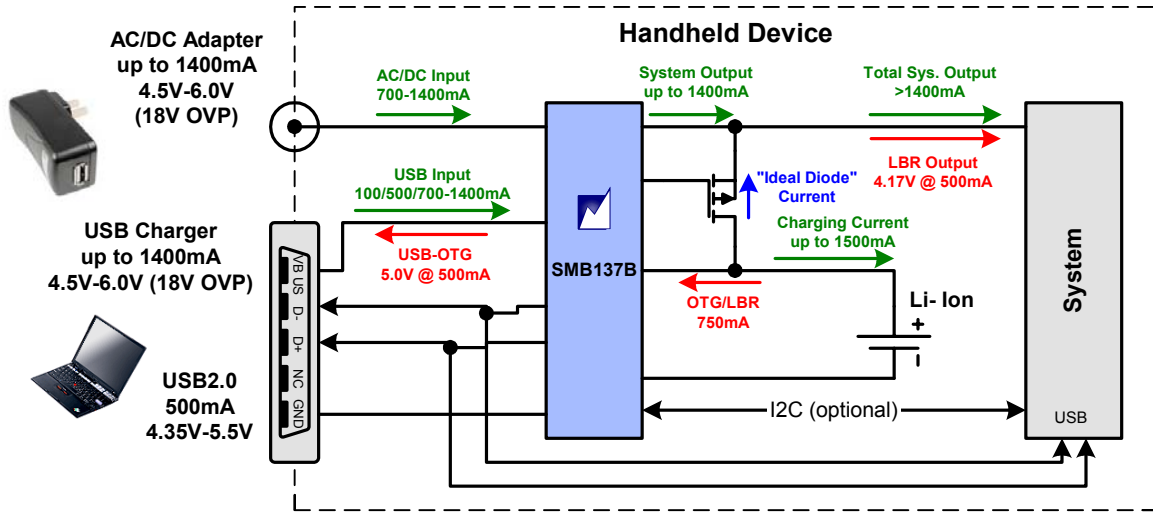
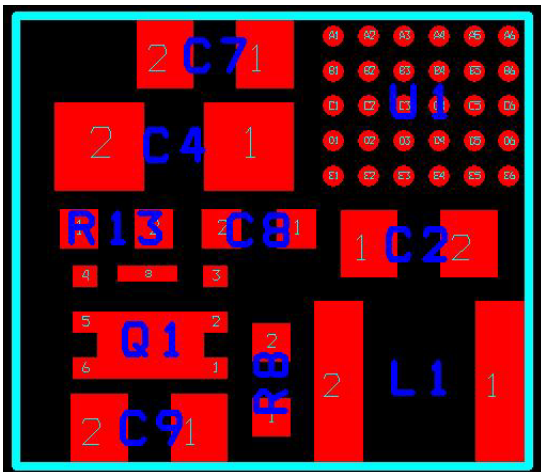


Tiny Li+ Charger ICs Solve “Dead” Battery Issues, Extend Run Time & Reduce Charging Time

Input/Output Power Control, Automatic Input Current Limit, and USB-OTG power support latest battery charging specifications and reduce system cost and size*



High Integration and Low Power Dissipation Enable Small Industrial Designs (45mm²) without Compromising Performance



SMB136/137B Applications

- Mobile/Smart Phones
- Digital Cameras/Camcorders
- Portable Media Players/Games
- Handheld GPS Terminals

SMB136/137B Features

- USB & AC Input with Automatic Input Selection (SMB137B)
- CurrentPath™ for Independent System and Battery Charging Operation
- TurboCharge™* for 50% Current Gain from Current-limited Power Sources
- Automatic Charger Input Current Adjustment based on Wall Adapter Current Limit *
- Automatic Power Source Detection per USB 1.0 Charging Specification
- Integrated USB On-the-Go Power Support (+5V @ 500mA)
- “Low-Battery Recovery” Mode for Instant “Dead Battery” Power On and Extended Talk/Standby Time
- +3.5V to +6.2V Operating Input (+18V Protection)
- 3MHz Switch-Mode Operation (Chip Inductors)
- Very low reverse leakage and shutdown current
- I²C Programmable (Volatile and Non-volatile)
 - Fast/Pre-Charge/Termination Current
 - Float Voltage
 - Pre-Charge/Dead-battery Thresholds
- Built-in Safety – supports IEEE 1725 standard
 - Input OV Protection to +18V
 - Battery OV/OC Protection
 - Trickle Charge for Deeply-Discharged Cells
 - Watchdog and Safety Timers
 - Digital Fault Monitors
 - Battery Temperature Monitor
- 3.0mm x 2.5mm CSP Packaging



“Programmable Power for a Green Planet™”

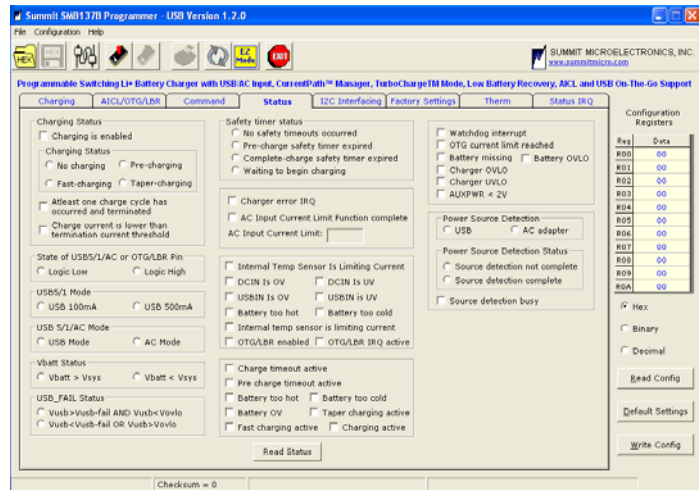
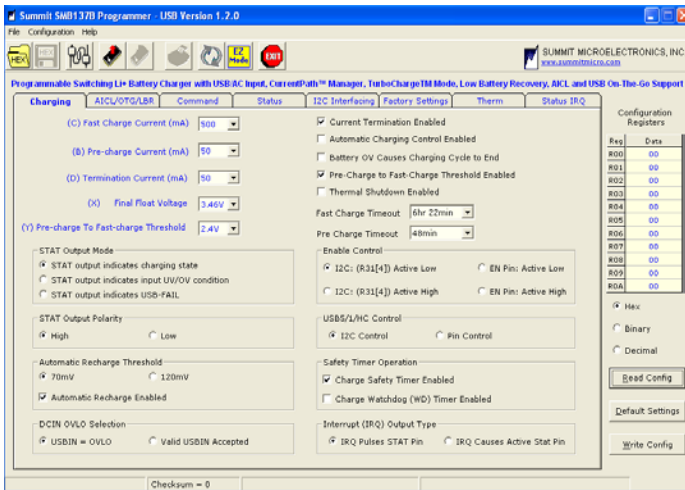
* Patent pending

Tiny Li+ Charger ICs Solve “Dead” Battery Issues, Extend Run Time & Reduce Charging Time

GUI allows easy programming of all functions and parameters in a real-time environment

Battery Charger Configuration

Real-time Status/Fault Control



Battery Charging Product Portfolio

	SMB137B	SMB136	SMB329	SMB339	SMB135/235	SMB139/239
Topology	Switch-mode	Switch-mode	Switch-mode	Switch-mode	Switch-mode	Linear-mode
Input Voltage Range (V)*	4.35 to 6.2 (18)	4.35 to 6.2 (18)	4.35 to 6.2 (18)	4.35 to 6.2 (18)	4.35 to 6.5 (10)	4.35 to 6.5 (10)
# of Inputs/Outputs	2/2	1/2	1/1	1/1	1/1	1/1
Maximum Charge Current (mA)	1500	1500	1250	1250	900	210/525
Maximum Input Current (mA)	1400	1400	1250	1250	NA	NA
TurboCharge™ Output	Automatic	Automatic	Automatic	Automatic	Software/uC	
CurrentPath™ Control	X	X				
USB On-The-Go Power	X	X	X	X		
Instant-On System Boot			X			
Charge Current Voltage Output			X	X		
Low-Battery Recovery Mode	X	X				
I2C Interface	X	X	X		X	X
Programmable Float Voltage	X	X	X	X	X	X
Programmable Charge/Term. Current	X	X	X	X	X	X
Programmable Input Current Limit	X	X	X	X		
Input/Battery OV/UV	X	X	X	X	X	X
Hardware Safety Timer	X	X	X	X	X	X
Software Watchdog Timer	X	X	X	X		
Battery Thermal Protection	X	X	X	X	X	X
Automatic Input Current Limit	X	X	X	X		
Automatic Power Source Detection **	X	X	X	X		
IC Thermal Protection	X	X	X	X	X	X
Package	3.0x2.5 CSP-30	3.0x2.5 CSP-30	2.2x1.9 CSP-20 4x4 QFN-24	2.2x1.9 CSP-20	2.1x1.3 CSP-15 5x5 QFN-32	2.1x1.3 CSP-15 2.1x1.3 CSP-8

* () Indicates overvoltage "holdoff" tolerance
 ** Per USB Battery Charging Specification 1.0



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