| | Mega/Due | | | | EEZ Arduino shield+BP r1B13 | | | |
|----|-------------|------------|------|-----------------|-----------------------------|-------------|----------------|---|
| # | Pin name | Pin no. | IRQ* | IDE pin name | Pin name | Туре | Level shift | Description |
| 1 | PE0 | 2 | | 0 | - | - | _ | - |
| 2 | PE1 | 3 | | 1 | - | - | - | - |
| 3 | PE4 | 6 | 0 | 2 | TOUCH_IRQ | Digital in | Yes | Touch screen interrupt request |
| 4 | PE5 | 7 | 1 | 3 | TOUCH_DOUT | Digital in | Yes | Touch screen data out |
| 5 | PG5 | 1 | | 4 | LED_CC1 | Digital out | No | Ch#1 CC LED indication |
| 6 | PE3 | 5 | | 5 | LED_CV1 | Digital out | No | Ch#1 CV LED indication |
| 7 | PH3 | 15 | | 6 | - | - | _ | - |
| 8 | PH4 | 16 | | 7 | LCD_BRIGHTNESS | PWM 8-bit | Yes | LCD background control (0=max. brightness) |
| 9 | PH5 | 17 | | 8 | RTC_SELECT | Digital out | Yes | PCA21125 RTC chip select |
| 10 | PH6 | 18 | | 9 | BP_SELECT** | Digital out | Yes | TLC5925 16-output driver select |
| 11 | PB4 | 23 | | 10 | BP_OE** | Digital out | Yes | <u>TLC5925</u> 16-output driver output enable |
| 12 | PB5 | 24 | | 11 | ETH_SELECT | Digital out | Yes | ENC28J60-I/SS Ethernet chip select |
| 13 | PB6 | 25 | | 12 | BUZZER | PWM 8-bit | No | Buzzer |
| 14 | PB7 | 26 | | 13 | - | - | _ | - |
| 15 | PJ1 | 64 | | 14 | ISOLATOR1_EN | Digital out | No | Ch#1 Data out (MISO) en- able |
| 16 | PJ0 | 63 | | 15 | ADC1_SELECT | Digital out | Yes | Ch#1 <u>ADS1120</u> ADC chip select |
| 17 | PH1 | 13 | | 16 | DAC1_SELECT | Digital out | Yes | Ch#1 <u>DAC8552</u> DAC chip select |
| 18 | PH0 | 12 | | 17 | IO_EXPANDER1 | Digital out | Yes | Ch#1 MCP23S08 8-bit expander chip select |
| 19 | PD3 | 46 | 5 | 18 | ETH_IRQ | Digital in | Yes | ENC28J60-I/SS Ethernet interrupt request |
| 20 | PD2 | 45 | 4 | 19 | RTC_IRQ | Digital in | Yes | PCA21125 RTC interrupt request |
| 21 | PD1 | 44 | 3 | 20 | CONVEND2 | Digital in | Yes | Ch#2 DRDY/Interrupt |
| 22 | PD0 | 43 | 2 | 21 | CONVEND1 | Digital in | Yes | Ch#1 DRDY/Interrupt |
| 23 | PA0 | 78 | | 22 | LCD_DB8 | Digital out | Yes | LCD Data I/O 8 |
| 24 | PA1 | 77 | | 23 | LCD_DB9 | Digital out | Yes | LCD Data I/O 9 |
| 25 | PA2 | 76 | | 24 | LCD_DB10 | Digital out | Yes | LCD Data I/O 10 |
| 26 | PA3 | 75 | | 25 | LCD_DB11 | Digital out | Yes | LCD Data I/O 11 |
| 27 | PA4 | 74 | | 26 | LCD_DB12 | Digital out | Yes | LCD Data I/O 12 |
| 28 | PA5 | 73 | | 27 | LCD_DB13 | Digital out | Yes | LCD Data I/O 13 |
| 29 | PA6 | 72 | | 28 | LCD_DB14 | Digital out | Yes | LCD Data I/O 14 |
| 30 | PA7 | 71 | | 29 | LCD_DB15 | Digital out | Yes | LCD Data I/O 15 |
| 31 | PC7 | 60 | | 30 | LCD_DB7 | Digital out | Yes | LCD Data I/O 7 |
| 32 | PC6 | 59 | | 31 | LCD_DB6 | Digital out | Yes | LCD Data I/O 6 |

| 33 | PC5 | 58 | 32 | LCD_DB5 | Digital out | Yes | LCD Data I/O 5 |
|--|--|--|--|--|--|--|---|
| 34 | PC4 | 57 | 33 | LCD_DB4 | Digital out | Yes | LCD Data I/O 4 |
| 35 | PC3 | 56 | 34 | LCD_DB3 | Digital out | Yes | LCD Data I/O 3 |
| 36 | PC2 | 55 | 35 | LCD_DB2 | Digital out | Yes | LCD Data I/O 2 |
| 37 | PC1 | 54 | 50 | LCD_DB1 | Digital out | Yes | LCD Data I/O 1 |
| 38 | PC0 | 53 | 37 | LCD_DB0 | Digital out | Yes | LCD Data I/O 0 |
| 39 | PD7 | 50 | 38 | LCD_RESET | Digital out | Yes | LCD register select |
| 40 | PG2 | 70 | 39 | LCD_CS | Digital out | Yes | LCD write |
| 41 | PG1 | 52 | 40 | LCD_WR | Digital out | Yes | LCD select |
| 42 | PG0 | 51 | 41 | LCD_RS | Digital out | Yes | LCD reset |
| 43 | PL7 | 42 | 42 | TOUCH_DIN | Digital out | Yes | Touch screen data in |
| 44 | PL6 | 41 | 43 | TOUCH_CS | Digital out | Yes | Touch screen select |
| 45 | PL5 | 40 | 44 | TOUCH_SCLK | Digital out | Yes | Touch screen clock |
| 46 | PL4 | 39 | 45 | ISOLATOR2_EN | Digital out | No | Ch#2 Data out (MISO) en- able |
| 47 | PL3 | 38 | 46 | IO_EXPANDER2 | Digital out | Yes | Ch#2 MCP23S08 8-bit ex- pander chip select |
| 48 | PL2 | 37 | 47 | DAC2_SELECT | Digital out | Yes | Ch#2 DAC8552 DAC chip select |
| 49 | PL1 | 36 | 48 | ADC2_SELECT | Digital out | Yes | Ch#2 ADS1120 ADC chip select |
| 50 | PL0 | 35 | 49 | EEPROM_SELECT | Digital out | Yes | External <u>EEPROM</u> chip select |
| | | | | | | | |
| 51 | PB3 | 22 | 50 | MISO | Digital in | Yes | SPI MISO signal |
| 51 52 | PB3 PB2 | 22 21 | 50 51 | MISO MOSI | Digital in Digital out | Yes Yes | SPI MISO signal SPI MOSI signal |
| | | | | | <u> </u> | | |
| 52 | PB2 | 21 | 51 | MOSI | Digital out | Yes | SPI MOSI signal |
| 52 53 | PB2 PB1 | 21 20 | 51 52 | MOSI SCLK | Digital out Digital out | Yes Yes | SPI MOSI signal SPI SCLK signal |
| 52 53 54 | PB2 PB1 PB0 | 21 20 19 | 51 52 53 | MOSI SCLK LCDSD_CS | Digital out Digital out Digital out | Yes Yes Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select |
| 52 53 54 55 | PB2 PB1 PB0 PF0 | 21 20 19 97 | 51 52 53 54 (A0) | MOSI SCLK LCDSD_CS TEMP_ANALOG | Digital out Digital out Digital out Analog in | Yes Yes Yes No | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac con- |
| 52 53 54 55 56 | PB2 PB1 PB0 PF0 PF1 | 21 20 19 97 96 | 51 52 53 54 (A0) 55 (A1) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT | Digital out Digital out Digital out Analog in Digital out | Yes Yes Yes No No | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac |
| 525354555657 | PB2 PB1 PB0 PF0 PF1 | 21 20 19 97 96 | 51 52 53 54 (A0) 55 (A1) 56 (A2) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART | Digital out Digital out Digital out Analog in Digital out Digital out | Yes Yes No No | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F convert- |
| 52535455565758 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 | 21 20 19 97 96 95 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in | Yes Yes No No No Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F convert- |
| 5253545556575859 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 | 21 20 19 97 96 95 94 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in | Yes Yes No No No Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F convert- |
| 52 53 54 55 56 57 58 59 60 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 | 21 20 19 97 96 95 94 93 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in | Yes Yes No No No Yes Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F convert- |
| 52 53 54 55 56 57 58 59 60 61 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 PF6 | 21 20 19 97 96 95 94 93 92 91 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) 60 (A6) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 BATT_NTC1 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in Digital in Digital in | Yes Yes No No No Yes Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F converter for Battery NTC — — External digital trigger input |
| 52 53 54 55 56 57 58 59 60 61 62 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 PF6 PF7 | 21 20 19 97 96 95 94 93 92 91 90 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) 60 (A6) 61 (A7) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 BATT_NTC1 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in Digital in Digital in | Yes Yes No No No Yes Yes - Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F converter for Battery NTC — — External digital trigger input |
| 52 53 54 55 56 57 58 59 60 61 62 63 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 PF6 PF7 | 21 20 19 97 96 95 94 93 92 91 90 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) 60 (A6) 61 (A7) 62 (A8) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 BATT_NTC1 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in Digital in Digital in | Yes Yes No No No Yes Yes - Yes - Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F converter for Battery NTC — — External digital trigger input |
| 52 53 54 55 56 57 58 59 60 61 62 63 64 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 PF6 PF7 PK0 PK1 | 21 20 19 97 96 95 94 93 92 91 90 89 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) 60 (A6) 61 (A7) 62 (A8) 63 (A9) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 BATT_NTC1 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in Digital in Digital in | Yes Yes No No No Yes Yes - Yes - Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F converter for Battery NTC — — External digital trigger input |
| 52 53 54 55 56 57 58 59 60 61 62 63 64 65 | PB2 PB1 PB0 PF0 PF1 PF2 PF3 PF4 PF5 PF6 PF7 PK0 PK1 PK2 | 21 20 19 97 96 95 94 93 92 91 90 89 88 87 | 51 52 53 54 (A0) 55 (A1) 56 (A2) 57 (A3) 58 (A4) 59 (A5) 60 (A6) 61 (A7) 62 (A8) 63 (A9) 64 (A10) | MOSI SCLK LCDSD_CS TEMP_ANALOG PWR_DIRECT PWR_SSTART BATT_NTC2 BATT_NTC1 | Digital out Digital out Digital out Analog in Digital out Digital out Digital in Digital in Digital in | Yes Yes No No No Yes Yes | SPI MOSI signal SPI SCLK signal LCD SD-card select NTC temperature sensor AC power direct triac control AC power soft-start triac control Opto-isolated V/F converter for Battery NTC Opto-isolated V/F converter for Battery NTC — — External digital trigger input |

| | | | | | | supported in firmware M1) |
|----|-----|----|------------------|-------------|----|---------------------------|
| 69 | PK6 | 83 | 68 (A14) LED_CC2 | Digital out | No | Ch#2 CC LED indication |
| 70 | PK7 | 82 | 69 (A15) LED_CV2 | Digital out | No | Ch#2 CV LED indication |
| 71 | PD0 | 43 | | _ | _ | _ |
| 72 | PD1 | 44 | | - | - | - |

^{*} The Arduino Due board has powerful interrupt capabilities that allows you to attach an interrupt function on all available pins. You can directly specify the pin number in attachInterrupt().

^{**} Not available on board variant without binding posts.

^{***} Not used on Arduino shield+BP board variant where LED_PWR (OUT15 of the TLC5925 driver) has the same function.