

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

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 - Heilbronn - 49-7131-72400
Germany - Karlsruhe - 49-721-625370
Germany - Munich - 49-89-627-144-0
Germany - Rosenheim - 49-8031-354-560
Israel - Ra'anana - 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 - Gothenberg - 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

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.

2/28/20



Microchip Technology Inc. • 2355 West Chandler Blvd. • Chandler, AZ 85224-6199

www.microchip.com

The Microchip name and logo, the Microchip logo and dsPIC are registered trademarks of Microchip Technology Inc. in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies. © 2020, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 8/20

DS50002916B

Table 1: dsPIC33CK64MC105 PIM Mapping

PIM Pin #	Device Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
1	—	—	Not Connected	—
2	13, 18, 31, 43	VDD	VDD	—
3	15	OA3IN-/AN13/CMP1B/ISRC0/RP49/RC1	LCD D5 and LED4	P3_LCDD5, P38_LED4
4	16	OA3IN+/AN14/ISRC1/RP50/RC2	LCD D6 and LED5	P4_LCDD6, P58_LED5
5	20	AN15/IBIAS2/RP51/RC3	LCD D7 and LED6	P5_LCDD7, P59_LED6
6	—	—	Not Connected	—
7	—	—	Not Connected	—
8	—	—	Not Connected	—
9	—	—	Not Connected	—
10	45	TMS/RP42/PWM3H/RB10	mikroBUS™ A SPI SCK	P10_SCKA
11	46	TCK/RP43/PWM3L/RB11	mikroBUS A SPI MISO	P11_MISOA
12	47	TDI/RP44/PWM2H/RB12	mikroBUS A SPI MOSI	P12_MOSIA
13	5	MCLR	MCLR	P13_MCLR
14	1	RP46/PWM1H/RB14	mikroBUS A Chip Select	P14_CSA
15	14, 19, 32, 42	VSS + AVSS	VSS	VSS
16	13, 18, 31, 43	VDD + AVDD	VDD	VDD
17	7	AN12/RP48/RC0	LCD D4 and LED3	P100_LCDD4, P17_LED3
18	38	RP52/RC4	mikroBUS B Interrupt	P18_INTB
19	17	IBIAS1/RP54/RC6	mikroBUS B Reset	P19_RSTB
20	12	OA3OUT/AN4/IBIAS3/RA4	Potentiometer	P20_POT
21	24	ISRC2/RP55/RC7	TC1047A Temp. Sensor	P21_TEMP
22	—	—	Not Connected	—
23	35	TDO/AN2/RP39/RB7	mikroBUS B Chip Select	P23_CSB
24	25	OA2OUT/AN1/AN7/CMP1D/RP34/INT0/RB2	mikroBUS B Analog	P24_ANB
25	11	DACOUT/AN3/CMP1C/RA3	General Purpose I/O	P25_ANA_USBOC
26	34	PGC3/RP38/RB6	ICSP™ Prog/Debug PGC3	P26_PGC3
27	33	PGD3/RP37/RB5	ICSP Prog/Debug PGD3	P27_PGD3
28	—	—	Not Connected	—
29	—	—	Not Connected	—
30	13, 18, 31, 43	VDD + AVDD	VDD	VDD
31	14, 19, 32, 42	VSS + AVSS	VSS	VSS
32	—	—	Not Connected	—
33	—	—	Not Connected	—
34	—	—	Not Connected	—
35	—	—	Not Connected	—
36	14, 19, 32, 42	VSS + AVSS	VSS	VSS
37	13, 18, 31, 43	VDD + AVDD	VDD	VDD
38	15	OA3IN-/AN13/CMP1B/ISRC0/RP49/RC1	LCD D5 and LED4	P3_LCDD5, P38_LED4
39	—	—	Not Connected	—
40	—	—	Not Connected	—
41	—	—	Not Connected	—
42	—	—	Not Connected	—
43	—	—	Not Connected	—
44	8	OA1OUT/AN0/CMP1A/IBIAS0/RA0	LCD Register Select	P44_LCDRS
45	14, 19, 32, 42	VSS + AVSS	VSS	VSS
46	13, 18, 31, 43	VDD + AVDD	VDD	VDD
47	—	—	Not Connected	—
48	—	—	Not Connected	—
49	40	RP58/RC10	MCP2221A/mikroBUS B RX	P49_RXB
50	41	RP59/RC11	MCP2221A/mikroBUS B TX	P50_TXB

Table 1: dsPIC33CK64MC105 PIM Mapping (Continued)

PIM Pin #	Device Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
51	4	RP61/RC13	mikroBUS™ A TX	P51_TXA
52	3	RP60/RC12	mikroBUS A RX	P52_RXA
53	30	RP72/SDO2/PCI19/RD8	mikroBUS™ B SPI MOSI	P53_MOSIB
54	29	RP57/ASCL1/SDI2/RC9	mikroBUS B SPI MISO	P54_MISOB
55	28	RP56/ASDA1/SCK2/RC8	mikroBUS B SPI SCK	P55_SCKB
56	37	PGC1/AN11/RP41/SDA1/RB9	mikroBUS Shared I ² C SDA	P56_SDA
57	36	PGD1/AN10/RP40/SCL1/RB8	mikroBUS Shared I ² C SCL	P57_SCL
58	16	OA3IN+/AN14/ISRC1/RP50/RC2	LCD D6 and LED5	P4_LCDD6, P58_LED5
59	20	AN15/IBIAS2/RP51/RC3	LCD D7 and LED6	P5_LCDD7, P59_LED6
60	—	—	Not Connected	—
61	—	—	Not Connected	—
62	13, 18, 31, 43	VDD + AVDD	VDD	VDD
63	21	OSCI/CLKI/AN5/RP32/RB0	Primary Oscillator In	P63_OSCI
64	22	OSCO/CLKO/AN6/RP33/RB1	Primary Oscillator Out	P64_OSCO
65	14, 19, 32, 42	VSS + AVSS	VSS	VSS
66	—	—	Not Connected	—
67	39	RP53/RC5	mikroBUS A Interrupt	P67_INTA
68	—	—	Not Connected	—
69	—	—	Not Connected	—
70	—	—	Not Connected	—
71	—	—	Not Connected	—
72	2	RP47/PWM1L/RB15	mikroBUS A PWM	P72_PWMA
73	—	—	Not Connected	—
74	—	—	Not Connected	—
75	14, 19, 32, 42	VSS + AVSS	VSS	VSS
76	—	—	Not Connected	—
77	—	—	Not Connected	—
78	48	RP45/PWM2L/RB13	mikroBUS B PWM	P78_PWMB
79	27	PGC2/OA2IN+/RP36/RB4	EEPROM Chip Select	P79_EECS
80	6	ANN0/RP77/RD13	Button 4	P80_S4
81	9	OA1IN-/RA1	LCD Enable	P81_LCDE
82	44	RP65/PWM4H/RD1	LCD Read/Write	P82_LCDRW
83	23	ISRC3/RP74/RD10	Button 3	P83_S3
84	26	PGD2/OA2IN-/AN8/RP35/RB3	Button 6	P84_S6
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	10	OA1IN+/AN9/RA2	RSTA	P95_RSTA
96	—	—	Not Connected	—
97	—	—	Not Connected	—
98	—	—	Not Connected	—
99	—	—	Not Connected	—
100	7	AN12/RP48/RC0	LCD D4 and LED3	P100_LCDD4, P17_LED3

Table 2: dsPIC33CK64MC105 dsPIC® DSC Mapping

Device Pin #	PIM Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
1	14	RP46/PWM1H/RB14	mikroBUS™ A Chip Select	P14_CSA
2	72	RP47/PWM1L/RB15	mikroBUS A PWM	P72_PWMA
3	52	RP60/RC12	mikroBUS A RX	P52_RXA
4	51	RP61/RC13	mikroBUS A TX	P51_TXA
5	13	MCLR	MCLR	P13_MCLR
6	80	ANNO/RP77/RD13	Button 4	P80_S4
7	100	AN12/RP48/RC0	LCD D4 and LED3	P100_LCDD4, P17_LED3
8	44	OA1OUT/AN0/CMP1A/IBIAS0/RA0	LCD Register Select	P44_LCDRS
9	81	OA1IN-/RA1	LCD Enable	P81_LCDE
10	95	OA1IN+/AN9/RA2	RSTA	P95_RSTA
11	25	DACOUT/AN3/CMP1C/RA3	General Purpose I/O	P25_ANA_USBOC
12	20	OA3OUT/AN4/IBIAS3/RA4	Potentiometer	P20_POT
13	2, 16, 30, 37, 46, 62	VDD + AVDD	VDD	VSS
14	15, 31, 36, 45, 65, 75	VSS + AVSS	VSS	VDD
15	3	OA3IN-/AN13/CMP1B/ISRC0/RP49/RC1	LCD D5 and LED4	P3_LCDD5, P38_LED4
16	4	OA3IN+/AN14/ISRC1/RP50/RC2	LCD D6 and LED5	P4_LCDD6, P58_LED5
17	19	IBIAS1/RP54/RC6	mikroBUS B Reset	P19_RSTB
18	2, 16, 30, 37, 46, 62	VDD + AVDD	VDD	VSS
19	15, 31, 36, 45, 65, 75	VSS + AVSS	VSS	VDD
20	5	AN15/IBIAS2/RP51/RC3	LCD D7 AND LED6	P5_LCDD7, P59_LED6
21	63	OSCI/CLKI/AN5/RP32/RB0	Primary Oscillator In	P63_OSCI
22	64	OSCO/CLKO/AN6/RP33/RB1	Primary Oscillator Out	P64_OSICO
23	83	ISRC3/RP74/RD10	Button 3	P83_S3
24	21	ISRC2/RP55/RC7	TC1047A Temp. Sensor	P21_TEMP

Table 2: dsPIC33CK64MC105 dsPIC® DSC Mapping (Continued)

Device Pin #	PIM Pin #	dsPIC33CK64MC105 I/Os	Function	Explorer 16/32 Net Name
25	24	OA2OUT/AN1/AN7/CMP1D/RP34/INT0/RB2	mikroBUS™ B Analog	P24_ANB
26	84	PGD2/OA2IN-/AN8/RP35/RB3	Button 6	P84_S6
27	79	PGC2/OA2IN+/RP36/RB4	EEPROM Chip Select	P79_EECS
28	55	RP56/ASDA1/SCK2/RC8	mikroBUS B SPI SCK	P55_SCKB
29	54	RP57/ASCL1/SDI2/RC9	mikroBUS B SPI MISO	P54_MISOB
30	53	RP72/SDO2/PCI19/RD8	mikroBUS B SPI MOSI	P53_MOSIB
31	2, 16, 30, 37, 46, 62	VDD + AVDD	VDD	VSS
32	15, 31, 36, 45, 65, 75	VSS + AVSS	VSS	VDD
33	27	PGD3/RP37/RB5	ICSP™ Prog/Debug PGD3	P27_PGD
34	26	PGC3/RP38/RB6	ICSP Prog/Debug PGC3	P26_PGC
35	23	TDO/AN2/RP39/RB7	mikroBUS B Chip Select	P23_CSB
36	57	PGD1/AN10/RP40/SCL1/RB8	mikroBUS Shared I2C SCL	P57_SCL
37	56	PGC1/AN11/RP41/SDA1/RB9	mikroBUS Shared I2C SDA	P56_SDA
38	18	RP52/RC4	mikroBUS B Interrupt	P18_INTB
39	67	RP53/RC5	mikroBUS A Interrupt	P67_INTA
40	49	RP58/RC10	MCP2221A/mikroBUS B RX	P49_RXB
41	50	RP59/RC11	MCP2221A/mikroBUS B TX	P50_TXB
42	15, 31, 36, 45, 65, 75	VSS + AVSS	VSS	VDD
43	2, 16, 30, 37, 46, 62	VDD + AVDD	VDD	VSS
44	82	RP65/PWM4H/RD1	LCD Read/Write	P82_LCDRW
45	10	TMS/RP42/PWM3H/RB10	mikroBUS A SPI SCK	P10_SCKA
46	11	TCK/RP43/PWM3L/RB11	mikroBUS A SPI MISO	P11_MISOA
47	12	TDI/RP44/PWM2H/RB12	mikroBUS A SPI MOSI	P12_MOSIA
48	78	RP45/PWM2L/RB13	mikroBUS B PWM	P78_PWMB

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

Schematic Revision 4.0

EXP16/32 PIM dsPIC33CK64MC105 General Purpose PIM TQFP-48

