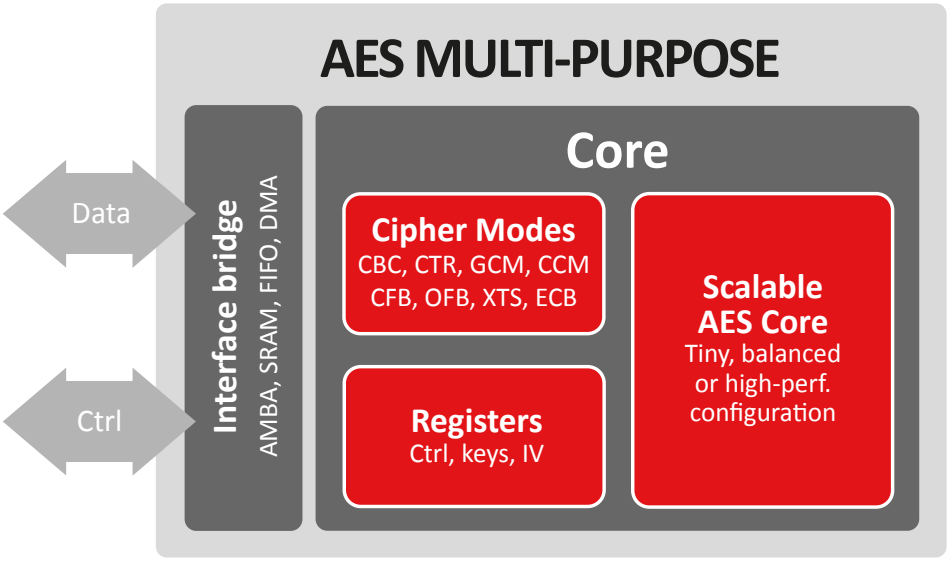
SILEX INSIGHT

Product sheet
BA411e

AES MULTI-PURPOSE

The AES Multi-Purpose crypto engine includes a generic and scalable implementation of the AES algorithm and a configurable wrapper making the solution suitable for a wide range of low-cost & high-end applications for the most advanced AES core.



Implementation aspects

The AES Multi-Purpose crypto engine is easily portable to ASIC and FPGA . It supports a wide range of applications on various technologies. The unique architecture enables a high level of flexibility. The throughput and features required by a specific application can be taken into account in order to select the most optimal configuration.

For other AES solutions, please see dedicated product sheets: **AES-GCM Multi-Booster** (BA415) and **AES-XTS Multi-Booster** (BA416).

Features

- ASIC and FPGA
- Supports a wide selection of programmable ciphering modes based on NIST SP 800-38:
  - Non-chaining modes: ECB, CTR
  - Chaining modes: CBC, CFB, OFB
  - Cyphertext stealing modes: CBC-CS
  - Authentication: CMAC (OMAC1)
  - Authentication & Confidentiality: CCM, GCM
  - Confidentiality on storage devices: XTS/XTS-CS
- Masking option available with excellent protection against SPA & DPA
- Context switching
- Data interface: AMBA (AHB/AXI:AXI-4) with optional DMA
- Control interface: APB or AXI4-lite

Applications

- Ideal for any application, examples:
  - Wireless and wired communications
  - Digital Cinema
  - DRM
  - Encrypted data storage
  - Industrial
  - Cloud computing
  - Defence
  - Automotive
  - General MCU's
  - Etc...

Deliverables

- Netlist or RTL
- Scripts for synthesis & STA
- Self-checking RTL test-bench on referenced vectors
- Documentation

V1.1

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