EVKT-MP2667 Product Brief

MP2667 Evaluation Kit

5V, 1000mA, I²C-Controlled Battery Charger with Power Path Management for Single-Cell Li-Ion Battery in QFN Package

The MP2667 is a highly integrated, single-cell, Li-ion/Li-polymer battery charger with system power path management for space-limited portable applications. The MP2667 takes input power from either an AC adapter or a USB port to supply the system load and charge the battery simultaneously. The charger function features pre-charge (PRE.C), fast current (CC), constant voltage (CV) regulation, charge termination, and auto-recharge.

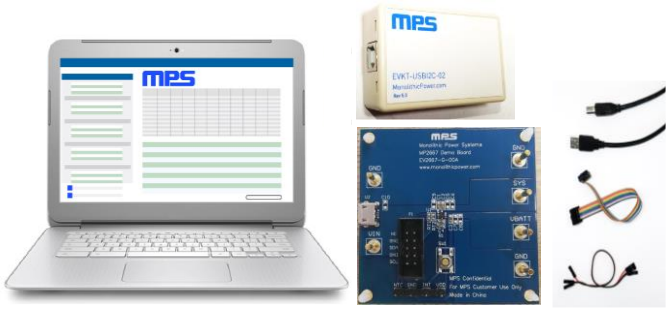
The power path management function ensures continuous power to the system by automatically selecting the input, battery, or both to power the system. This function features a low dropout regulator from the input to the system and a 100mΩ switch from the battery to the system. Power path management separates the charging current from the system load, which allows for proper charge termination and keeps the battery in full-charge mode.

The MP2667 provides a system short-circuit protection (SCP) function by limiting the current from the input to the system and the battery to the system. This feature is especially critical for preventing the Li-ion battery from being damaged due to an excessively high current. On-chip battery under-voltage lockout (UVLO) cuts off the path between the battery and the system if the battery voltage drops below a programmable battery UVLO threshold. This prevents the Li-ion battery from being over-discharged. An integrated I²C control interface allows the MP2667 to program the charging parameters.

Kit Contents

- EV2667 evaluation board (EV2667-G-00A)
- Communication interface with accessories (EVKT-USBI2C-02)
  - USB to I²C communication interface
  - Ribbon cable
  - USB cable

Note: The GUI installation file and supplemental documents can be downloaded from the MPS website.



Feature	Specification
Supply for Board	4.35V to 5.5V
Operating Input Voltage	4.35V to 5.5V
Battery Regulation Voltage	3.6V to 4.545V
Fast Charge Current	26mA to 1049mA
Input Minimum Voltage	3.88V to 5.08V
Input Current Limit	77mA to 993mA
Discharge Current	100mA to 1600mA
Operating Systems Supported	Windows XP, 7, and later
System Requirements	Minimum 22.2MB free
GUI Software	MP2667 V1.0
EVB Size (LxW)	6.35cmx6.35cm

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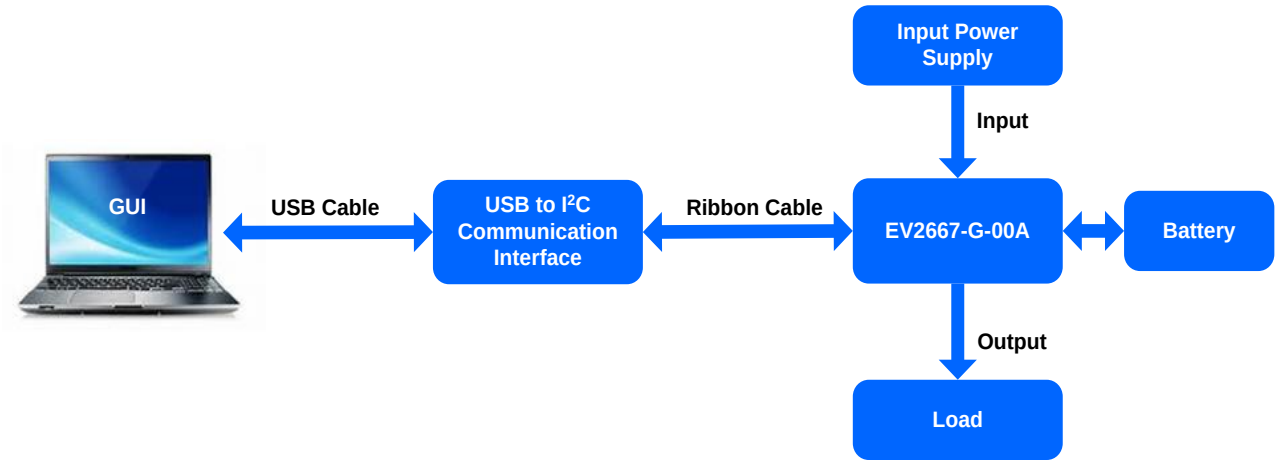
Quick Start (Refer to user guide for more details.)

1. Install the GUI software.
2. Use the provided ribbon cable to connect the EVB and the USB to the I²C communication interface.
3. Preset the power supply output to between 4.35V and 5.5V, then connect the EVB.
4. Connect the communication interface to the PC and turn the power supply on.
5. Open the GUI software, and program as needed.

Kit offers rapid application assessment and requires minimal external components.



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REVISION HISTORY

Revision #	Revision Date	Description	Pages Updated
1.0	2/8/2021	Initial Release	-
1.1	4/15/2021	Formatting updates	All

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