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 - 45-4450-2828
Finland - Espoo - 358-9-4520-820
France - Paris - 33-1-69-53-63-20
France - Saint Cloud - 33-1-30-60-70-00
Germany - Garching - 49-8931-9700
Germany - Haan - 49-2129-3766400
Germany - Heilbronn - 49-7131-67-3636
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 - 47-7289-7561
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 - 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 - 91-20-3019-1500
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 - 60-3-6201-9857
Malaysia - Penang - 60-4-227-8870
Philippines - Manila - 63-2-634-9065
Singapore - 65-6334-8870
Taiwan - Hsin Chu - 886-3-5778-366
Taiwan - Kaohsiung - 886-7-213-7830
Taiwan - Taipei - 886-2-2508-8600
Thailand - Bangkok - 66-2-694-1351

11/07/16

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

www.microchip.com

The Microchip name and logo, the Microchip logo, and MPLAB 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. © 2016, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 12/16

DS50002463B

PIC24FJ256GA705 Plug-In Module (PIM) Information Sheet

Overview

The PIC24FJ256GA705 Plug-in Module is designed to demonstrate the capabilities of the PIC24FJ256GA705 family using the Explorer 16 Board. Refer to Table 1 and Table 2 for the mapping of the physical pins on the PIC24FJ256GA705 to the 100 pins on the PIM connector. In some cases, one I/O pin on the PIC24FJ256GA705 device is connected to 2 PIM signals. Not all predefined PIM signals found on the Explorer 16 are connected due to the limited amount of I/O pins available.

Table 1: PIC24FJ256GA705 PIM Mapping

PIM Pin #	Device Pin #	PIC24FJ256GA705 I/Os	Function	Explorer 16/32 Net Name
1	—	—	—	P1_VBUS
2	18, 30, 43	VDD + AVDD	VDD	VDD_PIM
3	12	RB13/AN7/RP13	LCD4 D5	P3_LCDD5
4	15	RB14/AN6/RP14	LCD4 D6	P4_LCDD6
5	16	RB15/AN9/RP15	LCD4 D7	P5_LCDD7
6	—	—	—	P6
7	—	—	—	P7
8	—	—	—	P8
9	—	—	—	P9
10	16	RB15/AN9/RP15	EEPROM (SCK) and mikroBUS™ A SCK	P10_SCKA
11	12	RB13/AN7/RP13	EEPROM (MSDI) and mikroBUS A MISO	P11_MISOA
12	15	RB14/AN6/RP14	EEPROM (MSDO) and mikroBUS A MISO	P12_MOSIA
13	19	$\overline{MCLR}$	$\overline{MCLR}$	P13_$\overline{MCLR}$
14	5	RC9/RP25	mikroBUS A Chip Select	P14_CSA
15	6, 31, 42	VSS + AVSS	VSS + AVSS	VSS
16	18,30,43	VDD + AVDD	VDD	VDD_PIM
17	35	RA8	LED D3	P17_LED3
18	41	RC5/RP21	mikroBUS B Interrupt	P18_INTB
19	44	RA14/RPIN32	mikroBUS B Reset	P19_RSTB
20	11	RB12/AN8.RP12	10k Potentiometer	P20_POT
21	22	RA1/AN1/RP27	TC1047A Temperature Sensor	P21_TEMP
22	21	RA0/AN0/RP26	General Purpose I/O	P22
23	13	RA10/RP28	mikroBUS B Chip Select	P23_CSB
24	27	RC0/AN10/RP16	mikroBUS B Analog	P24_ANB
25	28	RC1/AN11/RP17	mikroBUS B Analog or USB Overcurrent Sense	P25_ANA_USBOC
26	10	RB11/RP11	ICSP™ PGC	P26_PGC
27	9	RB10/RP10	ICSP PGD	P27_PGD
28	—	—	—	P28
29	—	—	—	P29
30	18, 30, 43	VDD + AVDD	VDD	VDD_PIM
31	6, 31, 42	VSS + AVSS	VSS	VSS
32	—	—	—	P32_CC2
33	21	RA0/AN0.RP26	General Purpose I/O	P33_CC1
34	—	—	—	P34
35	—	—	—	P35
36	6, 31, 42	VSS + AVSS	VSS	VSS
37	18, 30, 43	VDD + AVDD	VDD	VDD_PIM
38	38	RA9	LED D4	P38_LED4
39	—	—	—	P39
40	—	—	—	P40
41	—	—	—	P41
42	—	—	—	P42
43	—	—	—	P43
44	1	RB9/RP9	LCD RS	P44_LCDRS
45	6, 31, 42	VSS + AVSS	VSS	VSS
46	18, 30, 43	VDD + AVDD	VDD	VDD_PIM
47	32	RA13	General Purpose I/O	P47
48	3	RC7	General Purpose I/O	P48
49	48	RB8/RP8	MCP2221A and mikroBUS B RX	P49_RXB
50	47	RB7/RP7	MCP2221A and mikroBUS B TX	P50_TXB

Table 1: PIC24FJ256GA705 PIM Mapping (Continued)

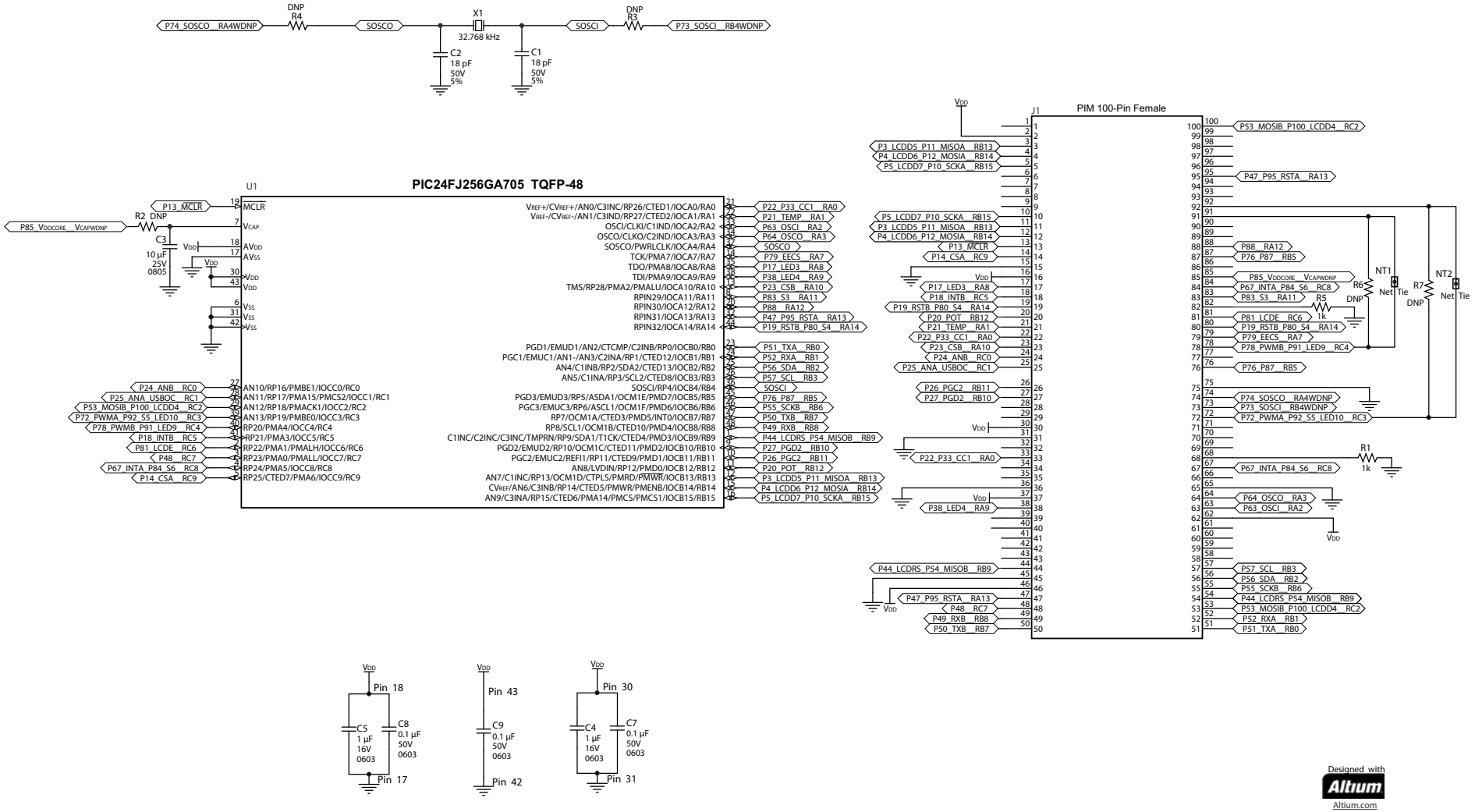
PIM Pin #	Device Pin #	PIC24FJ256GA705 I/Os	Function	Explorer 16/32 Net Name
51	23	RB0/AN2/RP0	mikroBUS A TX	P51_TXA
52	24	RB1/AN3RP1	mikroBUS A RX	P52_RXA
53	29	RC2/AN12/RP18	mikroBUS B MOSI	P53_MOSIB
54	1	RB9/RP9	mikroBUS B MISO	P54_MISOB
55	46	RB6/RP6	mikroBUS B SCKB	P55_SCKB
56	25	RB2/AN4/RP2	Shared I^2C SDA	P56_SDA
57	26	RB3/AN5/RP3	Shared I^2C SCL	P57_SCL
58	—	—	—	P58_LED5
59	—	—	—	P59_LED6
60	—	—	—	P60_LED7
61	—	—	—	P61_LED8
62	18, 30, 43	VDD + AVDD	VDD	VDD_PIM
63	33	RA2	Primary Oscillator In	P63_OSCI
64	34	RA3	Primary Oscillator Out	P63_OSCO
65	6, 31, 42	VSS + AVSS	VSS	VSS
66	—	—	—	P66
67	4	RC8/RP24	mikroBUS A Interrupt (digital)	P67_INTA
68	—	—	—	P68
69	—	—	—	P69
70	—	—	—	P70
71	—	—	—	P71
72	39	RC3/AN13	mikroBUS A PWM	P72_PWMA
73	37	RA4/SOSCO	SOSC In	P73_SOSCI
74	36	RB4/SOSCI	SOSC Out	P74_SOSCO
75	6, 31, 42	VSS + AVSS	VSS	VSS
76	45	RB5/RP5	General Purpose I/O	P76
77	—	—	—	P77
78	40	RC4/RP20	mikroBUS B PWM	P78_PWMB
79	14	RA7	EEPROM CS	P79_EECS
80	44	RA14/RPIN32	Switch S4	P80_S4
81	2	RC6/RP22	LCD E	P81_LCDE
82	—	—	—	P82_LCDRW
83	8	RA11/RPIN29	Switch S3	P83_S3
84	4	RC8/RP24	Switch S6	P84_S6
85	7	VCAP	VCAP, 10 µF Capacitor	P85_VDDCORE
86	—	—	—	P86_ENVREG
87	45	RB5/RP5	General Purpose I/O	P87
88	20	RA12/RPIN30	General Purpose I/O	P88
89	—	—	—	P89_USBDN
90	—	—	—	P90_USBDP
91	40	RC4/RP20	LED D9	P91_LED9
92	39	RC3/AN13	LED D10, Switch S5	P92_S5_LED10
93	—	—	—	P93_LCDD0
94	—	—	—	P94_LCDD1
95	32	RA13	mikroBUS A Reset Pin	P95_RSTA
96	—	—	—	P96_VBUSON
97	—	—	—	P97
98	—	—	—	P98_LCDD2
99	—	—	—	P99_LCDD3
100	29	RC2/AN12/RP18	LCD4 D4	P100_LCDD4

Table 2: PIC24FJ256GA705 PIC® MCU Mapping

Device Pin #	PIM Pin #	PIC24FJ256GA705 I/Os	Function	Explorer 16/32 Net Name
1	44, 54	RB9/RP9	LCD RS, mikroBUS™ B MISO	P44_LCDRS, P54_MISOB
2	81	RC6/RP22	LCD E	P81_LCDE
3	48	RC7	General Purpose I/O	P48
4	67, 84	RC8/RP24	mikroBUS A Interrupt (digital), Switch S6	P67_INTA, P84_S6
5	14	RC9/RP25	mikroBUS A Chip Select	P14_CSA
6	15, 31, 36, 45, 65, 75	VSS	VSS	VSS
7	85	VCAP	VCAP, 10 µF Capacitor	P85_VDDCORE
8	83	RA11/RPIN29	Switch S3	P83_S3
9	27	RB10/RP10	ICSP™ PGD	P27_PGD
10	26	RB11/RP11	ICSP PGC	P26_PGC
11	20	RB12/AN8/RP12	10k Potentiometer	P20_POT
12	3, 11	RB13/AN7/RP13	LCD4 DS, EEPROM (MSDI) and mikroBUS A MISO	P3_LCDD5, P11_MISOA
13	23	RA10/RP28	mikroBUS B Chip Select	P23_CSB
14	79	RA7	EEPROM CS	P79_EECS
15	4, 12	RB14/AN6/RP14	LCD4 D6, EEPROM (MSDO) and mikroBUS A MOSI	P4_LCDD6, P12_MOSIA
16	5, 10	RB15/AN9/RP15	LCD4 D7, EEPROM (SCK) and mikroBUS A SCK	P5_LCDD7, P10_SCKA
17	15, 31, 36, 45, 65, 75	AVSS	VSS	VSS
18	2, 16, 30, 37, 46, 62	AVDD	VDD	VDD_PIM
19	13	$\overline{\text{MCLR}}$	$\overline{\text{MCLR}}$	P13_$\overline{\text{MCLR}}$
20	88	RA12/RPIN30	General Purpose I/O	P88
21	22, 23	RA0/AN0/RP26	General Purpose I/O	P22, P23_CC1
22	21	RA1/AN1/RP27	TC1047A Temperature Sensor	P21_TEMP
23	51	RB0/AN2/RP0	mikroBUS A TX	P51_TXA
24	52	RB1/AN3/RP1	mikroBUS A RX	P52_RXA

Table 2: PIC24FJ256GA705 PIC® MCU Mapping (Continued)

Device Pin #	PIM Pin #	PIC24FJ256GA705 I/Os	Function	Explorer 16/32 Net Name
25	56	RB2/AN4/RP2	Shared I^2C SDA	P56_SDA
26	57	RB3/AN5/RP3	Shared I^2C SCL	P57_SCL
27	24	RC0/AN10/RP16	mikroBUS B Analog	P24_ANB
28	25	RC1/AN11/RP17	mikroBUS A Analog or USB Overcurrent Sense	P25_ANA_USBOC
29	53, 100	RC2/AN12/RP18	mikroBUS B MOSI, LCD4 D4	P53_MOSIB, P100_LCDD4
30	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
31	15, 31, 36, 45, 65, 75	VSS	VSS	VSS
32	47, 95	RA13	mikroBUS A Reset Pin	P47, P95_RSTA
33	63	RA2	Primary Oscillator In	P63_OSCI
34	64	RA3	Primary Oscillator Out	P64_OSCO
35	17	RA8	LED D3	P17_LED3
36	74	RB4/SOSCI	SOSC Out	P74_SOSCO
37	73	RA4/SOSCO	SOSC In	P73_SOSCI
38	38	RA9	LED D4	P38_LED4
39	72, 92	RC3/AN13	mikroBUS A PWM, LED D10, Switch S5	P72_PWMA, P92_S5_LED10
40	78, 91	RC4/RP20	mikroBUS B PWM, LED D9	P78_PWMB, P91_LED9
41	18	RC5/RP21	mikroBUS B Interrupt	P18_INTB
42	15, 31, 36, 45, 65, 75	VSS	VSS	VSS
43	2, 16, 30, 37, 46, 62	VDD	VDD	VDD_PIM
44	19, 80	RA14/RPIN32	mikroBUS B Reset, Switch S4	P19_RSTB, P80_S4
45	76, 87	RB5/RP5	General Purpose I/O	P76, P87
46	55	RB6/RP6	mikroBUS B SCKB	P55_SCKB
47	50	RB7/RP7	MCP2221A and mikroBUS B TX	P50_TXB
48	49	RB8/RP8	MCP2221A and mikroBUS B RX	P49_RXB

PIC24FJ256GA705 Plug-In Module (PIM) Information Sheet

Schematic Revision 1.0