

Freedom KL03Z Platform Pin-Out Connections

The Freescale Freedom development platform is a set of software and hardware tools for evaluation and development. It is ideal for rapid prototyping of microcontroller-based applications. The Freescale Freedom KL03Z hardware, FRDM-KL03Z, is a simple, yet sophisticated design featuring a Kinetis L Series microcontroller, built on the ARM® Cortex®-M0+ core.

This engineering bulletin provides the pin connections for all MCU pins, the FRDM-KL03Z I/O pinouts, headers, Arduino R3 compatibility chart, and the OpenSDA MCU pinout.

[Table 1](#) contains the pin-out assignments for the platform board.

Table 1. Freedom KL03Z Platform Board Pin-Out Connections

| | | UART | PWM | GPIO | Interrupt | I2C | SPI | A/D | Input Capture | Comparator | LED |
|-----|-----------------------|----------|----------|------|-----------|----------|-----------|-----------|---------------|------------|-----|
| D0 | Arduino Uno | RX | | ✓ | ✓ | | | | | | |
| | FREEDOM-KL03Z (PTB2) | UART0_RX | | ✓ | ✓ | | | | | | |
| D1 | Arduino Uno | TX | | ✓ | ✓ | | | | | | |
| | FREEDOM-KL03Z (PTB1) | UART0_TX | | ✓ | ✓ | | | | | | |
| D2 | Arduino Uno | | | ✓ | ✓ | | | | | | |
| D3 | Arduino Uno | | ✓ | ✓ | ✓ | | | | | | |
| | FREEDOM-KL03Z (PTB6) | | FTM1_CH1 | ✓ | ✓ | | | | | | |
| D4 | Arduino Uno | | | ✓ | ✓ | | | | | | |
| D5 | Arduino Uno | | ✓ | ✓ | ✓ | | | | | | |
| | FREEDOM-KL03Z (PTB7) | | FTM1_CH0 | ✓ | ✓ | | | | | | |
| D6 | Arduino Uno | | ✓ | ✓ | ✓ | | | | | ✓ | |
| | FREEDOM-KL03Z (PTB5) | | FTM1_CH1 | ✓ | ✓ | | | ADC0_SE1 | FTM0_CH1 | COMP0_IN1 | |
| D7 | Arduino Uno | | ✓ | ✓ | ✓ | | | | | ✓ | |
| | FREEDOM-KL03Z (PTA0) | | FTM1_CH0 | ✓ | ✓ | | | ADC0_SE15 | FTM1_CH0 | COMP0_IN2 | |
| D8 | Arduino Uno | | ✓ | ✓ | ✓ | | | | ✓ | | |
| | FREEDOM-KL03Z (PTB10) | | FTM0_CH1 | ✓ | X | | | | FTM0_CH1 | | |
| D9 | Arduino Uno | | ✓ | ✓ | ✓ | | | | | | |
| | FREEDOM-KL03Z (PTB11) | | FTM0_CH0 | ✓ | X | | | | | | |
| D10 | Arduino Uno | | ✓ | ✓ | ✓ | | ✓ | | | | |
| | FREEDOM-KL03Z (PTA5) | | FTM0_CH1 | ✓ | X | | SPI0_PCS0 | | FTM0_CH1 | | |
| D11 | Arduino Uno | | ✓ | ✓ | ✓ | | ✓ | | | | |
| | FREEDOM-KL03Z (PTA7) | | | ✓ | ✓ | | SPI0_MOSI | | | | |
| D12 | Arduino Uno | | ✓ | ✓ | ✓ | | ✓ | | | | |
| | FREEDOM-KL03Z (PTA6) | | FTM0_CH0 | ✓ | X | | SPI0_MISO | | FTM0_CH0 | | |
| D13 | Arduino Uno | | ✓ | ✓ | ✓ | | ✓ | | | | ✓ |
| | FREEDOM-KL03Z (PTB0) | | ✓ | ✓ | ✓ | | SPI0_SCK | ADC0_SE9 | | | |
| D14 | Arduino Uno | | ✓ | ✓ | ✓ | SDA | | | | | |
| | FREEDOM-KL03Z (PTB4) | UART0_TX | | ✓ | ✓ | I2C1_SDA | | A4 | | | |
| D15 | Arduino Uno | | ✓ | ✓ | ✓ | SCL | | A5 | | | |
| | FREEDOM-KL03Z (PTB3) | | ✓ | ✓ | ✓ | I2C1_SCL | | | | | |
| A0 | Arduino Uno | | ✓ | ✓ | ✓ | | | A0 | | | |
| | FREEDOM-KL03Z (PTA9) | | ✓ | X | ✓ | | | ADC0_SE2 | | | |
| A1 | Arduino Uno | | ✓ | ✓ | ✓ | | | A1 | | | |
| | FREEDOM-KL03Z (PTA8) | | ✓ | X | ✓ | | | ADC0_SE3 | | | |
| A2 | Arduino Uno | | ✓ | ✓ | ✓ | | | A2 | | | |
| | FREEDOM-KL03Z (PTA12) | | ✓ | ✓ | ✓ | | | ADC0_SE0 | | | |
| A3 | Arduino Uno | | ✓ | ✓ | ✓ | | | A3 | | | |
| | FREEDOM-KL03Z (PTA2) | | | | | | | | | | |
| A4 | Arduino Uno | | ✓ | ✓ | ✓ | SDA | | A4 | | | |
| | FREEDOM-KL03Z (PTB13) | | | | | | | | | | |
| A5 | Arduino Uno | | ✓ | ✓ | ✓ | SCL | | A5 | | | |

Revision History

| Rev. number | Date | Substantive change(s) |
|-------------|---------|---|
| 0 | 07/2014 | Document created. |
| 1 | 08/2014 | Changes to A/D connections for D7, D13, D14, D15. |

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