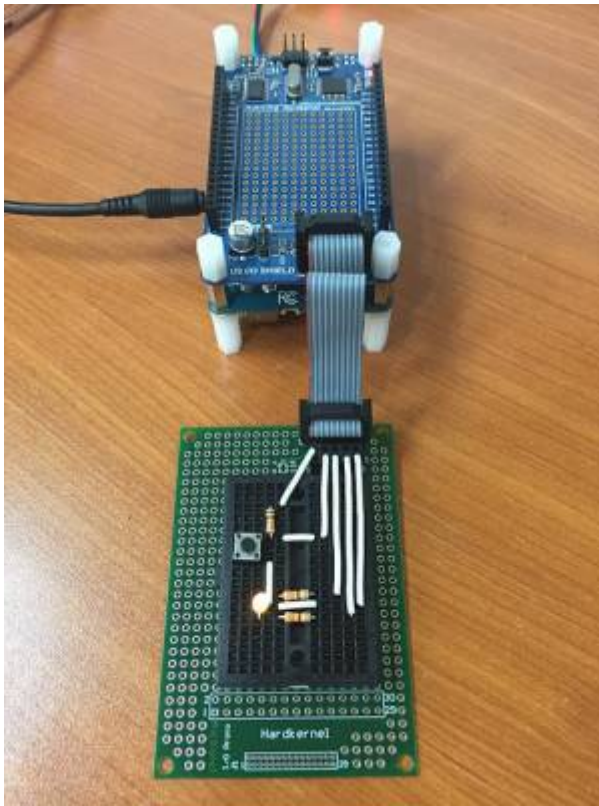


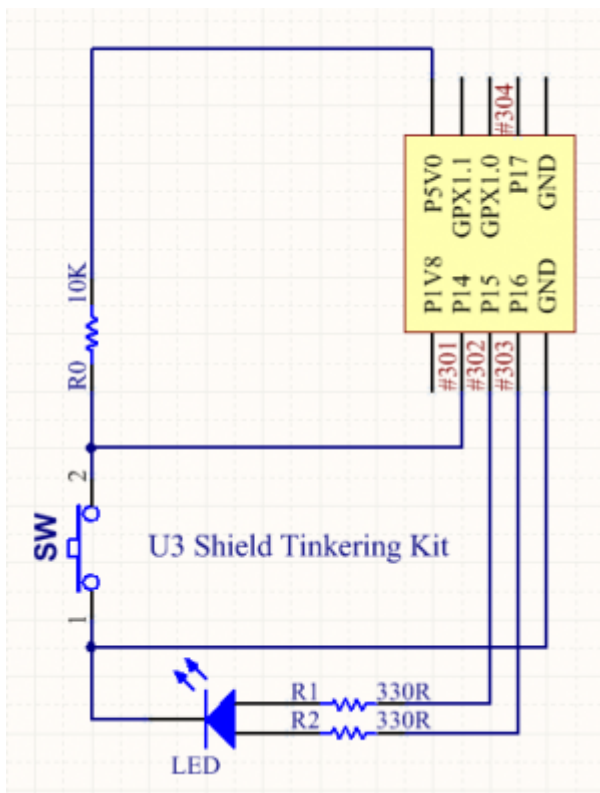
Use to U3 Shield Tinkering Kit

This page introduces how you can use a Tinkering Kit compatible U3 IO Shield.



Using a dual color LED and push button switch.

1. Hardware settings.



2. ODROID-U3 settings.

You will use GPIO-I2C to communication with U3 IO Shield.

```
sudo modprobe i2c_dev
sudo modprobe i2c-gpio-custom bus0=4,200,199
```

To use external IO port of U3 IO Shield you will attach tca6416 gpio driver to i2c-gpio.4 bus.

```
echo tca6416 0x20 > /sys/devices/platform/i2c-gpio.4/i2c-4/new_device
```

Now, you can use GPIO #301 ~ #304 in the Tinkering Kit.

```
echo 302 > /sys/class/gpio/export
echo out > /sys/class/gpio/gpio302/direction
echo 1 > /sys/class/gpio/gpio302/value
```

3. Bash shell script example

```
#!/bin/bash

GPIOPATH="/sys/class/gpio"

echo 301 > $GPIOPATH/unexport
echo 302 > $GPIOPATH/unexport
echo 303 > $GPIOPATH/unexport

echo 301 > $GPIOPATH/export
echo 302 > $GPIOPATH/export
echo 303 > $GPIOPATH/export

echo in > $GPIOPATH/gpio302/direction
echo out > $GPIOPATH/gpio302/direction
echo out > $GPIOPATH/gpio303/direction

while true :
do
    cat=$(cat $GPIOPATH/gpio301/value)
    if [ $cat -eq 1 ]; then
        pushed=1
    fi
    if [[ ($cat -eq 1) && ($pushed -eq 1) ]]; then
        pushed=
        cnt=$((cnt + 1)%4)
    fi

    case $cnt in
        0) echo > $GPIOPATH/gpio302/value
           echo > $GPIOPATH/gpio303/value ;;
        1) echo 1 > $GPIOPATH/gpio302/value
```

```
    echo > $GPIOPATH/gpio303/value ;;  
2) echo > $GPIOPATH/gpio302/value  
    echo 1 > $GPIOPATH/gpio303/value ;;  
3) echo 1 > $GPIOPATH/gpio302/value  
    echo 1 > $GPIOPATH/gpio303/value ;;  
  
esac  
  
sleep 0.1  
  
done
```

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