

ABRIDGED DATA SHEET

MAX36051

DeepCover Security Manager with 128 Bytes of Nonimprinting Memory

General Description

DeepCover™ embedded security solutions cloak sensitive data under multiple layers of advanced physical security to provide the most secure storage possible.

The MAX36051 DeepCover security manager is a 4-wire-compatible controller specifically intended to address the temperature and voltage monitoring requirements of personal computers, USB flash memory drives, and other equipment where data protection and security is critical. The device incorporates 128 bytes of nonimprinting memory, a battery-backup controller, system power monitor, CPU supervisor, temperature sensor, and two tamper-detection comparator inputs for interface to external sensors, interlocks, or antitamper meshes. In the event of primary power failure, an external battery power source is automatically switched in to keep the tamper-detection circuitry alive.

Applications

- Personal Computers
- Gaming
- Lottery Terminals
- Industrial Controls and Monitoring
- Secure USB Flash Memory Drives

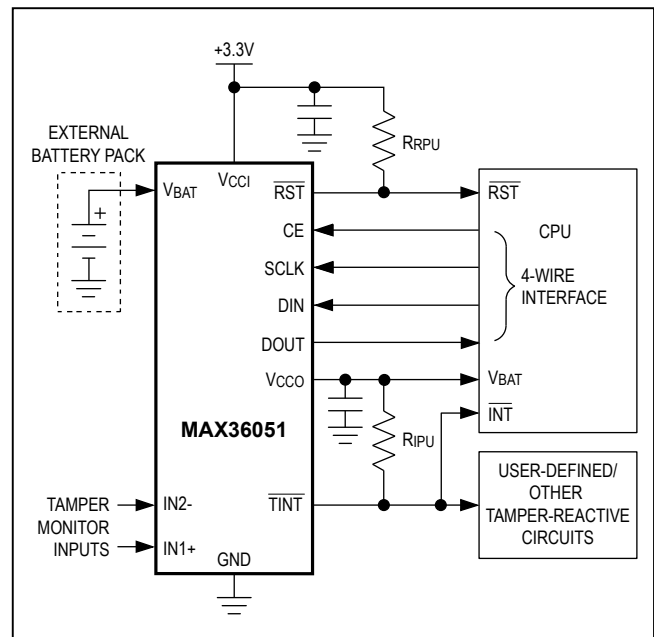
Ordering Information appears at end of data sheet.

DeepCover is a trademark of Maxim Integrated Products, Inc.

Features

- 128 Bytes of Patented Nonimprinting Memory with High-Speed Erase
- Two General-Purpose, Tamper-Detect Comparators with Associated Reference
- Latches State of All Tamper-Detect Comparators
- Free-Running, 32-Bit Elapsed Time Counter
- 4-Wire-Compatible Interface
- Programmable Glitch Filters
- On-Chip, Programmable Temperature Sensor
- System Power Monitor for Detection of Power-Supply Attacks
- Tamper-Interrupt Output
- Integrated CPU Supervisor
- Battery-Backup Controller
- Programmable Ultra-Low Power Consumption
 - 1.5µA at +25°C (typ)
- +3.0V to +3.6V Single-Supply Operation

Typical Operating Circuit



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Ordering Information

PART	TEMP RANGE	PIN-PACKAGE
MAX36051+	-40°C to +85°C	16 CSBGA
MAX36051+TRL	-40°C to +85°C	16 CSBGA

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

TRL = Tape and reel.

Package Information

For the latest package outline information and land patterns (footprints), go to www.maximintegrated.com/packages. Note that a "+", "#", or "-" in the package code indicates RoHS status only. Package drawings may show a different suffix character, but the drawing pertains to the package regardless of RoHS status.

PACKAGE TYPE	PACKAGE CODE	OUTLINE NO.	LAND PATTERN NO.
16 CSBGA	X16+1	21-0355	90-0334

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Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	4/10	Initial release	—
1	12/11	Corrected the comparator VIN reference in the <i>Recommended Operating Conditions</i> table; corrected the default Glitch Filter register (21h) value from 0Ah to AAh in the <i>Power-On Initialization</i> section	2, 13

For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim Integrated's website at www.maximintegrated.com.

Maxim Integrated cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a Maxim Integrated product. No circuit patent licenses are implied. Maxim Integrated reserves the right to change the circuitry and specifications without notice at any time. The parametric values (min and max limits) shown in the Electrical Characteristics table are guaranteed. Other parametric values quoted in this data sheet are provided for guidance.

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[AT97SC3204-U4A14-20](#) [AT97SC3205T-H3M4C20B](#) [AT97SC3205-X3A12-10](#) [AT97SC3204-U2MA-20](#) [AT97SC3204-X2A1A-10](#)
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