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

2/28/20

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

www.microchip.com

DS50003013A

PIC24FJ64GU205 General Purpose Plug-In Module (PIM) Information Sheet

Overview

The PIC24FJ64GU205 General Purpose Plug-In Module (EV95N98A) is designed to demonstrate the capabilities of the PIC24FJ64GU205 family using the Explorer 16/32 Development Board. Refer to Table 1 and Table 2 for the mapping of the physical pins on the PIC24FJ64GU205 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.

Table 1: PIC24FJ64GU205 PIM Mapping

PIM Pin #	Device Pin #	PIC24FJ64GU205 I/Os	Function	Explorer 16/32 Net Name
1	46	VBUS/IOCB6/RB6	USB VBUS	P1_VBUS_RF7
2	11, 18, 30, 43	VDD, AVDD, VUSB3V3	VSS	VDD
3	24	PGC1/TSCK/EMUC1/AN1-/AN3/C2INA/RP1/IOCB1/RB1	LCD D5/LED4	P3_P38_LCD5/LED4__RB1
4	25	AN4/C1INB/RP2/SDA2/IOCB2/RB2	LCD D6/LED5	P4_P58_LCD6/LED5__RB2
5	26	AN5/C1INA/RP3/SCL2/IOCB3/RB3	LCD D7/LED6	P5_P59_LCD7/LED6__RB3
6	—	—	—	—
7	—	—	—	—
8	—	—	—	—
9	—	—	—	—
10	41	RP21/IOCC5/RC5	mikroBUS™ A and B SPI SCK	P10_P55_SCKA_SCKB_RC5
11	40	RP20/IOCC4/RC4	mikroBUS A and B SPI MISO	P11_P54_MISOA_MISOB_RC4
12	5	RP25/IOCC9/RC9	mikroBUS A and B SPI MOSI	P12_P53_MOSIA_MOSIB_RC9
13	19	$\overline{\text{MCLR}}$	$\overline{\text{MCLR}}$	P13_MCLR
14	35	TDO/IOCA8/RA8	mikroBUS A Chip Select	P14_CSA_RA8
15	6, 17, 31, 42	VSS, AVSS	VSS	VSS
16	11, 18, 30, 43	VDD, AVDD, VUSB3V3	—	—
17	23	PGD1/TSDI/TSDO/EMUD1/AN2/LVDIN/C2INB/RP0/IOCB0/RB0	LCD D4/LED3	P100_P17_LCD4/LED3_RB0
18	44	RPI32/IOCA14/RA14	mikroBUS B Interrupt	P18_INTB_RA14
19	13	TMS/RP28/IOCA10/RA10	mikroBUS B Reset	P19_RSTB_RA10
20	16	AN9/C3INA/RP15/IOCB15/RB15	10k Potentiometer	P20_POT_RB15
21	12	AN7/C1INC/RP13/IOCB13/RB13	TC1047A Temp. Sensor	P21_TEMP_RB13
22	—	—	—	—
23	29	AN12/RP18/IOCC2/RC2	mikroBUS B Chip Select	P23_CSB_RC2
24	27	AN10/RP16/IOCC0/RC0	mikroBUS B Analog	P24_ANB_RC0
25	15	CVREF/AN6/C3INB/RP14/IOCB14/RB14	mikroBUS B Analog/USB Overcurrent	P25_ANA/USBOC_RB14
26	22	PGC3/TSCK/EMUC3/CVREF-/AN1/C3IND/RP27/ASCL1/IOCA1/RA1	ICSP™ Prog/Debug PGC2	P26_PGC_RA1
27	21	PGD3/VREF+/CINVREF+/AN0/C3INC/RP26/ASDA1/IOCA0/RA0	ICSP Prog/Debug PGD2	P27_PGD_RA0
28	—	—	—	—
29	—	—	—	—
30	11, 18, 30, 43	VDD, AVDD, VUSB3V3	—	—
31	6, 17, 31, 42	VSS, AVSS	VSS	VSS
32	—	—	—	—
33	—	—	—	—
34	—	—	—	—
35	—	—	—	—
36	6, 17, 31, 42	VSS, AVSS	VSS	VSS
37	11, 18, 30, 43	VDD, AVDD, VUSB3V3	—	—
38	24	PGC1/TSCK/EMUC1/AN1-/AN3/C2INA/RP1/IOCB1/RB1	LCD D5/LED4	P3_P38_LCD5/LED4_RB1
39	—	—	—	—
40	—	—	—	—
41	—	—	—	—
42	—	—	—	—
43	—	—	—	—
44	14	TCK/IOCA7/RA7	LCD Register Select	P44_P60_LCDRS/LED7_RC0
60	14	TCK/IOCA7/RA7	LCD Register Select	P44_P60_LCDRS/LED7_RC0
45	6, 17, 31, 42	VSS, AVSS	VSS	VSS
46	11, 18, 30, 43	VDD, AVDD, VUSB3V3	—	—
47	—	—	—	—
48	—	—	—	—
49	20	RPI30/IOCA12/RA12	MCP2221A and mikroBUS B RX	P49_RXB_RA12

Table 1: PIC24FJ64GU205 PIM Mapping (Continued)

PIM Pin #	Device Pin #	PIC24FJ64GU205 I/Os	Function	Explorer 16/32 Net Name
50	39	AN13/RP19/IOCC3/RC3	MCP2221A/mikroBUS™ B TX	P50_TXB_RC3
51	2	RP22/IOCC6/RC6	mikroBUS A TX	P51_TXA_RC6
52	3	RP23/IOCC7/RC7	mikroBUS A RX	P52_RXA_RC7
53	5	RP25/IOCC9/RC9	mikroBUS A and B SPI MOSI	P12_P53_MOSIA_MOSIB_RC9
54	40	RP20/IOCC4/RC4	mikroBUS A and B SPI MISO	P11_P54_MISOA_MISOB_RC4
55	41	RP21/IOCC5/RC5	mikroBUS A and B SPI SCK	P10_P55_SCKA_SCKB_RC5
56	1	C1INC/C2INC/C3INC/RP9/SDA1/T1CK/IOCB9/RB9	mikroBUS Shared I2C SDA	P56_SDA_RB9
57	48	RP8/SCL1/$\overline{\text{USBOEN}}$/IOCB8/RB8	mikroBUS Shared I2C SCL	P57_SCL_RB8
58	25	AN4/C1INB/RP2/SDA2/IOCB2/RB2	LCD D6/LED5	P4_P58_LCD6/LED5_RB2
59	26	AN5/C1INA/RP3/SCL2/IOCB3/RB3	LCD D7/LED6	P5_P59_LCD7/LED6_RB3
61	—	—	—	—
62	11, 18, 30, 43	VDD, AVDD, VUSB3V3	—	—
63	33	OSCI/CLKI/C1IND/IOCA2/RA2	Primary Oscillator In	P63_OSCI_RA2
64	34	OSCO/CLKO/C2IND/IOCA3/RA3	Primary Oscillator Out	P64_OSCO_RA3
65	6, 17, 31, 42	VSS, AVSS	VSS	VSS
66	—	—	—	—
67	47	RP7/INT0/IOCB7/RB7	mikroBUS A Interrupt	P67_INTA_RB7
68	—	—	—	—
69	—	—	—	—
70	—	—	—	—
71	—	—	—	—
72	4	RP24/IOCC8/RC8	mikroBUS A PWM	P72_PWMA_RC8
73	—	—	—	—
74	—	—	—	—
75	6, 17, 31, 42	VSS, AVSS	VSS	VSS
76	—	—	—	—
77	—	—	—	—
78	45	RP5/USBID/IOCB5/RB5	mikroBUS B PWM	P78_PWMB_RB5
79	8	RPI29/IOCA11/RA11	EEPROM Chip Select	P79_EECS_RA11
80	—	—	—	—
81	28	AN11/RP17/IOCC1/RC1	LCD Enable	P81_LCDE_RC1
82	—	—	LCD R/$\overline{\text{W}}$ Pull-Down	—
83	32	RPI31/IOCA13/RA13	Button 3	P83_S3_RA13
84	—	—	—	—
85	—	—	—	—
86	—	—	—	—
87	—	—	—	—
88	—	—	—	—
89	10	PGC2/TSCK/EMUC2/RP11/D-/IOCB11/RB11	USB D+	P89_USBDP_RB11
90	9	PGD2/TSDI/TSDO/EMUD2/RP10/D+/IOCB10/RB10	USB D-	P90_USBDM_RB10
91	—	—	—	—
92	—	—	—	—
93	—	—	—	—
94	—	—	—	—
95	38	TDI/IOCA9/RA9	mikroBUS A Reset	P95_RSTA_RA9
96	—	—	—	—
97	—	—	—	—
98	—	—	—	—
99	—	—	—	—
100	23	PGD1/TSDI/TSDO/EMUD1/AN2/LVDIN/C2INB/RP0/IOCB0/RB0	LCD D4/LED3	P100_P17_LCD4/LED3__RB0

Table 2: PIC24FJ64GU205 Device Mapping

Device Pin #	PIM Pin #	PIC24FJ64GU205 I/Os	Function	Explorer 16/32 Net Name
1	56	C1INC/C2INC/C3INC/RP9/SDA1/T1CKI/IOCB9/RB9	mikroBUS™ Shared I2C SDA	P56_SDA_RB9
2	51	RP22/IOCC6/RC6	mikroBUS A TX	P51_TXA_RC6
3	52	RP23/IOCC7/RC7	mikroBUS A RX	P52_RXA_RC7
4	72	RP24/IOCC8/RC8	mikroBUS A PWM	P72_PWMA_RC8
5	12, 53	RP25/IOCC9/RC9	mikroBUS A and B SPI MOSI	P12_P53_MOSIA_MOSIB_RC9
6	15, 31, 36, 45, 65, 75, 82	VSS/AVSS	VSS	VSS/AVSS
7	—	VCAP	VCAP	—
8	79	RPI29/IOCA11/RA11	EEPROM Chip Select	P79_EECS_RA11
9	90	PGD2/TSDI/TSDO/EMUD2/RP10/D+/IOCB10/RB10	USB D+	P90_USBDP_RB10
10	89	PGC2/TSCK/EMUC2/RP11/D-/IOCB11/RB11	USB D-	P89_USBDN_RB11
11	—	VUSB3V3	USB Power	VDD/AVDD
12	21	AN7/C1INC/RP13/IOCB13/RB13	TC1047A Temp. Sensor	P21_TEMP_RB13
13	19	TMS/RP28/IOCA10/RA10	mikroBUS B Reset	P19_RSTB_RA10
14	44, 60	TCK/IOCA7/RA7	LCD Register Select	P44_P60_LCDRS_LED7_RC0
15	25	CVREF/AN6/C3INB/RP14/IOCB14/RB14	mikroBUS B Analog/ USB Overcurrent	P25_ANA/USBOC_RB14
16	20	AN9/C3INA/RP15/IOCB15/RB15	10k Potentiometer	P20_POT_RB15
17	15, 31, 36, 45, 65, 75, 82	VSS/AVSS	VSS	VSS/AVSS
18	2, 16, 30, 37, 46, 62, 11, 18, 39, 43	VDD/AVDD	VDD	VDD/AVDD
19	13	$\overline{\text{MCLR}}$	$\overline{\text{MCLR}}$	P13_MCLR
20	49	RPI30/IOCA12/RA12	MCP2221A and mikroBUS B RX	P49_RXB_RA12
21	27	PGD3/VREF+/CINVREF+/AN0/C3INC/RP26/ASDA1/IOCA0/RA0	ICSP™ Prog/Debug PGD2	P27_PGD_RA0
22	26	PGC3/TSCK/EMUC3/CVREF-/AN1/C3IND/RP27/ASCL1/IOCA1/RA1	ICSP Prog/Debug PGC2	P26_PGC_RA1
23	100, 17	PGD1/TSDI/TSDO/EMUD1/AN2/LVDIN/C2INB/RP0/IOCB0/RB0	LCD D4/LED3	P100_P17_LCD4/LED3_RB0
24	3, 38	PGC1/TSCK/EMUC1/AN1-/AN3/C2INA/RP1/IOCB1/RB1	LCD D5/LED4	P3_P38_LCD5/LED4_RB1

Table 2: PIC24FJ64GU205 Device Mapping (Continued)

Device Pin #	PIM Pin #	PIC24FJ64GU205 I/Os	Function	Explorer 16/32 Net Name
25	4, 58	AN4/C1INB/RP2/SDA2/IOCB2/RB2	LCD D6/LED5	P4_P58_LCD6/LED5_RB2
26	5, 59	AN5/C1INA/RP3/SCL2/IOCB3/RB3	LCD D7/LED6	P5_P59_LCD7/LED6_RB3
27	24	AN10/RP16/IOCC0/RC0	mikroBUS™ B Analog	P24_ANB_RC0
28	81	AN11/RP17/IOCC1/RC1	LCD Enable	P81_LCDE_RC1
29	23	AN12/RP18/IOCC2/RC2	mikroBUS B Chip Select	P23_CSB_RC2
30	2, 16, 30, 37, 46, 62	VDD/AVDD	VSS	VDD/AVDD
31	15, 31, 36, 45, 65, 75	VSS/AVSS	VDD	VSS/AVSS
32	83	RPI31/IOCA13/RA13	Button 3	P83_S3_RA13
33	63	OSCI/CLKI/C1IND/IOCA2/RA2	Primary Oscillator In	P63_OSCI_RA2
34	64	OSCO/CLKO/C2IND/IOCA3/RA3	Primary Oscillator Out	P64_OSCO_RA3
35	14	TDO/IOCA8/RA8	mikroBUS A Chip Select	P14_CSA_RA8
36	—	SOSCI/C2IND/RP4/IOCB4/RB4	Secondary Oscillator In	SOSCI_RB4
37	—	SOSCO/SCLKI/C2INC/PWRLCLK/IOCA4/RA4	Secondary Oscillator Out	SOSCO_RA4
38	95	TDI/IOCA9/RA9	mikroBUS A Reset	P95_RSTA_RA9
39	50	AN13/RP19/IOCC3/RC3	MCP2221A and mikroBUS B TX	P50_TXB_RC3
40	11, 54	RP20/IOCC4/RC4	mikroBUS A and B SPI MISO	P11_P54_MISOA_MISOB_RC4
41	10, 55	RP21/IOCC5/RC5	mikroBUS A and B SPI SCK	P10_P55_SCKA_SCKB_RC5
42	15, 31, 36, 45, 65, 75	VSS/AVSS	VSS	VSS/AVSS
43	2, 16, 30, 37, 46, 62	VDD/AVDD	VDD	VDD/AVDD
44	18	RPI32/IOCA14/RA14	mikroBUS B Interrupt	P18_INTB_RA14
45	78	RP5/USBID/IOCB5/RB5	mikroBUS B PWM	P78_PWMB_RB5
46	2, 16, 30, 37, 46, 62	VBUS/IOCB6/RB6	USB VBUS	P1_VBUS_RB6
47	67	RP7/INT0/IOCB7/RB7	mikroBUS A Interrupt	P67_INTA_RB7
48	57	RP8/SCL1/$\overline{\text{USBOEN}}$/IOCB8/RB8	mikroBUS Shared I2C SCL	P57_SCL_RB8

PIC24FJ64GU205 General Purpose Plug-In Module (PIM) Information Sheet 48-Pin TQFP

Schematic Revision 1.0