BOB Workshop   Hannover   26.März.2023

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Flashen mit Powershell und Kommandozeilen-Tool pycom-fwtool-cli.exe

```
PS J:\4-BOB-Workshop\1-Firmware> dir

    Verzeichnis: J:\4-BOB-Workshop\1-Firmware

Mode          LastWriteTime      Length Name
----          -------------      ------ ----
-a----   18.03.2023   08:25     1216105 FiPy-1.20.2.rc6-0.10.2-vanilla-squirrel-nosmartconfig.tar.gz
-a----   06.07.2020   18:04      607562 pycom-fwtool-cli.exe
-a----   17.07.2020   23:14    26100933 pycom_firmware_updater_1.16.5.exe

PS J:\4-BOB-Workshop\1-Firmware> .\pycom-fwtool-cli.exe --verbose --port COM6 erase_all
Running in PIC mode
Erasing the board can take up to 40 seconds.
Product ID: 152 HW Version: 7 FW Version: 0.0.11
Connecting...
Uploading stub...
Running stub...
Stub running...
Changing baud rate to 921600
Changed.
Auto-detected Flash size: 8MB
Board erased successfully in 14.25 seconds
PS J:\4-BOB-Workshop\1-Firmware>
PS J:\4-BOB-Workshop\1-Firmware> .\pycom-fwtool-cli.exe --verbose --port COM6 flash --tar .\FiPy-1.20.2.rc6-0.10.2-vanilla-squirrel-no
smartconfig.tar.gz
Running in PIC mode
Product ID: 152 HW Version: 7 FW Version: 0.0.11
Connecting...
Uploading stub...
Running stub...
Stub running...
Changing baud rate to 921600
Changed.
Auto-detected Flash size: 8MB
Script Version: 2.1
Flash params set to 0x023f
Compressed 28672 bytes to 15646...
Writing bootloader.bin at 0x0001000... (100 %)
Hash of data verified.
Wrote 28672 bytes (15646 compressed) at 0x00001000 in 0.7 seconds (309.5 kbit/s)...
Compressed 4096 bytes to 141...
Writing partitions_8MB.bin at 0x00008000... (100 %)
Hash of data verified.
Wrote 4096 bytes (141 compressed) at 0x00008000 in 0.1 seconds (394.8 kbit/s)...
Compressed 2027520 bytes to 1199452...
Writing fipy.bin at 0x00134000... (100 %)
Hash of data verified.
Wrote 2027520 bytes (1199452 compressed) at 0x00010000 in 21.2 seconds (765.4 kbit/s)...
Compressed 4096 bytes to 51...
Writing at 0x001ff000... (100 %)
Hash of data verified.
Wrote 4096 bytes (51 compressed) at 0x001ff000 in 0.1 seconds (404.5 kbit/s)...
Flash operation successful.
PS J:\4-BOB-Workshop\1-Firmware>
```

Programmieren mit Thonny


```python
# Testprogramm für BOB
programmname = "1a-Test-HW.py"
print("Start von", programmname)

print("#### Test I2C-Bus")
from machine import Pin, I2C
#                    SDA   SCL
i2c = I2C(0, I2C.MASTER, pins=('P9', 'P10'))    # PyCom FiPy
print('Scan i2c bus...')
devices = i2c.scan()
```

```
>>> %Run -c $EDITOR_CONTENT
Start von 1a-Test-HW.py
#### Test I2C-Bus
Scan i2c bus...
i2c devices found: 1
Decimal address: 119  | Hexa address: 0x77    BME280-1

#### Test RGB-Led
Schleife 0
    rot
    gelb
    gruen
    blau
    weiss
    aus
Schleife 1
    rot
    gelb
    gruen
    blau
    weiss
    aus

#### Test Taster und Led
0. SW1: 1 SW2: 1 SW3: 0
1. SW1: 1 SW2: 1 SW3: 0
2. SW1: 1 SW2: 1 SW3: 0
3. SW1: 1 SW2: 1 SW3: 0
4. SW1: 1 SW2: 1 SW3: 0
5. SW1: 1 SW2: 1 SW3: 0
6. SW1: 1 SW2: 1 SW3: 0
7. SW1: 1 SW2: 1 SW3: 0
8. SW1: 1 SW2: 1 SW3: 0
9. SW1: 1 SW2: 1 SW3: 0
>>>
```

Variables:

Name	Value
I2C	<class 'I2C'>
LED1	Pin('P3', mode=Pin.OUT, pull=None, ...
LED2	Pin('P5', mode=Pin.OUT, pull=None, ...
LED3	Pin('P6', mode=Pin.OUT, pull=None, ...
Pin	<class 'Pin'>
SW1	Pin('P16', mode=Pin.IN, pull=Pin.PULL...
SW2	Pin('P14', mode=Pin.IN, pull=Pin.PULL...
SW3	Pin('P13', mode=Pin.IN, pull=Pin.PULL...
UART	<class 'UART'>
cycles	9
device	119
devices	[119]
i2c	I2C(0, I2C.MASTER, baudrate=100000)
os	<module 'uos'>
programmname	'1a-Test-HW.py'
pycom	<module 'pycom'>
test	0
time	<module 'utime'>