

ZLUSBEVAL3Z

USB to PMBus™ Adapter

AN1900

Rev 1.00

September 29, 2014

The Intersil 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 Intersil website using the following link: <http://www.intersil.com/powernavigator.html>

**Ordering Information**

PART NUMBER	DESCRIPTION
ZLUSBEVAL3Z	USB to PMBus Adapter and Cable

**USB to PMBus Adapter 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
- Using the host PC's internet browser, connect to the following website: <http://www.intersil.com/powernavigator.html>
- Follow the instructions on the website.
- Once the PowerNavigator software is installed, double-click on the PowerNavigator icon and follow the software's instructions

**Technical Details**

A typical application set-up is shown in [Figure 1](#). For those wishing to make discrete connections to an application board, a pictorial diagram of the output pin signals is shown in [Figure 2](#). A schematic of the USB to PMBus Adapter internal circuitry is provided in [Figure 3](#). The Bill Of Materials is detailed on [page 3](#).

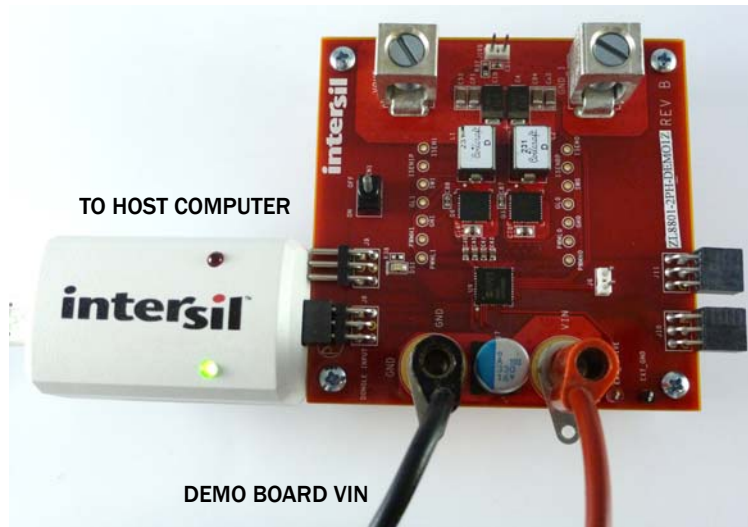


FIGURE 1. USB TO PMBus TYPICAL SET-UP

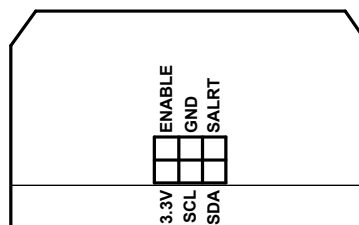


FIGURE 2. PIN CONFIGURATION DIAGRAM

# ZLUSBEVAL3Z Schematic

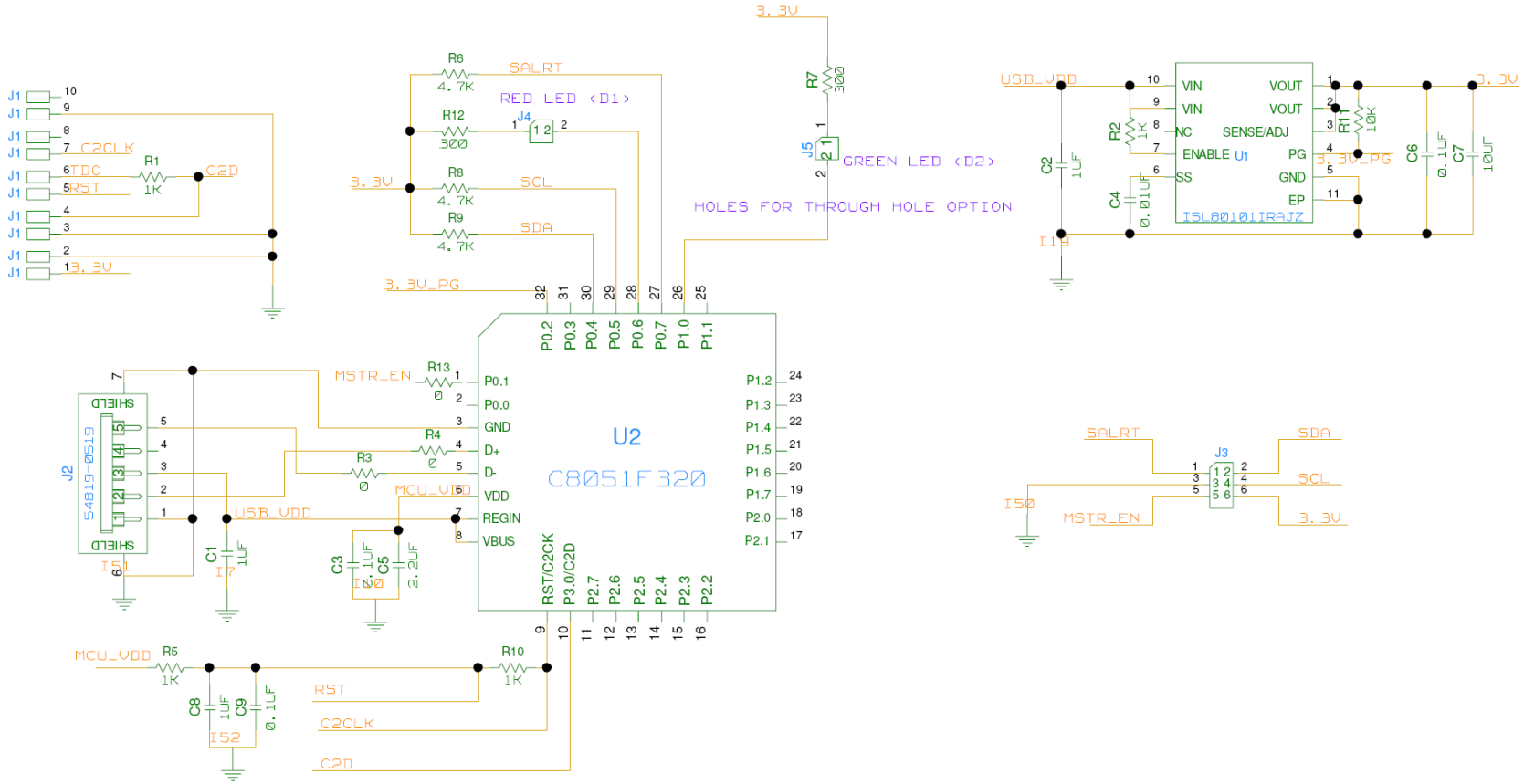


FIGURE 3. USB TO PMBus ADAPTER SCHEMATIC

## USB to PMBus Bill Of Materials

PART #	REF DES	QTY	VALUE	TOL.	VOLTAGE	POWER	PACKAGE TYPE	MANUFACTURER	DESCRIPTION
54819-0519	J2	1					VER1	MOLEX	GRAY USB TYPE B MINI-B Header Assembly
TSW-105-07-T-D	J1	1					10	MOLEX	10 PIN DUAL ROW VERTICAL PCB MALE CONNECTOR
C0805C106K8PACTU	C7	1	10 $\mu$ F	10%	10V		805	KEMET	Multilayer Cap
C1608X7R1C105K	C1, C2, C8	3	1 $\mu$ F	10%	16V		603	TDK	Multilayer Cap
C8051F320	U2	1					LQFP	SILICON LABRATORIES	General Purpose MicroControllers - PREPROGRAMMED
H1044-00103-16V10	C4	1	0.01 $\mu$ F	10%	16V		402	GENERIC	Multilayer Cap
H1044-00104-16V10	C3, C6, C9	3	0.1 $\mu$ F	10%	16V		402	GENERIC	Multilayer Cap
H2510-00R00-1/16W	R3, R4, R13	3	0	0%		1/16W	402	GENERIC	Thick Film Chip Resistor
H2510-01001-1/16W1	R1, R2, R5, R10	4	1k	1%		1/16W	402	GENERIC	Thick Film Chip Resistor
H2510-01002-1/16W1	R11	1	10k	1%		1/16W	402	GENERIC	Thick Film Chip Resistor
H2510-03000-1/16W1	R7, R12	2	300	1%		1/16W	402	GENERIC	Thick Film Chip Resistor
H2510-04701-1/16W1	R6, R8, R9	3	4.7k	1%		1/16W	402	GENERIC	Thick Film Chip Resistor
ISL80101IR33Z	U1	1			3.3V		DFN	INTERSIL	HIGH PERFORMANCE 1A LDO (Pb-Free) 3.3V
LMK107B7225KA-T	C5	1	2.2 $\mu$ F	10%	10V		603	Taiyo Yuden	CERAMIC CAP
MV5774C	D1	1					DIP2	EVERLGT ELECTRONICS	LED SS HI EFF RED DIFF 3MM
MV5474C	D2	1					DIP2	EVERLGT ELECTRONICS	LED SS HI EFF GREEN DIFF 3MM
SSQ-103-02-T-D-RA	J3	1					DIP	SAMTEC	6 Pin Header 2.54mm x 2.54mm (0.100) right angle
S1A-201209-INT13029	MECHANICAL	1						New Age Enclosures	Custom plastic encapsulation for dongle; includes screws
0887328800	MECHANICAL	1						Molex	USB A TO MINI B 1.8M WHITE Cable
	TOTAL	31							

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