

Sitara AM335x Power Solutions

January 2014

AM335x Power Solutions

Feature	TPS650250	TPS65217	TPS65910
Power (DCDC/LDO)	3 DCDC / 3 LDO	3 DCDC / 2+2 LDOs	3 DCDC / 9 LDO
Other features	<ul style="list-style-type: none"> Power-fail comparator 	<ul style="list-style-type: none"> WLED driver 2LDO can be configured as load switches. I2C interface 	<ul style="list-style-type: none"> 5V boost (100mA) 2 x I2C interface
Charger	No	Linear w/ Power-Path	No
RTC	NO Requires external LDO	NO LDO to power AM335x RTC	YES Coin-cell input for RTC backup
Voltage Range	2.5..6.0V	2.75..5.5V 20V tolerant	2.7...5.5V
Dynamic Voltage Scaling	NO	YES 300/600/720/800/1000MHz	YES 300/600/720/800/1000MHz
Supervisor	NO	NO	NO
Power sequencing	NO Requires external enable circuit	YES	YES
Temperature range	-40..85C / -40..125 (Q1)	-40..105C	-40..85C
Memory support	LPDDR1, DDR2, DDR3	LPDDR1,DDR2, DDR3(L)(RS)	LPDDR1/DDR2, DDR3
Package	32 pin QFN 5x5mm ² , 0.5mm pitch	48pin QFN 6x6mm ² , 0.4mm pitch	48pin QFN 6x6mm ² , 0.4mm pitch
Status	In production	In production	In production

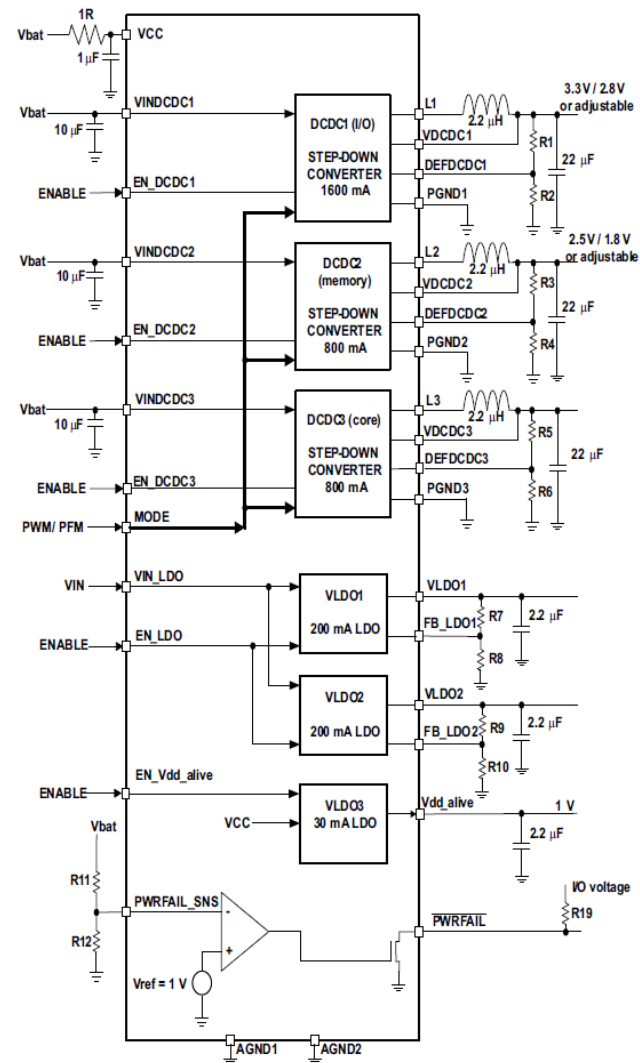
TPS650250

Features

- 2.5V to 6.0V input voltage range
 - Ideal for single cell Li+ batteries
- Three step-down converters
 - 1x1.6A, adjustable output
 - 2x0.8A, adjustable output
 - 2.25MHz switching frequency
- Two adjustable LDOs
 - 200mA, 0.9-1.8V adjustable output
- One keep-alive LDO
 - 30mA, 1.0V fixed output
- Power-Fail comparator
- Separate enable pins for DCDCs and LDOs
- 85uA quiescent current
- 32 pin 5x5mm QFN w/ 0.5mm pitch
- Also available as Q100 w/ -40..125C temperature range.

Bennefits

- Low-cost solution
- Extended temperature range
- Available in 0.5mm pitch package
- Reference design available at <http://www.ti.com/tool/pr1067.1>



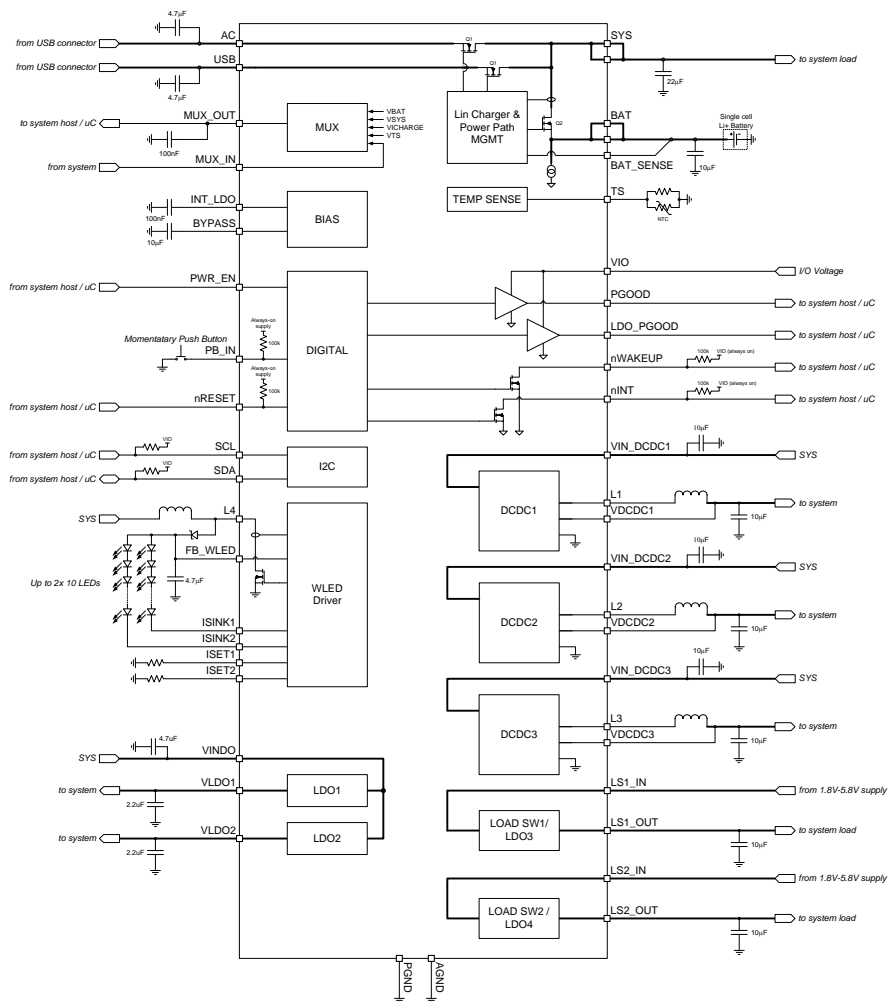
TPS65217

Features

- 2.7V to 5.8V input voltage range
- 2A, Dual Input Power Path
- Linear Charger with supplement mode
 - 700mA max charge current
- Three step-down converters
 - 1.2A, 0.9V-3.3V adjustable output
 - 2.25MHz switching frequency
- Two adjustable LDOs
 - 100mA, 0.9-1.8V adjustable output
- Two 500mΩ load switches / LDOs
 - 500mΩ (max) impedance
 - Switches can be configured as LDOs (1.8V-6.0V output voltage range)
- WLED driver
 - Supports two strings of up to 10LEDs @ 25mA each
- Extended temperature range of -40..105C
- I2C interface
- 6x6mm QFN w/ 0.4mm pitch

Benefits

- Compact power solution for portable systems
- Extended temperature range
- Reference design available at <http://www.ti.com/litv/pdf/slvu551f>



TPS65910

Features

- 2.7V to 5.5V input voltage range
- Three step-down converters
 - 1.5A, 0.6V-1.5V adjustable output (VDD1,2)
 - 1.0A, 1.5/1.8/2.5/3.3V (VIO)
 - 3MHz switching frequency
- One step-up converter
 - 100mA, 5V fixed output (VDD3)
 - 1MHz switching frequency
- 8 adjustable LDOs
 - 4x300mA + 4x150mA
 - Output voltage range 1.2V-3.3V
- One RTC LDOs
 - 20mA 1.8V
 - Internal power-path for coin-cell backup battery
- RTC
 - 32kHz crystal oscillator
 - Date, time , and calendar
- I2C interface
- 48pin, 6x6mm QFN w/ 0.4mm pitch

Benefits

- Compact solution for portable systems w/ external charger or non-portable systems.
- Reference design available at <http://www.ti.com/litv/pdf/swca089a>

