

## Secure iRAM Extender

### Overview

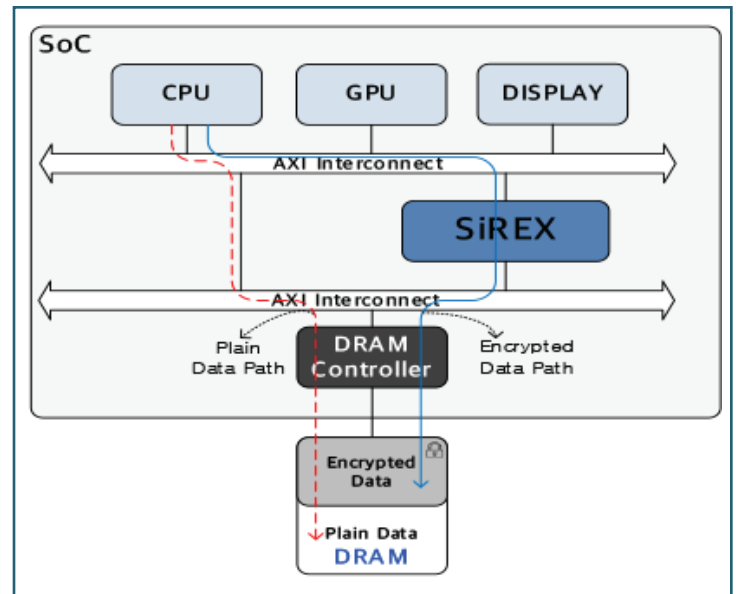
The Secure iRAM Extender (SIREX) is a DRAM protection solution. SIREX encrypts the raw form of data and delivers it to the DRAM controller so that the data written in DRAM through SIREX is stored in encrypted form. SIREX is compliant with the AMBA AXI4 specification. The throughput of SIREX can be scaled, according to system requirement.

### Key Features

- Transparent On-the-fly Encryption for DRAM Protection
- Encryption Type : AES CTR Mode (128 bit Key) for Code Confidentiality
- Configurable Options for Secure Software Code
  - o Address Remapping Function for Seamless Software Mapping
  - o Configurable Encrypted DRAM Range (Up to 4 Region)
  - o Bypass (No Encryption) Mode
- Safety Features : Error Correcting Code (SEC-DED)

### Deliverables

- Encrypted RTL
- Data Sheet Document
- User Guide Document



### Target Applications

- Against DRAM Probing Attack
- Against DRAM Cold-boot Attack

# SAMSUNG Foundry

For more information, please contact us at [IP@silvaco.com](mailto:IP@silvaco.com).

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