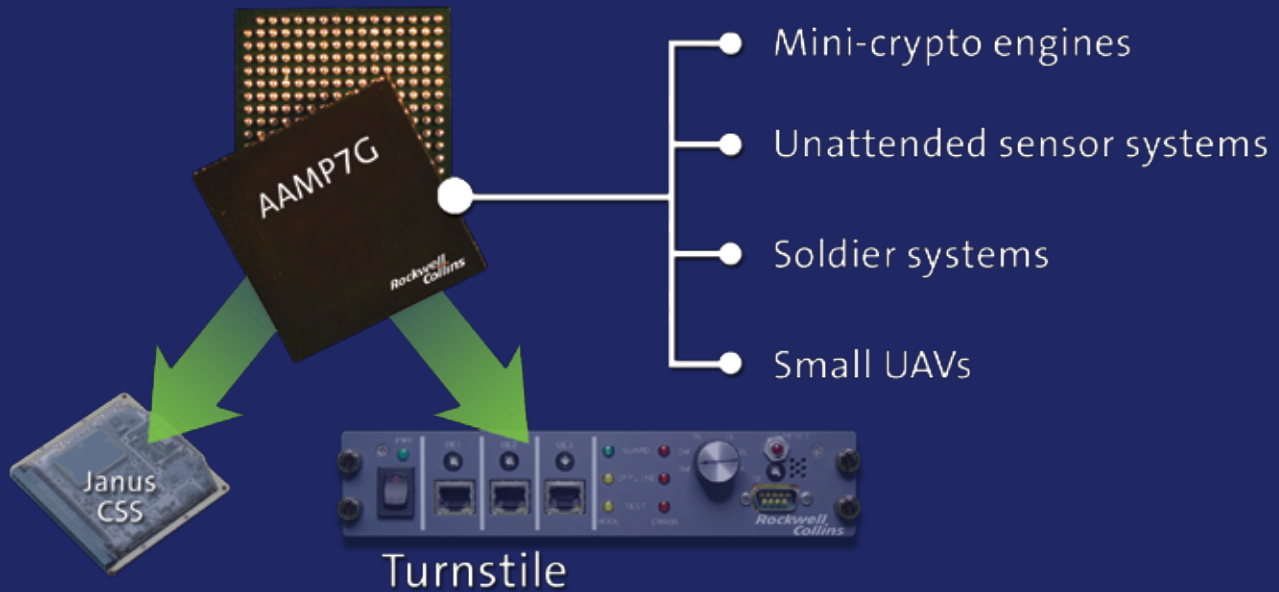


Advanced Architecture MicroProcessor 7 Government Version (AAMP7G)



For simultaneous processing at all security levels from Unclassified through Top Secret Code Word in a cost effective, energy efficient and smaller package, the Rockwell Collins AAMP7G delivers. The AAMP7G has been certified by the National Security Agency (NSA) as a Multiple Independent Levels of Security (MILS) device for use in cryptographic applications and is an exportable architecture requiring a U.S. Government export license and limited to specific end users.

This device is used in the NSA Type 1 certified Janus crypto engine. The MILS capability is provided through AAMP7G's unique micro-architecture, which employs a secure hardware-based separation kernel. AAMP7G's security was proven mathematically using Formal Methods techniques as specified by EAL-7 of the Common Criteria.

KEY FEATURES AND BENEFITS

- › MILS certified
- › Full spectrum processing
- › Small form factor
- › Energy efficient

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AAMP7G FEATURES

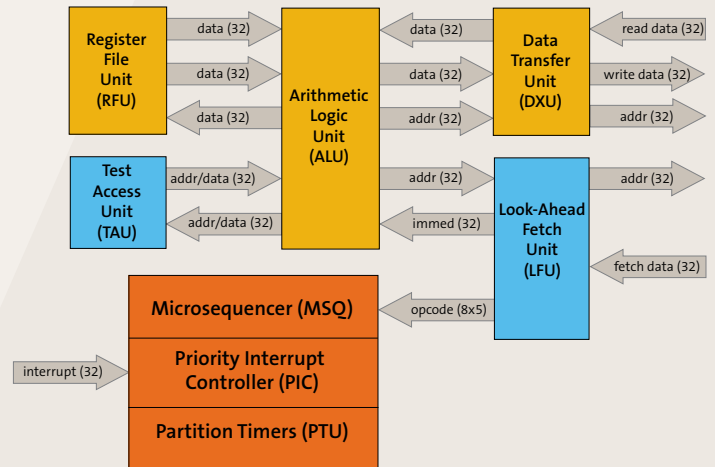
- NSA certified as a MILS device for simultaneous processing of Unclassified – Top Secret
- NSA certified boot code for JOSEKI decrypt and Type 1 signature verification
- 32-bit single-chip microprocessor
- Built-in support for time and space partitioning
- Low power, high speed, noise immunity
- Hardened for Single Event Upset (Registers triplicated, voted and corrected each clock cycle)
- Arithmetic operations on integer, fractional, and floating point data
- Stack-oriented instruction set
- On-chip debugging support
- Prioritized interrupt controller

SPECIFICATION

- Partition timers and Memory Protection Unit (Enforce time and space partitioning)
- Zero-operand stack architecture
- 32-bit address bus
- 8/16/32-bit data bus
- 4 kb on-chip instruction cache
- 192 kb on-chip ECC SRAM
- 256 kb on-chip flash
- On-chip partitioning control
- 100 MHz over Mil Temp Range
- BIST and IEEE 1149.1 JTAG
- Built-in NSEU protection

TEST CHIP SPECIFICATION

- Target process: Philips CMOS 18 (0.18)
- Maximum bus clock frequency: 60 MHz
- Maximum core clock frequency 100 MHz
- Voltage: 3.3 V, fully static design
- Power consumption: <500 mW (est)
- Die size: 359 x 359 mils (83 mmffi2)
- Logic gate count: 1.6 M
- Packaging: 455 PBGA
- Temperature screening: Military (-55°C to 125°C)



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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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