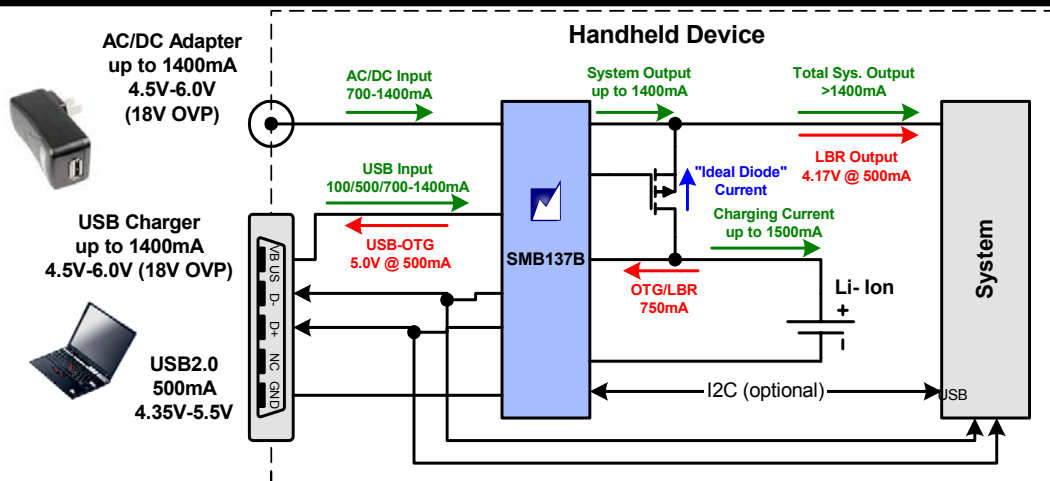


Programmable Switching Li+ Battery Charger with USB/AC Input, CurrentPath™ Manager, TurboCharge™ Mode*, Low Battery Recovery*, AICL* and USB On-The-Go Support
FEATURES & APPLICATIONS

- Automatic Input Current Limit for universal USB/AC/DC adapter compatibility*
- Optional automatic power source detection per latest USB charging specification 1.0
- USB or AC input with automatic input selection and programmable input current limiting (USB2.0 compliant)
- Up to 750mA charging output from 500mA USB port or 1500mA from AC adapter using proprietary “TurboCharge™ Mode”
- Input/output CurrentPath™ control allows system operation with deeply discharged/missing battery – no start-up delay
- “Low Battery Recovery” mode for >500mA startup from 100mA USB port with deeply discharged cells – no start-up delay
- USB On-the-Go (OTG) power support (up to 500mA @ +5V)
- Reverse current blocking prevents battery discharge
- High-efficiency step-down regulator with 3MHz switching
- +4.35 to +6.0V input voltage range
- +18V input tolerance (non-operating)
- High-accuracy float voltage regulation: 1.0%
- Digital programming of all major parameters via I²C interface
 - Pre-charge voltage, float voltage
 - Input/pre-charge/fast charge/term. current
 - Battery temperature limits, safety timers
- Comprehensive protection features
 - Status/fault indicator
 - Battery/IC thermal protection
 - Short circuit/UV/OV protection
 - Charge termination safety timers
 - Software watchdog timers
- Tiny CSP-30 package

Applications

- Portable Media Players
- Smartphones/PDA's
- Digital camcorders/still cameras
- Handheld GPS

SYSTEM APPLICATION

Figure 1 – Using the SMB137B to charge a single cell Li+ battery from USB or AC Adapter power sources

*Patent Pending