



CMOS RF Analog Engineer



Overview

Position: CMOS RF Analog Engineer

Location: Orange County

Company

Jariet is a mature startup with a large customer base in the aerospace and commercial markets. Our focus is on Digital Microwave, which takes our very high speed 64+ GS/s ADC and DAC data converters and marries them with our digital systems for up and down frequency conversion. For very high frequency systems we integrate RF components such as mixers in front of our converters. Our location in Redondo Beach has our test lab and analog AFE design team. In our second office in Aliso Viejo we have the digital and analog data converter team.

Our team is quite strong in the data converter area and we want to compliment that team with someone with talent in the RF CMOS area. In particular, experience in CMOS based mixers, gain, LNAs at frequencies above 10 GHz. Knowledge in state of the art architectures, along with creativity and desire to pursue new ideas is welcome. Having “scars” from testing their designs in silicon is crucial.

We currently utilize 12nm CMOS technology and are looking at scaling to smaller geometries. Our design team requires engineers capable of assuming a broad range of development responsibilities, including chip design, layout, design verification, and test validation. Candidates must have experience working in commercial analog development teams and executing standard design processes and flows.

Description

- CMOS RF Analog Design:
- General (motherhood and apple-pie):
- Understand and analyze system level design requirements
- Review existing publications, literature, conference proceedings to investigate solutions to requirements
- Work within team to design and simulate viable circuits
- Support circuit layout and post-layout simulation
- Prepare and participate in design reviews
- Develop verification plans for design work
- Validate circuit performance in test laboratory facilities
- Diagnose problems and formulate rework or redesign solution.



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- Specific design skills in increasing order of need:
- High speed (>10 GHz) CMOS RF
- Passive and Active Mixers
- PA and LNA
- Keywords: Mixers, RF, analog design, CMOS

Required Skills and Experience

- Experience with high-quality full custom analog layout utilizing the latest Fin-FET processes.
- Knowledgeable of layout techniques for device matching, minimizing parasitic, signal shielding, and high-frequency routing.
- Comprehensive understanding of CADENCE layout tools.
- Clear working proficiency of CALIBRE verification tool suite DRC, ERC, LVS, etc., and the ability to interpret the flow output.
- Must have a comprehensive understanding of well-constructed layouts at the transistor base layer level and the ability to work with circuit engineers to drive performance solutions.
- Excellent communication skills are a must, along with a willingness to put oneself forward to drive solutions across diverse teams and functioning groups.
- Scripting skills are a plus.
- US citizenship is required.

Education

- MS or PhD in Electrical Engineering with a minimum of 6 years of experience or BSEE degree with at least 8 years of applicable industry experience
- Familiarity with Cadence schematic, layout, and simulation tools. Spectre, PSS, noise, jitter analysis
- Experience working in a commercial IC development team
- Experience with IC engineering life cycle (system definition, system architecture, simulation, circuit design, reliability, test validation)