

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

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## 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.

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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 <sup>2</sup> C SDA	P56_SDA
57	36	PGD1/AN10/RP40/SCL1/RB8	mikroBUS Shared I <sup>2</sup> 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

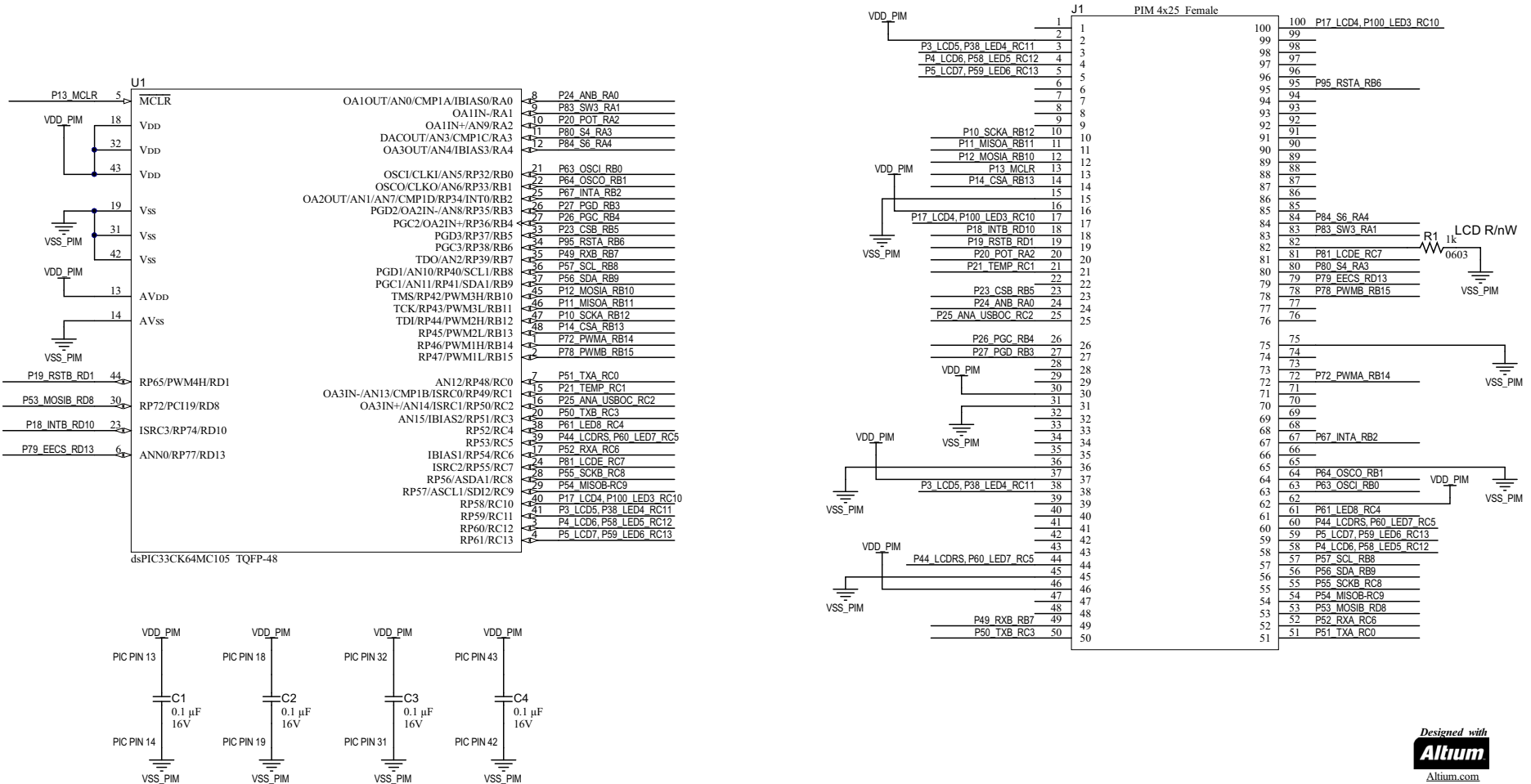
**Table 2: dsPIC33CK64MC105 dsPIC® DSC Mapping (Continued)**

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



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