ACT8796

Product Brief, 31-Jan-08
Advanced Information—All Information Subject to Change

Six Channel Integrated Power Management IC for Handheld Portable Equipment

FEATURES

- **Multiple Patents Pending**
- **Six Integrated Regulators**
  - **750mA PWM Step-Down DC/DC**
  - **750mA PWM Step-Down DC/DC**
  - **550mA PWM Step-Down DC/DC**
  - **250mA Low Noise LDO**
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- **I²C™ Compatible Serial Interface**
  - **Programmable Output Voltages**
  - **Configurable Operating Modes**
- **Minimal External Components**
- **4x4mm, Thin-QFN (TQFN44-24) Package**
  - **Only 0.75mm Height**
  - **RoHS Compliant**

APPLICATIONS

- **Portable Devices and PDAs**
- **Wireless Handhelds**
- **DMB Enabled Devices**
- **GPS Receivers, etc.**

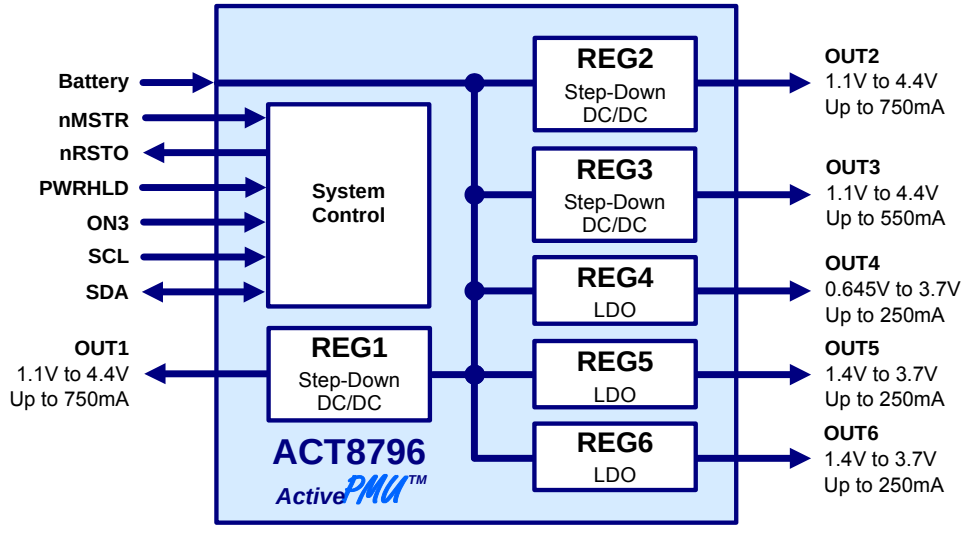
GENERAL DESCRIPTION

The patent-pending ACT8796 is a complete, cost-effective, highly-efficient *ActivePMU™* power management solution that is ideal for a wide range of portable handheld equipment. This device integrates three step-down DC/DC converters and three low dropout linear regulators (LDOs) into a single, thin, space-saving package. An I²C Serial Interface provides programmability for the DC/DC converters and LDOs.

REG1, REG2, and REG3 are fixed-frequency, current-mode PWM step-down DC/DC converters that are optimized for high efficiency and are capable of supplying up to 750mA, 750mA and 550mA, respectively. REG4, REG5 and REG6 are low noise, high PSRR linear regulators that are capable of supplying up to 250mA each.

The ACT8796 is available in a tiny 4mm x 4mm 24-pin Thin-QFN package that is just 0.75mm thin.

SYSTEM BLOCK DIAGRAM



ActivePMU™ is a trademark of Active-Semi.
I²C™ is a trademark of Philips Electronics.

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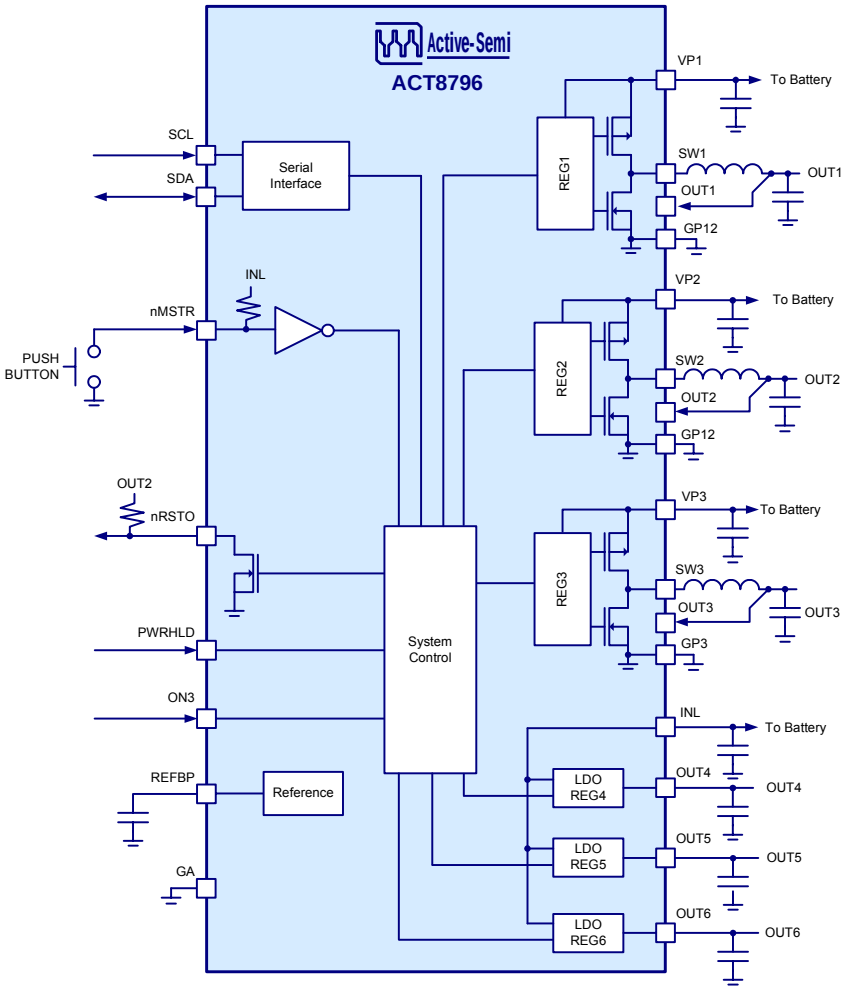
PRODUCT OPTIONS

Block	Function	Output Voltage①	Capability②
REG1	Step-Down DC/DC	1.1V to 4.4V	750mA
REG2	Step-Down DC/DC		750mA
REG3	Step-Down DC/DC		550mA
REG4	LDO	0.645V to 3.7V	250mA
REG5	LDO	1.4V to 3.7V	250mA
REG6	LDO		250mA

①: Output voltage options detailed in this table represent standard voltage options, and are available for samples or production orders. Contact Active-Semi for more information regarding semi-custom output voltage combinations.

②: Contact factory for additional available products or custom requirements.

FUNCTIONAL BLOCK DIAGRAM



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