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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