

Intelligent Power Management with MPM for SmartFusion

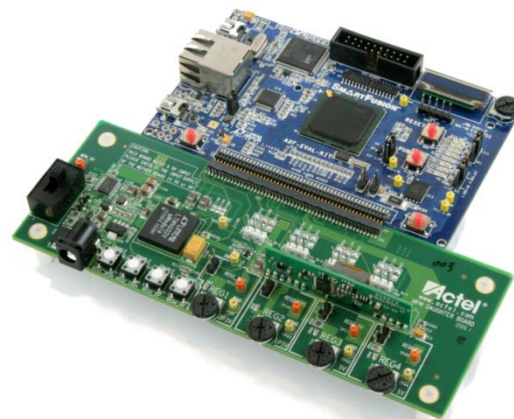
Microsemi's Mixed Signal Power Manager (MPM) for SmartFusion™ provides a demonstration and development system for intelligent power management, taking full advantage of the proven low power flash FPGA fabric, programmable mixed signal, embedded NVM flash memory and 100 MHz 32-bit ARM® Cortex™-M3 processor provided on the SmartFusion device.

The MPM Daughter Card Kit (MPM-DC-KIT, \$299 list, \$250 DC) plugs into either the SmartFusion Evaluation Kit or the SmartFusion Development Kit to enable benchtop demonstration and development using the MPM for SmartFusion Reference Design. The MPM daughter card includes four fully independent voltage regulators, four voltage bias potentiometers, four fault introduction push-button switches and an array of LED indicators, implementing four fully independent power supplies that can be varied and faulted to demonstrate the management capabilities of the MPM Reference Design.

MPM Daughter Card Kit (MPM-DC-KIT)

The MPM Daughter Card Kit includes:

- MPM daughter card
- 9 V power supply
- MPM-DC-KIT Quickstart Card



MPM for SmartFusion Reference Design

The MPM for SmartFusion Reference Design is downloadable from www.actel.com. Loaded on a SmartFusion Evaluation Kit or SmartFusion Development Kit connected to the MPM daughter card, MPM offers these key benefits:

- Four independent regulators — 3.3 V (2 each) and 5 V (2 each)
 - Each rail includes voltage bias potentiometer and enable interrupt push-button switch
- Four voltage bias potentiometers and four enable interrupt push-button switches for fault introduction
- Eight LEDs available for MPM combinatorial digital flag assignment
- Completely independent 9 V power supply with independent power switch
 - Fully isolated from motherboard power domains
- Intelligent power management leveraging 100 MHz 32-bit ARM Cortex-M3 in SmartFusion intelligent mixed signal FPGA
- Configurable power management using intrinsically low power, high reliability, flash-based SmartFusion intelligent mixed signal FPGA on A2F-DEV-KIT or A2F-EVAL-KIT motherboard
- Power Management functions reconfigurable via standalone PC GUI over JTAG or I²C for direct reconfiguration by register peek/poke
- Implements power management in hardware for comprehensive evaluation
- More features and channels than current ASSP solutions