

# Low Power Mixed Signal Design Services



## **HIGHLIGHTS**

- Complete Design & Layout Capability
- Technology Porting Service
- Low Power/Low Voltage
  Verification & Characterisation
- Supports nodes down to 16nm

## **APPLICATIONS**

- Artificial Intelligence
- Hearables
- IoT
- Imaging
- Medical
- Networking
- Wearables

### **OVERVIEW**

Cutting power consumption is today's #1 concern. And that's complicated by the fact that today's complex System-on-Chip solutions feature both power sensitive digital and analogue sub-systems, both of which are critical to meeting overall power budgets.

That's why sureCore provides an entire suite of custom low-power design services that are foundry-independent across Bulk CMOS, FDSOI and leading-edge advanced FinFET nodes.

The suite covers design and layout capabilities, technology porting as well as verification and characterisation services.

### **EXPERIENCED DESIGNERS**

The sureCore team features an exceptional blend of experienced analogue and mixed signal design and layout capability coupled with advanced verification and characterisation skills. Both low voltage and variability aware design techniques and know-how can be applied to create optimal power profiles for your application.

### SILICON EVALUATION

Silicon characterisation de-risks chip development and sureCore's considerable test chip design and evaluation experience boosts design confidence prior to production commitment. A hardware design capability coupled with a fully equipped test lab, including temperature chamber facilitates rapid and accurate silicon characterisation.

### LEADING EDGE INFRASTRUCTURE

# Secure high-performance IT capacity with comprehensive EDA tool portfolio enabling:

# **ANALOGUE & MIXED SIGNAL LAYOUT SERVICES**

sureCore's mixed signal layout methodology is foundry agnostic. The team has decades of full custom low power layout experience across a wide range of major foundry process nodes from 55nm to 16nm including Bulk CMOS, FDSOI & FinFET.

## **CHARACTERISATION SERVICES**

- Liberty file generation per PVT corner
- Mixed Signal & Memory Blocks
- Standard Cell Re-characterization

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### High Sigma Monte Carlo Analysis Design Marginality Validation

- Circuit margin analysis
- Determination of minimum safe operating parameters
- Key critical path and simulation sensitization methodology
- Identification of corner cases for PVT extremes
- Corner case simulation
- Design marginality issues identification
- Yield prediction

#### **Test Chip Development & Evaluation Service**

- · Test chip design for rapid mixed signal IP evaluation
- Project management from test chip spec to characterisation report
- Expert custom package design partner
- Expert physical implementation partner
- Expert custom evaluation hardware partner
- GPIB controlled test equipment
- Temperature chamber enabling characterisation across -40C to 125C

### **SUMMARY**

sureCore is the Mixed Signal Low-Power expert who's bringing its design, layout, verification and characterization techniques that made it a market leader in ultra-low voltage memory to the wider design community.

Whether conquering a low power design challenge or meeting business critical time-to-market, sureCore has a solution tailormade to fit your need.



WHEN POWER IS PARAMOUNT

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