EVKT-MP2663 Product Brief

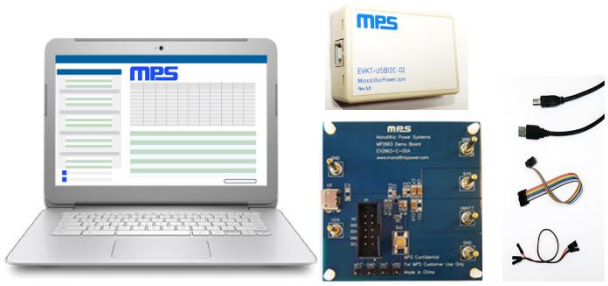
MP2663 Evaluation Kit

500mA, I²C Controlled Battery Charger with Power-Path Management for Single-Cell Li-Ion Battery

The MP2663 is a highly integrated, single-cell, Li-Ion/Li-Polymer battery charger with system power-path management for space-limited, portable applications. The MP2663 uses input power from either an AC adapter or a USB port to supply the system load and charge the battery independently. The charger features pre-charge, constant current (CC) constant voltage (CV) regulation, charge termination, and charge status.

The power stage 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 MP2663 provides system short-circuit protection (SCP) by limiting the current from the input to the system and the battery to the system. This feature is especially critical to prevent the Li-Ion battery from being damaged by excessively high currents. An on-chip battery under-voltage lockout (UVLO) cuts off the path between the battery and the system if the battery voltage drops below the programmable battery UVLO threshold, which prevents the Li-Ion battery from being over-discharged. An integrated I²C control interface allows the MP2663 to program the charging parameters.



Feature	Specification
Supply for Board	4.35V - 5.5V
Operating Input Voltage	4.35V - 5.5V
Battery Regulation Voltage	3.6V - 4.545V
Fast Charge Current	8mA - 535mA
Input Voltage Regulation	3.88V - 5.08V
Input Current Limit	85mA - 455mA
Discharge Current	400mA - 3200mA
Operating Systems Supported	Windows XP, 7, and later
System Requirements	Minimum 22.2 MB free
GUI Software	MP2663 V1.0
EVB Size (L x W)	6.35 cm x 6.35 cm

Kit Contents

- EV2663 evaluation board (EV2663-C-00A)
- EVKT-USBI2C-02
  - USB to I²C communication interface
  - Ribbon cable
  - USB flash drive for installing GUI
- Online resources that include: datasheet, user guide, product brief, and GUI

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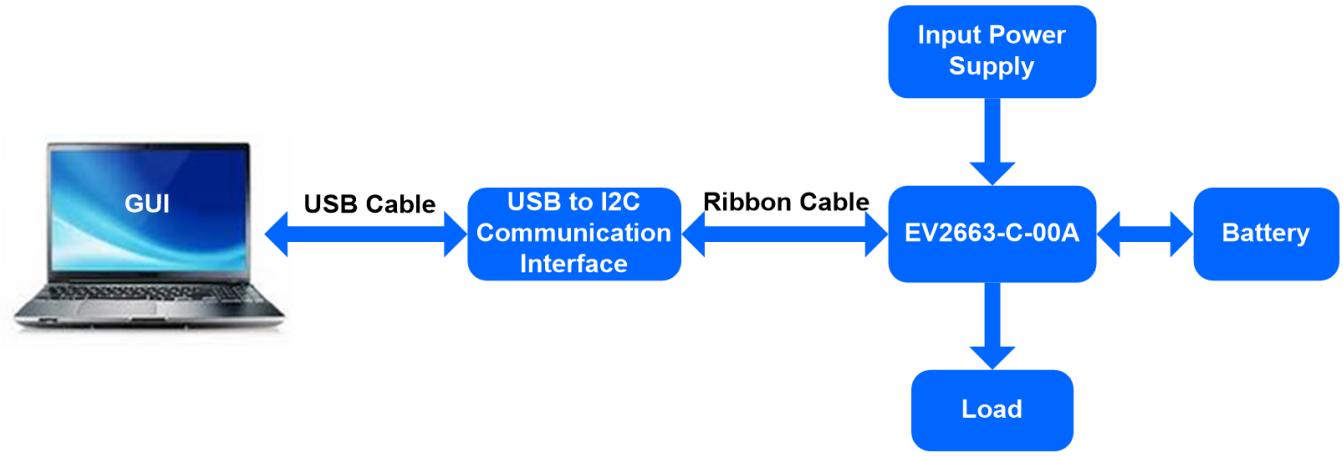
Quick Start (Refer to user guide for more details.)

1. Install the GUI software.
2. Use the provided ribbon cable to connect the EVB and the USB to I²C communication interface.
3. Preset the power supply output between 4.35V and 5.5V and 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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