

FEATURES

- AMBA® APB Compatible
- 16 bit loadable down counter
- 12 bit pre-scaler
- Internal and external reset inputs
- Provides “Fail-Safe / reboot” operation
- Warning interrupt

LICENSED IP PACKAGE INCLUDES

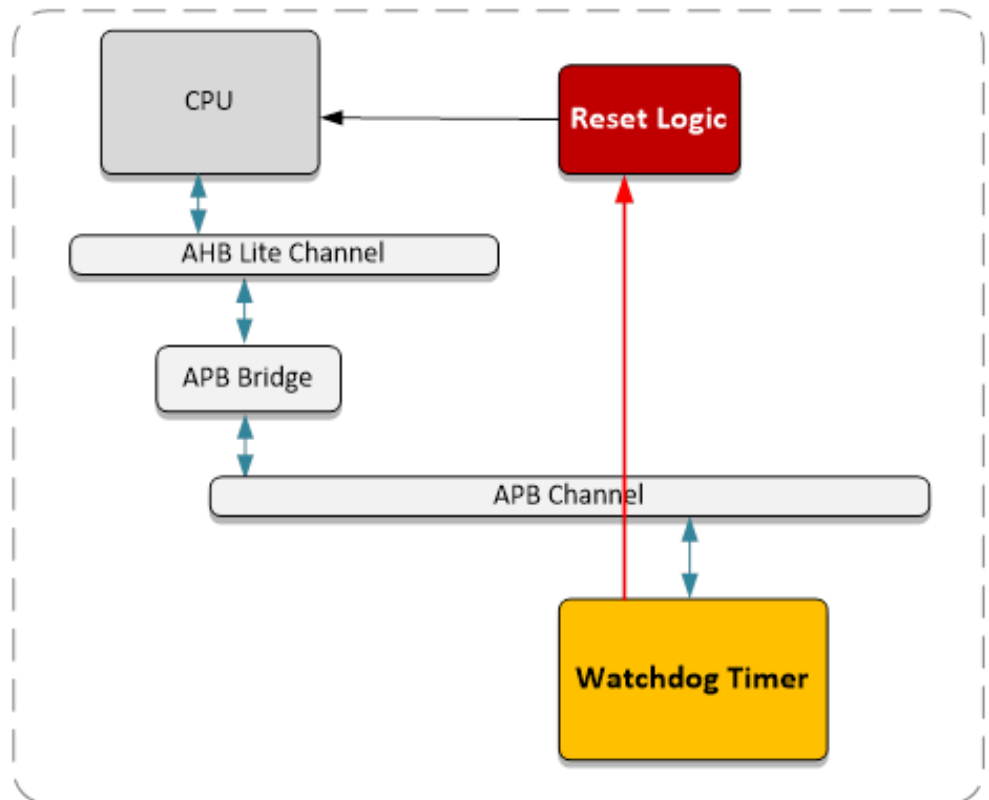
- Verilog Source
- Complete Test Environment
- AHB Bus Functional Model
- C-Sample Code

DESCRIPTION

The Watchdog Timer is useful in monitoring the condition where a CPU and software get into an unrecoverable unknown or “stuck” state. Software periodically “kicks” the watchdog by writing to it to reset its timeout counters.

The Watchdog Timer module is a programmable reset controller module. The module is a standard APB Slave peripheral; the Watchdog Timer registers are accessed through this interface. The module implements a 32-bit down counter with a selectable prescaler in order to produce a delayed reset signal and a watchdog reset signal, as well as a warning interrupt.

GENERAL USE



You may also be interested in:

AMBA® Subsystems

- Low Power Subsystem (simple AHB system)
- Low Power / Performance Subsystem (includes AHB Multi-matrix Fabric)
- Custom Performance Subsystem (includes AXI Multi-layer Fabric)

IP Cores

Infrastructure Cores

AHB Multi-Matrix Fabric
AHB/AHBLite Channel
AHB Arbiter
AXI Multi-Layer Fabric
AXI to AHBLite Bridge
AXI to APB Bridge
AHB to ABP Bridge
APB Channel

AXI Cores

AXI Multi-Layer Fabric
AXI to AHBLite Bridge
AXI to APB Bridge
AXI External Bus Interface
(Memory/Flash Controller)
AXI Internal Memory Controller
AXI QSPI with Execute in Place (XIP)

AHB Cores

AHB Channel
AHB Multi-Matrix Fabric
AHB to ABP Bridge
AHB Arbiter
AHB QSPI with Execute in Place (XIP)
AHB External Bus Interface
AHB Internal SRAM Controller
AHB Interrupt Controller
AHB DMA Controller
AHB DMA 4 Channel Controller
AHB TFT LCD Controller
AHB DES/TDES Encryption/Decryption

AHB Serial Flash Controller
Octal, Quad, Dual and Single Modes

Serial to AHB Bridge
SPI slave to AHB Master
Monitor/Control

APB Cores

APB Channel
APB Quad SPI Controller
APB General Purpose IO
APB Timer
APB UART
APB I2C (Master and Slave)
APB SPI
APB Watchdog Timer
APB Pulse Width Modulator
APB Real Time Clock

General

DES – Digital Encryption Standard
Triple DES (Low Gates)
Triple DES (pipelined)
ADC Interface (semi-custom)
Mixed-Signal Interfaces (semi-custom)
Power Management Unit (semi-custom)

AES Encryption Core

For more information contact



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