



6-Channel, Flash-Configurable System Manager with Nonvolatile Fault Registers

General Description

The MAX16067 flash-configurable system manager monitors and sequences multiple system voltages. The MAX16067 manages up to six system voltages simultaneously. The MAX16067 integrates an analog-to-digital converter (ADC) and configurable outputs for sequencing power supplies. Device configuration information, including overvoltage and undervoltage limits, time delay settings, and the sequencing order is stored in nonvolatile flash memory. During a fault condition, fault flags and channel voltages can be automatically stored in the nonvolatile flash memory for later read-back.

The internal 1% accurate, 10-bit ADC measures each input and compares the result to one overvoltage and one undervoltage limit. A fault signal asserts when a monitored voltage falls outside the set limits.

The MAX16067 supports a power-supply voltage of up to 14V and can be powered directly from the 12V intermediate bus in many systems.

The integrated sequencer provides precise control over the power-up and power-down order of up to six power supplies. Three outputs (EN_OUT1 to EN_OUT3) are configurable with charge-pump outputs to directly drive external n-channel MOSFETs.

The MAX16067 includes six programmable general-purpose inputs/outputs (GPIOs). GPIOs are flash configurable as a fault output, as a watchdog input/output, or as a manual reset.

The MAX16067 features nonvolatile fault memory for recording information during system shutdown events. The fault logger records a failure in the internal flash and sets a lock bit protecting the stored fault data from accidental erasure.

An SMBus™ or a JTAG serial interface configures the MAX16067. The MAX16067 is available in a 32-pin, 5mm x 5mm, TQFN package and is fully specified over the -40°C to +85°C extended temperature range.

Features

- ◆ Operates from 2.8V to 14V
- ◆ 1% Accurate, 10-Bit ADC Monitors 6 Voltage Inputs
- ◆ Analog EN Monitoring Input
- ◆ 6 Monitored Inputs with Overvoltage and Undervoltage Limits
- ◆ Nonvolatile Fault Event Logger
- ◆ Power-Up and Power-Down Sequencing Capability
- ◆ 6 Outputs for Sequencing/Power-Good Indicators
- ◆ 3 Configurable Charge-Pump Output
- ◆ Six General-Purpose Inputs/Outputs Configurable as:
 - ◆ Dedicated Fault Output
 - ◆ Watchdog Timer Function
 - ◆ Manual Reset
 - ◆ SMBus Alert
 - ◆ Fault Propagation Input/Output
- ◆ SMBus and JTAG Interface
- ◆ Supports Cascading with MAX16065/MAX16066
- ◆ Flash-Configurable Time Delays and Thresholds
- ◆ -40°C to +85°C Extended Operating Temperature Range

Applications

- Networking Equipment
- Telecom Equipment (Base Stations, Access)
- Storage/Raid Systems
- Servers

Typical Operating Circuit appears at end of data sheet.

Ordering Information/Selector Guide

PART	PIN-PACKAGE	VOLTAGE-DETECTOR INPUTS	GENERAL-PURPOSE INPUTS/OUTPUTS	SEQUENCING OUTPUTS
MAX16067ETJ+	32 TQFN-EP*	6	6	6

Note: This device is specified over the -40°C to +85°C extended temperature range

+Denotes a lead(Pb)-free/RoHS-compliant package.

*EP = Exposed pad.

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MAX16067

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