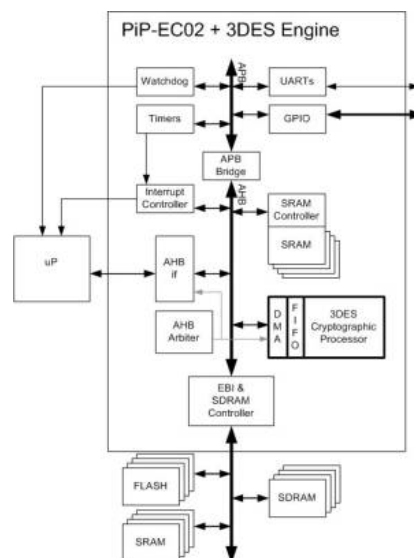


Features:

- 3DES Secure Microcontroller Platform
- Verilog SOC Reference 3DESIGN
- ARM AHB Based Platform
- Includes all functions needed to encrypt and decrypt from memory
- 3DES DMA
- RTOS Support
- FPGA or ASIC



Overview

SoC Solutions' **PiP-TDES01** Security Microcontroller platform was designed for connecting industrial controllers and other devices to a local area network. The **PiP-TDES01 Pre-integrated IP™** jumpstarts your industrial controller development by providing a pre-verified hardware/software platform (or SOC reference design).

The **PiP-TDES01** is an ARM AHB based integrated Verilog SOC design combined with an integrated software suite. The SoC contains the basic hardware functions needed to run a real time operating system. Along with the hardware, the **PiP-TDES01** includes all the software device drivers and boot code needed to start software application development right away.

The Secure Micro-Controller reference design is to be used as a basis (or starting point) for custom designs. This implementation uses the microprocessor to load memory, control the start of encryption/decryption and then verify the stored result. In a typical application, a communications port such as Ethernet, PCI, USB, or simple COM port would be used as a data IO port.

Included in the design is a DMA engine to read and write data from/to the 3DES core to internal FPGA SRAM or external memory. Also included is an internal SRAM controller, an interrupt controller, timers, UART, and External Bus Interface.

Software

The software development tools supported are ARM ADS and **SoC-RDS01** Rapid Development System.

Hardware

The **PiP-TDES01** is targeted for FPGA or ASIC SOCs. The **PiP-TDES01** Verilog IP is fully tested and extensive system level test bench is available in C/C++ and Verilog.

PiP-TDES01 contains:

3DES Encryption Engine	Timers
General Purpose IO	UART
Interrupt Controller	External Bus Interface
SRAM Controller	Watchdog
3DES DMA Controller	