

SENIOR ANALOG/MIXED-SIGNAL DESIGN ENGINEER

About Us

We are passionate about building the next generation of LiDAR systems for autonomous vehicles, UAVs, industrial automation and many other applications. Our core technology – protected by over 200 patents – enables a simple, high-performance, solid state solution with no moving parts that can uniquely meet the rigorous performance, reliability and cost requirements of the automotive industry. Sense Photonics was founded in 2016 and is based in Research Triangle Park, NC with offices in Edinburgh, UK and in Silicon Valley. We are well financed, backed by several top tier venture capital firms and have already developed strong customer traction for our solution. We are building an innovative world-class company that designs and builds the world's best 3D sensors. Sense Photonics is also an equal opportunity employer – all applicants will be given equal consideration.

Office Location: One St Colme Street Edinburgh, Scotland

Remuneration: Competitive compensation and employee benefit package

The Position

Sense Photonics is seeking a Senior Analog/Mixed-Signal Design Engineer for our newly opened Edinburgh Advanced Design Center. The successful candidate will play a critical role in building the next generation of LiDAR systems for autonomous vehicles, UAVs, industrial automation and other applications. This position is a research and development focused role for an innovative and versatile Integrated Circuit (IC) Design Engineer who is keen to get involved in all aspects of LiDAR sensor development in a start-up environment. The successful candidate will be an effective team player with excellent communication skills, who is eager to take ownership of design challenges and use their experience to contribute to the success of the new Research and Development (R&D) Centre.

Key Responsibilities

- Matlab modelling of systems for LiDAR applications
- Develop custom analog/mixed signal blocks for LiDAR sensors
- Circuit definition and block level simulations and documentation
- Layout of analog/mixed-signal blocks and pixel arrays
- Top-level mixed-signal simulations (VerilogD, VerilogAMS, etc.)
- Definition of digital control blocks and implementation
- Bench evaluation and characterisation of circuits and systems
- Define production test plans for blocks

Requirements

- Strong, in-depth understanding of analog & mixed signal IC design
- 5+ years' experience in the modelling, design, simulation and layout of custom IC blocks

- Solid understanding of design trade-offs e.g. noise, power, area and speed
- Experience in some of the following: ADCs (SAR/Sigma-Delta/Single-Slope), PLL, DLL, image-sensor pixels, PGA and TDC
- Have seen multiple ICs into mass production with experience in test development
- Have experience running top-level simulations of analog & digital blocks up to chip-level
- Basic digital design from Verilog/VHDL to place and route for digital control blocks
- Experience of bench testing, characterisation and debug of analog/mixed-signal circuits ideally with firmware development for FPGA based evaluation systems
- Direct experience in high-speed image sensor or ROIC design and evaluation is highly desirable
- Good verbal and written technical communications skills

Preferences

- Direct experience in high-speed image sensor or ROIC design and evaluation is highly desirable
- Firmware development for FPGA based evaluation systems

Personal Attributes

- Reliable, proactive and adaptable
- Self-motivated, resourceful, inventive and well-organized
- Ability to build trust, creditability and rapport in a skillful manner
- Strong verbal and written communication skills