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## iCana launches indoor small cell RF Front-End reference design for AMD RFSoC DFE Evaluation Platform

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iCana launches 5G NR FR1 RF Front-End Reference Design for indoor small cells. The RF Front-End interfaces directly to AMD Zynq<sup>™</sup> UltraScale+<sup>™</sup> RFSoC DFE ZCU670 Evaluation Kit and demonstrates iCana's line-up for a high-performing, power-efficient, and BOM-conscious RF Front-End. The layout is pin-to-pin compatible in covering all major 5G Bands and is available for evaluation for n41, n77, n78, CBRS, and n79 bands.



iCana's RFFE Reference Design includes:

- ARQSP3336-4 3.3–3.6 GHz 4W High-Efficiency Power Amplifier providing 28 dBm average output power with excellent compatibility for digital pre-distortion (DPD) linearization, high efficiency, and strong ruggedness handling up to 10:1 VSWR output mismatch.
  - 2. ARQSF2442-RX-A 2.4–4.2 GHz Dual-Channel Receiver Front-End Module combining a high-power handling Switch and a Low Noise Amplifier with bypass function in a dual channel configuration. The FEM delivers a low noise figure < 1.5 dB, 37/16 dB Gain, and high channel isolation while minimize the footprint to a 6x6 mm<sup>2</sup> package.
  - 3. ICASD3338-D2S 3.3–3.8 GHz Differential to Single-Ended Gain Amplifier and ICASD3338-S2D 3.3–3.8 GHz Single-Ended to Differential Gain Amplifier. The gain amplifiers combine a balun and a low noise gain stage in a small 2x2 mm<sup>2</sup> footprint to provide a high and flat gain of > 17 dB, high linearity > 30 dBm, and low noise figure.
  - ICASS1050-4T 1–5 GHz SP4T RF Switch to control the DPD feedback path between the transmission chains. The Switch excels in fast switching time < 450 ns, high isolation > 65 dB and is specially designed to reduce the phase and amplitude variation during hot switching on the signal paths.

"We are delighted to work with iCana on these optimized RF Front-End small cell solutions." said **Anthony Collins, Director 5G Radio and RF Ecosystem, AMD**. "These proven solutions will accelerate our mutual customers' time to market".

The design will be presented at MWC 2023, Barcelona, Hall #2 - Booth #2M61.

#### About iCana

iCana Limited is a fabless semiconductor component supplier for the Wireless Telecommunications Infrastructure market. As the world is evolving fast towards 5G with new architectures and technical challenges ahead, iCana has been transforming its IP portfolio into a range of key high-performing products in different semiconductor technologies, to support the 5G market and ecosystem.

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### iCana Limited



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