Low Power Mixed Signal ASIC Design Services

OVERVIEW
Cutting power consumption is today’s #1 concern. And that’s complicated by the fact that today’s complex on-chip systems feature both power-critical digital and analogue sub-systems, both of which are critical to cutting overall system power budgets.

That’s why sureCore provides an entire suite of custom low-power ASIC design services that are foundry-independent across bulk CMO and FDSOI at leading-edge FinFET technologies.

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

EXPERIENCED DESIGNERS
The sureCore design team brings an exceptional blend of experienced mixed signal, verification and characterisation engineers, augmented by solid software skills.

SILICON EVALUATION
The result is a semi-automated custom design environment that accelerates the design, layout and porting. Silicon characterisation de-risks chip development and sureCore’s considerable test chip design and evaluation ASIC design services raises design confidence prior to production commitment. A hardware design capability coupled with a fully equipped test lab, including temperature chamber generates rapid and accurate silicon characterisation.

LEADING EDGE INFRASTRUCTURE
Secure high-performance IT capacity with complete EDA tool portfolio enabling:

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. Their silicon-proven track record runs across 55nm to 22nm bulk CMOS, 28FD SOI down to 12nm advanced FinFET nodes.

CHARACTERISATION SERVICES
- .lib file generation per PVT corner for both memory and standard cells
- Both for Memory & std cells
- Standard cell re-characterization

HIGHLIGHTS
• Complete Design & Layout Capability
• Technology Porting Service
• Low Power/Low Voltage Verification & Characterisation
• Supports nodes down to 12nm

APPLICATIONS
• Artificial Intelligence
• Hearables
• IoT
• Imaging
• Medical
• Networking
• Wearables
ADVANCED VERIFICATION & IMPLEMENTATION

**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.

Meeting challenging power goals means challenging assumptions. sureCore’s Low Power Mixed Signal ASIC Design Service differentiates your Low-Power ASIC.