

Application-Centric Custom SRAM Design Services Product Information

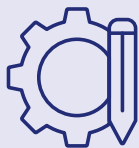


HIGHLIGHTS

- Ultra-Low Power SRAM Customized to Spec
- Silicon Proven Design Techniques
- Process Technology Agnostic

TARGET MARKETS:

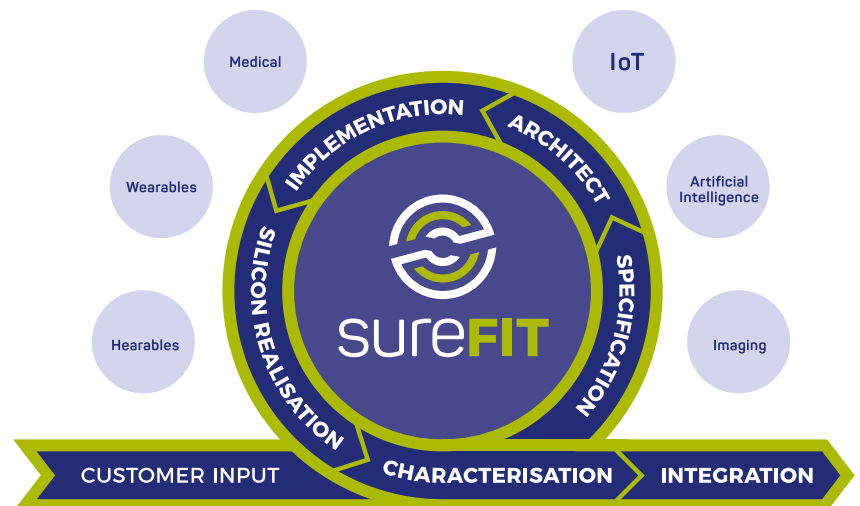
- Artificial Intelligence
- Hearables
- IoT
- Imaging
- Medical
- Networking
- Wearables



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OVERVIEW

Today's emerging markets aren't playing by yesterdays rules... design or otherwise. SoC architects developing cutting edge artificial intelligence, imaging, machine learning, wearable, and IoT devices can no longer make do with standard memory IP to deliver lower and lower power targets. Their designs are ahead of the game. They demand application specific power and performance; targets that demand "out-of-the-box" thinking, targets that deliver market leading energy efficiency.



When developers need extraordinary Ultra-Low Power Memory IP they turn to SureFIT™, sureCore's application-centric custom memory design service to deliver on their unique design and PPA requirements. Memory tuned to their low-power needs. Memory tuned to deliver disruptive innovation. Memories that are optimised, verified, characterised and ready for integration.

PROVEN TECHNIQUES

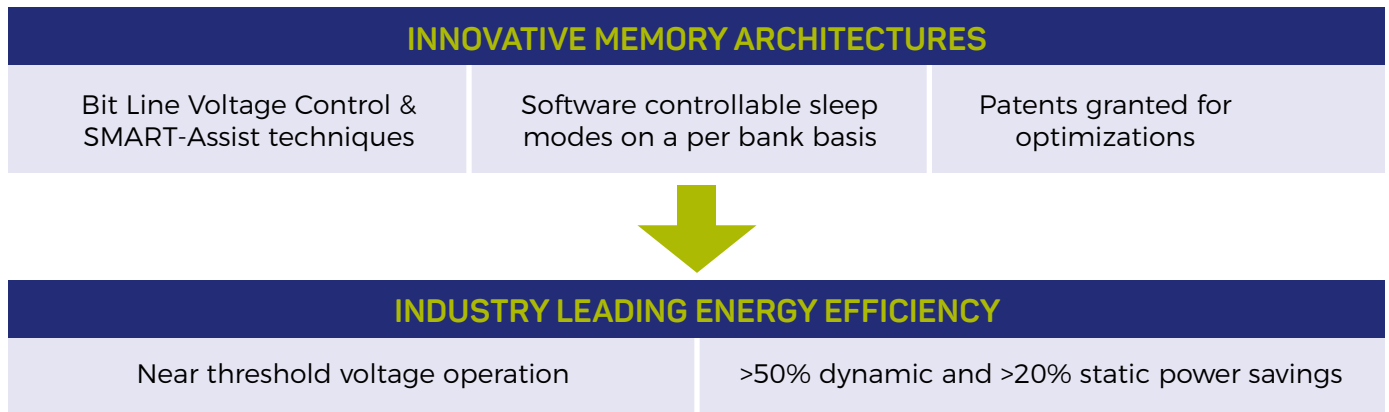
SureFIT deploys silicon proven and patented low-power design techniques with powerful verification and characterization methodologies to deliver optimal memory solutions.

Customers come seeking many attributes including multiple read/write ports, burst capabilities, ultra-low leakage retention modes, low dynamic power, near-threshold operation, write masking and BIST/DFT support. Memory tuned to their precise requirements. Memory tuned to deliver the target performance demanded by next generation products.

SureFIT develops memory variants including SRAM and Register Files and can be based on either standard foundry or custom bit cells. Foundry bit cells deliver the highest possible density; while custom bit cells, built according to standard process rules, deliver Ultra-Low voltage operation.

SureFIT applies patented proven design techniques and innovative memory architectures including:

- Segmented arrays and bit line voltage control to deliver optimal dynamic power and performance
- SMART-Assist circuitry to deliver robust near-threshold operation across process and temperature extremes
- Sleep modes with independently switchable sub-banks deliver highly granular control to system architects
- Custom-designed single-port and multi-port bit cells
- Pipelined read circuitry to deliver on demanding performance goals
- Power saving low voltage differential swing interconnect methodologies to support multi-megabyte memories



SureFIT's power saving techniques are process technology agnostic and have been demonstrated in bulk CMOS, FDSOI and FinFET.

The bottom line? Customized Ultra-Low power memory IP built to your exact specifications that hits dynamic power targets, operates at near-threshold voltages, delivers multiple read/write ports and provides comprehensive sleep modes to meet challenging leakage targets.

ADVANCED VERIFICATION & CHARACTERIZATION TECHNOLOGY

A rigorous verification regime incorporating statistical, parametric and physical validation ensures that sureCore application-centric memories meet demanding quality requirements. Accurate industry-standard timing and power views are delivered from flows based on leading memory characterization tooling and multiple PVT corners are generated quickly and automatically.

SUMMARY

When your designs are ahead of the game and standard IP no longer delivers turn to sureCore to develop a memory tuned to your exact needs. Standard IP delivers standard performance. Meeting challenging power goals means challenging assumptions. Make your product stand out with SureFIT.