Parallel WIRELESS

SOLUTION OVERVIEW

5G OPEN RAN

HOW PARALLEL WIRELESS OPEN RAN MEETS 5G REQUIREMENTS AND DELIVERS BENEFITS

THE ROUTE TO A PROFITABLE 5G FUTURE

The deployment of 5G networks will create a surge in revenue-generating traffic for mobile network operators as bandwidth-hungry and latency-sensitive use cases proliferate – from gaming, AR/VR, and autonomous vehicles, to IoT, smart grid, and intelligent transportation. To take advantage of these opportunities, operators must first invest in the necessary capacity, power, and backhaul infrastructure. The Parallel Wireless cloud-native Open RAN solution offers operators a cost-effective, flexible means to accommodate growth, ensure QoS, simplify architecture, and reduce network TCO.

MAKING THE TRANSITION TO 5G

Mobile operators seeking to reap the benefits of 5G need a manageable way to build out the necessary capacity, power, and backhaul infrastructure while maintaining control over CAPEX and OPEX.

Parallel Wireless answers these needs with an Open RAN solution built around a cloud-native, fully virtualized architecture and a flexible, end-to-end orchestration framework.

- **A flexible architecture for manageable growth.** Parallel Wireless Open RAN is cloud-native and supports All Gs, deployed on general purpose COTS hardware.
- **Intelligence to optimize and reduce OPEX.** The Parallel Wireless RAN Intelligent Controller (RIC) incorporates xApp/rApps to provide intelligent decision-making to optimize and tune the network. They leverage AI/ML and data collected from the network to analyze and derive actionable decisions to tune and optimize the network to deliver the best user experience to subscribers.
- **A vibrant ecosystem for greater choice.** An ecosystem of RRH partners offers the flexibility of choice that comes with the Open RAN promise.
- **Software upgradeability for reduced CAPEX/OPEX.** Parallel Wireless requires no radio replacement to upgrade and supports CI/CD and ZTP for ease of maintenance and convenience in upgradeability.

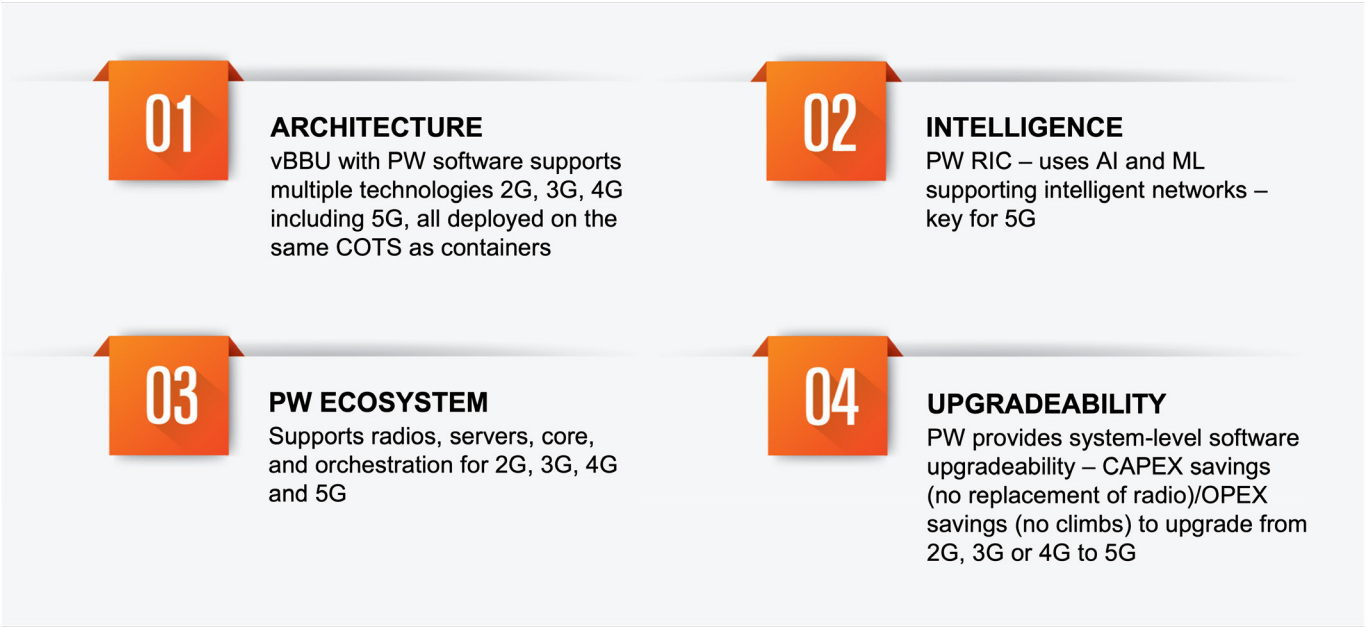

Figure 1: Foundation of PW 5G Solution

HOW PARALLEL WIRELESS FULFILLS 5G SERVICE REQUIREMENTS

As mobile operators plan for their 5G future, they will need the ability to support three major service categories:

- **Enhanced Mobile Broadband (eMBB):** Considered the main driver for initial 5G rollouts, eMBB will meet end user expectations for faster speeds and more data allowances at a lower price. The Parallel Wireless Open RAN solution delivers the capability to provide capacity and coverage, catering to different deployment options based on mobile operator requirements.
- **Massive Machine Type Communications (mMTC):** Millions of IoT devices, such as energy meters and smart home appliances, are driving demand for mMTC, a service requiring massive scalable connectivity for latency-agnostic applications and optimized for small packets, sporadic transmissions, and uplink-centric activity. The Parallel Wireless Open RAN solution will help to manage the growing myriad of IoT devices while mitigating interference and reducing signaling strain on the core.
- **Ultra-Reliable and Low-Latency Communications (URLLC):** This will be the most demanding 5G service, with latency of a few milliseconds. It is designed to support latency-sensitive applications, such as gaming, AR/VR, autonomous vehicles, and more. The Parallel Wireless Open RAN solution enables Control and User Plane traffic separation, allowing operators to co-locate RAN User Plane, Core User Plane and MEC functions. This will enable operators to offload traffic at the edge and reduce the latency significantly.

SUMMARY

Parallel Wireless's All G, O-RAN-compliant, cloud-native Open RAN solution provides operators with the agility, elasticity, flexibility, interoperability and cost savings they need to make a seamless transition to 5G and open the door to a more innovative, manageable, and profitable future.