PIC32MX270F256D

PIC32MX270F256D Bluetooth® Audio 44-pin to 100-pin TQFP Plug-In Module (PIM) Information Sheet

The PIC32MX270F256D Bluetooth Audio PIM is designed to demonstrate the capabilities of the PIC32MX1XX/2XX family of devices using the PIC32 Bluetooth Audio Development Kit board.

Note: This PIM can only be used with the PIC32 Bluetooth Audio Development Board. To get started with development, please visit: http://www.microchip.com/pic32tools and click the PIC32 Bluetooth Audio Development Board product link.

The PIC32MX1XX/2XX family of devices are high-performance 32-bit microcontrollers in low-pin count packages.

Table 1 shows the mapping between the development board functions and the device pins.

The MCP23008 (see Figure 3) is an I^2C bus expander, which was added to help maintain most of the functionality of the 100-pin device. The I^2C expander controls the on-board LEDs and charge management logic control lines. For flexibility, the I^2C expander has a changeable slave address.

TABLE 1: 44-PIN TO 100-PIN PINOUT

Device Pin #	PIC32MX270F256D Pin Name	PIM Pin #	Functional Description	I^2C Expander (MCP23008)
1	RPB9/SDA1/CTED4/PMD3/RB9	59, 67	I2C SDA	2
2	RPC6/PMA1/RC6	77	UART1_RX	—
3	RPC7/PMA0/RC7	78	UART_TX	—
4	RPC8/PMA5/RC8	49	UART2_RX	—
5	RPC9/CTED7/PMA6/RC9	41	SW4	—
6	VSS	15, 31, 36, 45, 65, 75	GND	3, 5, 9
7	VCAP	2, 16, 30, 37, 46, 62, 86	3.3V/VCAP	—
8	PGED2/RPB10/D+/CTED11/RB10	57	USB D+	—
9	PGEC2/RPB11/D-/RB11	56	USB D-	—
10	VBUS3V3		3.3V	20
11	AN11/RPB13/CTPLS/PMRD/RB13	11	SPI2_SDI	—
12	PGED/TMS/PMA10/RA10	27	PGD4	—
13	PGEC/TCK/CTED8/PMA7/RA7	26	PGC4	—
14	CVREFOUT/AN10/C3INB/RPB14/VBUSON/SCK1/CTED5/RB14	70	I2S1_BCLK	—
15	AN9/C3INA/RPB15/SCK2/CTED6/PMCS1/RB15	10	SCK2	—
16	AVSS	15, 31, 36, 45, 65, 75	GND	3, 5, 9
17	AVDD	2, 16, 30, 37, 46, 62, 86	3.3V	20
18	$\overline{\text{MCLR}}$	13	MCLR#	—
19	PGED3/VREF+/CVREF+/AN0/C3INC/RPA0/CTED1/PMD7/RA0	35	VOLUME	—
20	PGEC3/VREF-/CVREF-/AN1/RPA1/CTED2/PMD6/RA1	80	VBUS_SENSE	—
21	PGED1/AN2/C1IND/C2INB/C3IND/RPB0/PMD0/RB0	52	SS2	—
22	PGEC1/AN3/C1INC/C2INA/RPB1/CTED12/PMD1/RB1	79	UART1_CTS#	—
23	AN4/C1INB/C2IND/RPB2/SDA2/CTED13/PMD2/RB2	17	SW1	—
24	AN5/C1INA/C2INC/RTCC/RPB3/SCL2/PMWR/RB3	38	SW2	—
25	AN6/RPC0/RC0	1	STBY/RS#	—
26	AN7/RPC1/RC1	53	I2S1_MCLK	—

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TABLE 1: 44-PIN TO 100-PIN PINOUT (CONTINUED)

Device Pin #	PIC32MX270F256D Pin Name	PIM Pin #	Functional Description	I^2C Expander (MCP23008)
27	AN8/RPC2/PMA2/RC2	76	UART_RTS#	—
28	VDD	2, 16, 30, 37, 46, 62, 86	3.3V	20
29	VSS	15, 31, 36, 45, 65, 75	GND	3, 5, 9
30	OSC1/CLKI/RPA2/RA2	63	OSC1	—
31	OSC2/CLKO/RPA3/RA3	64	OSC2	—
32	TDO/RPA8/PMA8/RA8	83	A_DET#	—
33	SOSCI/RPB4/RB4	69	I2S1_LRCL	—
34	SOSCO/RPA4/T1CK/CTED9/RA4	12	SDO2	—
35	TDI/RPA9/PMA9/RA9	72	I2S1_SDO	—
36	AN12/RPC3/RC3	23	UART2_CTS#	—
37	RPC4/PMA4/RC4	50	UART2_TX	—
38	RPC5/PMA3/RC5	29	SW3	—
39	VSS	15, 31, 36, 45, 65, 75	GND	3, 5, 9
40	VDD	2, 16, 30, 37, 46, 62, 86	3.3V	20
41	RPB5/USBID/RB5	42	SW5	—
42	VBUS	54	3.3V/VBUS	—
43	RPB7/CTED3/PMD5/INT0/RB7	14	UART2_RTS#	—
44	RPB8/SCL1/CTED10/PMD4/RB8	58, 66	I2C SCL	1

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FIGURE 1: 100-PIN HEADER SCHEMATIC

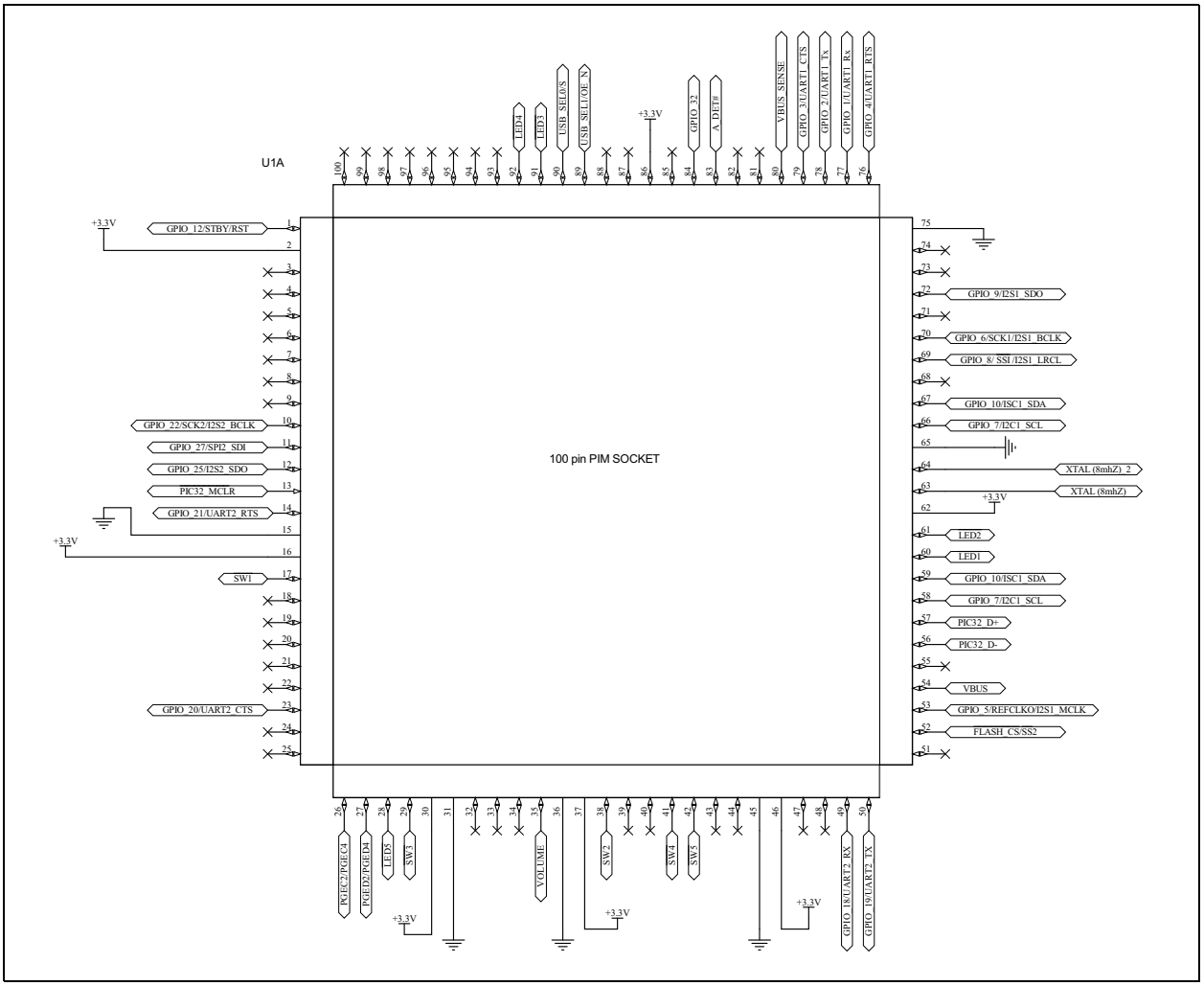
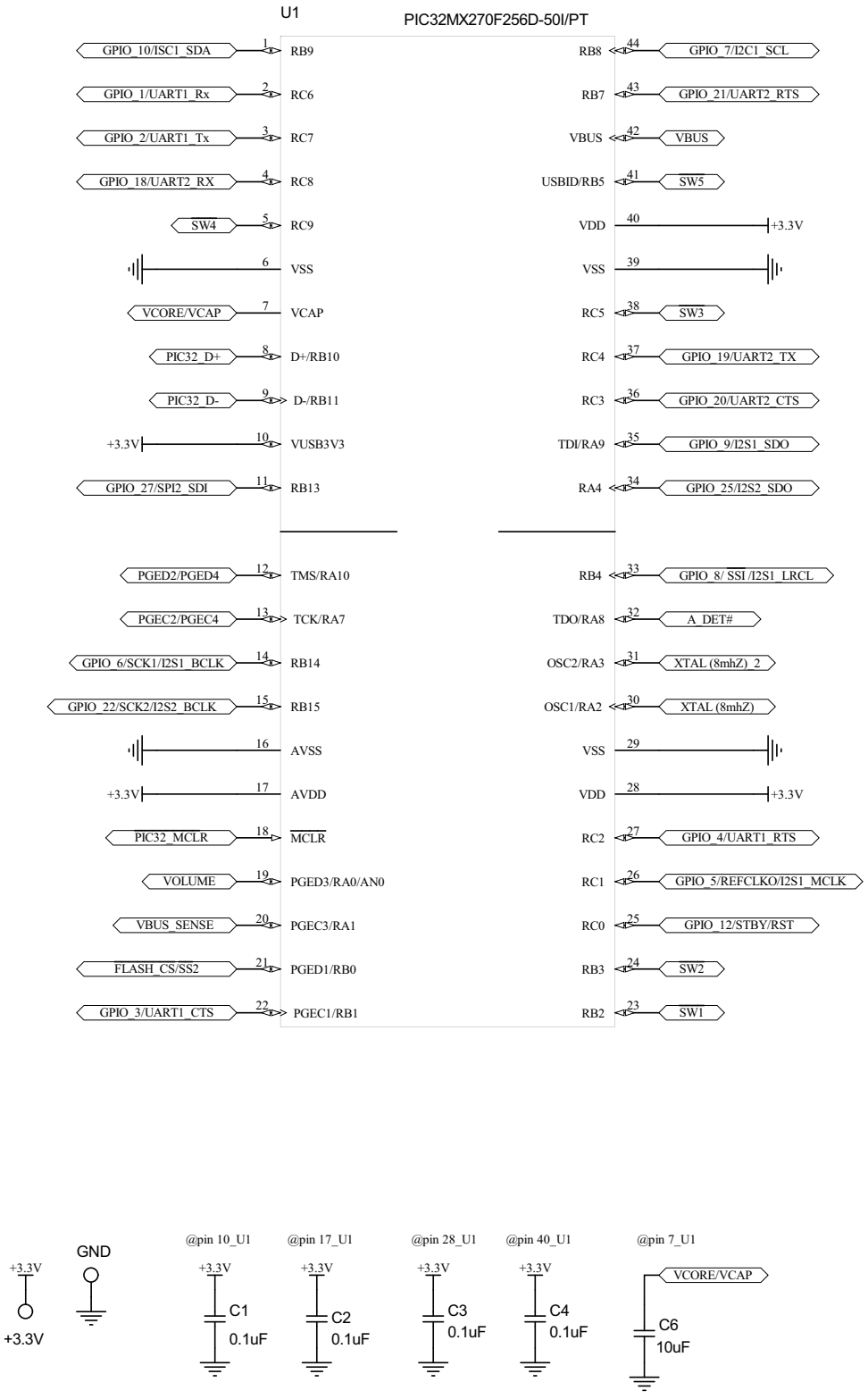
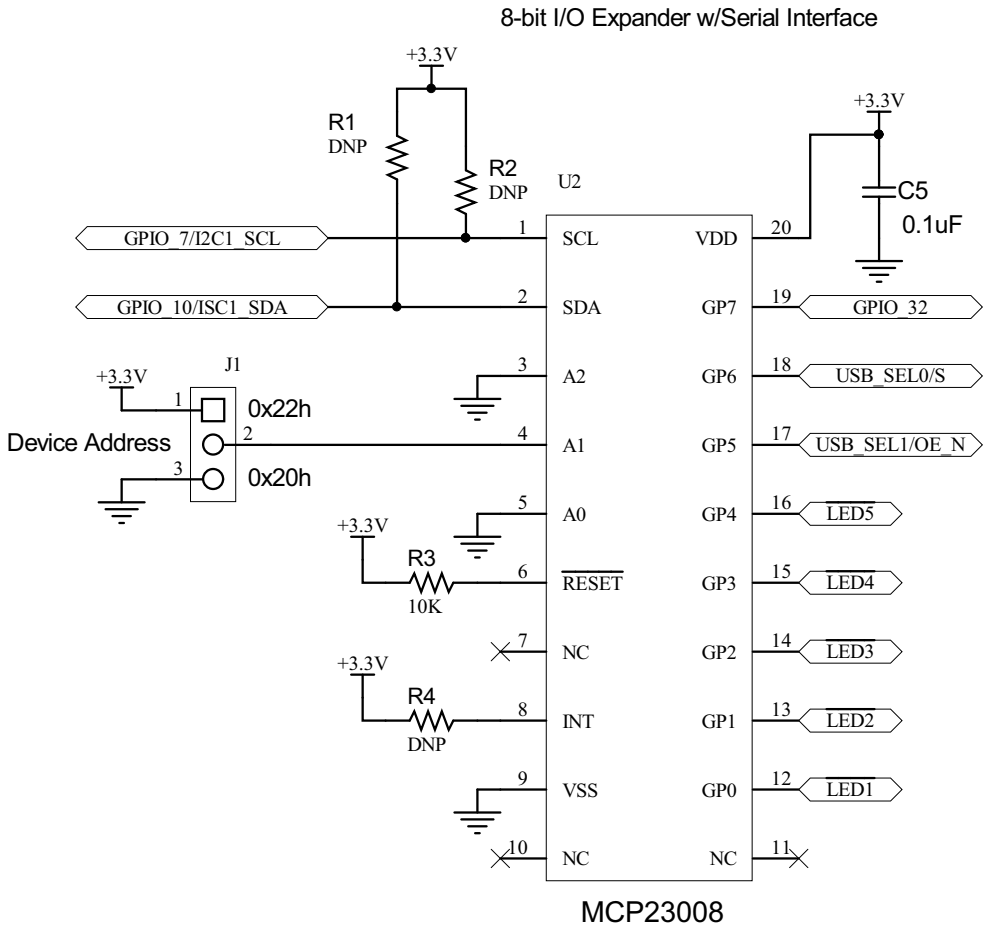


FIGURE 2: 44-PIN DEVICE SCHEMATIC



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FIGURE 3: MCP23008 EXPANDER



MCP23008 Pinout

Pin #	Pin Name	PIM Pin #	Functional Description
12	GP0	60	LED1
13	GP1	61	LED2
14	GP2	91	LED3
15	GP3	92	LED4
16	GP4	28	LED5
17	GP5	89	USB_SEL/OE#
18	GP6	90	USB_SEL/S
19	GP7	84	GPIO_32

REVISION HISTORY

Revision A (May 2014)

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