



dsPIC33AK128MC106

dsPIC33AK128MC106 General Purpose Dual In-Line Module (DIM) Information Sheet

Overview

The dsPIC33AK128MC106 General Purpose DIM (EV02G02A) is designed to demonstrate the capabilities of the dsPIC33AK128MC106 family using the Curiosity Platform Development Board (EV74H48A). Refer to [Table 1](#) and [Table 2](#) for the mapping of the physical pins on the dsPIC33AK128MC106 to the 120 pins on the DIM connector.

Not all predefined DIM signals found on the Curiosity Platform Development Board are connected due to the limited amount of I/O pins available.

Information for dsPIC33AK128MC106 General Purpose DIM is available through the website at: <https://www.microchip.com/EV02G02A>.

Information for Curiosity Platform Development Board is available through the website at: <https://www.microchip.com/en-us/development-tool/EV74H48A>.

TABLE 1: dsPIC33AK128MC106 DIM Mappings

DIM Pin #	Device Pin #	dsPIC33AK128MC106 I/Os	DIM Net Name / Function	Curiosity Platform Board Net Name	Platform Board Function
1	21	TMS/OA2IN-/AD1AN4/AD2ANN1/RP18/RB1	P1 AD1AN4 RB1	P1 XPRO1 9	XPLAINED PRO Extension 1 pin 9
2	20	OA2OUT/AD2AN1/CMP2A/RP17/INT0/RB0	P2 AD2AN1 RB0	P2 XPRO1 10	XPLAINED PRO Extension 1 pin 10
3	22	OA2IN+/AD2AN4/CMP2B/RP19/RB2	P3 AD2AN4 RB2	P3 XPRO1 8	XPLAINED PRO Extension 1 pin 8
4	56	RP55/ASDA1/RD6	P4 ASDA1 RD6	P4 mkB_B_XPRO1_SDA	mikroBUS B pin 11 SDA multiplexed with XPLAINED PRO Extension 1 pin 11 SDA
5	23	AD1AN11/RP25/RB8	P5 AD1AN11 RB8	P5 XPRO1 7	XPLAINED PRO Extension 1 pin 7
6	55	RP54/ASCL1/RD5	P6 ASCL1 RD5	P6 mkB_B_SPRO1_SCL	mikroBUS B pin 12 SCL multiplexed with XPLAINED PRO Extension 1 pin 12 SCL
7	36	RP40/RC7	P7 P36 RC7	P7 XPRO1 6	XPLAINED PRO Extension 1 pin 6
8			NC	P8 XPRO1 13	XPLAINED PRO Extension 1 pin 13
9	33	RP41/IOMD11/IOMF11/PCI20/RC8	P9 P50 RC8	P9 XPRO1 5	XPLAINED PRO Extension 1 pin 5
10			NC	P10 XPRO1 14	XPLAINED PRO Extension 1 pin 14
11	24	AD2AN10/RP26/RB9	P11 AD2AN10 RB9	P11 XPRO1 4	XPLAINED PRO Extension 1 pin 4
12	42	RP38/PWM4L/RC5	P12 P32 RC5	P12 XPRO1 15	XPLAINED PRO Extension 1 pin 15
13	27	PGD1/AD1AN5/CMP1C/ISRC0/IBIAS0/RP20/SDA1/RB3	P13 AD1AN5 RB3	P13 XPRO1 3	XPLAINED PRO Extension 1 pin 3
14	35	RP39/RC6	P14 P34 RC6	P14 XPRO1 16	XPLAINED PRO Extension 1 pin 16
15			NC	P15 XPRO1 1	XPLAINED PRO Extension 1 pin 1
16	43	PGD3/RP36/PWM3H/IOMD0/RC3	P16 P28 RC3	P16 XPRO1 17	XPLAINED PRO Extension 1 pin 17
17			NC	NC	NC
18	44	RP37/PWM3L/IOMD1/RC4	P18 P30 RC4	P18 XPRO1 18	XPLAINED PRO Extension 1 pin 18
19			NC	NC	NC
20			NC	P20 XPRO2 3	XPLAINED PRO Extension 1 pin 3
21			NC	P21 mkB_B_TX	mikroBUS B pin 13 UART TX
22			NC	P22 XPRO2 4	XPLAINED PRO Extension 2 pin 4
23			NC	P23 mkB_B_RX	mikroBUS B pin 14 UART RX
24			NC	P24 XPRO2 5	XPLAINED PRO Extension 2 pin 5
25			NC	P25 mkB_B_INT	mikroBUS B pin 15 INT
26			NC	P26 XPRO2 6	XPLAINED PRO Extension 2 pin 6
27			NC	P27 mkB_B_PWM	mikroBUS B pin 16 PWM
28	43	PGD3/RP36/PWM3H/IOMD0/RC3	P16 P28 RC3	P28 LED 0	General purpose LED 0
29			NC	P29 mkB_B_AN	mikroBUS B pin 1 AN
30	44	RP37/PWM3L/IOMD1/RC4	P18 P30 RC4	P30 LED 1	General purpose LED 1
31			NC	P31 mkB_B_RST	mikroBUS B pin 2 RST
32	42	RP38/PWM4L/RC5	P12 P32 RC5	P32 LED 2	General purpose LED 2
33			NC	P33 mkB_B_CS	mikroBUS B pin 3 CS
34	35	RP39/RC6	P14 P34 RC6	P34 LED 3	General purpose LED 3
35			NC	P35 mkB_B_SCK	mikroBUS B pin 4 SCK
36	36	RP40/RC7	P7 P36 RC7	P36 LED 4	General purpose LED 4
37			NC	P37 mkB_B_MISO	mikroBUS B pin 5 MISO
38	14	OA1IN+/AD1AN1/CMP1B/RP5/RA4	P38 AD1AN1 RA4	P38 Cap_Touch 3R	Capacitive touch pad 3 redundant
39			NC	P39 mkB_B_MOSI	mikroBUS B pin 6 MOSI
40	13	OA1IN-/AD1ANN1/AD2AN0/RP4/RA3	P40 AD2AN0 RA3	P40 Cap_Touch 3	Capacitive touch pad 3
41	16	OA3IN-/AD1AN2/RP7/RA6	P41 RA6	P41 S3	Push button switch 3
42	12	OA1OUT/AD1AN0/CMP1A/RP3/RA2	P42 AD1AN0 RA2	P42 Cap_Touch 2R	Capacitive touch pad 2 redundant
43	28	PGC1/AD2AN5/CMP2C/ISRC1/IBIAS1/RP21/SCL1/RB4	P43 RB4	P43 S2	Push button switch 2
44	9	AD2ANN3/AD2AN7/RP11/RA10	P44 AD2AN7 RA10	P44 Cap_Touch 2	Capacitive touch pad 2
45	17	OA3IN+/AD2AN2/CMP3B/RP22/RB5	P45 RB5	P45 S1	Push button switch 1

TABLE 1: dsPIC33AK128MC106 DIM Mappings (CONTINUED)

DIM Pin #	Device Pin #	dsPIC33AK128MC106 I/Os	DIM Net Name / Function	Curiosity Platform Board Net Name	Platform Board Function
46	8	AD1ANN3/AD1AN9/RP10/RA9	P46 AD1AN9 RA9	P46 Cap_Touch_1R	Capacitive touch pad 1 redundant
47	64	MCLR	P47 MCLR	P47 MCLR	Device Master clear and MCLR switch
48	7	AD2AN9/ISRC3/IBIAS3/RP9/RA8	P48 AD2AN9 RA8	P48 Cap_Touch_1	Capacitive touch pad 1
49	1	PGD2/AD2AN6/CMP3C/ISRC2/IBIAS2/RP1/SDA2/IOMF2/RA0	P49 PGD	P49 PGD	ISCP Programming Data
50	33	RP41/IOMD11/IOMF11/PCI20/RC8	P9 P50 RC8	P50 LED_5	General purpose LED 5
51	3	PGC2/DACOUT1/AD1AN7/AD2AN3/CMP1D/CMP2D/CMP3D/RP2/SCL2/RA1	P51 PGC	P51 PGC	ISCP Programming Clock
52	34	RP42/IOMD10/SDO2/IOMF10/PCI19/RC9	P52 RC9	P52 LED_6	General purpose LED 6
53			NC	NC	NC
54	45	RP43/IOMD9/IOMF9/RC10	P54 RC10	P54 LED_7	General purpose LED 7
55			NC	P55 Board_VDD_Select	Voltage Select pin. On 3.3V devices pin is not connected as 3.3V is default.
56	63	RP61/PCI21/RD12	P56 RD12	P56 Cap_Touch_DS	Capacitive touch pad driven shield IO
57	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
58	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
59	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
60	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
61	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
62	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
63	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
64	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
65	58	RP57/ASDA2/IOMD6/IOMF3/RD8	P65 ASDA2 RD8	P65 mkB_A_USB_SDA	mikroBUS A pin 11 SDA multiplexed with I2C to USB Converter pin 8 SDA
66	2	AD1AN6/RP8/IOMF1/RA7	P66 AD1AN6 RA7	P66 POT	10kOhm Potentiometer
67	57	RP56/ASCL2/IOMD7/IOMF4/RD7	P67 ASCL2 RD7	P67 mkB_A_USB_SCL	mikroBUS A pin 12 SCL multiplexed with I2C to USB Converter pin 9 SCL
68	41	PGC3/RP35/PWM4H/RC2	P75 P68 PWM4H RC2	P68 LED_R	Red LED control for RGB LED
69	31	RP27/SCK2/RB10	P69 RP27 RB10	P69 mkB_A_TX	mikroBUS A pin 13 TX
70	51	RP49/PWM2H/IOMD2/RD0	P70 PWM2H RD0	P70 LED_G	Green LED control for RGB LED
71	32	RP28/SDI2/RB11	P71 RP28 RB11	P71 mkB_A_RX	mikroBUS A pin 14 RX
72	53	TDO/RP51/PWM1H/IOMD4/RD2	P72 PWM1H RD2	P72 LED_B	Blue LED Control for RGB LED
73	15	OA3OUT/AD1AN3/CMP3A/RP6/RA5	P73 RP6 RA5	P73 mkB_A_INT	mikroBUS A pin 15 INT
74	46	RP44/IOMD8/IOMF8/RC11	P87 P74 RP44 RC11	P74 QSPI_MOSI	Quad SPI Flash pin 5 MOSI
75	41	PGC3/RP35/PWM4H/RC2	P75 P68 PWM4H RC2	P75 mkB_A_PWM	mikroBUS A pin 16 PWM
76	37	OSCO/CLKO/RP33/IOMF5/RC0	P83 P76 RP33 RC0	P76 QSPI_SCK	Quad SPI Flash pin 6 SCK
77	6	AD1AN10/RP12/RA11	P77 AD1AN10 RA11	P77 mkB_A_AN	mikroBUS A pin 1 AN
78			1k pull up	P78 QSPI_HOLD	Quad SPI Flash pin 7 HOLD
79	29	AD1ANN2/AD1AN8/RP23/RB6	P79 RP39 RB6	P79 mkB_A_RST	mikroBUS A pin 2 RST
80			1k pull up	P80 QSPI_WP	Quad SPI Flash pin 3 WP
81	30	AD2ANN2/AD2AN8/RP24/IOMF0/RB7	P81 RP40 RB7	P81 mkB_A_CS	mikroBUS A pin 3 CS
82	62	RP60/RD11	P85 P82 RD11	P82 QSPI_MISO	Quad SPI Flash pin 2 MISO
83	37	OSCO/CLKO/RP33/IOMF5/RC0	P83 P76 RP33 RC0	P83 mkB_A_SCK	mikroBUS A pin 4 SCK
84	61	RP53/PCI22/RD4	P84 RD4	P84 QPSI_CS	Quad SPI Flash pin 1 CS
85	62	RP60/RD11	P85 P82 RD11	P85 mkB_A_MISO	mikroBUS A pin 5 MISO
86			NC	P86 CAN_STBY	CAN FD Transceiver pin 8 STBY
87	46	RP44/IOMD8/IOMF8/RC11	P87 P74 RP44 RC11	P87 mkB_A_MOSI	mikroBUS A pin 6 MOSI
88			NC	P88 CAN_TXD	CAN FD Transceiver pin 1 TXD
89			NC	P89 RMII_Nrst	Ethernet RMII J20 pin 10 NRST
90			NC	P90 CAN_RXD	CAN FD Transceiver pin 4 RXD
91			NC	P91 RMII_IRQ	Ethernet RMII J20 pin 9 IRQ
92			NC	P92 GPIO	General purpose IO header
93			NC	P93 RMII_MDIO	Ethernet RMII J20 pin 8 MDIO

TABLE 1: dsPIC33AK128MC106 DIM Mappings (CONTINUED)

DIM Pin #	Device Pin #	dsPIC33AK128MC106 I/Os	DIM Net Name / Function	Curiosity Platform Board Net Name	Platform Board Function
94			NC	P94_GPIO	General purpose IO header
95			NC	P95_RMII_MDC	Ethernet RMII J20 pin 7 MDC
96	54	TDI/RP52/PWM1L/IOMD5/RD3	P96_RP52_RD3	P96_UART_USB_RX	USB to UART Converter pin 5 RX
97			NC	P97_RMII_CRS_DV	Ethernet RMII J20 pin 6 CRS_DV
98	52	TCK/RP50/PWM2L/IOMD3/RD1	P98_RP50_RD1	P98_UART_USB_TX	USB to UART Converter pin 4 TX
99			NC	P99_RMII_RXER	Ethernet RMII J20 pin 5 RXER
100	50	RP59/RD10	P100_RP59_RD10	P100_UART_PKoB_RX	UART to USB back-channel through PKoB RX
101			NC	P101_RMII_RXD0	Ethernet RMII J20 pin 4 RXD0
102	49	RP58/IOMF7/RD9	P102_RP58_RD9	P102_UART_PKoB_TX	UART to USB back-channel through PKoB TX
103			NC	P103_RMII_RXD1	Ethernet RMII J20 pin 3 RXD1
104			NC	P104_TRCLK	Trace pin 1 Clock line
105			NC	P105_RMII_TXEN	Ethernet RMII J19 pin 1 TXEN
106			NC	P106_TRDAT0	Trace pin 3 Data line 0
107			NC	P107_RMII_TXD0	Ethernet RMII J19 pin 2 TXD0
108			NC	P108_TRDAT1	Trace pin 5 Data line 1
109			NC	P109_RMII_TXD1	Ethernet RMII J19 pin 3 TXD1
110			NC	P110_TRDAT2	Trace pin 7 Data line 2
111			NC	P111_RMII_CLK_IN	Ethernet RMII J19 pin 8 CLK_IN
112			NC	P112_TRDAT3	Trace pin 9 Data line 3
113	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
114	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
115	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
116	5, 11, 19, 26, 40, 48, 60	VDD	Board_VDD	DIM_VDD	Supply voltage of attached DIM
117	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
118	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
119	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground
120	4, 10, 18, 25, 39, 47, 59	VSS	GND	GND	Ground

TABLE 2: dsPIC33AK128MC106 MCU Mappings

Device Pin #	DIM Pin #	dsPIC33AK128MC106 I/Os	DIM Net Name / Function	Curiosity Platform Board Net Name	Platform Board Function
1	49	PGD2/AD2AN6/CMP3C/ISRC2/IBIAS2/RP1/SDA2/IOMF2/RA0	P49 PGD	P49 PGD	ISCP Programming Data
2	66	AD1AN6/RP8/IOMF1/RA7	P66 AD1AN6 RA7	P66 POT	10kOhm Potentiometer
3	51	PGC2/DACOUT1/AD1AN7/AD2AN3/CMP1D/CMP2D/CMP3D/RP2/SCL2/RA1	P51 PGC	P51 PGC	ISCP Programming Clock
4	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
5	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
6	77	AD1AN10/RP12/RA11	P77 AD1AN10 RA11	P77 mkB A AN	mikroBUS A pin 1 AN
7	48	AD2AN9/ISRC3/IBIAS3/RP9/RA8	P48 AD2AN9 RA8	P48 Cap Touch 1	Capacitive touch pad 1
8	46	AD1ANN3/AD1AN9/RP10/RA9	P46 AD1AN9 RA9	P46 Cap Touch 1R	Capacitive touch pad 1 redundant
9	44	AD2ANN3/AD2AN7/RP11/RA10	P44 AD2AN7 RA10	P44 Cap Touch 2	Capacitive touch pad 2
10	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
11	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
12	42	OA1OUT/AD1AN0/CMP1A/RP3/RA2	P42 AD1AN0 RA2	P42 Cap Touch 2R	Capacitive touch pad 2 redundant
13	40	OA1IN-/AD1ANN1/AD2AN0/RP4/RA3	P40 AD2AN0 RA3	P40 Cap Touch 3	Capacitive touch pad 3
14	38	OA1IN+/AD1AN1/CMP1B/RP5/RA4	P38 AD1AN1 RA4	P38 Cap Touch 3R	Capacitive touch pad 3 redundant
15	73	OA3OUT/AD1AN3/CMP3A/RP6/RA5	P73 RP6 RA5	P73 mkB A INT	mikroBUS A pin 15 INT
16	41	OA3IN-/AD1AN2/RP7/RA6	P41 RA6	P41 S3	Push button switch 3
17	45	OA3IN+/AD2AN2/CMP3B/RP22/RB5	P45 RB5	P45 S1	Push button switch 1
18	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
19	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
20	2	OA2OUT/AD2AN1/CMP2A/RP17/INT0/RB0	P2 AD2AN1 RB0	P2 XPRO1 10	XPLAINED PRO Extension 1 pin 10
21	1	TMS/OA2IN-/AD1AN4/AD2ANN1/RP18/RB1	P1 AD1AN4 RB1	P1 XPRO1 9	XPLAINED PRO Extension 1 pin 9
22	3	OA2IN+/AD2AN4/CMP2B/RP19/RB2	P3 AD2AN4 RB2	P3 XPRO1 8	XPLAINED PRO Extension 1 pin 8
23	5	AD1AN11/RP25/RB8	P5 AD1AN11 RB8	P5 XPRO1 7	XPLAINED PRO Extension 1 pin 7
24	11	AD2AN10/RP26/RB9	P11 AD2AN10 RB9	P11 XPRO1 4	XPLAINED PRO Extension 1 pin 4
25	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
26	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
27	13	PGD1/AD1AN5/CMP1C/ISRC0/IBIAS0/RP20/SDA1/RB3	P13 AD1AN5 RB3	P13 XPRO1 3	XPLAINED PRO Extension 1 pin 3
28	43	PGC1/AD2AN5/CMP2C/ISRC1/IBIAS1/RP21/SCL1/RB4	P43 RB4	P43 S2	Push button switch 2
29	79	AD1ANN2/AD1AN8/RP23/RB6	P79 RP39 RB6	P79 mkB A RST	mikroBUS A pin 2 RST
30	81	AD2ANN2/AD2AN8/RP24/IOMF0/RB7	P81 RP40 RB7	P81 mkB A CS	mikroBUS A pin 3 CS
31	69	RP27/SCK2/RB10	P69 RP27 RB10	P69 mkB A TX	mikroBUS A pin 13 TX
32	71	RP28/SDI2/RB11	P71 RP28 RB11	P71 mkB A RX	mikroBUS A pin 14 RX
33	50	RP41/IOMD11/IOMF11/PC120/RC8	P9 P50 RC8	P50 LED 5	General purpose LED 5
33	9	RP41/IOMD11/IOMF11/PC120/RC8	P9 P50 RC8	P9 XPRO1 5	XPLAINED PRO Extension 1 pin 5
34	52	RP42/IOMD10/SDO2/IOMF10/PC119/RC9	P52 RC9	P52 LED 6	General purpose LED 6
35	14	RP39/RC6	P14 P34 RC6	P14 XPRO1 16	XPLAINED PRO Extension 1 pin 16
35	34	RP39/RC6	P14 P34 RC6	P34 LED 3	General purpose LED 3
36	7	RP40/RC7	P7 P36 RC7	P7 XPRO1 6	XPLAINED PRO Extension 1 pin 6
36	36	RP40/RC7	P7 P36 RC7	P36 LED 4	General purpose LED 4
37	76	OSCO/CLKO/RP33/IOMF5/RC0	P83 P76 RP33 RC0	P76 QSPI SCK	Quad SPI Flash pin 6 SCK
37	83	OSCO/CLKO/RP33/IOMF5/RC0	P83 P76 RP33 RC0	P83 mkB A SCK	mikroBUS A pin 4 SCK
38	NC	OSCI/CLKI/RP34/IOMF6/RC1	CLKI	NC	NC
39	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
40	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
41	68	PGC3/RP35/PWM4H/RC2	P75 P68 PWM4H RC2	P68 LED R	Red LED control for RGB LED
41	75	PGC3/RP35/PWM4H/RC2	P75 P68 PWM4H RC2	P75 mkB A PWM	mikroBUS A pin 16 PWM

TABLE 2: dsPIC33AK128MC106 MCU Mappings (CONTINUED)

Device Pin #	DIM Pin #	dsPIC33AK128MC106 I/Os	DIM Net Name / Function	Curiosity Platform Board Net Name	Platform Board Function
42	12	RP38/PWM4L/RC5	P12 P32 RC5	P12 XPRO1 15	XPLAINED PRO Extension 1 pin 15
42	32	RP38/PWM4L/RC5	P12 P32 RC5	P32 LED 2	General purpose LED 2
43	16	PGD3/RP36/PWM3H/IOMD0/RC3	P16 P28 RC3	P16 XPRO1 17	XPLAINED PRO Extension 1 pin 17
43	28	PGD3/RP36/PWM3H/IOMD0/RC3	P16 P28 RC3	P28 LED 0	General purpose LED 0
44	18	RP37/PWM3L/IOMD1/RC4	P18 P30 RC4	P18 XPRO1 18	XPLAINED PRO Extension 1 pin 18
44	30	RP37/PWM3L/IOMD1/RC4	P18 P30 RC4	P30 LED 1	General purpose LED 1
45	54	RP43/IOMD9/IOMF9/RC10	P54 RC10	P54 LED 7	General purpose LED 7
46	74	RP44/IOMD8/IOMF8/RC11	P87 P74 RP44 RC11	P74 QSPI MOSI	Quad SPI Flash pin 5 MOSI
46	87	RP44/IOMD8/IOMF8/RC11	P87 P74 RP44 RC11	P87 mkB A MOSI	mikroBUS A pin 6 MOSI
47	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
48	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
49	102	RP58/IOMF7/RD9	P102 RP58 RD9	P102 UART PKoB TX	UART to USB back-channel through PKoB TX
50	100	RP59/RD10	P100 RP59 RD10	P100 UART PKoB RX	UART to USB back-channel through PKoB RX
51	70	RP49/PWM2H/IOMD2/RD0	P70 PWM2H RD0	P70 LED G	Green LED control for RGB LED
52	98	TCK/RP50/PWM2L/IOMD3/RD1	P98 RP50 RD1	P98 UART USB TX	USB to UART Converter pin 4 TX
53	72	TD0/RP51/PWM1H/IOMD4/RD2	P72 PWM1H RD2	P72 LED B	Blue LED Control for RGB LED
54	96	TDI/RP52/PWM1L/IOMD5/RD3	P96 RP52 RD3	P96 UART USB RX	USB to UART Converter pin 5 RX
55	6	RP54/ASCL1/RD5	P6 ASCL1 RD5	P6 mkB_B XPRO1_SCL	mikroBUS B pin 12 SCL multiplexed with XPLAINED PRO Extension 1 pin 12 SCL
56	4	RP55/ASDA1/RD6	P4 ASDA1 RD6	P4 mkB_B XPRO1_SDA	mikroBUS B pin 11 SDA multiplexed with XPLAINED PRO Extension 1 pin 11 SDA
57	67	RP56/ASCL2/IOMD7/IOMF4/RD7	P67 ASCL2 RD7	P67 mkB A USB_SCL	mikroBUS A pin 12 SCL multiplexed with I2C to USB Converter pin 9 SCL
58	65	RP57/ASDA2/IOMD6/IOMF3/RD8	P65 ASDA2 RD8	P65 mkB A USB_SDA	mikroBUS A pin 11 SDA multiplexed with I2C to USB Converter pin 8 SDA
59	61 62 63 64 117 118 119 120	Vss	GND	GND	Ground
60	57 58 59 60 113 114 115 116	Vdd	Board VDD	DIM VDD	Supply voltage of attached DIM
61	84	RP53/PCI22/RD4	P84 RD4	P84 QPSI CS	Quad SPI Flash pin 1 CS
62	82	RP60/RD11	P85 P82 RD11	P82 QSPI MISO	Quad SPI Flash pin 2 MISO
62	85	RP60/RD11	P85 P82 RD11	P85 mkB A MISO	mikroBUS A pin 5 MISO
63	56	RP61/PCI21/RD12	P56 RD12	P56 Cap_Touch_DS	Capacitive touch pad driven shield IO
64	47	MCLR	P47 MCLR	P47 MCLR	Device Master clear and MCLR switch

dsPIC33AK128MC106

dsPIC33AK128MC106



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TABLE 3: dsPIC33AK128MC106 BILL OF MATERIALS

Qty	Designator	Description	Manufacturer	Manufacturer Part #
1	C1	CAP CER 100pF 25V 10% X7R SMD 0402	AVX Corporation®	04023C101KAT2A
8	C2, C3, C4, C5, C6, C7, C8, C17	CAP CER 0.1uF 25V 10% X7R SMD 0402	TDK Corporation	C1005X7R1E104K050BB
4	C9, C12, C13, C16	CAP CER 22uF 25V 20% X5R SMD 0805	Yageo	CC0805MKX5R8BB226
4	C10, C11, C14, C15	CAP CER 0.1uF 50V 10% X7R SMD 0603	Yageo	CC0603KRX7R9BB104
7	C18, C19, C20, C21, C22, C23, C24	CAP CER 1000pF 50V 10% X7R SMD 0402	Murata®	GCM155R71H102KA37D
1	LD1	DIO LED GREEN 2V 30mA 35mcd Clear SMD 0603	Vishay® Lite-On	LTSTC190KGKT
1	R1	RES TKF 10k 1% 1/16W SMD 0402	TE Connectivity	CRG0402F10K
1	R2	RES TKF 100R 1% 1/10W SMD 0402 AEC-Q200	KOA Speer®	RK73H1ETTP81000F
1	R3	RES TKF 1k 1% 1/10W SMD 0603	TE Connectivity	1622866-1
2	R4, R5	RES TF 1k 1% 1/10W SMD 0402 AEC-Q200	Vishay	MCS04020C1001FE000
2	TP1, TP2	CON TP LOOP Silver 3.4x5 SMD	Keystone®	5016
1	U1	MCHP MCU 32-BIT 128KB Flash, 16 KB, dsPIC33AK128MC106-I/PT	Microchip Technology	dsPIC33AK128MC106-I/PT
1	Y1	MCHP CLOCK OSCILLATOR SINGLE 8.000MHz DSC6011JI2B-008.0000 VDFN-4	Microchip Technology	DSC6011JI2B-008.0000

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ISBN: 979-8-3371-0792-9

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