PM2300 - 3 AMPS CHARGER FOR TABLETS AND SMARTPHONES

Highly efficient & BOM optimized high current charger for single-cell or parallel Li-Ion batteries

Most current tablets use high capacity single-cell Li-Ion batteries or two batteries in parallel, which require several hours to recharge. The PM2300, with its high charging current capability, charges batteries in half the time of conventional charging circuitry.

The PM2300 has a dual DC/DC structure that allows the integration of a high performance power MOS. This leads to improved efficiency at lower cost.

The PM2300 also brings an optimized PCB footprint through the use of smaller and cheaper coils than those found in existing solutions

KEY FEATURES

- 3A DC/DC step-down battery charger
- High efficiency: up to 92% with 1µH coil
- Dual path integrated power FET
- I²C control
- LED driver for charging indicator
- Interrupt and wakeup signal
- Wall charger power optimization

TARGETED APPLICATIONS

- Tablet
- Smartphone
- Mobile phone
- Portable application

KEY BENEFITS

- Charges the battery at 3A instead of 1.5A max
- Halves the battery charging time: less than 3h for a 25Ah battery
- Charge even during intensive use cases: typical intensive use cases consume around 1A
- Up to 60% PCB footprint reduction compared to existing solutions

PM2300 IS PART OF POWERHUB™ PRODUCT FAMILY

PowerHUB™ is a family of products that harness a wide range of energy sources to make the charging of the mobile devices easier. The PowerHUB™ family provides a new level of scalability in energy management and charging solution and addresses the increasing demand for energy in the new generation of handheld devices. PowerHUB™ also leads the trend towards the use of new energy sources.

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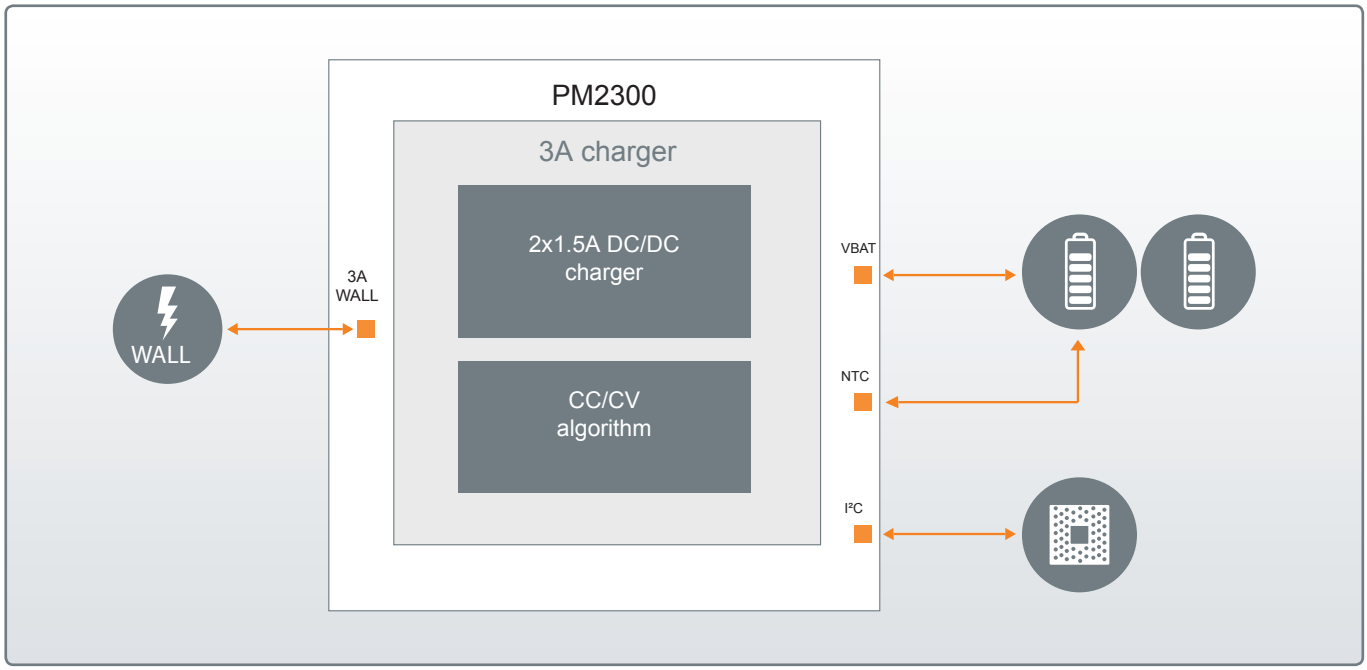


PM2300 block diagram

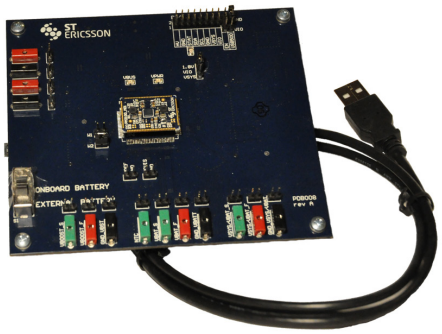
PM2300 FLEXIBLE PROGRAMMABLE CHARGE PARAMETERS

The battery CCCV charging algorithm is either fully autonomous when operating in standalone or controlled by the host by software. A wide set of charging parameters can be modified or monitored by I²C and through interrupt pin.

Several pre-defined default settings are available for different applications. The PM2300 permanently monitors several key parameters to optimize charging such as charging voltage, charging current, battery temperature, input current, voltage and die temperature.

PM2300 EVALUATION BOARD

PC driven control board with user SW interface and application sized module board on top



Part number	Configuration	Package
PM2300AH	Autonomous charging algorithm	WLCSP, 52 balls, 3.3x2.9mm
PM2300AS	Host driven charging algorithm	WLCSP, 52 balls, 3.3x2.9mm

LET'S CREATE IT

For more information on ST-Ericsson, visit **www.stericsson.com**

Order code: PM2300FL_1