

## MINI-MAX Microcontroller Board Family Interchangeable Port Mapping

Keypad Conn. Pin Number	Universal Pin Names	Keypad Conn. J1 MINI-MAX/51	Keypad Conn. X4 MINI-MAX/AVR-C	Keypad Conn. X2 MINI-MAX/AVR-BU	Keypad Conn. J1 MINI-MAX/ARM	Keypad Conn. J1 MINI-MAX/P18	Keypad Conn. X1 MINI-MAX/MSP430
1	KEY0	P2.0	PK0	PA0	P1.16	RD0	P6.0
2	KEY1	P2.1	PK1	PA1	P1.17	RD1	P6.1
3	KEY2	P2.2	PK2	PA2	P1.18	RD2	P6.2
4	KEY3	P2.3	PK3	PA3	P1.19	RD3	P6.3
5	KEY4	P2.4	PH4	PA4	P1.20	RD4	P6.4
6	KEY5	P2.5	PH5	PA5	P1.21	RD5	P6.5
7	KEY6	P2.6	PH6	PA6	P1.22	RD6	P6.6
8	KEY7	P2.7	PH7	PA7	P1.23	RD7	P1.7
9	Ground	Ground	Ground	Ground	Ground	Ground	Ground
10	VCC	VCC	+5V	+5V	VCC	VCC	VCC

LCD Conn. Pin Number	Universal Pin Names	LCD Conn. J3 MINI-MAX/51	LCD Conn. X3 MINI-MAX/AVR-C	LCD Conn. X9 MINI-MAX/AVR-BU	LCD Conn. J2 MINI-MAX/ARM	LCD Conn. J3 MINI-MAX/P18	LCD Conn. X2 MINI-MAX/MSP430
1	GND	GND	GND	GND	GND	GND	GND
2	VCC	VCC	VCC	VCC	VCC	VCC	VCC
3	Vee	Vee	V-PWM	Vee (PWM: PB7)	Vee	Vee	Vee (PWM: P8.2)
4	CTRL	P0.0	PL4	PB4	P0.17	RE2	P1.0
5	READ	P0.1	PL5	PB5	AVR - PB4	RE0	P1.4
6	STROBE	P0.2	PL6	PB6	P0.18	RE1	P1.3
7	Not Connected	P0.3	Not Connected	PC4	AVR - PD5	Not Connected	P4.4
8	Not Connected	Not Connected	Not Connected	Not Connected	AVR - PD1	Not Connected	Not Connected
9	Not Connected	Not Connected	Not Connected	PC6	AVR - PD0	Not Connected	P4.5
10	Not Connected	Not Connected	Not Connected	PC7	AVR - PD2	Not Connected	P4.6
11	LD0	P0.4	PL0	PC0	P0.19	RB0	P4.0
12	LD1	P0.5	PL1	PC1	P0.21	RB1	P4.1
13	LD2	P0.6	PL2	PC2	P0.22	RB2	P4.2
14	LD3	P0.7	PL3	PC3	P0.23	RB3	P4.3

Exp. Conn. Pin Number	Universal Pin Names	Exp. Conn. J4 MINI-MAX/51	Exp. Conn. X6 MINI-MAX/AVR-C	Exp. Conn. X6 MINI-MAX/AVR-AU	Exp. Conn. X8 MINI-MAX/AVR-BU	Exp. Conn. J3 MINI-MAX/ARM	Exp. Conn. X1 MINI-MAX/ARM9260	Exp. Conn. J4 MINI-MAX/P18	Exp. Conn. X3 MINI-MAX/MSP430
1	GND	GND	GND	GND	GND	GND	GND	GND	GND
2	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)
3	GND	GND	GND	GND	GND	GND	GND	GND	GND
4	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)
5	I2C SDA	P1.7	PD1	PC5	PD1	P0.3	PA23	RC4	P3.7
6	I2C SCL	P1.6	PD0	PC6	PD0	P0.2	PA24	RC3	P5.4
7	IO4	P1.5	PD6	PD1	PF7	P0.14	PC1	RA2	P2.4
8	IO5	P1.4	PD7	PD4	PE7	P0.15	PA6	RC5	P2.5
9	IO2	P1.3	PB6	PD0	PF6	P0.12	PB15	RA1	P2.2
10	IO3	P1.2	PB7	PC4	PE6	P0.13	PB14	RA0	P2.3
11	IO0	P1.1	PB4	PC7	PF5	P0.10	PB16	RC2	P2.0
12	IO1	P1.0	PB5	PC2	PE5	P0.11	PB17	RB7	P2.1
13	MOSI	P3.7	PB2	PB2	PB2	P0.6	PB1	RA5	P3.1
14	IO22	P3.6	PC7	PB7	PE4	P1.24	PA31	RC0	P2.7
15	SS	P3.5	PB0	PB0	PB0	P0.7	PB3	RA4	P3.0
16	SCK	P3.4	PB1	PB1	PB1	P0.4	PB2	RC1	P3.3
17	MISO	P3.3	PB3	PB3	PB3	P0.5	PB0	RB3 or RB5	P3.2
18	IO6	P3.2	PH2	PB6	PE1	P0.26	PA30	RB6	P2.6
19	/TXD2	P3.1	PH1	PD3	PD3	P0.0	PB8	RC6	P1.6
20	/RXD2	P3.0	PH0	PD2	PD2	P0.1	PB9	RC7	P1.5

Analog Conn. Pin Number	Universal Pin Names	Analog Conn. J6 MINI-MAX/51	Analog Conn. X10 MINI-MAX/AVR-C	Analog Conn. X6 MINI-MAX/AVR-BU	Analog Conn. J8 MINI-MAX/ARM	Analog Conn. X14 MINI-MAX/ARM9260	Analog Conn. X10 MINI-MAX/MSP430
1	AN0	AN0	AN0 (PF0/ADC0)	AN0 (PF0/ADC0)	AN0 (P0.27)	AN0 (PC0)	AN0 (P7.7)
2	AN1	AN1	AN1 (PF1/ADC1)	AN1 (PF1/ADC1)	AN1 (P0.28)	AN1 (PC1)	AN1 (P7.6)
3	AGND	AGND	AGND	AGND	AGND	AGND	AGND
4	AN2	AN2	AN2 (PF2/ADC2)	AN2 (PF2/ADC2)	AN2 (P0.29)	AN2 (PC2)	AN2 (P7.5)
5	AGND	AGND	AGND	AGND	AGND	AGND	AGND
6	AN3	AN3	AN3 (PF3/ADC3)	AN3 (PF3/ADC3)	AN3 (P0.30)	AN3 (PC3)	AN3 (P7.4)
7	VREF	VREF	VREF (1.1V/2.56V)	AREF (2.56V)	VREF (3V)	VREF (3V)	VREF (3V)
8	AN4	AN4	AN4 (PK7/ADC15)	AN4 (PF4/ADC4)	AN4 (P0.25)	WKUP	AN4 (P6.7)
9	AGND	AGND	AGND	AGND	AGND	AGND	AGND
10	VAN	VAN	VAN	VAN	VAN	VAN	VAN

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**Important NOTE: MINI-MAX/51-C2 Terminal Block Pinout is reverse of other boards**