

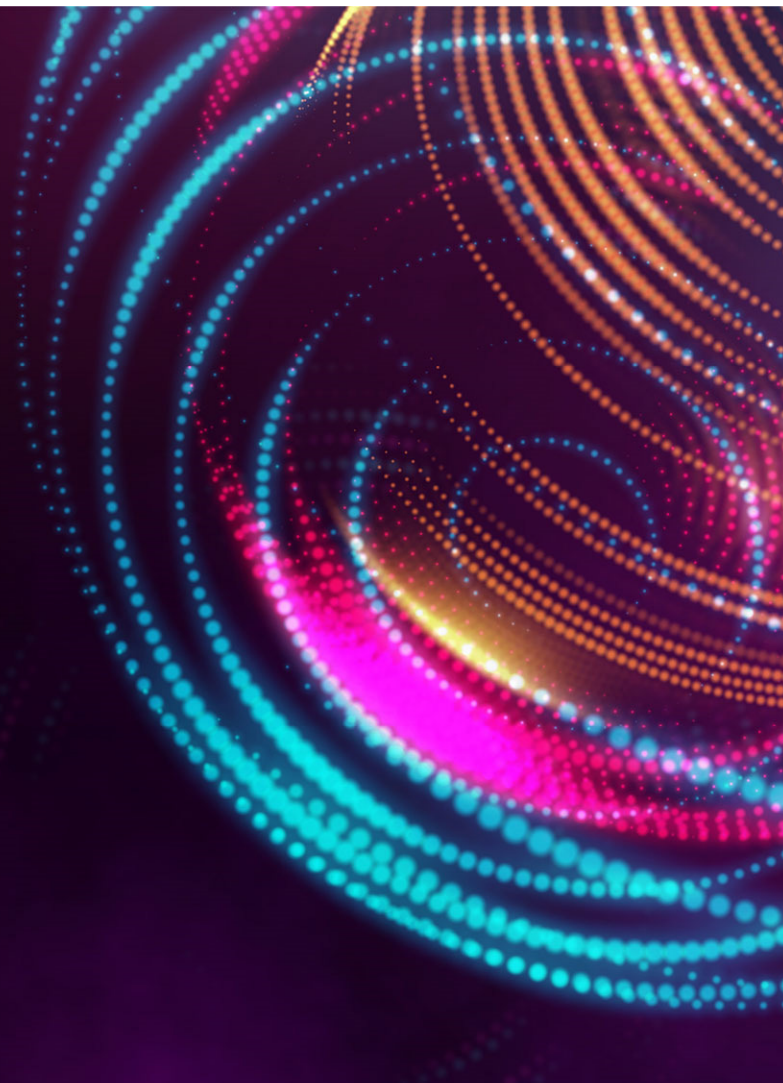


Data infrastructure technology
that powers the world

Leadership in 5G RAN

Extending Into O-RAN / vRAN

December 8, 2020



Connecting the world since before 2004



#1
in merchant silicon

~100M
units shipped

2B+
people connected

*Wireless products including baseband, ASICs and switches.

Marvell's Wireless portfolio

Radio Unit



Massive MIMO processing



Fronthaul connectivity



PHY



DFE RF interface

Digital Radio

Base Station (DU)



Transport processing



Baseband processing



Connectivity



PHY



L1 Baseband Unit

Central Unit



Higher Layer processing



Backhaul connectivity



PHY

L2 / L3 + Control

Marvell's O-RAN Platform

Introducing our O-RAN platform

mMIMO radio units



OCTEON Fusion-O RU

Key Hardware features

- 5G lower L1 acceleration
- eCPRI w/compression
- 32T32R @ 100MHz

O-RAN Reference Software

- Reference lower L1
- O-RAN management plane
- Reference Beamforming
- RF control

Distributed units



OCTEON Fusion-O DU

Key Hardware features

- 5G/LTE L1 acceleration
- 5G: Up to 16 DL / 8 UL layers @ 100 MHz
- 10 Gbps DL / 5 Gbps UL

O-RAN Reference Software

- Reference L1
- O-RAN APIs
- IEEE1588 timing

Centralized units

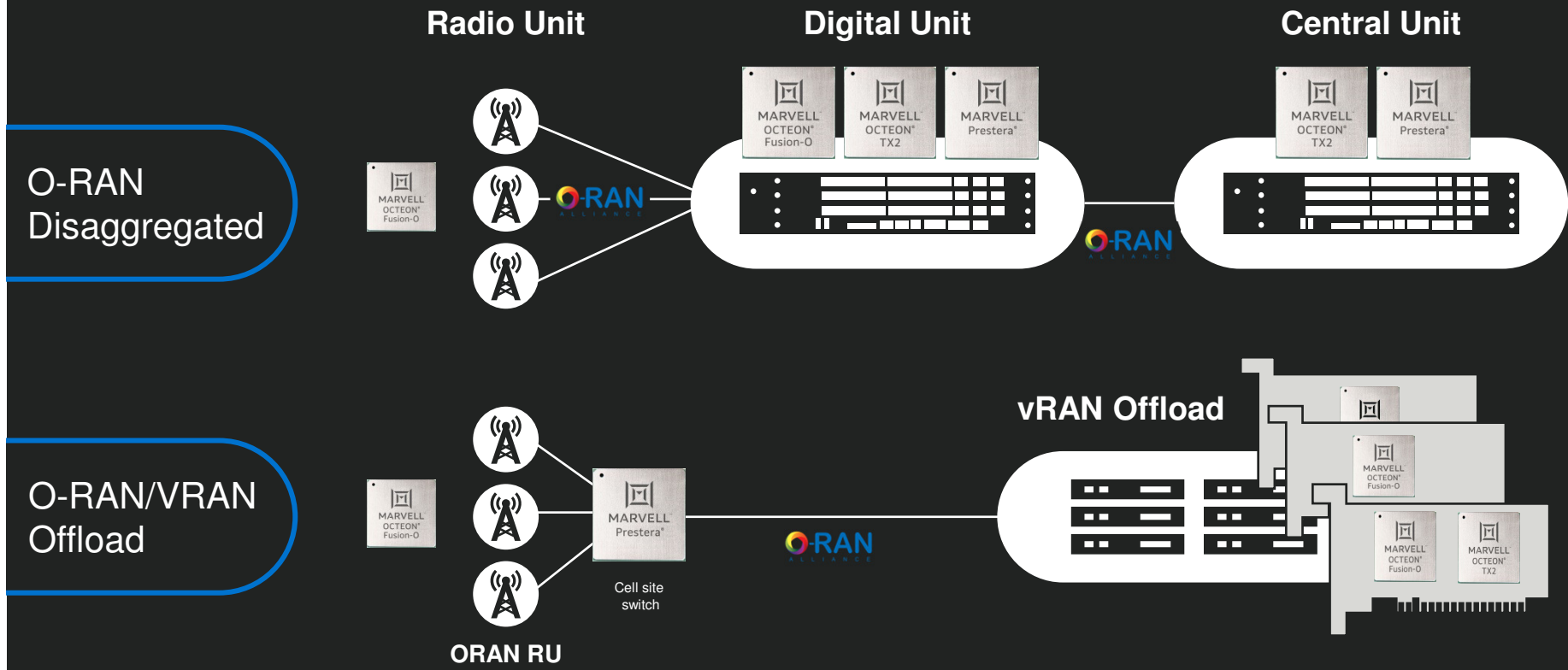


CN92/96/98xx DPUs & Presteria 7K

Key Hardware features

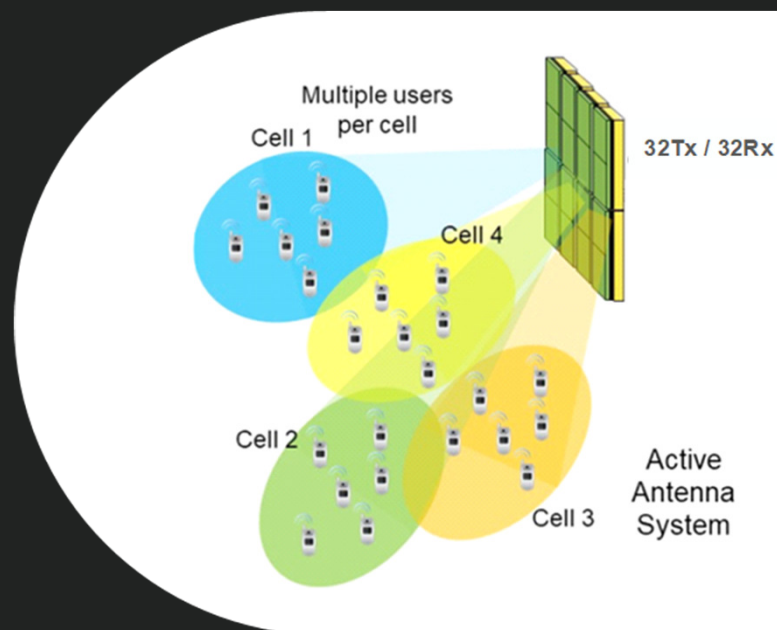
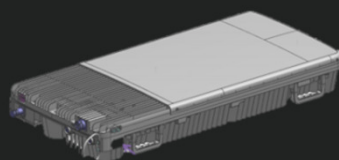
- Multicore Arm
- Full L2
- IPsec
- DPDK Acceleration
- Full Virtualization
- Fast Path Transport
- Metro access switch for 400G backhaul

Purpose-built platforms for O-RAN architectures



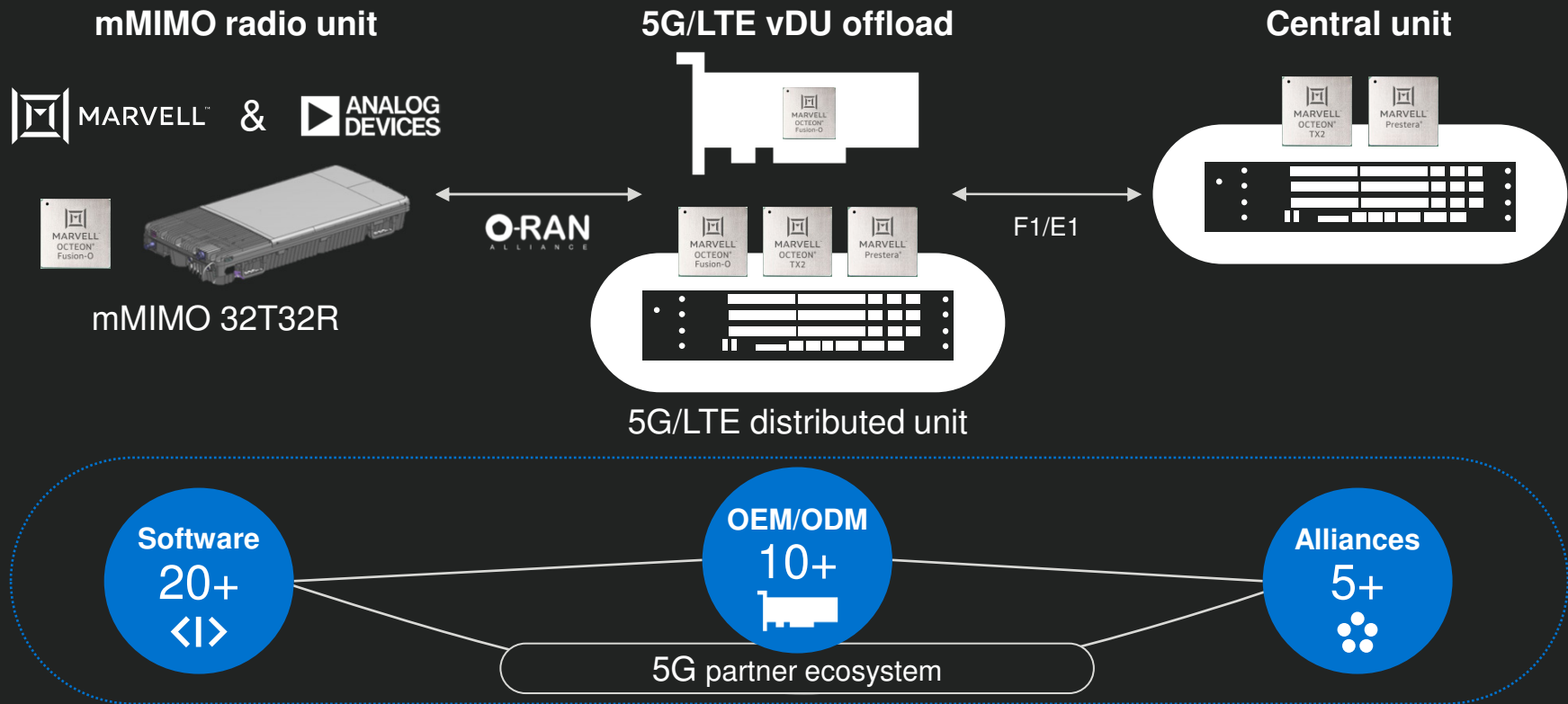
Massive MIMO O-RAN radio unit

- A complete RU design supporting O-RAN 7.2 split
 - From antenna array to lower L1
 - Superior cost and power attributes
- 32T32R / 8 layers / 100MHz channelization
- 32Tx32Rx
- Software
 - Lower L1 and Beamforming
 - O-RAN management plane
 - Antenna calibration
 - Digital Pre-distortion
 - Crest Factor Reduction



>5Gbps of steered downlink user data dynamically allocated where and when needed

Introducing our O-RAN platform





Essential technology, done right™