNS-2024-STREAM-B-01-07: Sustainability Lighthouse**

Thank you
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