ochin_CM4v2 Hardware test number 14

Button and LEDs test

Devices used for tests

1. ochin CM4v2 carrier board
2. Raspberry Pi CM4 module with eMMC
3. Power Supply 0-30Vdc

Test description

The purpose of this test is to verify the proper functioning of the S1 button located on the external board and the two leds available on the main ochin board.

Button S1 is connected to GPIO4 normally high input, when S1 is pressed GPIO4 goes to logic low level. The anodes of the two LEDs are connected to GPIO23 and GPIO24 outputs, so they will light up when the two outputs are at logic high level.

If the LEDs and the button are working well, you will have GPIO23 LED off and GPIO24 LED on. When button S1 is pressed, the GPL23 led will turn on and the GPL24 led will turn off.

Test execution

In order to test the S1 button and the two LEDs GPL23 and GPL24, simply run the python script "BTNnLEDs_test.py."

python BTNnLEDs _test.py

```
from RPi import GPIO

#CPU Ref Number
GPIO.setmode(GPIO.BCM)

#set GPIO23 and GPIO24 as output
GPIO.setup(23, GPIO.OUT)
GPIO.setup(24, GPIO.OUT)
#set the GPIO4, pin 54 as input
GPIO.setup(4, GPIO.IN)

#endless loop
while (True):
    if GPIO.input(4) == 0:
        GPIO.output(23, GPIO.HIGH)
        GPIO.output(24, GPIO.LOW)
    else:
        GPIO.output(23, GPIO.LOW)
        GPIO.output(24, GPIO.HIGH)
```

Test result

Test passed