

# O-RAN RU Radio Development Kit

## Hardware Reference for BRS/S-Band Radio Units



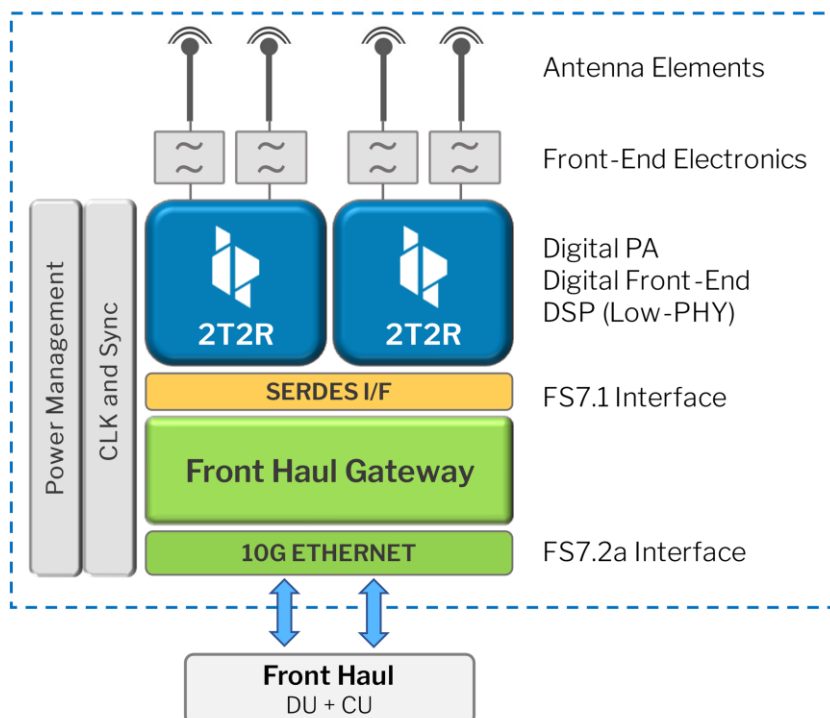
Built using our Hermes TWO digital radio, this reference design targets the critical requirements for enterprise 4G/5G network radios:

- Lowering Power Consumption (up to 50%)
- Increased Performance (256QAM DL/UL, Higher P<sub>out</sub>)
- Reduced Cost (through system integration)

As a fabless semiconductor company, our unique capability to embed RF and digital sub-systems into a single-die, advanced CMOS device provides incredible value and performance benefits.



### O-RAN FS7.2 Small Cell RDK



### Kit Includes:

- Hardware Platform
- Reference Schematics & BOM
- Logic & SW Package
- Configuration & Test GUI
- Test Reports
- Documentation
- Technical Support

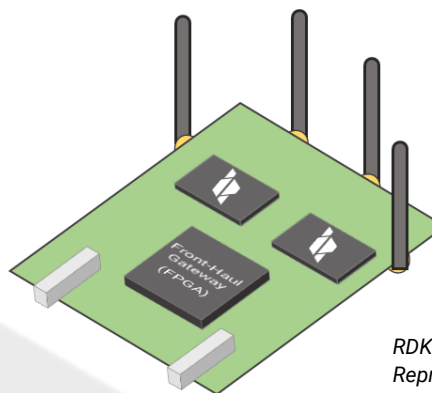
**Full Availability – 2H 2023**

## Product Summary

The O-RAN RU RDK uses the Hermes TWO digital radio with proprietary radio architecture, digital sub-system and integrated power amplifiers in a complete development and validation reference platform that expedites end-product implementations. The device uses standard, advanced CMOS technology for increased system integration and efficiency advantages. The result is a simplified system architecture for a wide range of new, cost-effective small cell designs.

## Target Applications

- TDD 4G/5G Small Cells
- In-Building Wireless
- Private Networks
- Industry 4.0
- Network Densification



RDK Hardware Representation Only

## Feature Table

CATEGORY	PRELIMINARY DETAILS (H2-RDK-251)		
<b>Standards Supported</b>	3GPP TS 38.104, O-RAN Option FS7.2a, O-RU C/ U/ M/ S plane		
<b>Duplex Mode</b>	TDD		
<b>Radio Access Technology</b>	4G / 5G		
<b>Frequencies Supported</b>	n41, B41: 2496MHz - 2690MHz (BRS/MMDS)		
	n53, B53: 2483.5MHz - 2495MHz (S-Band)		
<b>Bandwidth</b>	Up to 100MHz		
<b>Antenna Configuration</b>	2T2R	4T4R	4T4R
<b>Tx Power/Channel (Avg.)</b>	Up to 500mW (27dBm)	Up to 250mW (24dBm)	Up to 500mW (27dBm)
<b>System Power Consumption</b>	<13W	<13W	<25.5W
<b>PoE Power Class Supported</b>	802.3af PoE	802.3af PoE	802.3at PoE+
<b>Number of Carriers</b>	Two (4 Streams)	Two (8 Streams)	Two (8 Streams)
<b>Signal Optimization</b>	Digital Pre-Distortion (DPD), Crest Factor Reduction (CFR)		
<b>Modulation</b>	256QAM DL / 256QAM UL		
<b>Network Interface</b>	10G SFP+ / eCPRI (x1) (RJ45 10GbE TBD)		
<b>Timing Synchronization</b>	IEEE 1588v2 / SyncE		
<b>Power Supply</b>	12V DC (PoE TBD)		

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