BarcoSilex

3GPP security IP cores

BA421, BA422, BA423
Product sheet

The BA421, BA422 and BA423 (ZUC, KASUMI and SNOW_3G) IP cores are 3GPP ciphers for telephony applications. Our cores are optimized for applications requiring high performance with optimized silicon resources. Our 3GPP cores are all optimized for maximum throughput and minimum latency.

The unique architecture of our 3GPP IP cores enables a high level of flexibility. The throughput and features unique to each application can be taken into account in order to select the most optimal configuration of the implemented IP. The IP cores are able to achieve a throughput of several tens of Gbit/s when driven at corresponding frequencies and resource usage.

The 3GPP IP cores are available for ASIC and FPGA devices (Altera, Xilinx, Microsemi

Implementation aspects

Standardized Axi-4 I/O simplifies system integration. All our IP cores are delivered with software drivers to simplify ASIC or FPGA integration.

Deliverables

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

FEATURES

- ZUC
  - Supports EEA3 and EIA3
  - 8 or 32 bits/cycle
- KASUMI
  - Supports f8/UEA1, f9/UIA1, GSM A5/3, ECSD A5/3, GEA3, GSM A5/4, ECSD A5/4, GEA4
- SNOW_3G
  - Supports UEA2 and UIA2
  - 8 or 32 bits/ycle
- Compliant with ETSI specifications
- Hashing functions included
- AXI-4 stream IO
- Optional DMA
  - AMBA AHB or AXI master for data
  - AMBA APB for configuration

APPLICATIONS

- 3GPP telephony
- Secure mobile communications