User's Manual

ISLUSBEVAL1Z

User's Manual: USB to PMBus™ Adapter

Core Power Solutions

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ISLUSBEVAL1Z

USB to PMBus™ Adapter

1. Overview

The Renesas USB to PMBus Adapter (often referred to as a “dongle”) is used to connect a demonstration board with a PMBus interface to a PC. The USB to PMBus adapter is powered from the USB output of the host PC. The USB interface utilizes the USB Mini format, and the output uses a standard 2 row, 6 pin header on 0.100 inch centers. The PMBus command set is accessed by using the PowerNavigator™ evaluation software from a PC running Microsoft Windows. PowerNavigator software is downloaded from the Renesas website.

1.1 Key Features

- Compatible with PowerNavigator
- Compatible with the Power Configuration Tool
- Supports Multi-Master PMBus systems

1.2 Specifications

- USB Mini format
- Output: Standard 2 row, 6 pin header on 0.100 inch centers
- Compatible with 32-bit or 64-bit Windows Vista, Windows 7, Windows 8 or Windows 10

1.3 Ordering Information

Part Number	Description
ISLUSBEVAL1Z	USB to PMBus Adapter and Cable

1.4 Related Literature

For a full list of related documents, visit our website:

- ISLUSBEVAL1Z product page

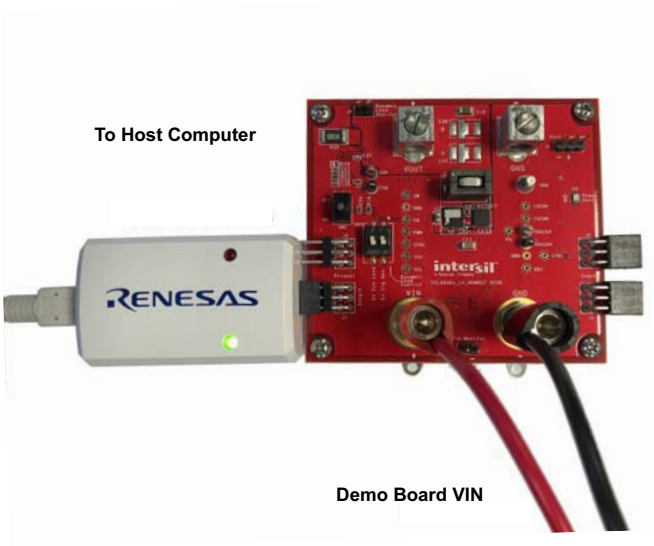

Figure 1. USB to PMBus Typical Set-Up

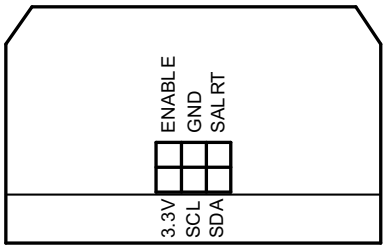

Figure 2. Pin Configuration

2. Functional Description

The Renesas USB to PMBus Adapter is used to connect a demonstration board with a PMBus interface to a PC.

2.1 Quick Start Guide

- Connect the USB Mini provided between the host computer and the USB to PMBus adapter.
- Connect USB to PMBus adapter to demonstration board to test or evaluate.
- Apply input power (labeled VIN) to the demonstration board.
- Download PowerNavigator from the Renesas website.
- Follow the instructions on the website.
- When PowerNavigator is installed, double-click on the PowerNavigator icon and follow the software's instructions.

2.2 ISL7202xCSEHEVAL1Z Circuit Schematic

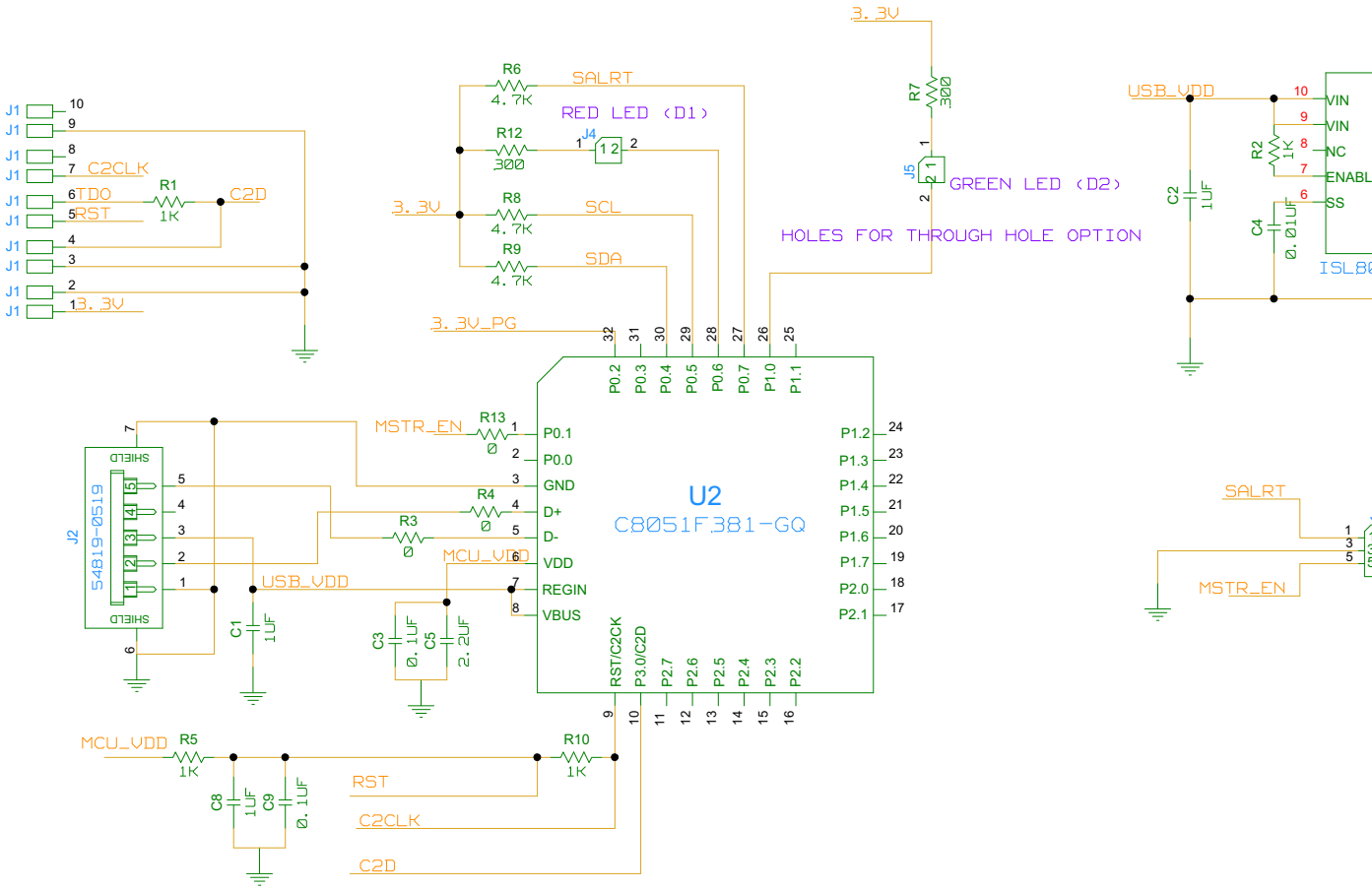

Figure 3. Schematic

2.3 Bill of Materials

Qty	Reference Designator	Description	Mfr	Manufacturer Part Number
1		PWB-PCB, ISLUSBEVAL1Z, REVA, ROHS	Imagineering Inc.	ISLUSBEVAL1ZREVAPCB
1	C4	CAP, SMD, 0402, 0.01µF, 16V, 10%, X7R, ROHS	TDK	C1005X7R1C103K
3	C3, C6, C9	CAP, SMD, 0402, 0.1µF, 16V, 10%, X7R, ROHS	Venkel	C0402X7R160-104KNE
3	C1, C2, C8	CAP, SMD, 0603, 1µF, 16V, 10%, X5R, ROHS	Murata	GRM188R61C105KA12D
1	C5	CAP, SMD, 0603, 2.2uF, 10V, 10%, X7R, ROHS	Murate	GRM188R71A225KE15D
1	C7	CAP, SMD, 0805, 10uF, 10V, 10%, X5R, ROHS	Murata	GRM21BR61A106KE19L(Pb FREE)
1	J2	CONN-USB MINI-B RECEPTACLE, TH, 5CIRCUIT, R/A, ROHS	Molex	54819-0519
1	J1	CONN-HEADER, 2X5, BRKAWY-2X36, 2.54mm, ROHS	Berg/FCI	67996-272HLF
1	J3	CONN-SOCKET STRIP, TH, 2X3, 2.54mm, TIN, R/A, ROHS	Samtec	SSQ-103-02-T-D-RA
1	D2 (See Document #1)	LED, TH, T-1, GRN DIFFUSED, 2.2V, 20mA, 9.0mcd, 535nm, ROHS	Everlight Electronics	MV5474C
1	D1 (See Document #1)	LED, TH, T-1, RED DIFFUSED, 2V, 20mA, 9.0mcd, 635nm, ROHS	Everlight Electronics	MV5774C
1	U2	IC-PROGRAMMED 3.2 FIRMWARE USB MCU, 32P, LQFP, 10BIT, ROHS	Silicon Laboratories	C8051F381-GQ
1	U1	IC-ADJ.V, 1A LDO REGULATOR, 10P, DFN, 3X3, ROHS	Intersil	ISL80101IRAJZ
3	R3, R4, R13	RES, SMD, 0402, 0Ω, 1/16W, 5%, TF, ROHS	Venkel	CR0402-16W-00T
5	R1, R2, R5, R10, R15	RES, SMD, 0402, 1K, 1/16W, 1%, TF, ROHS	Venkel	CR0402-16W-1001FT
1	R11	RES, SMD, 0402, 10K, 1/16W, 1%, TF, ROHS	Panasonic	ERJ-2RKF1002X
1	R14	RES, SMD, 0402, 178Ω,1/16W, 1%, TF, ROHS	Yageo	RC0402FR-07178RL
2	R7, R12	RES, SMD, 0402, 300Ω, 1/16W, 1%, TF, ROHS	Vishay/Dale	RC0402FR-07178RL
3	R6, R8, R9	RES, SMD, 0402, 4.7K, 1/16W, 1%, TF, ROHS	Venkel	CR0402-16W-4701FT
1	Bag & Ship W/Brd (Cable)	CABLE-USB 2.0, TYPE A MALE/TYPE MINI-B MALE, 1.8M, WHT, ROHS	Molex	88732-8800
1	Place assy in bag	BAG, STATIC, 3X5, ZIP LOC	Intersil Common Stock	D810 (212403-012)
1	D1, D2 - LED Placement Assy Photo	See attached document for manual or visual instruction.	Intersil	Document #1
1	Affix to Back of PCB	LABEL-DATE CODE_LINE 1: YRWK/REV#, LINE 2: BOM NAME	Renesas Electronics America	LABEL-DATE CODE
1	PCB Encapsulation Case	CASE-ISLUSBE1Z DONGLE ENCLOSURE, 2inch, WHT/BLUE INK, ROHS	New Age Enclosures	S1A-201209-INT13029

3. Revision History

Rev.	Date	Description
1.00	Mar.1.19	Initial release

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