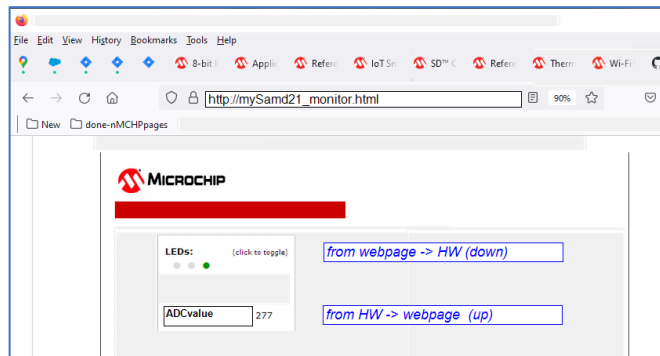


LabManual used for FHDortmund-session Nov.2022 on how to create a FW with webServer that hosts a webpage like this



which provides a two-way communication

1. downLink: web->phyHW: push-button on webpage to toggleLED
2. upLink: phyHW->web: continuously/dynamically read value of extPoti that simulates an analog value which could also be the engine-rpm

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History

v1.0: first version (SL, 31.10.22)

first version of webserver 'L1basic_telnet_0-1-Q'

to run step1 of webserver-demo

1. base-prj

The base prj is <h3>\wireless_apps_winc1500\apps\wifi_tcp_server_in_softap

All that was not needed was removed

2. Get prj from git

Get prj from git with

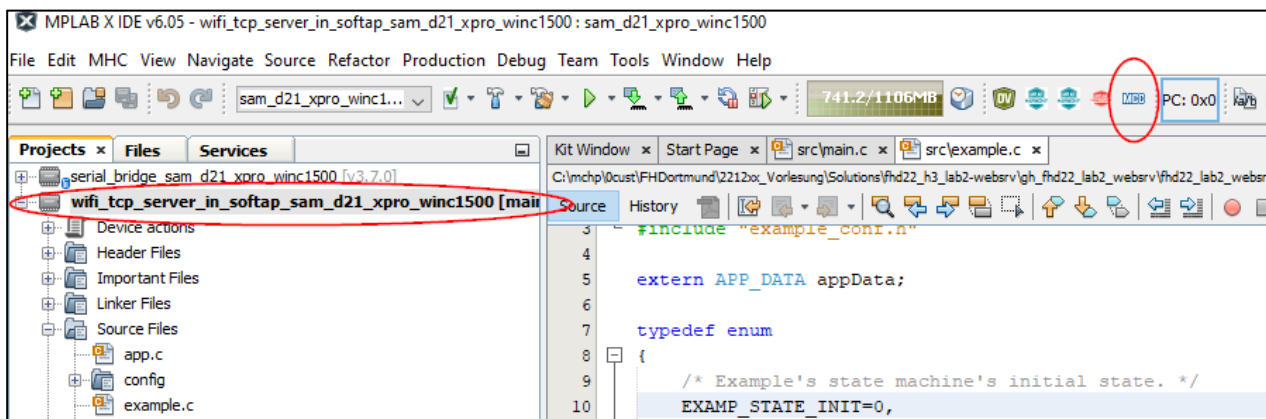
```
(dos)> cd <yourPath>
```

```
(dos: yourPath\)> git clone \
    https://github.com/stefanluethin-microchip/gh_fhd22_lab2_websrv
```

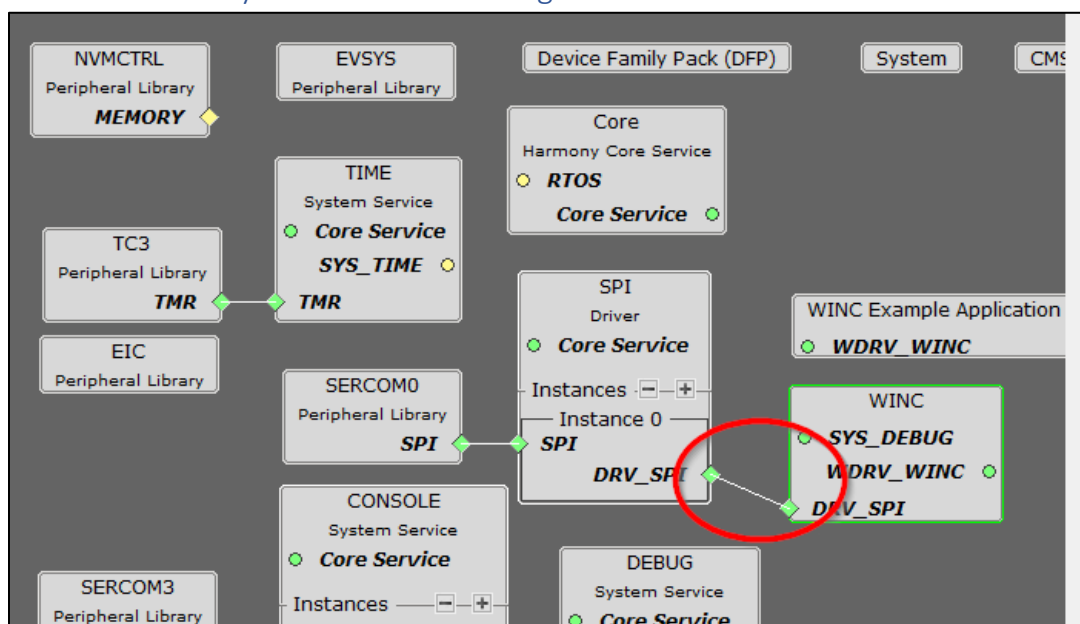
```
(dos: yourPath\)> git checkout L1basic_telnet_0-1-Q
```

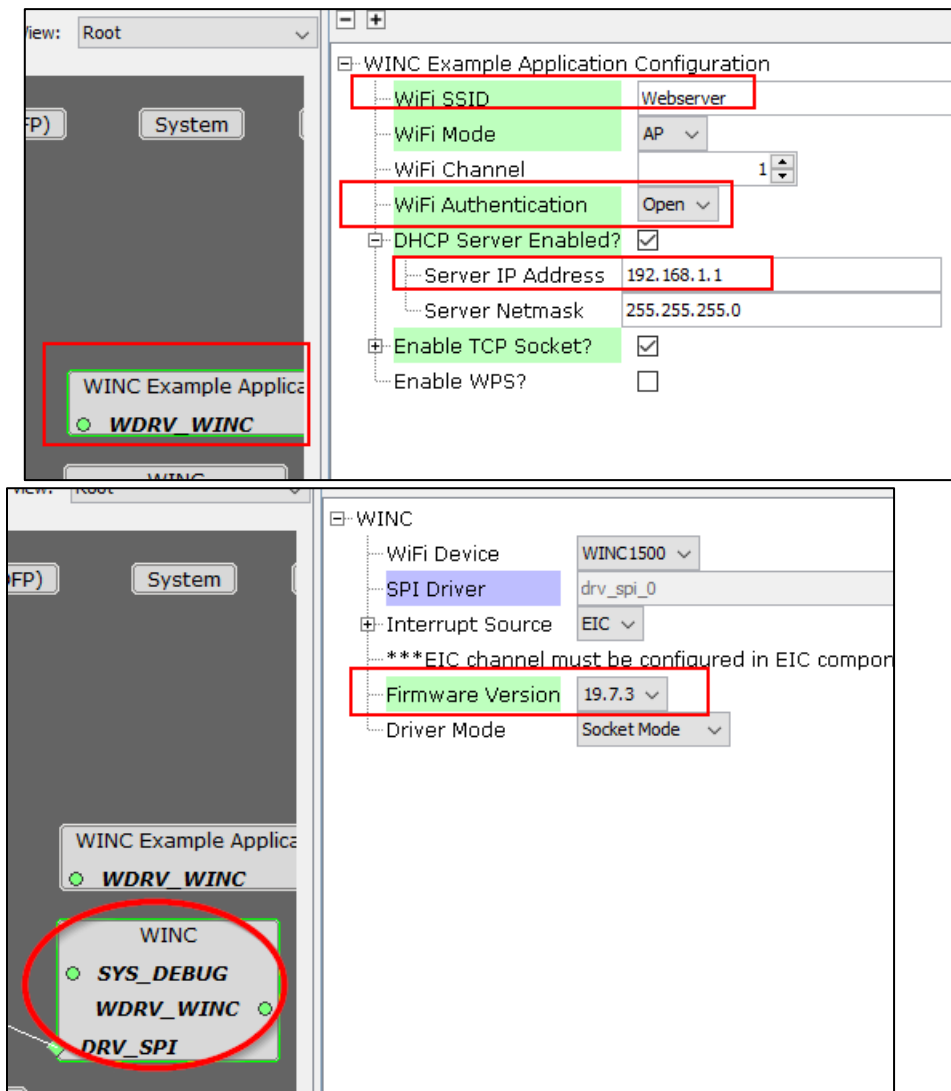
3. MPLABX

Load prj '<repo>\fhd22_lab2_websrv\firmware\sam_d21_xpro_winc1500.X'



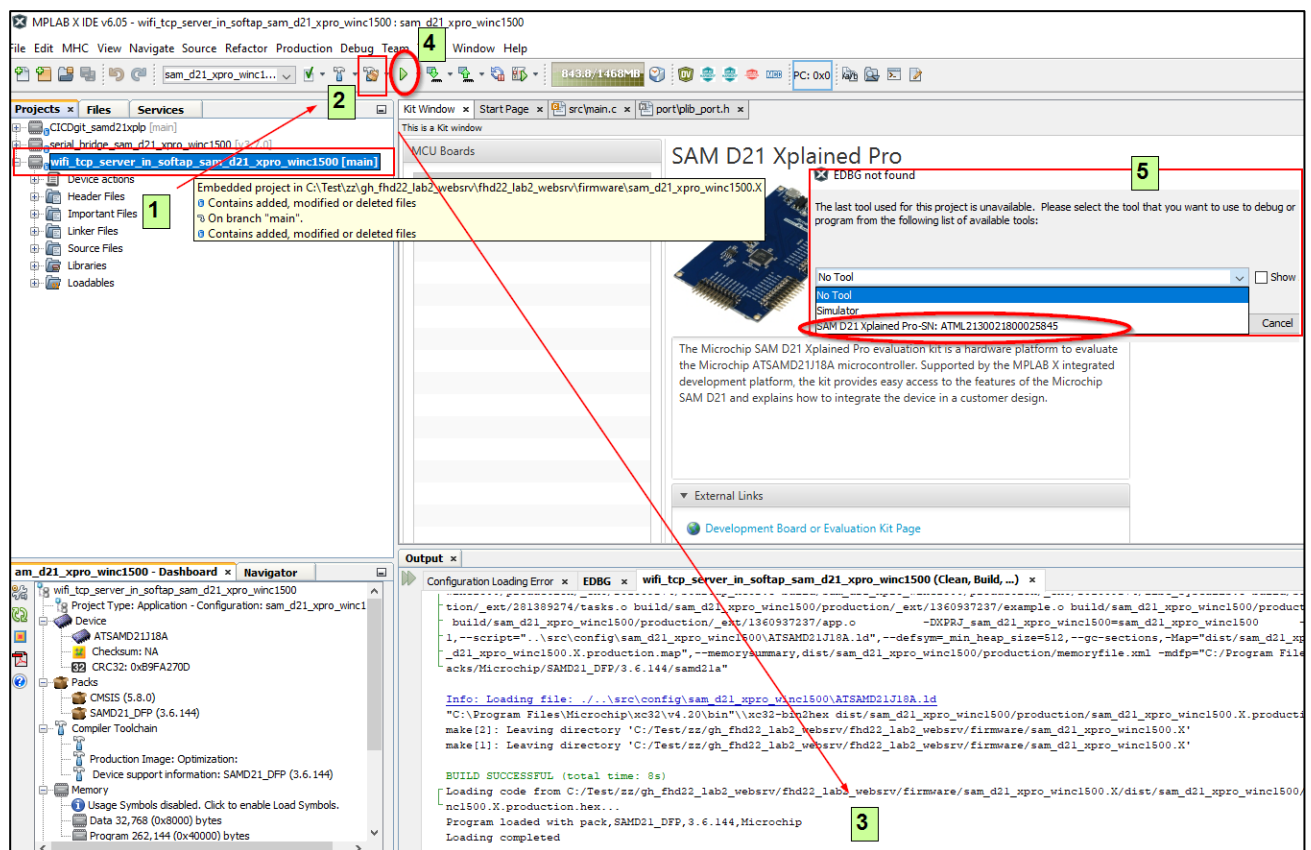
4. Start MCC check that you have these settings correct





5. download+run prj

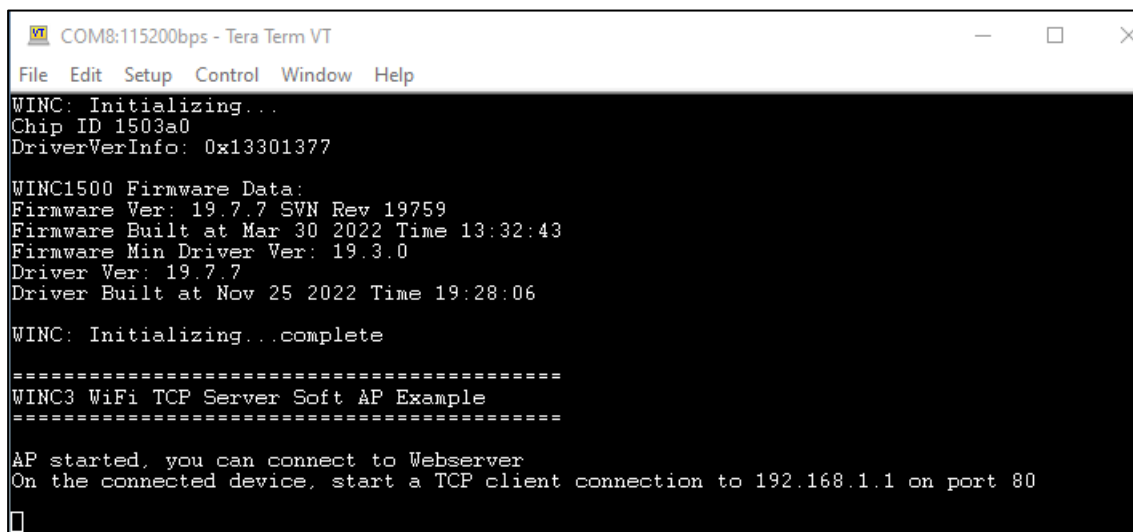
Next download and run



If all works fine, you should see 'loading completed'

6. vCOM

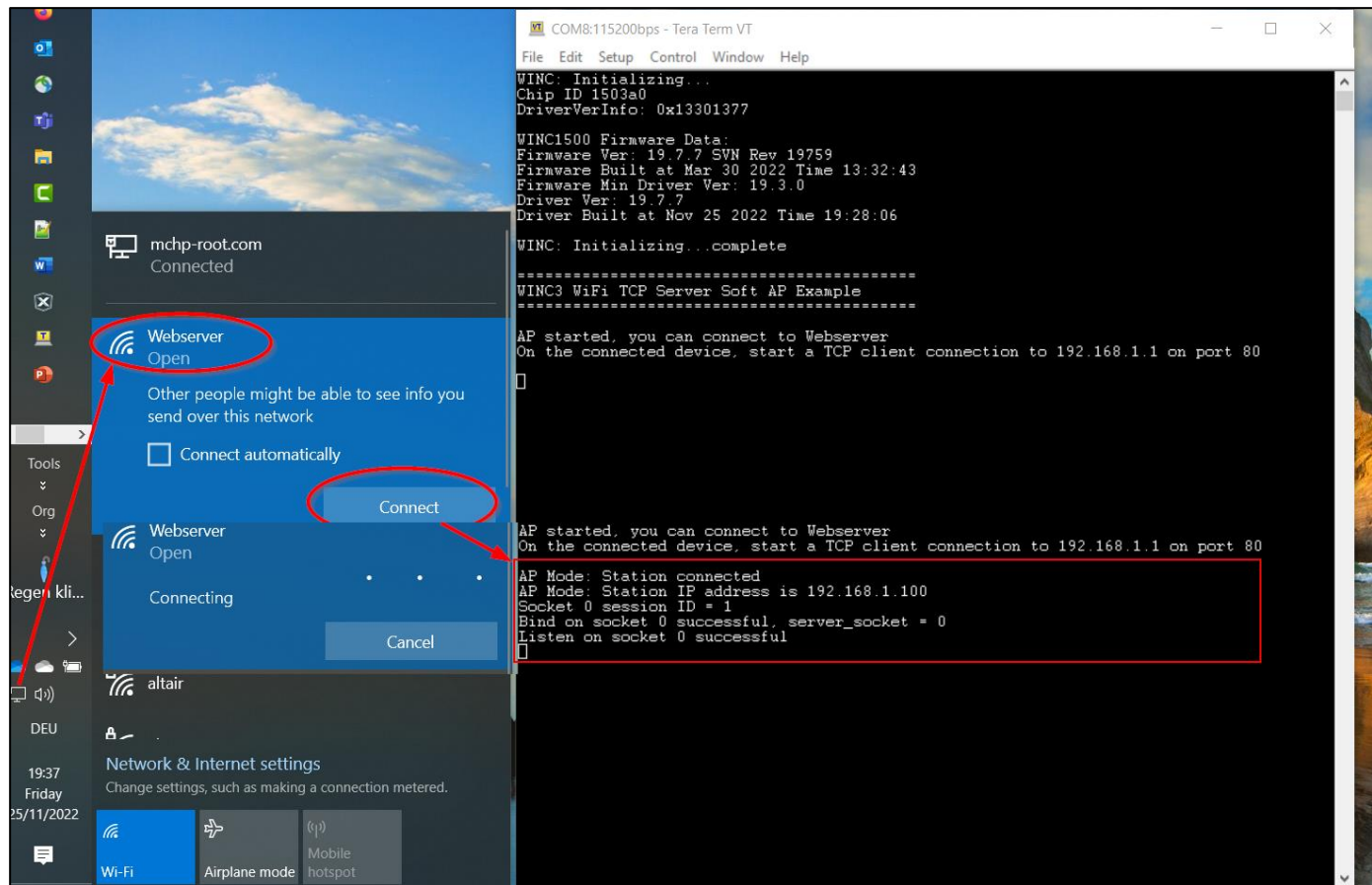
Now open a console and connect to the vCOM and press HW-reset



You should see something like above. Now you're winc1500/webserver is ready to be connected to -> next

7. Connect to winc1500

In the H3-settings you specified the SSID=Webserver so connect from your PC to it now



8. telnet

once your connected to your 'Webserver' you can now connect via telnet to communicate with it via telnet.

In the H3-settings you assigned the IPaddress 192.168.1.1 to it and start tcp-port '80' so open a dos-shell (telnet comes with win10, but must be activated -> search web / alternatively you can use putty, TeraTerm which include telnet-clients).

A successful connect via telnet to 192.168.1.1:80 is confirmed with the msg 'Hello, here is winc1500' -> see below screenshot

9. Use webserver

Once connected you can now use the webserver - in this first version it provides these features:

- '0' to turn onboard LED0=off
- '1' to turn onboard LED0=on
- Press SW0-button and send '?' -> current button-state is reflected
- Release SW0-button and send '?' -> current button-state is reflected

```

COM8:115200bps - Tera Term VT
File Edit Setup Control Window Help
WINC: Initializing...
Chip ID 1503a0
DriverVerInfo: 0x13301377
WINC1500 Firmware Data:
Firmware Ver: 19.7.7 SVN Rev 19759
Firmware Built at Mar 30 2022 Time 13:32:43
Firmware Min Driver Ver: 19.3.0
Driver Ver: 19.7.7
Driver Built at Nov 25 2022 Time 19:28:06
WINC: Initializing...complete
=====
WINC3 WiFi TCP Server Soft AP Example
=====
AP started, you can connect to Webserver
On the connected device, start a TCP client connection to 192.168.1.1 on port 80
AP Mode: Station connected
AP Mode: Station IP address is 192.168.1.100
Socket 0 session ID = 1
Bind on socket 0 successful, server_socket = 0
Listen on socket 0 successful
Connection from 192.168.1.100:15107
Received something on socket 1 [0]
] ceived something on socket 1 [
Received something on socket 1 [
Received something on socket 1 [
Received something on socket 1 [1]
] ceived something on socket 1 [
Received something on socket 1 [
Received something on socket 1 [0]
] ceived something on socket 1 [
Received something on socket 1 [
Received something on socket 1 [?]
] ceived something on socket 1 [
Received something on socket 1 [
Received something on socket 1 [?]
] ceived something on socket 1 [
Received something on socket 1 [
]

C:\Windows\System32\cmd.exe - telnet 192.168.1.1 80
C:\Test\zz\gh_fhd22_lab2_websrv>telnet 192.168.1.1 80
Trying 192.168.1.1...
Connected to 192.168.1.1.
Escape character is '^H'.
Hello, here is WINC1500 :-))
0=LEDon
1=LEDOff
?
[PRESSED]? press/release SW0 and send '?'
[RELEASED]? and current status is reflected
  
```

10. End 'L1basic_telnet_0-1-?'

Next step to follow...

#eof