

USB2¹C Programming Kit *Quick-Start* User's Guide

SMX3203

General Description

The SMX3203 USB programming system is used for device prototype development. The SMX3203 system consists of a programming Dongle, USB cable and Windows™ GUI software. It can be ordered on the website or from a local representative. The latest revisions of all software is available from the website (<http://www.summitmicro.com>).

The SMX3203 programming Dongle (Figure 1) and cable (Figure 2) interface directly between a PC's USB port and the target application. The device is then configured on-screen via an intuitive graphical user interface employing drop-down menus.

The Windows GUI software will generate the data and send it in I²C serial bus format so that it can be directly downloaded to the target device via the programming Dongle and cable. An example of the connection interface is shown in Figure 3.

When design prototyping is complete, the software can generate a HEX data file that is transmitted to Summit for approval. Summit will then assign a unique customer ID to the HEX code and program production devices before the final electrical test operations. This will ensure proper device operation in the end application.

Features included on the USB2¹C board:

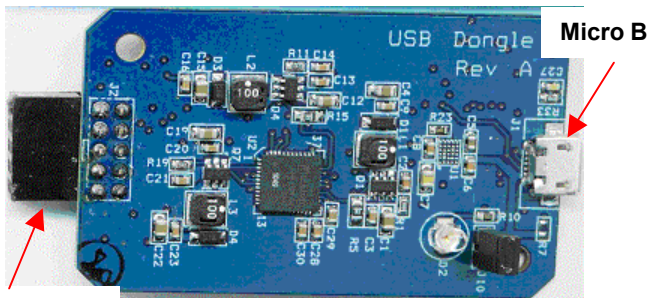
- User-Programmable Interface connector to digitally control power supply voltages, sequencing, etc.
- Power Status Indicator (LED) included on board.
- USB supply 5V@500mA to power programmable device and board.
- USB-B Port connector.
- Connects to standard PC USB 2.0 A/B cable

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SMX3203 Kit Contents

1. SMX3203 Programming Kit User's Guide.
2. USB2¹C Programming Dongle.
3. USB Interface Cable (1 meter).
4. Visit '<http://www.summitmicro.com>' for current information.



10 Pin header

Figure 1: SMX3203 USB-to-I²C Programming Dongle Board. The USB Dongle provides 5V to Read/Write devices. There is no need for an external supply.

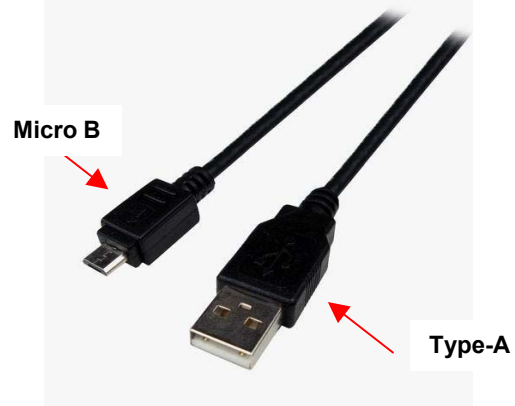


Figure 2: USB-to-I²C Programming Cable.



Operating Instructions

Test Equipment Required

- A. Personal Computer with Windows XP (or later O/S) and a USB port.
- B. Desired Summit GUI loaded onto PC.
- C. Optional: Any suitable Summit Eval Board (SMB137B Battery Charger as an example).

Setup

- 1. Insert the Dongle cable (Micro B end) into the SMX3203 Dongle.
- 2. Insert the Dongle cable (USB Type A end) into a spare USB port on the PC.

- 3. The PC will display a pop-up Window in the bottom right-hand corner of the screen indicating it recognized the hardware (Dongle) and is loading the driver.
- 4. Open the Windows GUI and select: File> Options>Advanced (See Figure 4)
- 5. If not already selected, check the "USB-Gen2" option then click "Refresh USB Connection" and click "OK".

Note: For a typical connection to an Eval Board (see Figure 3. The Dongle is keyed (pin 1 is plugged) and must be mated to fit the Eval Kit header, which is missing one pin (pin 1).

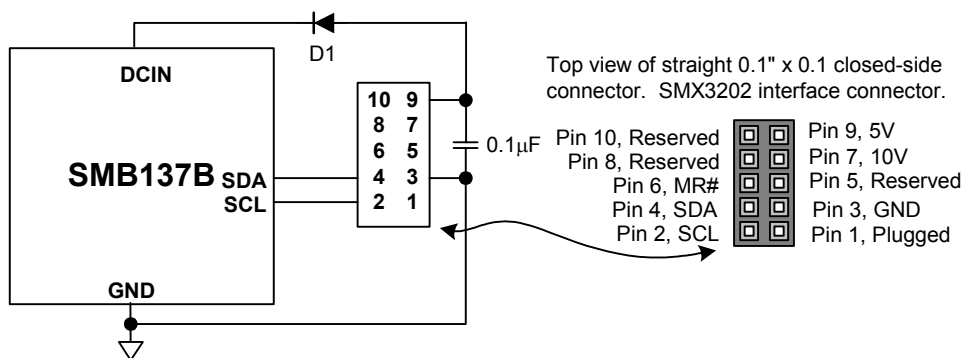


Figure 3 – Example SMX3203 Programmer I²C serial bus connections to program the SMB137B.

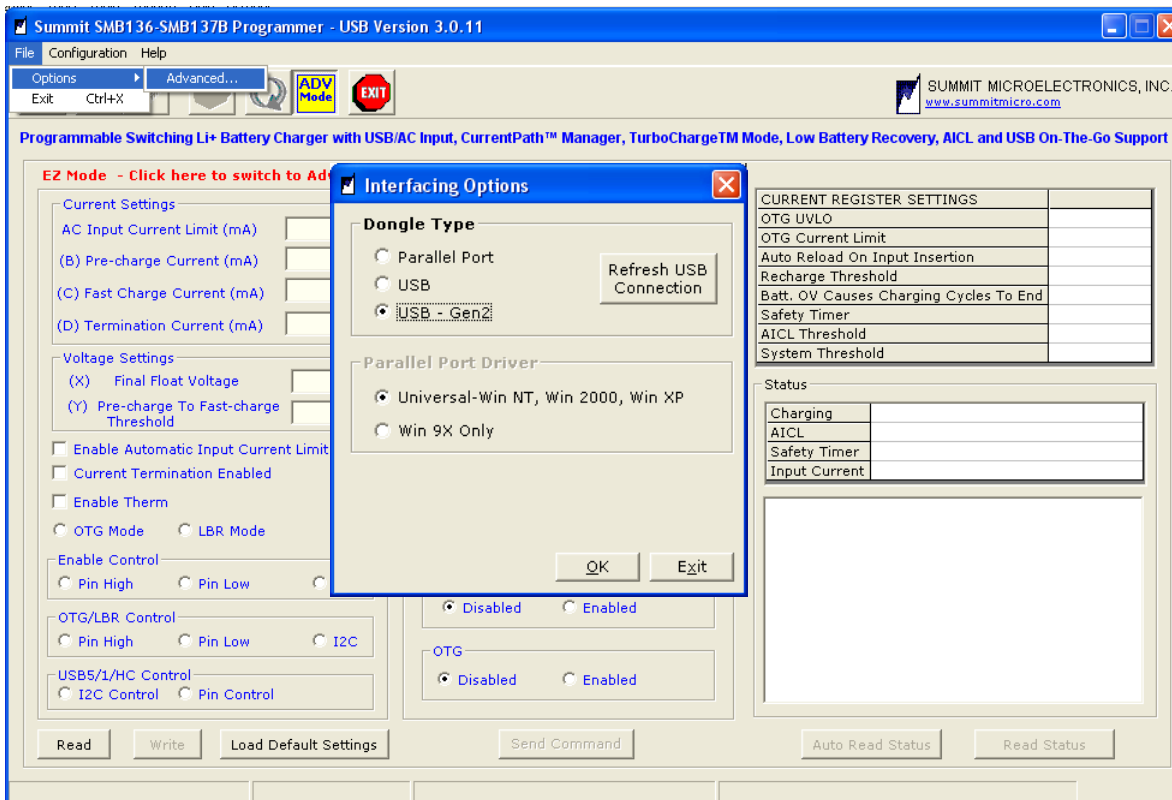
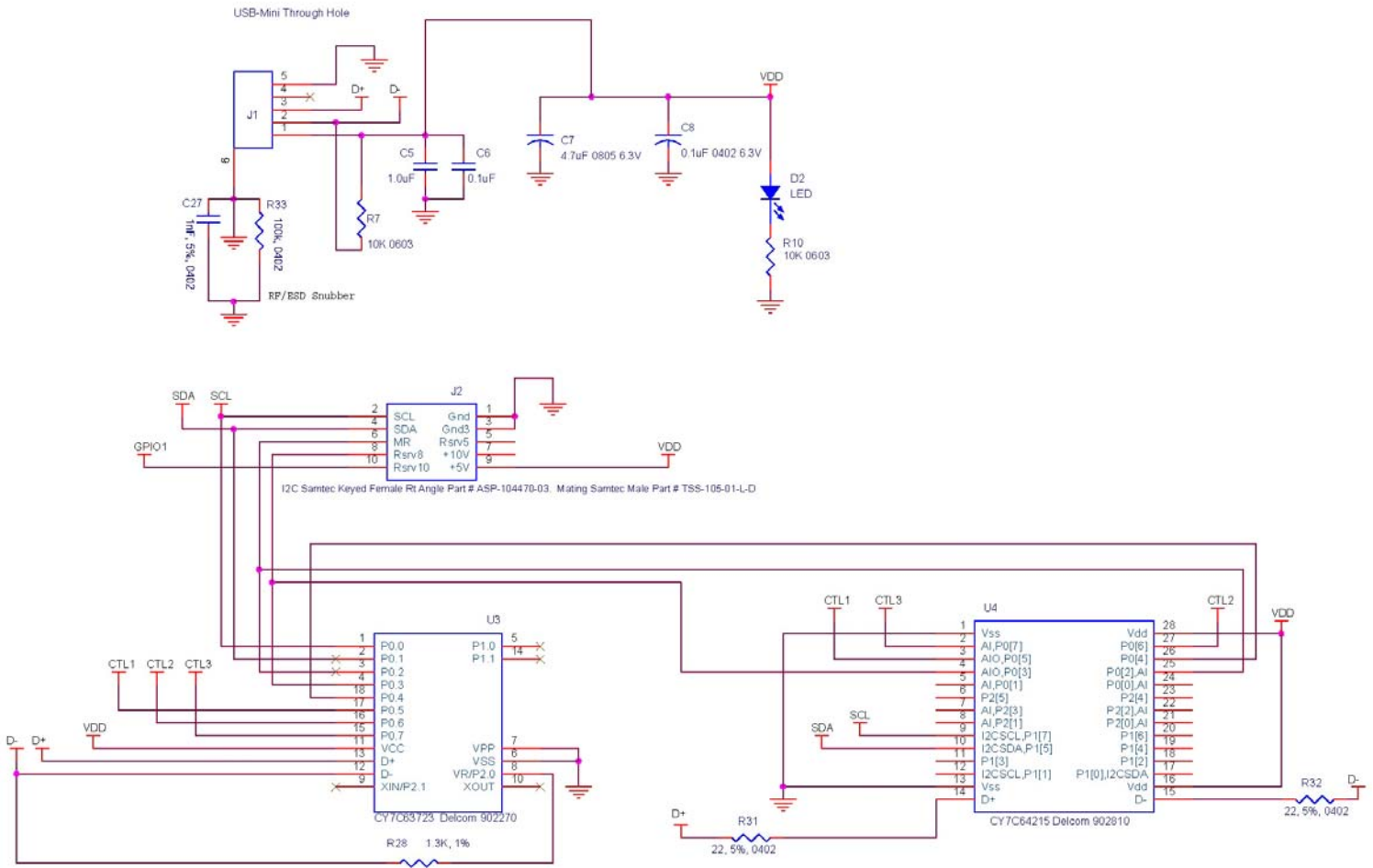


Figure 4 – Example Windows GUI Programmer displaying the “Interfacing Options Window”.



9xxxxx Series Delcom product has Windows/Linux compatible drivers.

Figure 5: SMX3203 USB2I²C Programmer Schematic.



Table 1: SMX3203 Programmer Board Parts List

Item	Description-	Vendor / Part Number	Qty	Ref. Des.
Resistors				
1	RES 10.0K OHM 1/10W 1% 0603 SMD	Rohm MCR03EZPFX1002	2	R7, R10
2	RES 1.3K OHM 1/10W 1% 0603 SMD	Vishay CRCW06031K30FKEA	1	R28
3	RES 22.0K OHM 5% 0603 SMD	Rohm MCR03EZPFX22R0	2	R31, R32
4	RES 100K OHM 1/16W 1% 0402 SMD	Rohm MCR01MZPF1003	1	R33
Capacitors				
5	1.0UF 25V CER X5R 0603	Taiyo Yuden TMK107BJ105KA-T	1	C5
6	0.1UF 50V 10% CER X7R 0603	Murata GRM188R71H104KA93D	1	C6
7	4.7uF 25V CER 10% X5R 0805 SMD	Murata GRM21BR81E475KA12L	1	C7
8	0.1UF 25V CER X5R 0402	Taiyo Yuden TMK105BJ104KV-F	1	C8
9	1000PF 50V CER 10% X7R 0603	Murata GRM188R71H102KA01D	1	C27
Semiconductors				
10	LED, Green, Through hole	Rohm SLA-370MT3F	1	D2
11	Microprocessor	DELCOM Engineering 802300_7	1	U3
12	Microprocessor	DELCOM Engineering 902810	1	U4
Hardware				
13	USB Micro-AB Through Hole	Molex 47589-0001	1	J1
14	CONN FEMALE 10POS DL .1" R/A TIN	Sullins PPTC052LJBN-RC	1	J2
15	Printed circuit board	Summit Microelectronics	1	SMX3203 USB2 ¹ C

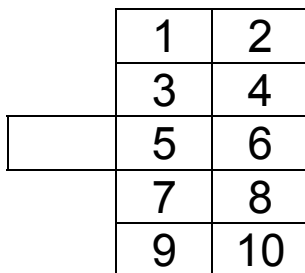
Comments & Precautions

Problems encountered reading/writing data:

If the Windows GUI is started first and then the USB programmer is connected onto the Eval board, it may read back incorrectly. First, press the "Refresh USB Connection" button shown in Figure 4. If that does not correct the problem, then disconnect the USB cable from the USB programmer and then reconnect it. Press the "Refresh USB Connection" button and try reading again.



Top View – SMX3203 Board connector



Pin	Name
1	Plugged
2	SCL
3	Ground
4	SDA
5	Reserved
6	MR#
7	10 Volts
8	Reserved
9	5 Volts
10	Reserved

Figure 14: SMX3203 Dongle Interface Cable Pinout.

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