Introduction

Imagine a processor support device that integrates all types of reset generator ICs, voltage supervisor ICs and watchdog timer ICs. That is what you get with the ProcessorPM™ device. The ProcessorPM device integrates six precision (0.7%) programmable threshold monitors that can be configured to monitor any supply rail from 0.67V to 5.7V, a 16-macrocell PLD that can be used for generating reset signals and brown-out signals and four timers for reset pulse stretching, de-bouncing reset switches and implementing watchdog timers. This device can be programmed in-system through JTAG and the configuration is stored in the on-chip non-volatile E²CMOS® memory.

Key Features and Benefits

- **Low-Cost Programmable Mixed-Signal IC**
  - Reduced cost: ProcessorPM integrates supervisor, reset generator and watchdog timer functions and costs as much as a supervisor IC
  - 6 Precision Programmable Threshold Monitors 0.67V to 5.7V
  - Smaller BOM – One chip replaces multiple factory-set supervisor ICs and resistors
  - Increased reliability due to increased monitoring accuracy

- **16-macrocell PLD to Integrate Various Logic Functions**
  - Standard solution – Design-specific logic functions required to support wide range of processors and DSP

- **Five Configurable Outputs with Programmable Functions**
  - Reduced number of ICs in a system – Single chip integrates multiple types of functions such as reset generators, supervisors

- **Four Programmable Timers**
  - Reduced number of ICs on a board – One chip to integrate watchdog timers, resistors and capacitors

- **24-Pin QFNS Package**
  - Smaller overall circuit board area – 16 mm² area replaces many ICs, resistors and capacitors

- **-40 to +85°C Operating Range**
  - Can be used across commercial and industrial applications

- **JTAG In-System Programmable**
  - Reduced manufacturing costs
  - Standard solution – ProcessorPM can be customized to implement supervisory functions specific to any processor or DSP
Pre-Configured* & Ready-to-Use!

ProcessorPM devices are factory-set to integrate a 6-supply reset generator as well as a watchdog timer with up to 1 minute delay.

ProcessorPM Application Example

Configuration to meet any microprocessor or DSP support function.

* User specific applications can be programmed in-system through the JTAG interface.