

Key Features

- **Works with Pi-UpTimeUPS.**
- **Solder and solderless connections for all GPIO**
- **Solder and solderless connections for all analog ports**
- **Twelve 16-bit Analog (ADC) ports available.**
- **Python code for use of the Analog ports.**
- **5V UPS and 3.3V UPS power from Pi-UpTimeUPS.**
- **Stacked with Pi-UpTimeUPS.**
- **Protective fuse for 3.3V UPS and 5V UPS.**

Pi-UpTimeUPS-BO – all the capabilities of Pi-UpTimeUPS

Pi-UpTimeUPS-BO board exposes the full capabilities of Pi-UpTimeUPS.

Pi-UpTimeUPS provides 5V and 3.3V UPS power. Pi-UpTimeUPS also provides twelve analog ports. All these capabilities are exposed using the Pi-UpTimeUPS-BO board. A maximum of 1.7 Amps are available for use from Pi-UpTimeUPS board. From this, 800 mA can be used for the 3.3V UPS power.

Pi-UpTimeUPS-BO board combines the functions of Pi-EzConnect as well as Pi-16ADC board into one board.

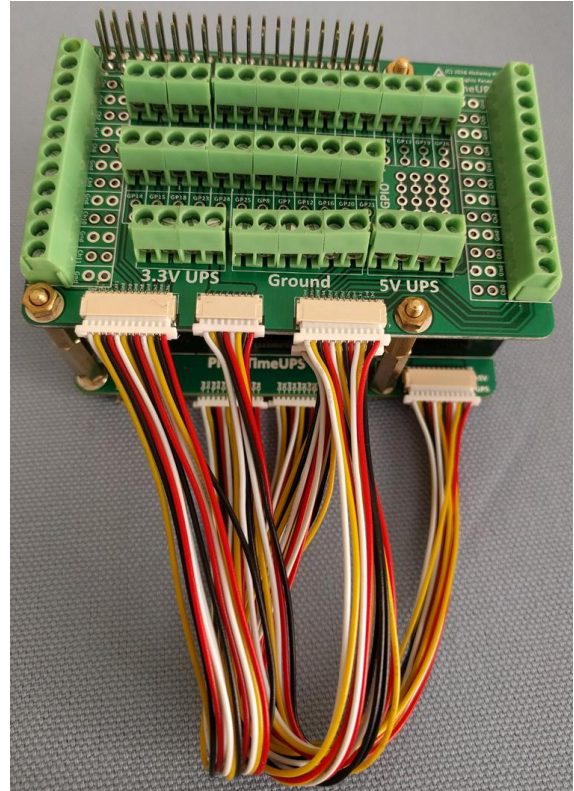
All twelve 16-bit Analog ports provide accurate data gathering.

Solderless connections are provided for all GPIO ports and for the twelve¹ analog ports.

Two solder connections are provided for all GPIO ports and the Analog Ports.

The Pi-UpTimeUPS board and the Pi-UpTimeUPS-BO board can be stacked in any order. Header pins on both these boards allow other HATs or boards to be stacked on these boards.

Pi-UpTimeUPS-BO board is strongly recommended as a accessory to the Pi-UpTimeUPS board.



¹ Four Analog ports are used by Pi-UpTimeUPS for monitoring such things as Input Power, battery level etc.

Specifications

General Information

Model Number: Pi-UpTimeUPS

Raspberry Pi Models supported

Any Raspberry Pi with a 40-pin header is supported. For example, Pi 2, Pi 3 etc. Older Raspberry Pi models with a 26-pin header are not supported.

Power

Input Power: Supplied by Pi-UpTimeUPS board.

Power Adapter: Not included. Use the same power adapter as Raspberry Pi.

Maximum Current: 1.7 Amps – system level maximum. Used by 5V and 3.3V power.

Maximum 3.3V UPS current: 800 mA. 3.3V is generated by Pi-UpTimeUPS.

Ripple: Less than 25mV p-p.

Operating Frequency: 18.5kHz.

ADC

Power: 0.8mW or less. Typical power is 0.5mW.

ADC Chip used: Linear Technologies™ LTC2497™ ADC.

Number of Analog Channels: Sixteen single-ended or eight adjacent differential channels, software selectable.

Maximum analog Voltage: 2.5V p-p. More than 2.5V indicates an over-voltage condition. Differential channels - maximum voltage is from -2.5V to +2.5V.

Maximum DC Voltage: Maximum +5V.

Resolution: 16 bits or appx 39 micro-volts per bit.

Conversion Rate: Maximum 17 samples per second for all channels. Recommended scan rate is 1-2 samples per second per channel.

Calibration: Auto calibration on power reset.

Interface: Interfaces to Raspberry Pi over the I²C bus at 100 kHz.

I²C address: Selectable by jumpers labelled A0, A1 and A2. Maximum of 27 addresses.

I²C Bus Speed: 100kHz (default). Other speeds are also supported.

Other: 50/60 Hz noise rejection.

Terminal Blocks

Capabilities: 3.5 mm spacing. 10A, 300V maximum for each connection. 16-26 AWG wire. Torque (screw) 0.22-0.25 Nm (1.9-2.2 lb-in). M2 screw thread.

Spacers

M2.5x23mm spacers recommended.

Dimensions

Board dimensions: 83mm x 35mm x 70mm (3.3" x 2.2" x 1.4").

Weight: About 50g (1.7 oz.)

Warranty

90-day limited warranty.

Other Information

Required peripheral: Pi-UpTimeUPS board.

RoHS Compliant. Electronic components, board etc. are RoHS compliant.

Operating Temperature: 0°C to +50°C with batteries. 0°C to +70°C without batteries.

Operating Humidity: 10% to 80% non-condensing.

Code download: www.piuptime.com

Product Video: <https://youtu.be/ZMUKscsNk1I>

Please see Pi-UpTimeUPS information.

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