NUTTY CIRCUITS

RPI-LED

GPIO LED Indicator Board

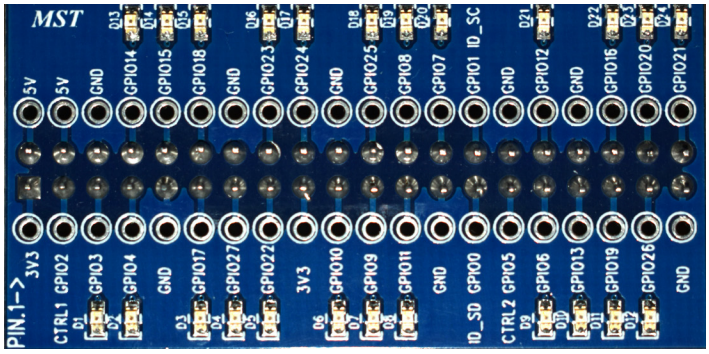
The new Micronatic™ RPI-LED board used for easy GPIO LED indication. Easy to plug in and remove so it can be switched between Raspberry Pi single board computers. Designed to be used with Raspberry Pi's that support the 40-Pin header. Also great for creating spectacular light shows.

The RPI-LED board has 24 LEDs that can be used for GPIO Indication and two GPIO pins with on board pull-ups for use with external switches for control input. The board has quick reference GPIO labeling next to each port pin for easy identification and an open pad for soldering external signals and expansion.

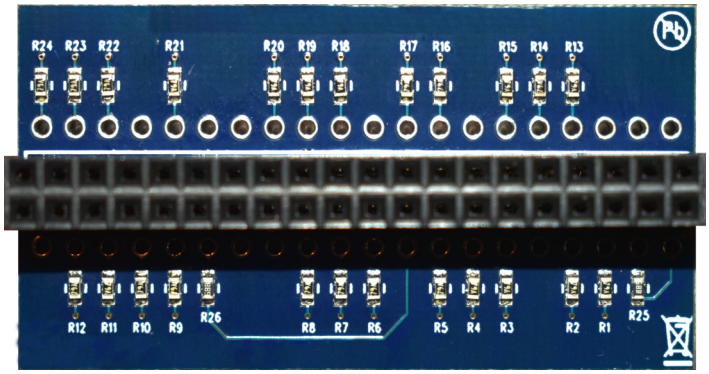
The board is compatible with the Raspberry Pi 4b, 3b, 2b, and Raspberry Pi Zero and Zero W. Currently the board is available with either Green or High Intensity Blue LEDs.

Notice in the illustration of the RPI-LED Top Side image that Pin 1 is marked. This Pin 1 label should be lined up with the 40-Pin Header Pin 1. Normally Pin 1 can be distinguished by a **Square** solder pad on the back side of the board where the 40-Pin header is soldered.

RPI-LED Board Top Side



RPI-LED Board Bottom Side



Specifications

- 24 GPIO Indicator LEDs
- 2 Switch inputs with on board pull-ups
- Green or High Intensity Blue LED versions

The LED Board is Led-Free and uses all RoHS compliant components.

Operating Voltage:	3.3V
Operating Temperature:	-30°C - +85°C
Current Draw, all LEDs on,	
Standard Green LEDs:	47.5mA - 50mA @ 3.3V
High Intensity Blue LEDs:	34mA - 36mA @ 3.3V

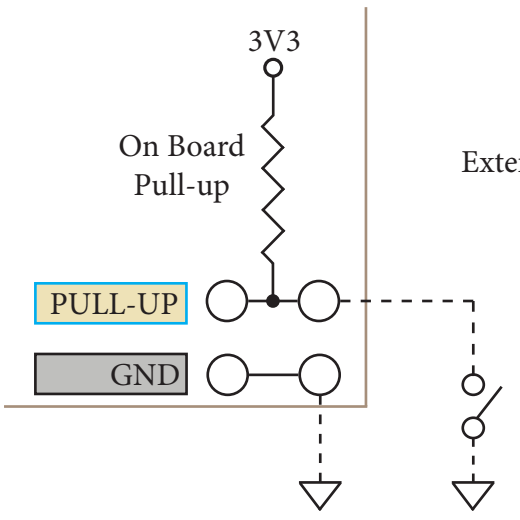
Board Dimensions,		
Height x Length x Width:	0.450 in x 2.064in x 1.064in	All dimensions ± 0.05in

The RPI-LED pinout figure is color coded to allow for easy signal/pin identification. Power outputs are shown in Blue and Ground pins are Gray. All GPIO pins are Brown. The LED board function columns show the position of the 24 LEDs in Green and two control signals with pull-up resistors in Yellow.

The two pins labeled **PULL-UP** can be used to provide control inputs to applications by connecting an external switch. When the switch is off or not connected the input will read a logic HIGH or 3.3V. When an external switch is connected and turned on the input will read a logic LOW or 0V.

RPI-LED PINOUTS

FUNCTION	NAME	PIN #	PIN #	NAME	FUNCTION
	3V3	1	2	5V	
PULL-UP	GPIO02	3	4	5V	
LED	GPIO03	5	6	GND	
LED	GPIO04	7	8	GPIO14	LED
	GND	9	10	GPIO15	LED
LED	GPIO17	11	12	GPIO18	LED
LED	GPIO27	13	14	GND	
LED	GPIO22	15	16	GPIO23	LED
	3V3	17	18	GPIO24	LED
LED	GPIO10	19	20	GND	
LED	GPIO09	21	22	GPIO25	LED
LED	GPIO11	23	24	GPIO08	LED
	GND	25	26	GPIO07	LED
	GPIO00	27	28	GPIO01	
PULL-UP	GPIO05	29	30	GND	
LED	GPIO06	31	32	GPIO12	LED
LED	GPIO13	33	34	GND	
LED	GPIO19	35	36	GPIO16	LED
LED	GPIO26	37	38	GPIO20	LED
	GND	39	40	GPIO21	LED



External switch hookup example.

External Switch
ON = 0V
OFF = 3.3V

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The RPI-LED board is meant to be used as a development tool providing LED indication for 24 of the GPIO pins on the Raspberry Pi, 2b, 3b, 4b, and Zero. Purchaser, User, or any other party may not duplicate for sale, modify for sale, or share copyrighted documentation without express permission from Microsystem Technologies. Microsystem Technologies retains all rights regarding intellectual properties and copyrighted materials related to the RPI-LED product.

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