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PIC32MM0256GPM064 Plug-In Module (PIM) Information Sheet

Overview

The PIC32MM0256GPM064 Plug-In Module is designed to demonstrate the capabilities of the PIC32MM0256GPM064 family using the Explorer 16/32 Development Board. Refer to [Table 1](#) and [Table 2](#) for the mapping of the physical pins on the PIC32MM0256GPM064 to the 100 pins on the PIM connector. Not all predefined PIM signals found on the Explorer 16/32 Development Board are connected due to the limited number of I/O pins available.

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Table 1: PIC32MM0256GPM064 PIM Mapping⁽¹⁾

PIM Pin #	Device Pin #	PIC32MM0256GPM064 I/Os	Function	Explorer 16/32 Net Name
1	44	V _{BUS} via R5	USB Type-C™ V _{BUS} Sense Pin	P1_VBUS
2	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
3	6	RA13	LCD D5	P3_LCDD5
4	59	RA14	LCD D6	P4_LCDD6
5	58	RA15	LCD D7	P5_LCDD7
6	—	—	General Purpose I/O	P6
7	—	—	General Purpose I/O	P7
8	—	—	General Purpose I/O	P8
9	—	—	General Purpose I/O	P9
10	48	RB8/RP13	EEPROM (SCK) and mikroBUS™ A SCK	P10_SCKA
11	30	RA9/RP24	EEPROM (MISO) and mikroBUS A MISO	P11_MISOA
12	16	RB3/RP9	EEPROM (MOSI) and mikroBUS A MOSI	P12_MOSIA
13	9	MCLR	MCLR	P13_MCLR
14	15	RB2	mikroBUS A Chip Select	P14_CSA/P48
15	4, 18, 24, 38	V _{SS} + AV _{SS}	V _{SS}	VSS
16	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
17	34	RD0	LED D3	P17_LED3
18	55	RC9/RP18	mikroBUS B Interrupt	P18_INTB/P22
19	21	RC2/RP19	mikroBUS B Reset	P19_RSTB
20	52	RC8/AN14	10k Potentiometer	P20_POT
21	8	RA11/AN18	TC1047A Temperature Sensor	P21_TEMP
22	55	RC9/RP18	General Purpose I/O	P22/P18_INTB
23	22	RC11	mikroBUS B Chip Select	P23_CSB
24	7	RA1/AN17	mikroBUS B Analog	P24_ANB
25	19	RC0/AN12	mikroBUS A Analog or USB Overcurrent Sense	P25_ANA_USBOC
26	11	RA0/PGEC2	ICSP™ PGC	P26_PGC
27	12	RA1/PGED2	ICSP PGD	P27_PGD
28	—	—	General Purpose I/O	P28
29	—	—	General Purpose I/O	P29
30	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
31	—	—	V _{SS}	VSS
32	37	RC5/AN15	USB Type-C CC2 Sense Line	P32_CC2
33	20	RC1/AN13	USB Type-C CC1 Sense Line	P33_CC1
34	—	—	General Purpose I/O	P34
35	—	—	General Purpose I/O	P35
36	—	—	—	VSS
37	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
38	53	RD1	LED D4	P38_LED4
39	—	—	General Purpose I/O	P39
40	—	—	General Purpose I/O	P40
41	—	—	General Purpose I/O	P41
42	—	—	General Purpose I/O	P42
43	—	—	General Purpose I/O	P43
44	45	RC10	LCD RS	P44_LCDRS
45	4, 18, 24, 38	V _{SS} + AV _{SS}	V _{SS}	VSS
46	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
47	14	RB1/RP7	General Purpose I/O	P47/P67_INTA
48	15	RB2	General Purpose I/O	P48/P14_CSA
49	10	RA6/U1RX	MCP2221A and mikroBUS B RX	P49_RXB
50	40	RC12/U1TX	MCP2221A and mikroBUS B TX	P50_TXB

Note 1: Shaded cells denote "double duty" pins (where one microcontroller pin connects to two PIM pins).

Table 1: PIC32MM0256GPM064 PIM Mapping⁽¹⁾ (Continued)

PIM Pin #	Device Pin #	PIC32MM0256GPM064 I/Os	Function	Explorer 16/32 Net Name
51	50	RC6/RP23	mikroBUS A TX	P51_TXA
52	51	RC7/RP20	mikroBUS A RX	P52_RXA
53	27	RA8/SDO3	mikroBUS B MOSI	P53_MOSIB
54	1	RA7/RP21	mikroBUS B MISO	P54_MISOB
55	64	RA10/SCK3	mikroBUS B SCKB	P55_SCKB
56	46	RB7/SDA3	Shared I ² C SDA	P56_SDA
57	63	RB13/SCL3	Shared I ² C SCL	P57_SCL
58	32	RD2	LED D5	P58_LED5
59	33	RD3	LED D6	P59_LED6
60	31	RD4	LED D7	P60_LED7
61	—	—	LED D8	P61_LED8
62	5, 17, 23, 39, 57, 62	V _{DD} + AV _{DD} + V _{USB3V3}	V _{DD}	VDD_PIM
63	25	OSC1	Primary Oscillator In	P63_OSCI
64	26	OSC2	Primary Oscillator Out	P64_OSCO
65	4, 18, 24, 38	V _{SS} + AV _{SS}	V _{SS}	VSS
66	—	—	General Purpose I/O	P66
67	14	RB1/RP7	mikroBUS A Interrupt	P67_INTA/P47
68	—	—	General Purpose I/O	P68
69	—	—	General Purpose I/O	P69
70	—	—	General Purpose I/O	P70
71	—	—	General Purpose I/O	P71
72	3	RB15/PWMA	mikroBUS A PWM	P72_PWMA
73	28	SOSCI	Secondary Oscillator In	P73_SOSCI
74	29	SOSCO	Secondary Oscillator Out	P74_SOSCO
75	4, 18, 24, 38	V _{SS} + AV _{SS}	V _{SS}	VSS
76	3	RB15/PWMA	General Purpose I/O	P76/P72_PWMA
77	—	—	General Purpose I/O	P77
78	13	RB0/RP6	mikroBUS B PWM	P78_PWM B/P88
79	42	RC15	EEPROM Chip Select	P79_EECS
80	36	RC4	Switch S4	P80_S4
81	54	RA5	LCD E	P81_LCDE
82	—	—	LCD R/W	P82_LCDRW
83	49	RB9	Switch S3	P83_S3
84	35	RC3	Switch S6	P84_S6
85	56	VCAP	V _{CAP} , 10 μF Capacitor	P85_VDDCORE
86	—	—	ENVREG	P86_ENVREG
87	43	RB5	General Purpose I/O	P87/P95_RSTA
88	13	RB0/RP6	General Purpose I/O	P88/P78_PWM B
89	60	D-	USB D- to Type-C/A Connectors	P89_USBDN
90	61	D+	USB D+ to Type-C/A Connectors	P90_USBDP
91	2	RB14/V _{BUSON}	LED D9	P91_LED9/P96_VBUSON
92	47	RC13	LED D10, Switch S5	P92_S5_LED10
93	—	—	LCD D0	P93_LCDD0
94	—	—	LCD D1	P94_LCDD1
95	43	RB5	mikroBUS A Reset Pin	P95_RSTA/P87
96	2	RB14/V _{BUSON}	V _{BUS} Output Enable for USB Type-C Conn	P96_VBUSON/P91_LED9
97	—	—	General Purpose I/O	P97
98	—	—	LCD D2	P98_LCDD2
99	—	—	LCD D3	P99_LCDD3
100	41	RC14	LCD D4	P100_LCDD4

Note 1: Shaded cells denote "double duty" pins (where one microcontroller pin connects to two PIM pins).

Table 2: PIC32MM0256GPM064 PIC® MCU Mapping⁽¹⁾

Device Pin #	PIM Pin #	PIC32MM0256GPM064 I/Os	Function	Explorer 16/32 Net Name
1	54	RA7/RP21	mikroBUS™ B MISO	P54_MISOB
2	91	RB14/VBUSON	LED D9	P91_LED9
2	96	RB14/VBUSON	Vbus Output Enable for USB Type-C™ Conn	P96_VBUSON
3	72	RB15/PWMA	mikroBUS A PWM	P72_PWMA
3	76	RB15/PWMA	General Purpose I/O	P76
4	15, 36, 45, 65, 75	AVss	AVss	Vss
5	2, 16, 30, 37, 46, 62	AVDD	VDD	VDD_PIM
6	3	RA13	LCD D5	P3_LCDDD5
7	24	RA1/AN17	mikroBUS B Analog	P24_ANB
8	21	RA11/AN18	TC1047A Temperature Sensor	P21_TEMP
9	13	MCLR	MCLR	P13_MCLR
10	49	RA6/U1RX	MCP2221A and mikroBUS B RX	P49_RXB
11	26	RA0/PGEC2	ICSP™ PGC	P26_PGC
12	27	RA1/PGED2	ICSP PGD	P27_PGD
13	78	RB0/RP6	mikroBUS B PWM	P78_PWMB
13	88	RB0/RP6	General Purpose I/O	P88
14	47	RB1/RP7	General Purpose I/O	P47
14	67	RB1/RP7	mikroBUS A Interrupt	P67_INTA
15	14	RB2	mikroBUS A Chip Select	P14_CSA
15	48	RB2	General Purpose I/O	P48
16	12	RB3/RP9	EEPROM (MOSI) and mikroBUS A MOSI	P12_MOSIA
17	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
18	15, 36, 45, 65, 75	Vss	Vss	Vss
19	25	RC0/AN12	mikroBUS A Analog or USB Overcurrent Sense	P25_ANA_USBOC
20	33	RC1/AN13	USB Type-C CC1 Sense Line	P33_CC1
21	19	RC2/RP19	mikroBUS B Reset	P19_RSTB
22	23	RC11	mikroBUS B Chip Select	P23_CSB
23	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
24	15, 36, 45, 65, 75	Vss	Vss	Vss
25	63	OSC1	Primary Oscillator In	P63_OSCI
26	64	OSC2	Primary Oscillator Out	P64_OSCO
27	53	RA8/SDO3	mikroBUS B MOSI	P53_MOSIB
28	73	SOSCI	SOSC In	P73_SOSCI
29	74	SOSCO	SOSC Out	P74_SOSCO
30	11	RA9/RP24	EEPROM (MSDI) and mikroBUS A MISO	P11_MISOA
31	60	RD4	LED D7	P60_LED7
32	58	RD2	LED D5	P58_LED5
33	59	RD3	LED D6	P59_LED6
34	17	RD0	LED D3	P17_LED3
35	84	RC3	Switch S6	P84_S6
36	80	RC4	Switch S4	P80_S4
37	32	RC5/AN15	USB Type-C CC2 Sense Line	P32_CC2
38	15, 36, 45, 65, 75	Vss	Vss	Vss
39	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
40	50	RC12/U1TX	MCP2221A and mikroBUS B TX	P50_TXB
41	100	RC14	LCD D4	P100_LCDDD4
42	79	RC15	EEPROM Chip Select	P79_EECS
43	87	RB5	General Purpose I/O	P87
43	95	RB5	mikroBUS A Reset Pin	P95_RSTA

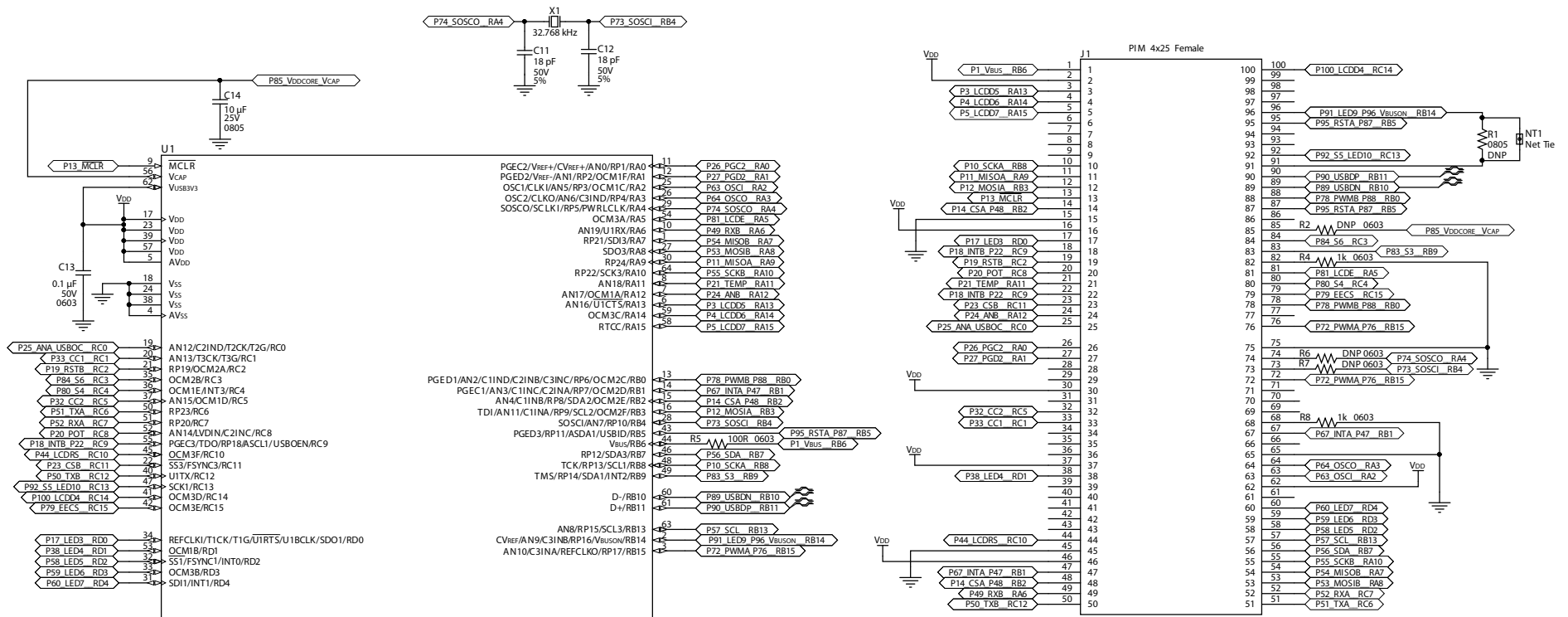
Note 1: Shaded cells denote "double duty" pins (where one microcontroller pin connects to two PIM pins).

Table 2: PIC32MM0256GPM064 PIC® MCU Mapping⁽¹⁾ (Continued)

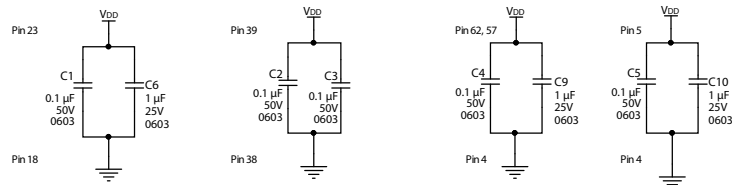
Device Pin #	PIM Pin #	PIC32MM0256GPM064 I/Os	Function	Explorer 16/32 Net Name
44	1	Vbus via R5	USB Type-C™ Vbus Sense Pin	P1_VBUS
45	44	RC10	LCD RS	P44_LCDRS
46	56	RB7/SDA3	Shared I²C SDA	P56_SDA
47	92	RC13	LED D10, Switch S5	P92_S5_LED10
48	10	RB8/RP13	EEPROM (SCK) and mikroBUS A SCK	P10_SCKA
49	83	RB9	Switch S3	P83_S3
50	51	RC6/RP23	mikroBUS A TX	P51_TXA
51	52	RC7/RP20	mikroBUS A RX	P52_RXA
52	20	RC8/AN14	10k Potentiometer	P20_POT
53	38	RD1	LED D4	P38_LED4
54	81	RA5	LCD E	P81_LCDE
55	18	RC9/RP18	mikroBUS B Interrupt	P18_INTB
55	22	RC9/RP18	General Purpose I/O	P22
56	85	VCAP	VCAP, 10 µF Capacitor	P85_VDDCORE
57	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
58	5	RA15	LCD D7	P5_LCDDD7
59	4	RA14	LCD D6	P4_LCDDD6
60	89	D-	USB D- to Type-C/A Connectors	P89_USBDN
61	90	D+	USB D+ to Type-C/A Connectors	P90_USBDP
62	2, 16, 30, 37, 46, 62	VUSB3V3	USB Transceiver Power Input	VDD_PIM
63	57	RB13/SCL3	Shared I²C SCL	P57_SCL
64	55	RA10/SCK3	mikroBUS B SCKB	P55_SCKB
—	6	—	General Purpose I/O	P6
—	7	—	General Purpose I/O	P7
—	8	—	General Purpose I/O	P8
—	9	—	General Purpose I/O	P9
—	28	—	General Purpose I/O	P28
—	29	—	General Purpose I/O	P29
—	34	—	General Purpose I/O	P34
—	35	—	General Purpose I/O	P35
—	39	—	General Purpose I/O	P39
—	40	—	General Purpose I/O	P40
—	41	—	General Purpose I/O	P41
—	42	—	General Purpose I/O	P42
—	43	—	General Purpose I/O	P43
—	61	—	LED D8	P61_LED8
—	66	—	General Purpose I/O	P66
—	68	—	General Purpose I/O	P68
—	69	—	General Purpose I/O	P69
—	70	—	General Purpose I/O	P70
—	71	—	General Purpose I/O	P71
—	77	—	General Purpose I/O	P77
—	82	—	LCD R/W	P82_LCDRW
—	86	—	VDD	P86_ENVREG
—	93	—	LCD D0	P93_LCDDD0
—	94	—	LCD D1	P94_LCDDD1
—	97	—	General Purpose I/O	P97
—	98	—	LCD D2	P98_LCDDD2
—	99	—	LCD D3	P99_LCDDD3

Note 1: Shaded cells denote "double duty" pins (where one microcontroller pin connects to two PIM pins).

Schematic Revision 1.0



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