

dsPIC33CK64MC105 General Purpose Plug-In Module (PIM) Information Sheet

Overview

The dsPIC33CK64MC105 General Purpose Plug-In Module (MA330052) is designed to demonstrate the capabilities of the dsPIC33CK64MC105 family using the Explorer 16/32 Development Board. Refer to [Table 1](#) and [Table 2](#) for the mapping of the physical pins on the dsPIC33CK64MC105 to the 100-pin PIM connector.

Not all predefined PIM signals found on the Explorer 16/32 are connected due to the limited number of I/O pins available.

Americas

Atlanta - 678-957-9614
Austin - 512-257-3370
Boston - 774-760-0087
Chicago - 630-285-0071
Dallas - 972-818-7423
Detroit - 248-848-4000
Houston - 281-894-5983
Indianapolis - 317-773-8323
Los Angeles - 949-462-9523
New York - 631-435-6000
Phoenix - 480-792-7200
Raleigh - 919-844-7510
San Jose - 408-735-9110
Toronto - 905-695-1980

Europe

Austria - Wels - 43-7242-2244-39
Denmark - Copenhagen - 45-4485-5910
Finland - Espoo - 358-9-4520-820
France - Paris - 33-1-69-53-63-20
Germany - Garching - 49-8931-9700
Germany - Haan - 49-2129-3766400
Germany - Hellbronn - 49-7131-72400
Germany - Karlsruhe - 49-721-625370
Germany - Munich - 49-89-627-144-0
Germany - Rosenheim - 49-8031-354-560
Israel - Raanana - 972-9-744-7705
Italy - Milan - 39-0331-742611
Italy - Padova - 39-049-7625286
Netherlands - Drunen - 31-416-690399
Norway - Trondheim - 47-7288-4388
Poland - Warsaw - 48-22-3325737
Romania - Bucharest - 40-21-407-87-50
Spain - Madrid - 34-91-708-08-90
Sweden - Gothenburg - 46-31-704-60-40
Sweden - Stockholm - 46-8-5090-4654
UK - Wokingham - 44-118-921-5800

Asia/Pacific

Australia - Sydney - 61-2-9868-6733
China - Beijing - 86-10-8569-7000
China - Chengdu - 86-28-8665-5511
China - Chongqing - 86-23-8980-9588
China - Dongguan - 86-769-8702-9880
China - Guangzhou - 86-20-8755-8029
China - Hangzhou - 86-571-8792-8115
China - Hong Kong SAR - 852-2943-5100
China - Nanjing - 86-25-8473-2460
China - Qingdao - 86-532-8502-7355
China - Shanghai - 86-21-3326-8000
China - Shenyang - 86-24-2334-2829
China - Shenzhen - 86-755-8864-2200
China - Suzhou - 86-186-6233-1526
China - Wuhan - 86-27-5980-5300
China - Xiamen - 86-592-2388138
China - Xian - 86-29-8833-7252
China - Zhuhai - 86-756-3210040
India - Bangalore - 91-80-3090-4444
India - New Delhi - 91-11-4160-8631
India - Pune - 91-20-4121-0141
Japan - Osaka - 81-6-6152-7160
Japan - Tokyo - 81-3-6880-3770
Korea - Daegu - 82-53-744-4301
Korea - Seoul - 82-2-554-7200
Malaysia - Kuala Lumpur - 60-3-7651-7906
Malaysia - Penang - 60-4-227-8870
Philippines - Manila - 63-2-634-9065
Singapore - 65-6334-8870
Taiwan - Hsin Chu - 886-3-577-8366
Taiwan - Kaohsiung - 886-7-213-7830
Taiwan - Taipei - 886-2-2508-8600
Thailand - Bangkok - 66-2-694-1351
Vietnam - Ho Chi Minh - 84-28-5448-2100

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DS50002916C

Table 1: dsPIC33CK64MC105 PIM Mapping

PIM Pin #	Device Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
1	—	—	Not Connected	—
2	13, 18, 32, 43	VDD + AVDD	VDD	VDD
3	41	RP59/RC11	LCD D5 and LED4	P3_LCD5, P38_LED4, RC11
4	3	RP60/RC12	LCD D6 and LED5	P4_LCD6, P58_LED5, RC12
5	4	RP61/RC13	LCD D7 and LED6	P5_LCD7, P59_LED6, RC13
3	—	—	Not Connected	—
7	—	—	Not Connected	—
3	—	—	Not Connected	—
9	—	—	Not Connected	—
10	47	TD/IRP44/PWM2/HRB12	mikroBUS™ A SPI SCK	P10_SCKA, RB12
11	46	TK/IRP43/PWM3/HRB11	mikroBUS A SPI MISO	P11_MISOA, RB11
12	45	TM/IRP42/PWM3/HRB10	mikroBUS A SPI MOSI	P12_MOSIA, RB10
13	5	MCLR	MCLR	P13_MCLR
14	48	RP45/PWM2/IRB13	mikroBUS A Chip Select	P14_CSA, RB13
15	14, 19, 31, 42	VSS + AVSS	VSS	VSS
16	13, 18, 32, 43	VDD + AVDD	VDD	VDD
17	40	RP58/RC10	LCD D4 and LED3	P17_LCD4, P100_LED3, RC10
18	23	ISRC3/RP74/RD10	mikroBUS B Interrupt	P18_INTB, RD10
19	44	RP65/PWM4/HRD1	mikroBUS B Reset	P19_RSTB, RD1
20	10	OA1IN+/AN9/RA2	Potentiometer	P20_POT_RA2
21	15	OA3IN+/AN13/CMP1B/ISRC0/RP49/RC1	TC1047A Temp. Sensor	P21_TEMP_RC1
22	—	—	Not Connected	—
23	33	PGD3/RP37/RB5	mikroBUS B Chip Select	P23_CSB, RB5
24	8	OA1OUT+/AND/CMP1A/IBIAS0/RA0	mikroBUS B Analog	P24_ANB, RA0
25	16	OA3IN+/AN14/ISRC1/IRP50/RC2	General Purpose I/O	P25_ANA, USB0C, RC2
26	27	PGC2/OA2IN+/RP36/RB4	ICSP™ Prog/Debug PGC2	P26_PGC_RB4
27	26	PGD2/OA2IN+/AN8/RP35/RB3	ICSP Prog/Debug PGD2	P27_PGD_RB3
28	—	—	Not Connected	—
29	—	—	Not Connected	—
30	13, 18, 32, 43	VDD + AVDD	VDD	VDD
31	14, 19, 31, 42	VSS + AVSS	VSS	VSS
32	—	—	Not Connected	—
33	—	—	Not Connected	—
34	—	—	Not Connected	—
35	—	—	Not Connected	—
36	14, 19, 31, 42	VSS + AVSS	VSS	VSS
37	13, 18, 32, 43	VDD + AVDD	VDD	VDD
38	41	RP59/RC11	LCD D5 and LED4	P3_LCD5, P38_LED4, RC11
39	—	—	Not Connected	—
40	—	—	Not Connected	—
41	—	—	Not Connected	—
42	—	—	Not Connected	—
43	—	—	Not Connected	—
44	39	RP53/RC5	LCD Register Select, LED7	P44_LCDRS, P60_LED7, RC5
45	14, 19, 31, 42	VSS + AVSS	VSS	VSS
46	13, 18, 32, 43	VDD + AVDD	VDD	VDD
47	—	—	Not Connected	—
48	—	—	Not Connected	—
49	35	TD/AN2/IRP39/RB7	MCP2221A/mikroBUS B RX	P49_RXB, RB7
50	20	AN15/IBIAS2/RP51/RC3	MCP2221A/mikroBUS B TX	P50_TXB, RC3

Table 1: dsPIC33CK64MC105 PIM Mapping (Continued)

PIM Pin #	Device Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
51	7	AN12/IRP48/RC0	mikroBUS™ A TX	P51_TXA, RC0
52	17	IBIAS1/IRP54/RC6	mikroBUS A RX	P52_RXA, RC6
53	30	RP72/ISDO2/PO19/RD8	mikroBUS™ B SPI MOSI	P53_MOSIB, RD8
54	29	RP57/ASCL1/ISDI2/RC9	mikroBUS B SPI MISO	P54_MISOB, RC9
55	28	RP56/ASDA1/ISCK2/RC8	mikroBUS B SPI SCK	P55_SCKB, RC8
56	37	PGC1/AN11/IRP41/SDA1/IRB9	mikroBUS Shared I ² C SDA	P56_SDA, RB9
57	36	PGD1/AN10/IRP40/SCL1/IRB8	mikroBUS Shared I ² C SCL	P57_SCL, RB8
58	3	RP60/RC12	LCD D6 and LED5	P4_LCD6, P58_LED5, RC12
59	4	RP61/RC13	LCD D7 and LED6	P5_LCD7, P59_LED6, RC13
60	39	RP63/RC5	LCD Register Select, LED7	P44_LCDRS, P60_LED7, RC5
61	38	RP62/RC4	LED8	P61_LED8, RC4
62	13, 18, 32, 43	VDD + AVDD	VDD	VDD
63	21	OSCI/CLKI/AN5/RP32/RB0	Primary Oscillator In	P63_OSCI, RB0
64	22	OSCO/CLKO/AN6/RP33/RB1	Primary Oscillator Out	P64_OSOCO, RB1
65	14, 19, 31, 42	VSS + AVSS	VSS	VSS
66	—	—	Not Connected	—
67	25	OA2OUT/AN1/AN7/CMP1D/RP34/INT0/RB2	mikroBUS A Interrupt	P67_INTA, RB2
68	—	—	Not Connected	—
69	—	—	Not Connected	—
70	—	—	Not Connected	—
71	—	—	Not Connected	—
72	1	RP46/PWM1/HRB14	mikroBUS A PWM	P72_PWMMA, RB14
73	—	—	Not Connected	—
74	—	—	Not Connected	—
75	14, 19, 31, 42	VSS + AVSS	VSS	VSS
76	—	—	Not Connected	—
77	—	—	Not Connected	—
78	2	RP47/PWM1L/IRB15	mikroBUS B PWM	P78_PWMMB, RB15
79	6	ANND/IRP77/RD13	EEPROM Chip Select	P79_EECS, RD13
80	11	DACOUT/AN3/CMP1C/RA3	Button 4	P80_S4, RA3
81	24	ISRC2/RP55/RC7	LCD Enable	P81_LCODE, RC7
82	—	—	1 kOhm Resistor to VSS	P82_LCD_RWW
83	9	OA1IN-/RA1	Button 3	P83_SW3, RA1
84	12	OA3OUT/AN4/IBIAS3/RA4	Button 6	P84_S6, RA4
85	—	—	Not Connected	—
86	—	—	Not Connected	—
87	—	—	Not Connected	—
88	—	—	Not Connected	—
89	—	—	Not Connected	—
90	—	—	Not Connected	—
91	—	—	Not Connected	—
92	—	—	Not Connected	—
93	—	—	Not Connected	—
94	—	—	Not Connected	—
95	34	PGC3/RP38/RB6	RSTA	P95_RSTA, RB6
96	—	—	Not Connected	—
97	—	—	Not Connected	—
98	—	—	Not Connected	—
99	—	—	Not Connected	—
100	40	RP58/RC10	LCD D4 and LED3	P17_LCD4, P100_LED3, RC10

Table 2: dsPIC33CK64MC105 dsPIC® DSC Mapping

Device Pin #	P1M Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
1	72	RP46/PWM1H/RB14	mikroBUS™ A PWM	P72_PWMA_RB14
2	78	RP47/PWM1L/RB15	mikroBUS B PWM	P78_PWMB_RB15
3	4	RP60/RC12	LCD D6, LED5	P4_LCD6, P58_LED5_RC12
4	5	RP61/RC13	LCD D7, LED6	P5_LCD7, P59_LED6_RC13
5	13	MCLR	MCLR	P13_MCLR
6	79	ANND0/RP77/RD13	EEPROM Chip Select	P79_EECS_RD13
7	51	AN12/RP48/RC0	mikroBUS A TX	P51_TXA_RC0
8	24	OA1OUT/AN0/CMP1A/BIAS0/RA0	mikroBUS B Analog	P24_ANB_RA0
9	83	OA1IN/RA1	Button 3	P83_SW3_RA1
10	20	OA1IN+/AN9/RA2	Potentiometer	P20_POT_RA2
11	80	DACOUT/AN3/CMP1C/RA3	Button 4	P80_S4_RA3
12	84	OA3OUT/AN4/BIAS3/RA4	Button 6	P84_S6_RA4
13	2, 16, 30, 37, 46, 62	Vdd + AVdd	Vdd	Vdd
14	15, 31, 36, 45, 65, 75	Vss + AVss	Vss	Vss
15	21	OA3IN-/AN13/CMP1B/ISRC0/RP49/RC1	TC1047A Temp. Sensor	P21_TEMP_RC1
16	25	OA3IN+/AN14/ISRC1/RP50/RC2	General Purpose I/O	P25_ANA_USBOC_RC2
17	52	IBIAS1/RP54/RC6	mikroBUS A RX	P52_RXA_RC6
18	2, 16, 30, 37, 46, 62	Vdd + AVdd	Vdd	Vdd
19	15, 31, 36, 45, 65, 75	Vss + AVss	Vss	Vss
20	50	AN15/BIAS2/RP51/RC3	MCP2221A, mikroBUS B TX	P50_TXB_RC3
21	63	OSCI/CLKI/AN5/RP32/RB0	Primary Oscillator In	P63_OSCI_RB0
22	64	OSCO/CLKO/AN6/RP33/RB1	Primary Oscillator Out	P64_OSCO_RB1
23	18	ISRC3/RP74/RD10	mikroBUS B Interrupt	P18_INTB_RD10
24	81	ISRC2/RP55/RC7	LCD Enable	P81_LCD_E_RC7

Table 2: dsPIC33CK64MC105 dsPIC® DSC Mapping (Continued)

Device Pin #	P1M Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
25	67	OA2OUT/AN1/AN7/CMP1D/RP34/INT0/RB2	mikroBUS™ A Interrupt	P67_INTA_RB2
26	27	PGD2/OA2IN-/AN8/RP35/RB3	ICSP™ Prog/Debug PGD2	P27_PGD_RB3
27	26	PGC2/OA2IN+/RP36/RB4	ICSP Prog/Debug PGC2	P26_PGC_RB4
28	55	RP56/ASDA1/SCK2/RC8	mikroBUS B SPI SCK	P55_SCKB_RC8
29	54	RP57/ASCL1/SDI2/RC9	mikroBUS B SPI MISO	P54_MISOB_RC9
30	53	RP72/SDO2/PC19/RD8	mikroBUS B SPI MOSI	P53_MOSIB_RD8
31	15, 31, 36, 45, 65, 75	Vss + AVss	Vss	Vss
32	2, 16, 30, 37, 46, 62	Vdd + AVdd	Vdd	Vdd
33	23	PGD3/RP37/RB5	mikroBUS B Chip Select	P23_CSB_RB5
34	95	PGC3/RP38/RB6	RSTA	P95_RSTA_RB6
35	49	TDO/AN2/RP39/RB7	MCP2221A/mikroBUS B RX	P49_RXB_RB7
36	57	PGD1/AN10/RP40/SCL1/RB8	mikroBUS Shared I ² C SCL	P57_SCL_RB8
37	56	PGC1/AN11/RP41/SDA1/RB9	mikroBUS Shared I ² C SDA	P56_SDA_RB9
38	61	RP52/RC4	LED8	P61_LED8_RC4
39	44	RP53/RC5	LCD Register Select, LED7	P44_LCDRS, P60_LED7_RC5
40	17	RP58/RC10	LCD D4, LED3	P17_LCD4, P100_LED3_RC10
41	3	RP59/RC11	LCD D5, LED4	P3_LCD5, P38_LED4_RC11
42	15, 31, 36, 45, 65, 75	Vss + AVss	Vss	Vss
43	2, 16, 30, 37, 46, 62	Vdd + AVdd	Vdd	Vdd
44	19	RP65/PWM4H/RD1	mikroBUS B Reset	P19_RSTB_RD1
45	12	TMS/RP42/PWM3H/RB10	mikroBUS A SPI MOSI	P12_MOSIA_RB10
46	11	TCK/RP43/PWM3L/RB11	mikroBUS A SPI MISO	P11_MISOA_RB11
47	10	TDI/RP44/PWM2L/RB12	mikroBUS A SPI SCK	P10_SCKA_RB12
48	14	RP45/PWM2L/RB13	mikroBUS A Chip Select	P14_CSA_RB13

dsPIC33CK64MC105 General Purpose Plug-In Module (PIM) Information Sheet

Schematic Revision 5.0

EXP16/32 PIM dsPIC33CK64MC105 General Purpose PIM TQFP-48

