Orange PI PC - How to use GPIO for push buttons : Tutorial

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By Schmurtz, April 25, 2018

Schmurtz

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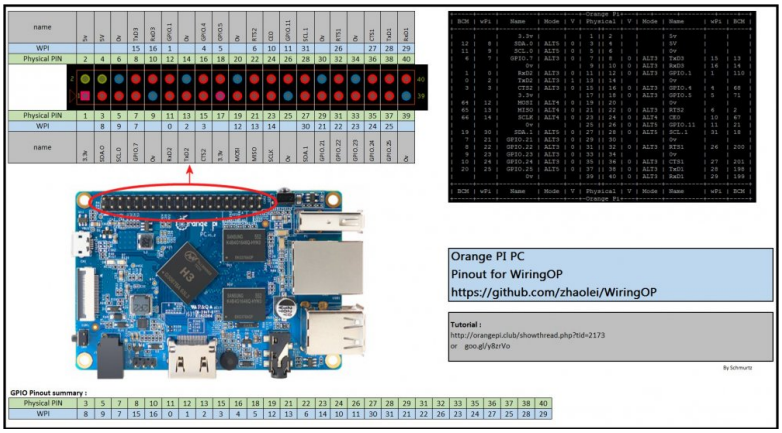
Hi, This topic was a initially a question and become a tutorial to use push buttons on orange pi PC.
This tutorial has been made with an Orange PI PC running on "Armbian_5.35_Orangepipc_Debian_jessie_default_3.4.113.img".

With this example you will be able to launch 3 different scripts for each push button :
/usr/local/bin/run<Wpi GPIO number>short.sh -> immediately launched when a button is pressed
/usr/local/bin/run<Wpi GPIO number>long.sh -> launched after a long pression
/usr/local/bin/run<Wpi GPIO number>release.sh -> launched when a button is released (but not after a long pression)

I've made this image to know easily see the correspondence between WiringOP and physical Orange PI PC connector :



Mhhh if you want to modify it, you'll find the excel source file here.

Sources :
http://orangepi.club/showthread.php?tid=2173 -> excellent tutorial for beginners !
https://github.com/zhaolei/WiringOP -> a modified WiringPi for OrangePi
http://nix.zeya.org/wiki/разработка_средств_аппаратного_управления_для_orange_pi_pc -> a very good example of program in C to use Orange PI GPIO with push buttons

To install and compile the WiringOP library :

```
mkdir downloads
cd downloads
git clone https://github.com/zhaolei/WiringOP.
cd WiringOP/
sudo ./build
```

Make a test :

```
gpio readall
```

You should obtain something like that :

```
+-----+-----+----------+------+---+-Orange Pi
| BCM | wPi |   Name   | Mode | V | Physical
+-----+-----+----------+------+---+----++----
|     |     |     3.3v |      |   |  1 || 2
|  12 |   8 |    SDA.0 | ALT5 | 0 |  3 || 4
|  11 |   9 |    SCL.0 | ALT5 | 0 |  5 || 6
|   6 |   7 |   GPIO.7 | ALT3 | 0 |  7 || 8
|     |     |       0v |      |   |  9 || 10
|   1 |   0 |     RxD2 | ALT3 | 0 | 11 || 12
|   0 |   2 |     TxD2 | ALT3 | 1 | 13 || 14
|   3 |   3 |     CTS2 |   IN | 1 | 15 || 16
|     |     |     3.3v |      |   | 17 || 18
|  64 |  12 |     MOSI | ALT4 | 0 | 19 || 20
|  65 |  13 |     MISO | ALT4 | 0 | 21 || 22
|  66 |  14 |     SCLK | ALT4 | 0 | 23 || 24
|     |     |       0v |      |   | 25 || 26
|  19 |  30 |    SDA.1 | ALT5 | 0 | 27 || 28
|   7 |  21 |  GPIO.21 |   IN | 1 | 29 || 30
|   8 |  22 |  GPIO.22 |   IN | 1 | 31 || 32
|   9 |  23 |  GPIO.23 |   IN | 1 | 33 || 34
|  10 |  24 |  GPIO.24 |   IN | 1 | 35 || 36
|  20 |  25 |  GPIO.25 | ALT5 | 0 | 37 || 38
|     |     |       0v |      |   | 39 || 40
+-----+-----+----------+------+---+----++----
| BCM | wPi |   Name   | Mode | V | Physical
+-----+-----+----------+------+---+-Orange Pi
```

Now we are going to write a program in C to detects pushes on buttons :

```
nano pushbuttons.c
```

The copy / paste the C program below :
(you should modify the numbers of buttons that you use, the WiringOP pins that you use, you can create scripts later)

Reveal hidden contents

OK now compile it and run it :

```
gcc -lwiringPi -lwiringPiDev -o pushbuttons pu
./pushbuttons
```

Press a button and you're done

FYI : To use the native button on the motherboard of the orange PI PC you can use "acpid" to make working for reboot

I hope it will be useful to some of you.

Schmurtz
Topic author

April 25, 2018

Reserved

Schmurtz
Topic author

April 30, 2018

I finally turned this topic in a tutorial for the community

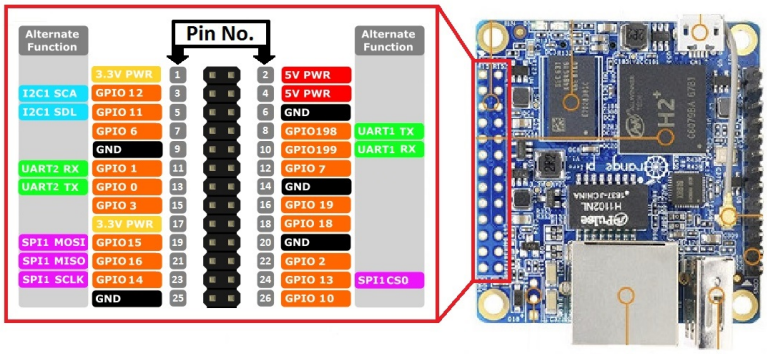
jackandjohn

March 10, 2019

Successfully used this on an Orange Pi Zero with

```
unsigned int nums = 2;
unsigned int WpiPinsSelection[] = {8, 24};
```

Pin "24" corresponds to physical pin 26 as per this pinout guide:



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