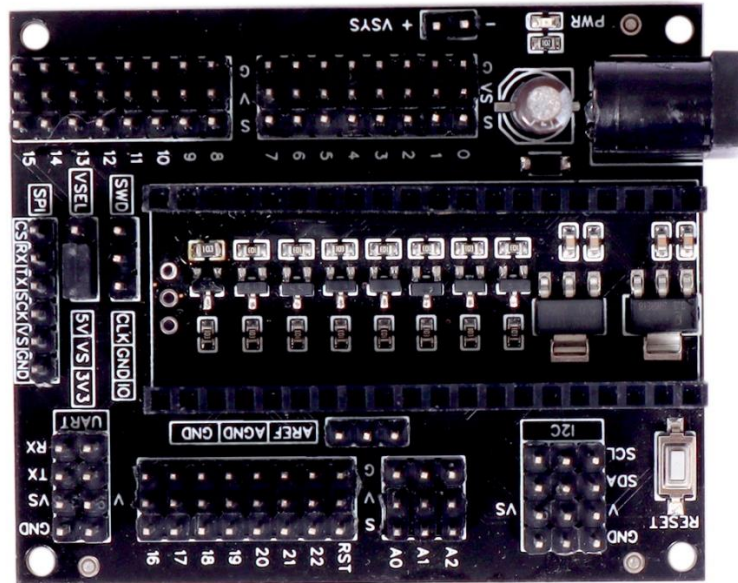


Pico RP2040 IO Expansion Board



Description:

The Pico IO Expansion Shield acts as a breakout board for the Adiy fly and Pico RP2040.

In addition, each pinout includes power and GND pins for easy connection to sensors or servos. Some of the pinouts include a 5V/3.3V selectable power making it easier to work with 5V and 3.3V digital devices. The unit comes partially/fully assembled. Just plug in your Pico and you are ready to go.

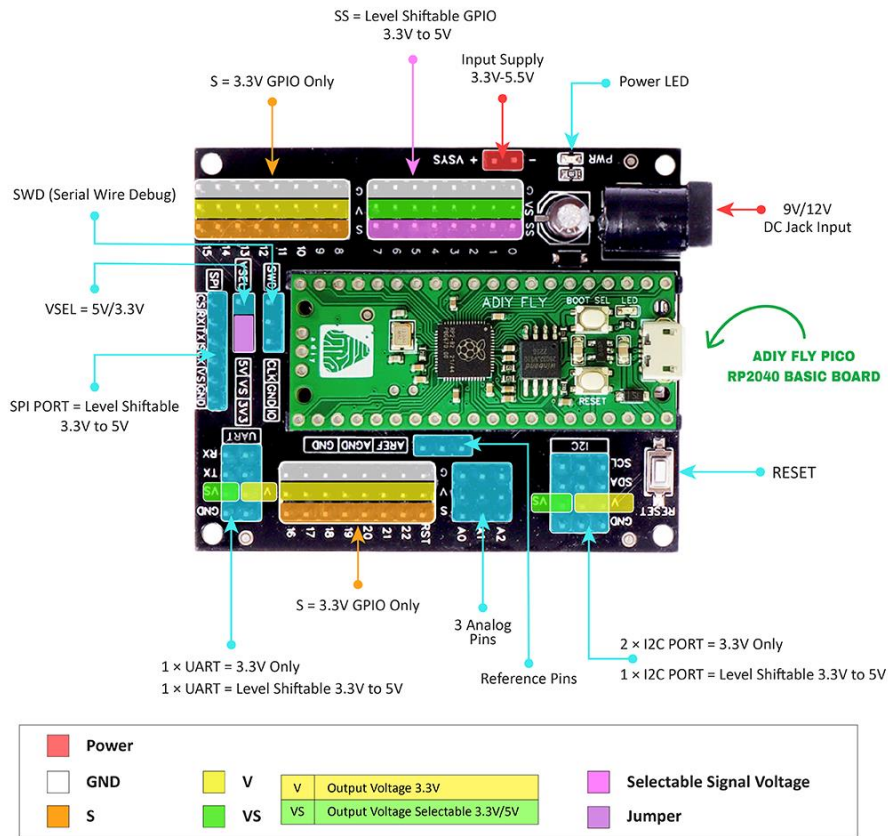
Pico RP2040 IO Expansion Shield is specifically designed to facilitate an easy connection between Pico RP2040 and many other devices. In essence, it expands the Pico RP2040 controller to link those devices in a simple and trouble-free manner.

Features and Specifications:

1. Power input via barrel jack or VSYS header.
2. Input Voltage (V): 6 ~ 15
3. 23 GPIO are digital-only (GND, power and signal format).
4. 8 GPIO ports with 5V/3.3V selectable power.
5. 3 Analog pins with power output and GND.
6. 16 PWM pins.
7. 2 I2C ports with 3.3V power and 1 I2C port with a 5V/3.3V selectable power.
8. 1 UART port with 3.3V power and 1 UART port with a 5V/3.3V selectable power.
9. 1 SPI port with 5/3.3V selectable power.
10. 1 AREF output and 1 AGND output.
11. 1 SWD Port.
12. 1 3.3V, 1A capable regulator output, available all through the board.
13. 1 5V, 1A capable regulator output, available all through the board.
14. 1 Reset button.
15. 1 Power LED
16. Dimensions: Width (mm)× Height (mm) : 65 × 54

Pin Configuration:

PICO RP2040 IO EXPANSION BOARD



DC Input: Supply input voltage to the board through this DC Jack. Input voltage can range between 7-12 Volts. This powers the onboard 5V and 3.3V, 1A regulators. The board can be powered either through this DC Jack or through the micro-USB connector on the Pico board. Both the power supplies can be connected simultaneously without any problems.

Power LED: Lights up when the board is powered either through the DC input jack or the Pico micro-USB connector.

VSYS header: Another way to power the board. NOTE: “The simplest way to safely add a second power source to Pico is to feed it into VSYS via another Schottky diode.” Check section 4.5. “Powering Pico” in the Pico datasheet for more information.

GPIO Block: Level shiftable GPIO between 5V and 3.3V. 8 GPIO pins with POWER and GND pins next to each of the GPIO pins for ease of connection to various peripherals. This block of 8 GPIO pins can be level shifted between 5V and 3.3V. Level Shifting is done using the VSEL jumper.

GPIO Block: 3.3V GPIO only. 8 GPIO pins with POWER and GND pins next to each of the GPIO pins for ease of connection to various peripherals.

SWD: Serial Wire Debug port for the Pico microcontroller.

VSEL, Voltage Selector Switch. Switches the signal logic levels along with the corresponding VCC. Choose between 5V and 3.3V. Operates on GPIO Block 1(4), 2 I2C Ports (14), SPI Port (8), UART Port (9)

SPI Port: Level Shiftable between 5V and 3.3V.

UART Port: Level Shiftable between 5V and 3.3V.

UART Port: 3.3V only

GPIO Block: 3.3V GPIO only. 8 GPIO pins with POWER and GND pins next to each of the GPIO pins for ease of connection to various peripherals.

AREF, AGND and GND Pins.

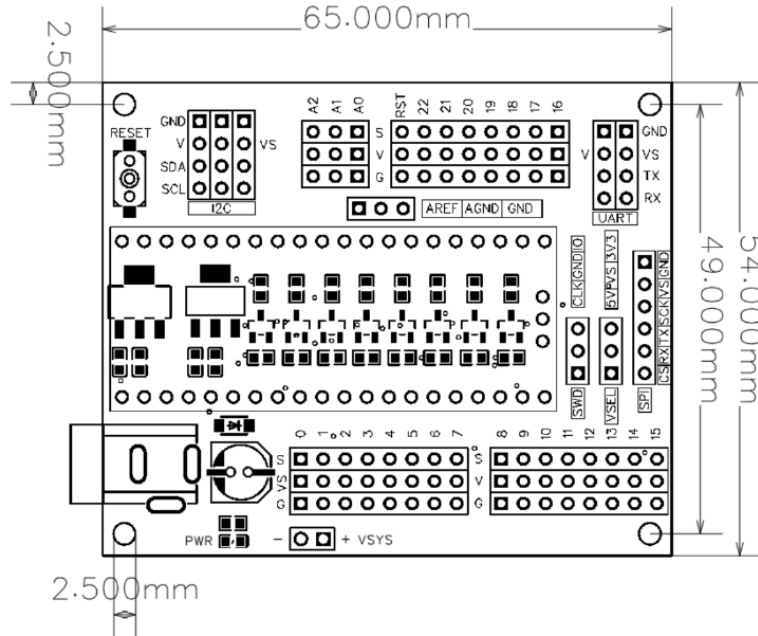
Analog Block: 3 Analog pins with POWER and GND pins next to each of the analog pins for ease of connection to various sensors.

I2C Ports: 2 I2C Ports with signal levels shift-able between 5V and 3.3V.

I2C Port: Single I2C Port with 3.3V only signal level.

Reset Switch: Resets the installed Pico microcontroller when pressed. Insert Pico, with the micro-USB connector of the Pico ending up next to the DC Jack.

Shipment Dimensions:



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