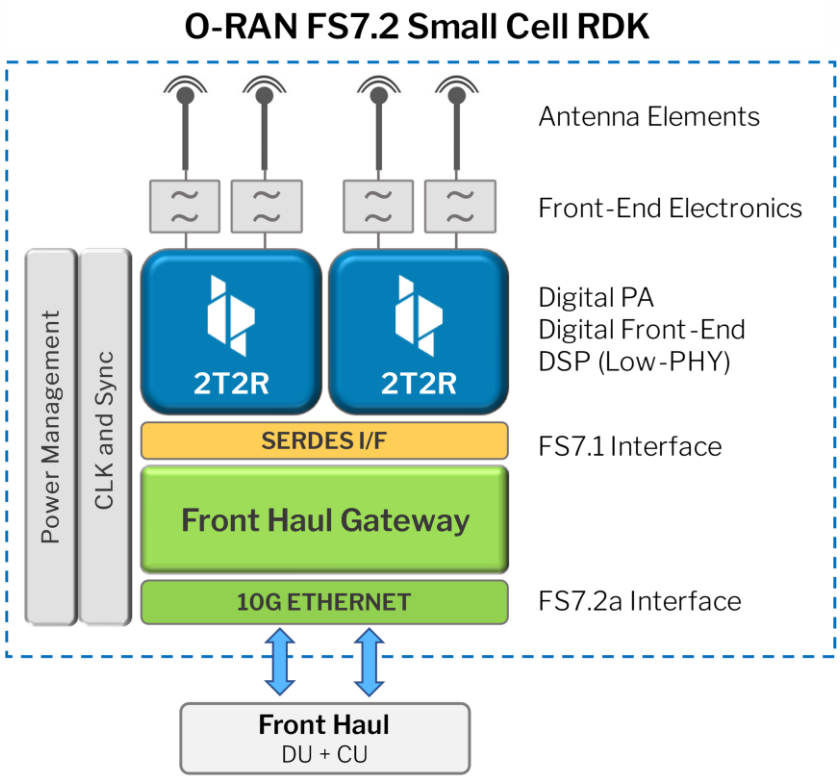
O-RAN RU Radio Development Kit

Hardware Reference for CBRS/C-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_{out})
- 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.



Kit Includes:

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

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PRODUCT BRIEF – H2-RDK-151

PRELIMINARY

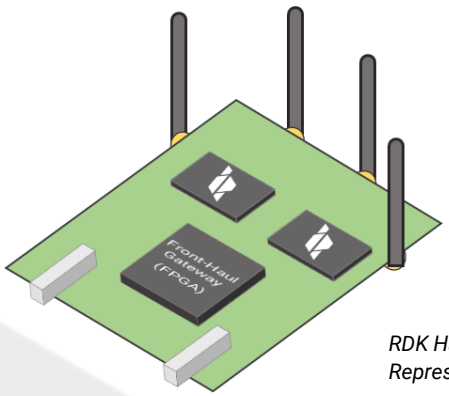
Full Availability – Late 2023

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-151)	
Standards Supported	3GPP TS 38.104, O-RAN Option FS7.2a, O-RU C/ U/ M/ S plane	
Duplex Mode	TDD	
Radio Access Technology	4G / 5G	
Frequencies Supported	B42: 3400MHz - 3600MHz (CBRS EU, Japan)	
	n48, B48: 3550MHz - 3700MHz (CBRS)	
	n77, n78, B43: 3300MHz - 3980MHz (C-Band)	
Bandwidth	Up to 100MHz	
Antenna Configuration	2T2R	4T4R
Tx Power/Channel (Avg., @ Ant.)	Up to 350mW (25.5dBm)	Up to 350mW (25.5dBm)
System Power Consumption	<13W	<25.5W
PoE Power Class Supported	802.3af PoE	802.3at PoE+
Number of Carriers	Two (4 Streams)	Two (8 Streams)
Signal Optimization	Digital Pre-Distortion (DPD), Crest Factor Reduction (CFR)	
Modulation	256QAM DL / 256QAM UL	
Network Interface	10G SFP+ / eCPRI (x1) (RJ45 10GbE TBD)	
Timing Synchronization	IEEE 1588v2 / SyncE	
Power Supply	12V DC (PoE TBD)	

Contact sales5G@innophaseinc.com for more information

Version 1.4

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