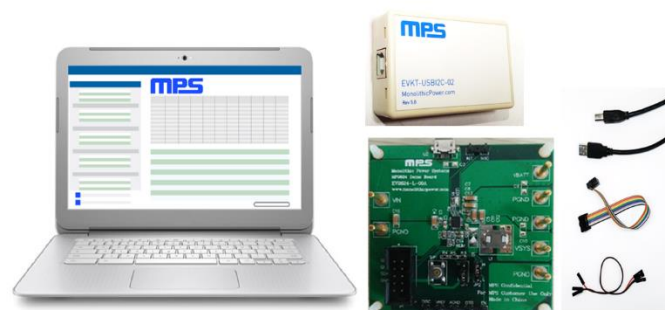


The MP2624 is a 4.5A, highly integrated, switching-mode battery charger IC for single-cell Li-ion or Li-polymer batteries. It supports NVDC architecture with power-path management suitable for different portable applications, such as tablets, MID, and smart phones. Its low impedance power path optimizes efficiency, reduces battery charging time, and extends battery life. The I<sup>2</sup>C serial interface with charging and system settings allows flexible control.

The MP2624 supports a wide range of input sources. It detects the input source type according to the USB Battery Charging Spec 1.2 (BC1.2) and then informs the host to set the proper input current limit. Also, it is compliant with USB2.0 and USB3.0 power specifications by adopting a proper input current and voltage regulation scheme. The MP2624 supports USB on-the-go operation by supplying 5V with current up to 1.3A.

The power-path management regulates the system voltage slightly above the set maximum voltage between the battery voltage and the lowest programmable I<sup>2</sup>C voltage level (e.g. 3.6V). This allows the system to operate even when the battery is depleted completely or removed. When the input source current or voltage limit is reached, the power-path management reduces the charge current automatically to meet the system power requirements. If the system current continues to increase, even when the charge current is reduced to zero, supplement mode allows the battery to power both the system and the input power supply at the same time.



| Feature                     | Specification             |
|-----------------------------|---------------------------|
| Supply for Board            | 3.9V - 7.0V               |
| Operating Input Voltage     | 3.9V - 7.0V               |
| Charge Full Voltage         | 4.2 / I <sup>2</sup> C V  |
| Charge Current              | 4.5 / I <sup>2</sup> C A  |
| OTG Voltage Regulation      | 5.15 / I <sup>2</sup> C V |
| OTG Current Limit           | 1.3 / I <sup>2</sup> C A  |
| Operating Systems Supported | Windows XP, 7, and later  |
| System Requirements         | Minimum 22.2 MB free      |
| GUI Software                | MP2624 V1.6               |
| EVB Size (L x W)            | 6.3 cm x 6.3 cm           |

### Kit Contents

- EV2624 Evaluation Board (EV2624-L-00A)
- EVKT-USB I<sup>2</sup>C-02
  - USB to I<sup>2</sup>C Communication Interface
  - Ribbon Cable
  - USB Flash drive for installing GUI
- Online resources that include: datasheet, user guide, product brief, and GUI

#### 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 I<sup>2</sup>C communication interface.
3. Pre-set the power supply output between 3.9V and 7.0V 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*

