

Nine Channel *ActivePath™* Power Management IC

FEATURES

- *ActivePath™* Li+ Charger with System Power Selection
- Seven Integrated Regulators
 - 2×900mA High Efficiency Step-Down DC/DCs
 - 700mA High Efficiency Step-Down DC/DC
 - 4×150mA Low Noise, High PSRR LDOs
- Flexible Interrupt Control
- I²C™ Serial Interface
- Minimal External Components
- Compatible with USB or AC-Adapter Charging
- 5x5mm, Thin-QFN (TQFN55-40) Package
 - Only 0.75mm Height,
 - RoHS Compliant

APPLICATIONS

- Personal Navigation Devices
- Portable Media Players
- Smart Phones

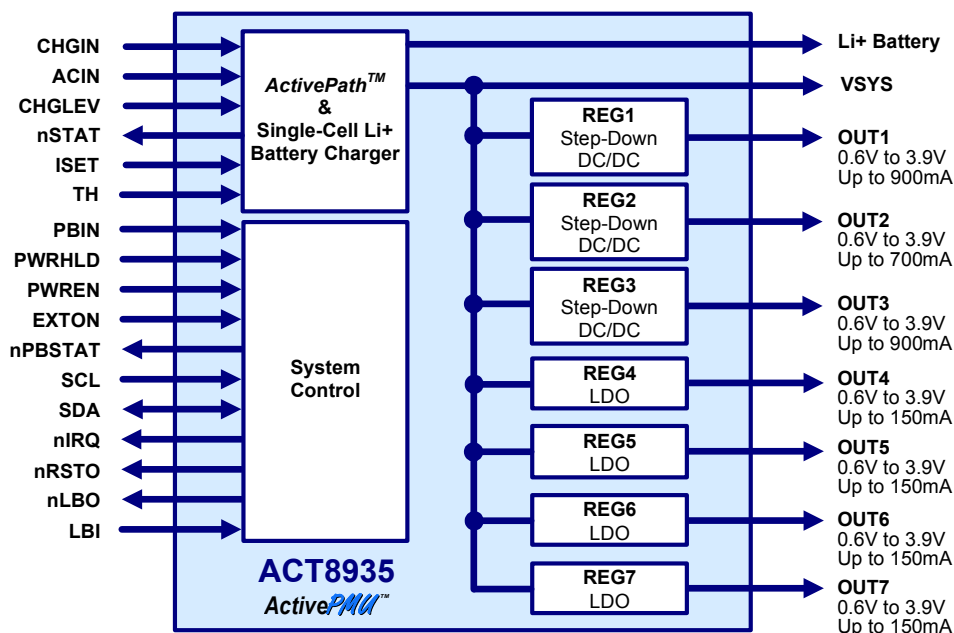
GENERAL DESCRIPTION

The ACT8935 is a complete, cost effective, highly-efficient *ActivePMU™* power management solution that is ideal for a wide range of high performance portable handheld applications such as personal navigation devices (PNDs). This device integrates the *ActivePath™* complete battery charging and management system with seven power supply channels.

The *ActivePath* architecture automatically selects the best available input supply for the system. If the external input source is not present or the system load current is more than the input source can provide, the *ActivePath* supplies additional current from the battery to the system. The charger is a complete, thermally-regulated, stand-alone single-cell Li+ charger.

REG1, REG2, and REG3 are fixed-frequency, current-mode step-down DC/DC converters. REG1 and REG3 are capable of supplying up to 900mA of output current, while REG2 supports up to 700mA. REG4, REG5, REG6, and REG7 are high performance, low-noise, low-dropout linear regulators that output up to 150mA each. Finally, an I²C serial interface provides programmability for the DC/DC converters and LDOs.

SYSTEM BLOCK DIAGRAM



PRODUCT OPTIONS

Block	Function	Output Voltage ^①	Capability ^②
ActivePath	System Power Selection	4.6V	Up to 2.4A
CHGR	Battery Charger	4.20V (4.10V to 4.30V available)	Programmable up to 1A
REG1	Step-Down DC/DC	0.6V to 3.9V	900mA
REG2	Step-Down DC/DC		700mA
REG3	Step-Down DC/DC		900mA
REG4	LDO	0.6V to 3.9V	150mA
REG5	LDO		150mA
REG6	LDO		150mA
REG7	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

