Quick Start Guide for bq27500/1EVM Kit

1 Quick-Start Guide for bq27500/1EVM Kit

This section permits the user to quickly set up and begin using the bq27500/1 evaluation module.

1.1 Kit Contents

1. bq27500/1EVM board (HPA291)
2. EV2300 USB PC Interface Board
3. 4-colored wire set connector
4. USB cable (A-B type)
5. CD containing supporting documents and evaluation software

1.2 Additional Equipment Required

1. Computer running Windows™ XP or 2000 with a USB port available
2. Power supply or single-cell in series Li-ion battery (Li-ion battery preferred)
3. Electronic load or electronic system that operates from 3 to 4.2 V
4. Single-cell Li-ion battery charger (optional)

1.3 Install Software

1. Ensure that EV2300 is not connected to PC through USB cable before staring this procedure.
2. Browse the included CD and go to the Software directory, and open the bqEV-EASYSetup00.09.38_bq27500v1.00_bqEasy1.00.exe file.
3. Follow the instructions on screen until completing the software installation.
4. Before starting the evaluation software, connect the EV2300 to the computer using the USB cable.
5. Wait until system prompt “new hardware found” appears. Choose “select location manually”, and use the “browse” button to point to subdirectory TIUSBWin2K-XP-1.
6. Answer “continue” to the warning that drivers are not certified with Microsoft™.
7. After installation finishes, another system prompt "new hardware found" appears. Repeat steps 1 through 5, but specify the directory as TIUSBWin2K-XP-2.
8. Answer "continue" to the warning that drivers are not certified with Microsoft. Driver installation is now finished.

1.4 Quick EVM Setup

Refer to Figure 1 for the following instructions.

1. Using the supplied USB cable, connect the EV2300 to the computer that has the bq27500 evaluation software installed.
2. Connect one side of the 4-wire-set connector to the EV2300’s I^2C port (black wire aligned with GND pin) and the other side to the HPA291’s J4 connector (black wire aligned with the VSS pin).
3. Ensure that jumper in J5 of HPA291 board is connected at the bottom position as shown in Figure 1.
4. Ensure that NTC103AT thermistor is connected to the T and PACK- terminals of the J8 block of the

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HPA291 board.

5. Ensuring proper polarity, connect the 3-V – 4.2-V power supply or single-cell Li-ion battery between the PACK+ and PACK- terminals (J8) of the HPA291 board.
6. Beginning at the Windows “Start” menu, run the bq27500/1 evaluation software by following the link: Start → Programs → Texas Instruments → bqEvaluation Software.
7. To see current measurements, apply a load to the J7 and J6 connectors of the HPA291 board. Note that the J6 is for host/charger ground and J7 is for host/charger power.
8. You are now ready to explore with the bq27500/1 EVM kit. To properly configure the fuel gauge IC for a given application proceed to the bqEasy section of the evaluation software and the User's Guide. For detailed instructions on operating the fuel gauge system, see the bq27500/1 data sheet and the bq27500/1 EVM User’s Guide.

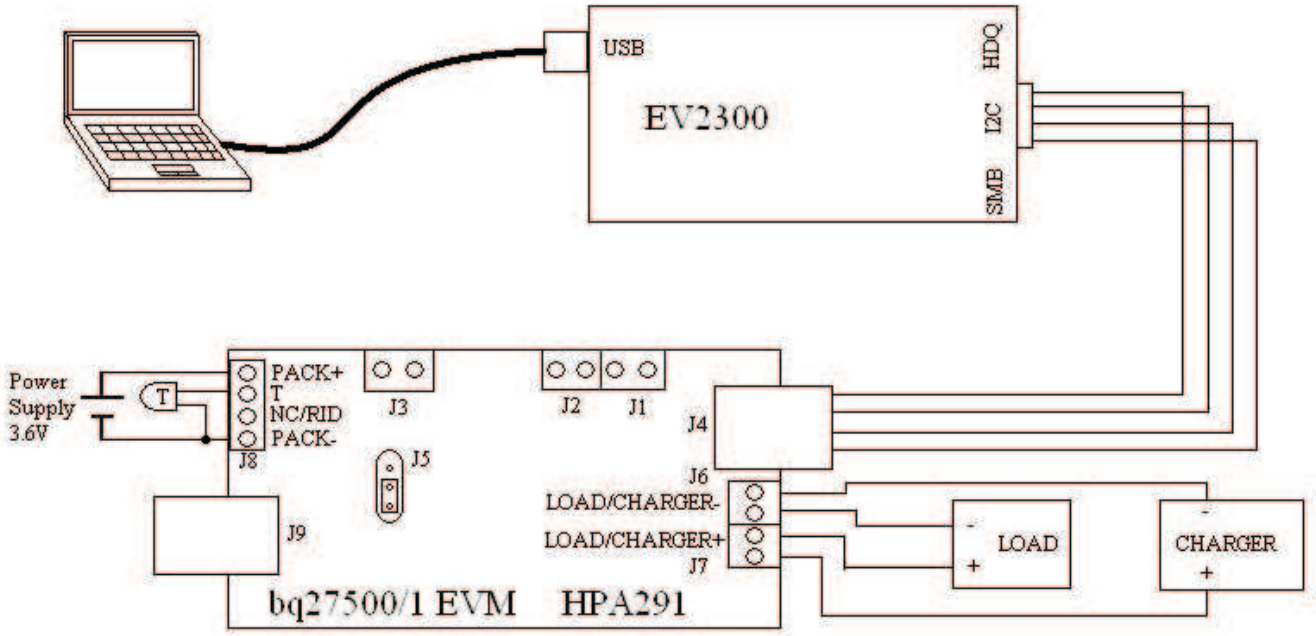

Figure 1. Basic EVM Setup

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