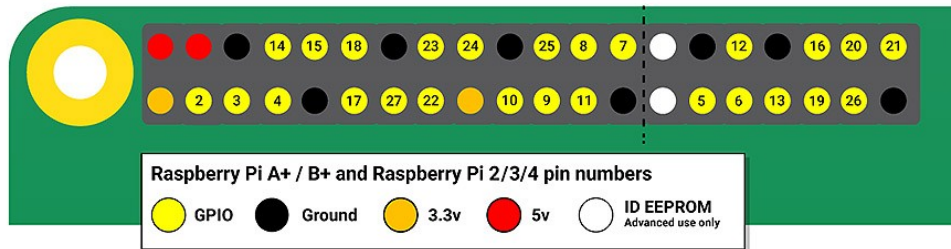


Raspberry Pi GPIO Pins: Any of the GPIO pins can be designated (in software) as an input or output pin and used for a wide range of purposes.



Note: the numbering of the GPIO pins is not in numerical order; GPIO pins 0 and 1 are present on the board (physical pins 27 and 28) but are reserved for advanced use (see below).

Voltages

Two 5V pins and two 3V3 pins are present on the board, as well as a number of ground pins (0V), which are unconfigurable. The remaining pins are all general purpose 3V3 pins, meaning outputs are set to 3V3 and inputs are 3V3-tolerant.

Outputs

A GPIO pin designated as an output pin can be set to high (3V3) or low (0V).

Inputs

A GPIO pin designated as an input pin can be read as high (3V3) or low (0V). This is made easier with the use of internal pull-up or pull-down resistors. Pins GPIO2 and GPIO3 have fixed pull-up resistors, but for other pins this can be configured in software.

More

As well as simple input and output devices, the GPIO pins can be used with a variety of alternative functions, some are available on all pins, others on specific pins.

- PWM (pulse-width modulation)
 - Software PWM available on all pins
 - Hardware PWM available on GPIO12, GPIO13, GPIO18, GPIO19