

# LLRF System Considerations for a Compact, Commercial C-band Accelerator using the AMD Xilinx RF-SoC

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A C-band klystron is being developed to provide 600 kW peak power to a fully integrated compact linear accelerator system. The design of this high-power RF source was centered on minimizing weight and volume. In doing so, a novel periodic permanent magnet focusing circuit was developed alongside a compact RF circuit to achieve > 50% efficiency in simulation. Fabrication of this system is underway and high-power tests will be performed.

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## Keyword

Normal conducting, compact, c-band, AMD Xilinx RF-SoC, embedded, sbc

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