# ACT8935

## Advanced PMU for SiRF Prima™ and Atlas IV™

## FEATURES

- **Optimized for SiRF Prima™/Atlas IV™ Processors**
- **Three Step-Down DC/DC Converters**
- **Four Low-Dropout Linear Regulators**
- **Integrated *ActivePath*™ Charger**
- **I²C™ Serial Interface**
- **Advanced Enable/Disable Sequencing Controller**
- **Minimal External Components**
- **Tiny 5×5mm TQFN55-40 Package**
  - **0.75mm Package Height**
  - **Pb-Free and RoHS Compliant**

## APPLICATIONS

- **Personal Navigation Devices**
- **Portable Media Players**
- **Tablet Devices**
- **Smart Phones**
- **MIDs**

## GENERAL DESCRIPTION

The ACT8935 is a complete, cost effective, highly-efficient *ActivePMU*™ power management solution, optimized for the unique power, voltage-sequencing, and control requirements of the SiRF Prima™ and Atlas IV™ processors.

This device features three step-down DC/DC converters and four low-noise, low-dropout linear regulators, along with a complete battery charging solution featuring the advanced *ActivePath*™ system-power selection function.

The three DC/DC converters utilize a high-efficiency, fixed-frequency (2MHz), current-mode PWM control architecture that requires a minimum number of external components. Two DC/DCs are capable of supplying up to 900mA of output current, while the third supports up to 700mA. All four low-dropout linear regulators are high-performance, low-noise, regulators that each supply up to 150mA.

The ACT8935 is available in a compact, Pb-Free and RoHS-compliant TQFN55-40 package.

## TYPICAL APPLICATION DIAGRAM
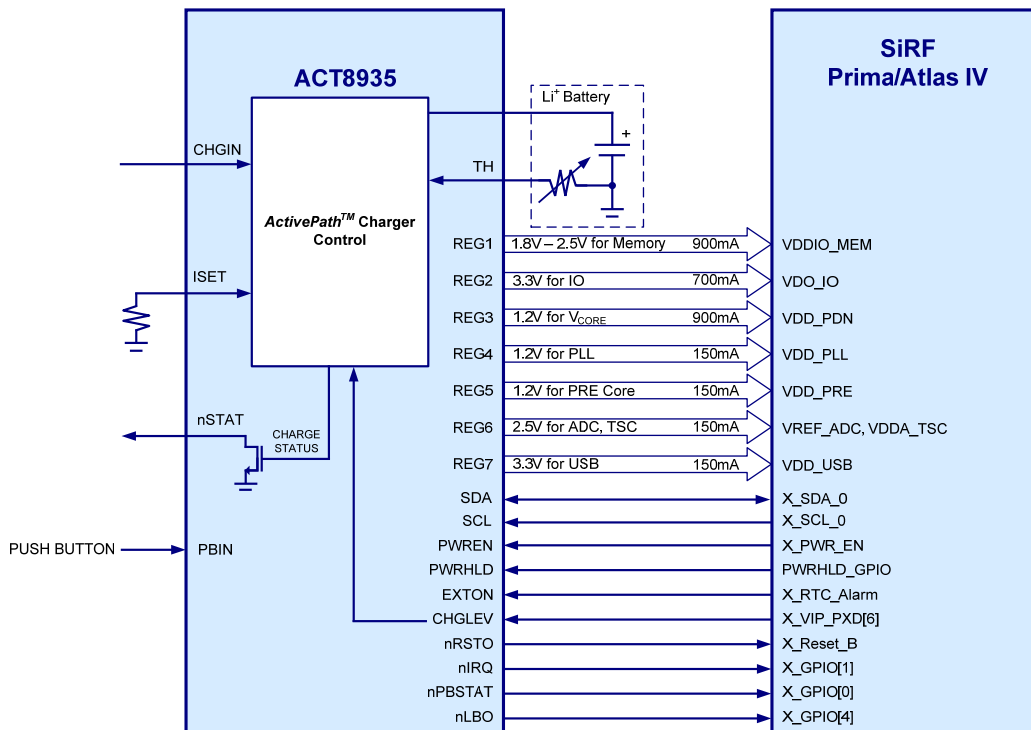
## PRODUCT OPTIONS

| Block | Function | Output Voltage | Capability |
|---|---|---|---|
| *ActivePath* | System Power Selection | 4.6V | Up to 2A |
| CHGR | Battery Charger | 4.2V | Programmable up to 1A |
| REG1 | Step-Down DC/DC | Adjustable, or 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 |

## FUNCTIONAL BLOCK DIAGRAM