

AXP2101 Single Cell NVDC PMU with E-gauge

1 Features

- 3.9V–5.5V Input Operating Range and Support single Cell Battery
- Battery fuel gauge: E gauge 3.0
- Support TWSI(Two Wire Serial Interface) and RSB(Reduced Serial Bus)
- 100mA-1A Linear charger, CV accuracy +/-0.5%
- Single input to support USB input
- High battery discharge efficiency with 50 mOhm
- High integration includes all MOSFETS, current sensing and loop compensation
- Power off current <40uA (BATFET off, RTCLDO output on)
- 5DCDC
 - DCDC1:1.5~3.4V, IMAX=2A;
 - DCDC2: 0.5~1.2V, 1.22~1.54V, IMAX=2A;
 - DCDC3: 0.5~1.2V, 1.22~1.54V, IMAX=2A;
 - DCDC4: 0.5~1.2V, 1.22~1.84V, IMAX=1.5A;
 - DCDC5: 1.2V, 1.4~3.7V, IMAX=1A.
- 11 LDOS
 - RTCLDO1/2: 1.8V/2.5V/3V/3.3V, 30mA;
 - Support RTCLDO1 supplied by backup battery (button battery)
 - ALDO1~4: analog LDO, 0.5~3.5V, 0.1V/step, IMAX=300mA
 - BLDO1/2: analog LDO,0.5~3.5V, 0.1V/step, IMAX=300mA
 - CPUSLDO: for CPUs, 0.5~1.4V, IMAX=30mA
 - DLDO1/2: analog LDO or power switch, 0.5~3.3V/ 0.5~1.4V, IMAX=300mA
- startup sequence and default voltage of DCDC/LDO setting
- Protection
 - Input Over-Voltage Protection
 - Battery Thermal Sense Hot/Cold Charge Suspend
 - Programmable Safety Timer for Charger
 - Die Thermal Balance for Charger
 - Thermistor Shutdown
 - DCDC Over-Voltage/Under-Voltage Protection

2 Applications

- SDV, CDR, IPC, smart doorbell, smart speaker

3 Description

AXP2101 is a highly integrated power management IC (PMIC) targeting at single cell Li-battery (Li-ion or Li-polymer) applications that require multi-channel power outputs. It provides an easy and flexible power management solution for multi-core processors to meet the complex and accurate requirements of power control.

AXP2101 supports Linear charge. Besides, it supports 16 channel power outputs which include 5 channel DC-DC and 11 channel LDO. To ensure the security and stability of the system, AXP2101 provides multiple channels 14-bit ADC for voltage/temperature monitor and integrates protection circuits such as over-voltage protection (OVP), over-current protection (OCP) and over-temperature protection (OTP). Moreover, AXP2101 features a unique E-Gauge™ (Fuel Gauge) system, making power gauge easy and exact.

AXP2101 supports TWSI and RSB for system to dynamically adjust output voltages, charge current and configure interrupt condition.

Device Information

Part Number	Package	Body Size
AXP2101	QFN-40	5mm * 5mm

Simplified Application Diagram

