AM335x power options

Feature	TPS65217A	TPS65217B	TPS65910A	TPS65910A3	TPS650250
Integrated Battery Charger	AC/USB	AC/USB	No	No	No
Drivers	WLED backlighting	WLED backlighting	Boost 5V/100mA for LED	Boost 5V/100mA for LED	No
Power	3 DCDC 4 LDO	3 DCDC 4 LDO	3 DCDC 9 LDO	3 DCDC 9 LDO	3 DCDC 3 LDO
Max Current	DCDC 3x1.2A LDO 2x0.2A, 2x0.1A	DCDC 3x1.2A LDO 2x0.2A, 2x0.1A	DCDC 3x1.5A LDO 4x0.3A, 3x0.15A, 0.05A, 0.02A	DCDC 3x1.5A LDO 4x0.3A, 3x0.15A, 0.05A, 0.02A	DCDC 1.6A, 2x0.8A LDO 2x0.2A, 0.03A
AM335x OPP	OPP100 (500MHz), OPP50 (275MHz)	TURBO (720MHz), OPP120 (600MHz), OPP100(500MHz), OPP50 (275MHz)	TURBO (720MHz), OPP120 (600MHz), OPP100(500MHz), OPP50 (275MHz)	TURBO (720MHz), OPP120 (600MHz), OPP100(500MHz), OPP50 (275MHz)	OPP100 (500MHz)
DVFS	Yes	Yes	Yes	Yes	No
SmartReflex	Yes	Yes	Yes	Yes	No
RTC-only mode	Yes	Yes	Yes	Yes	No
DDR3 1.5 V	No	No	No	Yes	Yes
Input Voltage Range	2.7 - 6.5 V	2.7 - 6.5 V	2.7 - 5.5 V	2.7 - 5.5 V	1.5 - 6.5 V
Other Features	I2C	I2C	I2C, RTC, SLEEP mode	I2C, RTC, SLEEP mode	
Package	48pin QFN 6 mm x 6 mm	48pin QFN 6 mm x 6 mm	48pin QFN 6 mm x 6 mm	48pin QFN 6 mm x 6 mm	32pin QFN 5 mm x 5 mm
T_A	–40°C to 105°C	–40°C to 105°C	–40°C to 85°C	–40°C to 85°C	–40°C to 85°C

TPS65217: PMU w/ lin-charger and WLED

Jan ‘12

Features

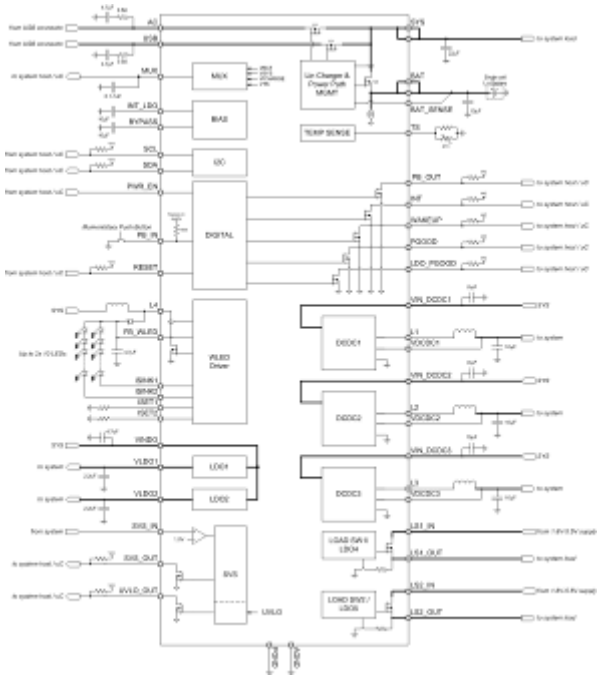
- Dual Input Linear Charger
  - 700mA Charge Current Max
- 3 Step Down Converters
  - 3x 1.2A. Vout externally adjustable.
  - 2.25MHz Switching Frequency
- 4 Low Dropout Regulators
  - 2 x 100mA
  - 2 x 200mA (also configurable as Load Switches)
- WLED Driver
  - 38V Output for up to 2 x 10 LED in series Voltage Supervisor
- I^2C Interface
- 48 pin QFN (6x6mm / 0.4mm pitch) or (7x7mm / 0.5mm pitch)

Applications

- TI Cortex A8 MPU processor (AM335x):
  - TPS65217A: AM335X –ZCE
  - TPS65217B: AM335X -ZCZ

Benefits

- ~50% smaller total solution compared to discrete
- Supported on Beagle-Bone board
- WLED backlight -> up to 5’ displays



TPS65910A: PMU for Cortex A8 with RTC

Features

- **2 step-down converters** with Smart Reflex capability, for core supplies (1.5A)
- 1.8V/3.3V step-down converter for IO (1A)
- 1 boost 5V/100mA
- **8 configurable Low noise LDOs** for peripherals and processor power rails
- Flexible clocking with 3 modes
  - 32kHz crystal oscillator
  - 32kHz integrated RC oscillator
  - 32kHz clock input (slave mode)
- **Real Time Clock & register**
- Backup battery charger
- Thermal Shutdown protection and Hot Die Detection
- Dedicated High Speed I2C serial control & Smart Reflex
- Efficient HW Sleep Mode management
- **QFN Package** 6x6 mm, 0.4mm pitch (POR)

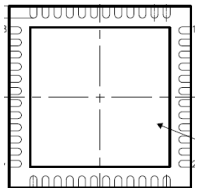
Applications

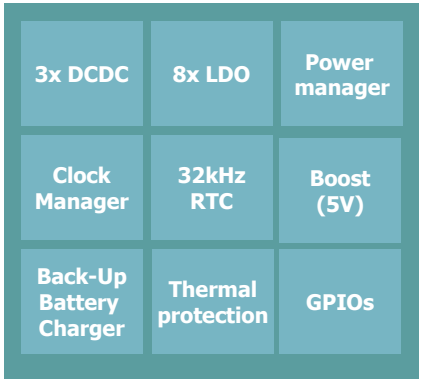
- Cortex A8 processors like OMAP/ Sitara, AM335x and other vendors.
- Consumer and industrial applications

Benefits

Released

- **Fast time-to-market**: proven ref-designs for several OMAP, Sitara and other processors. Several available ref-designs.
- **Integration**: 50% smaller footprint than discrete, ideal for portable applications. Also 32KHz clock and RTC integration.
- **Competitive pricing** for cost-sensitive applications.
- Supported on AM335x EVM





TPS650250: flexible PMU with 3 DCDC and 3 LDO

Features

- 6 Outputs: 3 DC/DC and 3 LDO
- DCDC1: 1.6A, 97% Efficient for System Voltage: 3.3V or 2.8V or Adjustable
- DCDC2: 0.8A, up to 95% Efficient for Memory Voltage: 1.8V or 2.5V or Adjustable
- DCDC3: 0.8A, 90% Efficient for Processor Core: adjustable output voltage
- 2 × 200mA General Purpose LDOs (LDO1 and LDO2): adjustable output voltages
- 30mA LDO3 for Vdd_alive
- 2.25MHz DCDC Switching Frequency
- 85uA Quiescent Current
- PWM / PFM Modes
- DC/DC with separate Enable Pins
- Package: 5x5mm^2 QFN-32 (0.5mm Pitch)

Applications

- ARM11 and Cortex A8 processors like AM335x
- Portable consumer/ industrial devices

Benefits

Released

- On SubArtic ref-design
- Lowest cost solution.
- Output voltages can be set by external resistor dividers.
- This Vout flexibility makes it a perfect all-rounder to power any processor family.
- Flexible sequencing due to the separate enable pins
- Ideal for low-power and single-cell Li-Ion applications
- High efficiency at light loads
- Power saving capability
- Small solution size