

Six Channel Integrated Power Management IC for Handheld Portable Equipment

FEATURES

- Multiple Patents Pending
- Six Integrated Regulators
 - 350mA PWM Step-Down DC/DC
 - 550mA PWM Step-Down DC/DC
 - Step-Up DC/DC with OVP for WLED Bias
 - 150mA Low Noise LDO
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- 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.

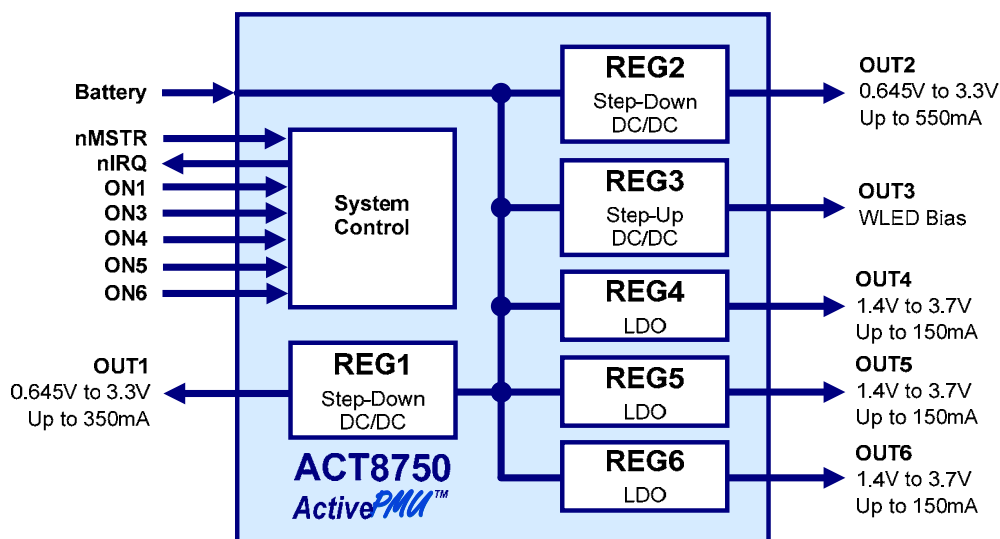
GENERAL DESCRIPTION

The patent-pending ACT8750 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 two PWM step-down DC/DC converters, one step-up DC/DC converter with over-voltage protection (OVP) for WLED bias, and three low dropout linear regulators (LDOs) into a single, thin, space-saving package.

REG1 and REG2 are fixed-frequency, current-mode PWM step-down DC/DC converters that are optimized for high efficiency and are capable of supplying up to 350mA and 550mA, respectively. REG3 is a fixed-frequency, step-up DC/DC converter that safely and efficiently biases a string of up to seven white-LEDs for backlighting applications. The three LDOs are low noise, high PSRR linear regulators capable of supplying up to 150mA each.

The ACT8750 is available in a tiny 4mm x 4mm 24-pin Thin-QFN package that is just 0.75mm thin.

SYSTEM BLOCK DIAGRAM



PRODUCT OPTIONS

Block	Function	Output Voltage ^①	Capability ^②
REG1	Step-Down DC/DC	0.645V to 3.3V	350mA
REG2	Step-Down DC/DC		550mA
REG3	Step-Up DC/DC	Up to 27.5V	Up to 7 WLEDs
REG4	LDO	1.4V to 3.7V	150mA
REG5	LDO		150mA
REG6	LDO		150mA

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

