

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

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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.

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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/TSC/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	MCLR	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/TSC/EMUC3/CVREF-/AN1/C3IND/RP27/ASCL1/IOCA1/RA1	ICSP™ Prog/Debug PGC2	P26_PGC_RA1
27	21	PGD3/VREF+/CIN/VREF+/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/TSC/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 I ² C SDA	P56_SDA_RB9
57	48	RP8/SCL1/USBOEN/IOCB8/RB8	mikroBUS Shared I ² C 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_PWM_A_RC8
73	—	—	—	—
74	—	—	—	—
75	6, 17, 31, 42	Vss, AVss	Vss	Vss
76	—	—	—	—
77	—	—	—	—
78	45	RP5/USBID/IOCB5/RB5	mikroBUS B PWM	P78_PWM_B_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/W Pull-Down	—
83	32	RPI31/IOCA13/RA13	Button 3	P83_S3_RA13
84	—	—	—	—
85	—	—	—	—
86	—	—	—	—
87	—	—	—	—
88	—	—	—	—
89	10	PGC2/TSC/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 I ² C 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_PWM_A_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_LCD_RS_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	MCLR	MCLR	P13_MCLR
20	49	RPI30/IOCA12/RA12	MCP2221A and mikroBUS B RX	P49_RXB_RA12
21	27	PGD3/VREF+/C1INVREF+/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_LCD_E_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_OSOC_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_PWM_B_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/USBOEN/IOCB8/RB8	mikroBUS Shared I ² C SCL	P57_SCL_RB8

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

Schematic Revision 1.0

