

APB Windowed Watchdog Timer

Overview

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 component 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.

Features

- AMBA® APB Compatible
- 32-bit loadable down counter
- 12-bit pre-scaler
- Internal and external reset inputs
- Provides “Fail-Safe / reboot” operation
- Warning interrupt
- Windowing feature for timing min. and max. “kick” times

Deliverables

- Verilog Source
- Complete Test Environment
- APB Bus Functional Model

