



## Product Overview

### NCP1851: Smallest 1.6A High Innovation Switching Battery Charger

For complete documentation, see the [data sheet](#)

#### Product Description

The NCP1851 is a fully programmable single cell Lithium-ion switching battery charger optimized for charging from a USB compliant input supply and AC adaptor power source. The device integrates a synchronous PWM controller, power MOSFETs, and the entire charge cycle monitoring including safety features under software supervision. An optional battery FET can be placed between the system and the battery in order to isolate and supply the system. The NCP1851 junction temperature and battery temperature are monitored during charge cycle, and both current and voltage can be modified accordingly through I2C setting. The charger activity and status are reported through a dedicated pin to the system. The input pin is protected against overvoltages.

#### Features

- 1.6A buck converter with integrated pass devices
- Input current limiting to comply to USB standard
- 500mA boosted supply for USB OTG peripherals
- Dynamic power path with external battery FET
- High accuracy voltage and current regulation
- Input over voltage protection up to +28V
- Reverse leakage protection prevents battery discharge
- Protected USB Transceiver supply switch
- Factory mode
- Battery temperature sensing for safe operation (JEITA)

#### Applications

- High Efficiency Charging Line-up

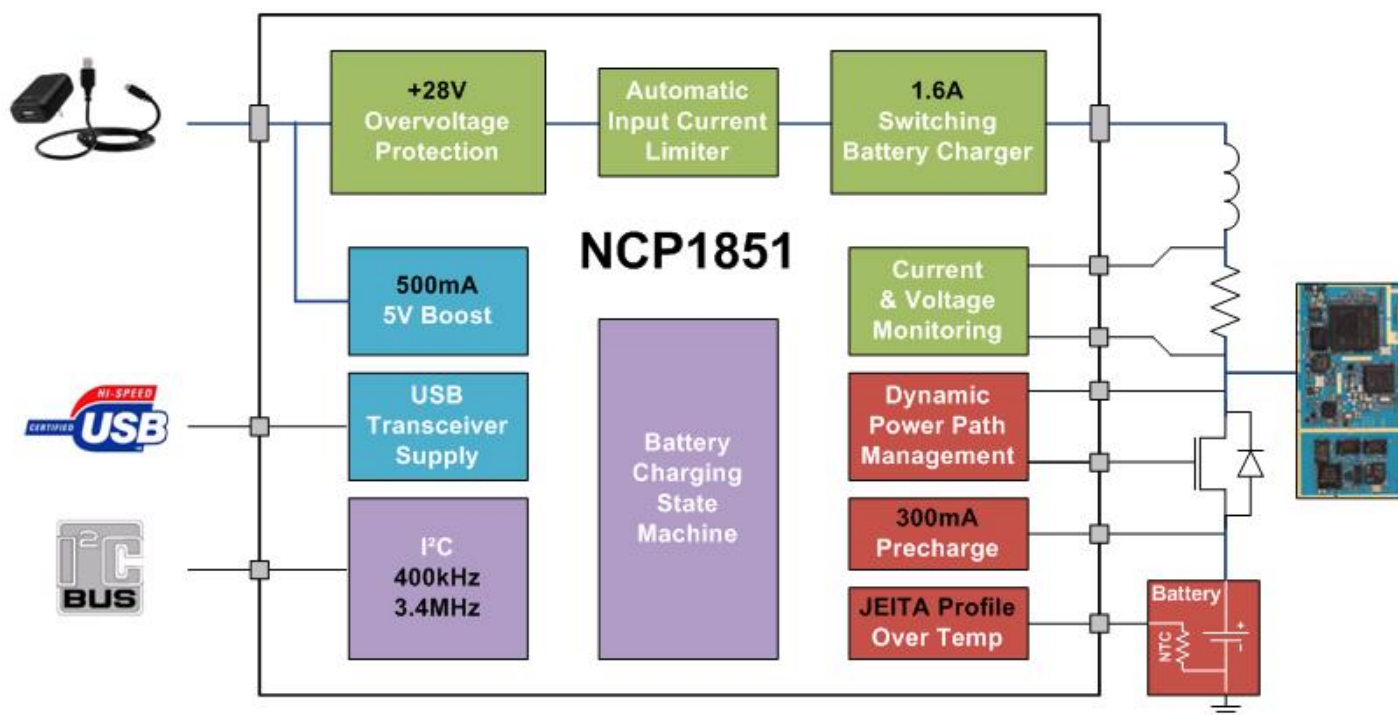
#### End Products

- Smart Phone
- Handheld Devices
- PDA
- Tablets

#### Part Electrical Specifications

| Product       | Compliance             | Status | Type           | Number of Cells Charged | V <sub>CC</sub> Min (V) | V <sub>CC</sub> Max (V) | I <sub>D</sub> Max (uA) | Features                 | Package Type |
|---------------|------------------------|--------|----------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------|
| NCP1851FCCT1G | Pb-free<br>Halide free | NEW    | Li-Ion/Polymer | 1                       | 3.6                     | 28                      | 5                       | Max. Charge Current 1.6A | Flip-Chip-25 |

## Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

Created on: 5/18/2012