39_ModemESP32_test

Testing ESP32 WROOM32D WIFI modem and AT-Comands with n-PRO-20

Bootloader
And printf()
UART0

TxD

RxD

Boot button

TxD

RxD

AT Commands
UART1

5V_in

GND
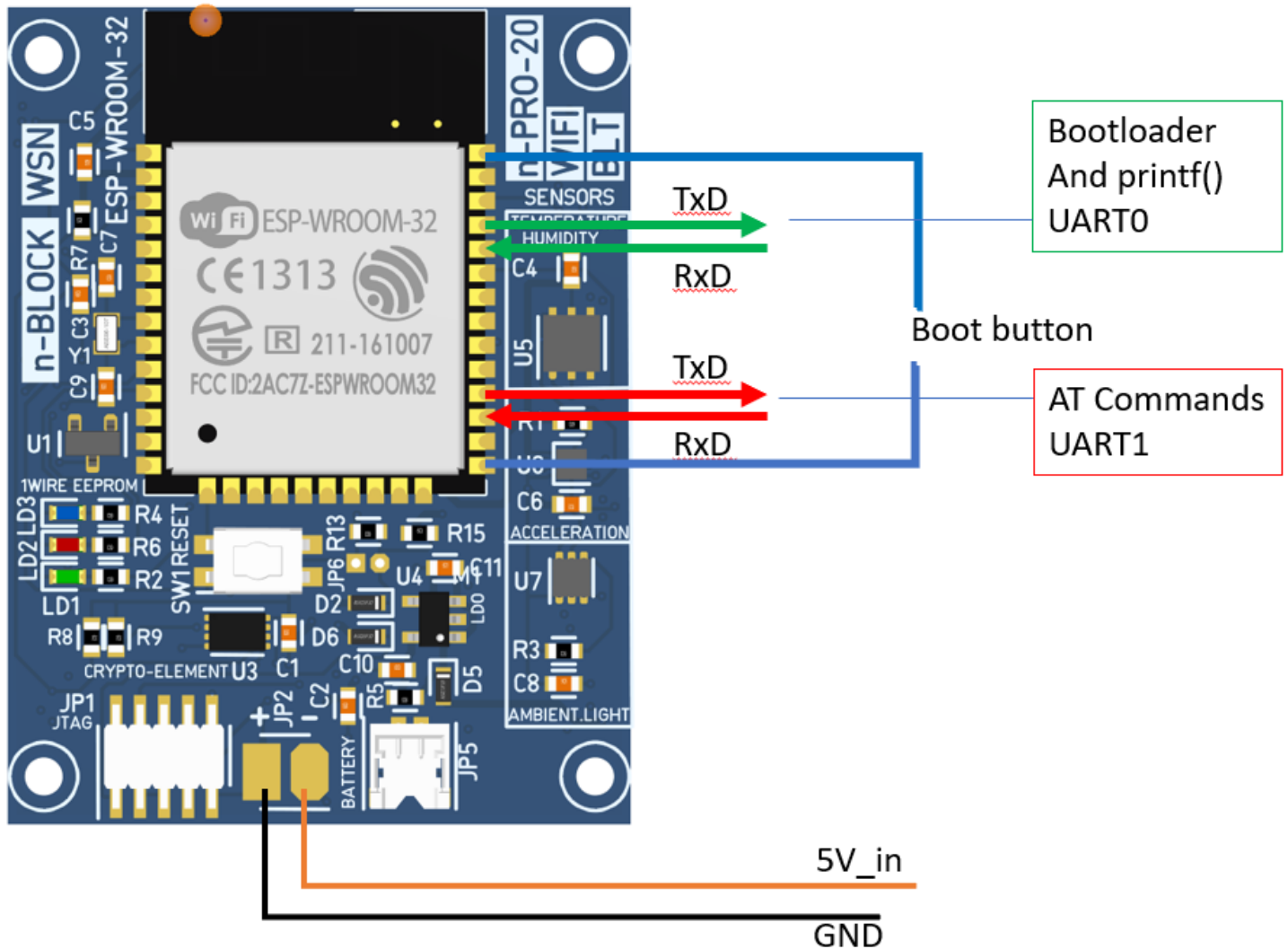
Testing with Arduino IDE

Bootloader Uart workded seamlessly with Arduino IDE 'Upload' ✔

Uploading new Factory image

After more than 90 minutes, still did not flash it ✗

Testing with the existing Factory image

- Ater connecting to UART0 the Modem respondes to AT commands ✔
- Connects to the domestic WiFi Access Point ✔
- Connects to a remote Server ✔
- ...
- ...

Tested AT commands

```
AT+GMR
AT+CWMODE=1
AT+CWMODE?
AT+CWLAP
AT+CWJAP="ssid","password"

AT+CIPSTART="TCP","n-blocks.net/sensor_test",80
AT+CIPSEND=57

GET /hello.html HTTP/1.1
Host: n-blocks.net/sensor_test


AT+CIPCLOSE
```

Test sending data to URL

Using the preprogrammed factory flash image:

- Connect an mbed board with this repository firmware, to ESP32 based n-PRO-20
- to monitor the data, use: test_web_page

Timestamp	Sensor IP	Value
24/03/2021 04:57:00	37.228.240.184	0.258852
24/03/2021 05:06:48	37.228.240.184	0.127228
24/03/2021 05:09:18	37.228.240.184	0.205128
24/03/2021 05:09:49	37.228.240.184	0.126984
24/03/2021 05:10:19	37.228.240.184	0.16801
24/03/2021 05:10:49	37.228.240.184	0.185592
24/03/2021 05:11:19	37.228.240.184	0.069597
24/03/2021 05:11:50	37.228.240.184	0.161172
24/03/2021 05:12:20	37.228.240.184	0.129915
24/03/2021 05:12:50	37.228.240.184	0.177045
24/03/2021 05:13:20	37.228.240.184	0.128938
24/03/2021 05:13:37	37.228.240.184	0.235653
24/03/2021 05:14:29	37.228.240.184	0.201465
24/03/2021 05:15:29	37.228.240.184	0.047375
24/03/2021 05:16:29	37.228.240.184	0.199756
24/03/2021 05:17:29	37.228.240.184	0.062515
24/03/2021 05:19:03	37.228.240.184	0.053968
24/03/2021 05:25:34	37.228.240.184	0.059096
24/03/2021 05:25:47	37.228.240.184	0.058608
24/03/2021 05:26:07	37.228.240.184	0.17558
24/03/2021 05:26:27	37.228.240.184	0.177289
24/03/2021 05:26:47	37.228.240.184	0.160195

to erase all the data, add "receive.php?value=clear" at the end of the url above (careful, there is no confirmation, no questions asked. You visit the url, data is gone)

Links

Hardware Connection