



SENIOR ANALOGUE IC DESIGN ENGINEERS

CamSemi is a fabless semiconductor company making and selling mixed signal integrated circuits for switch mode power supplies for chargers, adapters and solid state lighting. Our products are aimed at high volume, cost sensitive consumer market segments. They employ novel, often patented, techniques to deliver best in class system cost-performance.

At the heart of every product is a mixed signal CMOS integrated circuit whose architecture embodies our patented control methods for low cost power conversion. By innovative circuit design our IC team extracts all the precision and micro-power performance that CMOS technology can deliver.

Successful candidates will have extensive analogue CMOS / biCMOS experience and have designs in volume production today. The successful candidate will be joining a small team with the highest academic qualifications, extensive industrial experience and an enviable right-first-time track record. You will also be expected to have a significant positive impact in respect of creativity, accuracy and productivity.

Main Tasks and Responsibilities:

- Work with colleagues in the Systems team to help optimally partition the system solution and make the most cost effective integration trade-offs.
- Work with colleagues in the IC Design team to devise a chip architecture, refine it to block level and agree a chip floor plan.
- Devise innovative circuit solutions that implement the complex and intellectually challenging functions and control schemes necessary to deliver target system performance.
- Capture his/her design in schematic form according to the methodology and quality standards developed and adopted by the design team.
- Simulate his/her designs, according to well defined plans and specifications, to verify correctness and fitness for purpose.
- Share responsibility for compact cell layout with specialist layout designers in the team.
- Diligently employ best practice methods in analogue IC Design to ensure that first silicon behaves as intended and as simulated before tape out.
- Avoid circuits or layouts that might be inadequately modelled in the process design kit.
- Verify design correctness by comprehensive circuit simulations, including Monte Carlo methods.
- Design circuits for testability and manufacturability, so helping us maximise yield and product margin.
- Ensure that his/her circuits, when integrated in the complete chip with all its parasitics, deliver the required performance over process, supply voltage and temperature.
- Ensure that his/her circuits and layouts comply fully with the design rules (physical and electrical) of the process and its design kit.
- Carry out detailed peer review of the circuits and layouts created by colleagues in the IC Design team, so helping maintain the team's first-time-success rate.

Qualifications and Experience:

- A bachelors degree in Electronics Engineering or related subject and, quite likely a second degree (MSc or PhD) as well.
- Extensive and demonstrable experience of full custom analogue IC Design on CMOS or biCMOS processes, preferably including 0.35 μm CMOS.
- Designs already in production that serve high volume, cost driven end market applications.

Competencies and Knowledge:

- Have in-depth knowledge and understanding of analogue circuit design, theory and practice, including precision and micropower design of the following:
 - Op amps and comparators
 - ADC's and DAC's, including delta-sigma converters
 - Linear regulators
 - Current sources and current mirrors
 - Voltage references
 - Filters
 - Switched capacitor methods
 - Oscillators
- Have in depth knowledge and understanding of best-practice analogue IC design methods (theory and practice).
- Have comprehensive understanding and knowledge of layout best practice to ensure best possible component performance, tolerance and matching.
- Be an expert user of IC design tools (such as Cadence and Mentor).
- Have a thorough understanding of DFM and DFT, appreciate their importance and know the techniques by which to optimise designs accordingly.
- Understand the criticality of manufacturing yield and of know how to implement circuits such that they that do not present a design yield hazard.

ENDS