|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Function | Module | GPIO | Pin # |  | GPIO | Module | Function |
| Sensor power | I2C sensors | 3.3V | 1 | 2 | 5V |  |  |
| Sensor SDA | I2C sensors | GPIO2 SDA (I2C) | 3 | 4 | 5V |  |  |
| Sensor SCK | I2C sensors | GPIO3 SCK (I2C) | 5 | 6 | GND | I2C sensor GND | GND |
|  |  | GPIO4 | 7 | 8 | GPIO14 (UART TX) | SIM800 RX | Receive |
|  |  | GND | 9 | 10 | GPIO15 (UART RX) | SIM800 TX | Transmit |
|  |  | GPIO17 Chip Enable-CE1 (SPI1) | 11 | 12 | GPIO18 Chip Enable-CE0 (SPI1) [PWM] | LiPo Shim Pin 12 | Low-voltage shutdown signal |
|  |  | GPIO27 | 13 | 14 | GND | SIM800 GND | GND |
|  |  | GPIO22 | 15 | 16 | GPIO23 |  |  |
| 3.3V ref voltage | LiPo Shim | 3.3V | 17 | 18 | GPIO24 |  |  |
|  |  | GPIO10 MOSI (SPI0) | 19 | 20 | GND |  |  |
|  |  | GPIO9 MISO (SPI0) | 21 | 22 | GPIO25 |  |  |
|  |  | GPIO SCLK (SPI0) | 23 | 24 | GPIO8 Chip Enable-CE0 (SPI0) |  |  |
|  |  | GND | 25 | 26 | GPIO7 Chip Enable-CE1 (SPI0) |  |  |
|  |  | GPIO 0 EEPROM SDA (I2C) | 27 | 28 | GPIO 1 EEPROM SCK (I2C) |  |  |
|  |  | GPIO5 | 29 | 30 | GND |  |  |
|  |  | GPIO6 | 31 | 32 | GPIO12 (PWM) |  |  |
|  |  | GPIO13 (PWM) | 33 | 34 | GND |  |  |
|  |  | [PWM] GPIO19 MISO (SPI1) | 35 | 36 | GPIO16 Chip Enable-CE2 (SPI1) |  |  |
|  |  | GPIO26 | 37 | 38 | GPIO 20 MISO (SPI1) |  |  |
|  |  | GND | 39 | 40 | GPIO 21 SCLK (SPI1) |  |  |

LiPo Shim Pinout

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | GPIO | Pin # |  | GPIO | Function |
| Provides 3.3V reference voltage to trigger safe shutdown. | 3.3V | 1 | 2 | 5V | Provides 5V to Witty Pi3 Mini power management board. |
|  |  | 3 | 4 |  |  |
|  |  | 5 | 6 | GND | Ground |
|  |  | 7 | 8 |  |  |
|  |  | 9 | 10 |  |  |
|  |  | 11 | 12 | GPIO18 | Connects to Pi GPIO18 to provide the shutdown signal when low voltage (< 3.3V) detected on battery. |