

GPIO Module & Userspace Application Interface Manual

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Table of Contents

GPIO Kernel Module Interface.....	3
Method.....	3
Read state of buttons.....	3
Change state of LEDs.....	4
GPIO Userspace Application.....	5
Method.....	5
Read state of buttons.....	5
Change state of LEDs.....	5

GPIO Kernel Module Interface

Method

The method used to talk to the kernel module and work with the buttons and the LEDs is the proc filesystem. You can use cat to read from the proc file or echo to write to the proc file.

The location of the procfile is: /proc/my_gpio.

Read state of buttons

To get the value using the kernel module, you have to do two steps:

First you have to select which button you want to read by writing to the proc file.

There are 3 buttons that are identified by the numbers 1, 2 and 3.

Format: b <button number>

Example: echo "b1" > /proc/my_gpio

This will set button 1 to be read.

The second step is to get the state of the button by reading the proc file.

Example: cat /proc/my_gpio

This will read the value of button 1.

Change state of LEDs

To turn a LED on or off using the kernel module you have to write 1 (on) or 0 (off) to the proc file.

There are 3 LEDs that are identified by the numbers 1, 2, and 3.

Format: 1 <led number><on/off>

Example 1: echo "l11" > /proc/my_gpio

This will turn LED1 on.

Example 2: echo "l10" > /proc/my_gpio

This will turn LED1 off.

GPIO Userspace Application

Method

The method used to work with the buttons and the LEDs is via an application called gpio.

The default location is /bin/gpio.

Read state of buttons

To get the value using the gpio application you have to select which button you want to read by using its number.

There are 3 buttons that are identified by the numbers 1, 2 and 3.

Format: `gpio b <button number>`

Example: `gpio b 1`

This will set button 1 to be read.

Change state of LEDs

To turn a LED on or off using the gpio application you have to write 1 (on) or 0 (off) to a LED.

There are 3 LEDs that are identified by the numbers 1, 2, and 3.

Format: `gpio l <led number> <on/off>`

Example 1: `gpio l 1 1`

This will turn LED1 on.

Example 2: `gpio l 1 0`

This will turn LED1 off.