



GUI USER GUIDE

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1. Consol

Console

Test Suite

Power Control

Test Slot

Transfer

Register

None/None

STEP1

STEP3

4800

STEP2

5

Connect

Disconnect

Send

Board Information

Check Speed

Check Temperature

4

6

7

Reboot

Register Address

DWord

Check Leakage

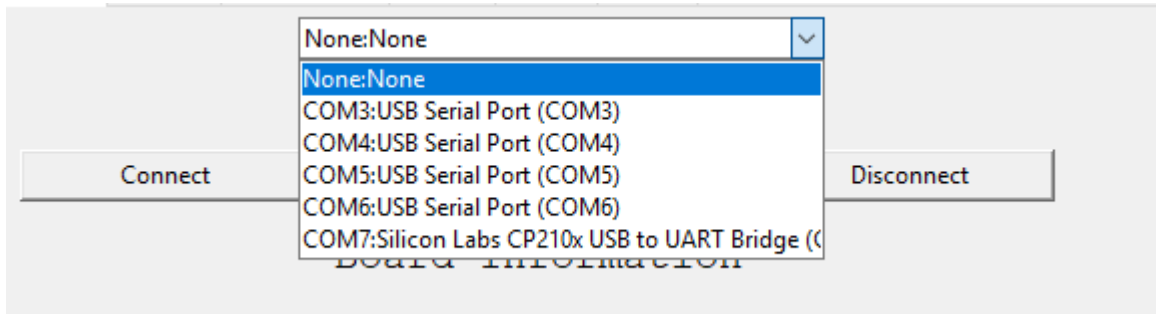
8

9

Check

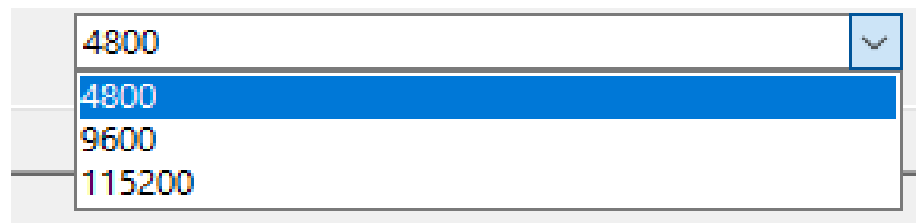
- **STEP1**

- Choose the com port.



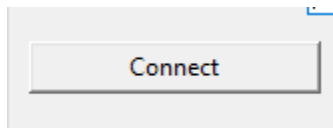
- **STEP2**

- Choose the baud rate.



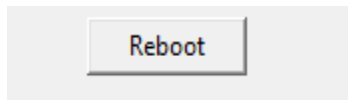
- **STEP3**

- Press button, “**Connect**” to connect the board.



- **4. (Board Information)**

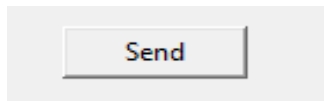
- Press “**Reboot**” to connect the board.



- After press button, “**Reboot**”, we can get the information as following:
version:4.80.120517_v1.20 BG4-CTpA0 ASIC
svn:62576
ProductId=0x03288b11
ProductIdExt=0xa0 FPGA Rev=0xb3a9fa72
Bootstrap=0x01800007

- **5. (Command Check box)**

- Type any command and press button, **“Send”**. The information will show in the text box of left side.



```

BerlinDiag>RD 0 10

0x00000000: 0x00171C1C 0x07
E7CE71 0x1DA001E2 0x0534AB1F

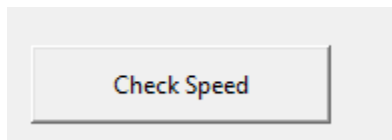
0x00000010: 0x3157E355 0x17
6207BA 0x4F1C8903 0x35E96A78

0x00000020: 0x1C293453 0x24
7DDEB2

```

- **6. (Check Speed)**

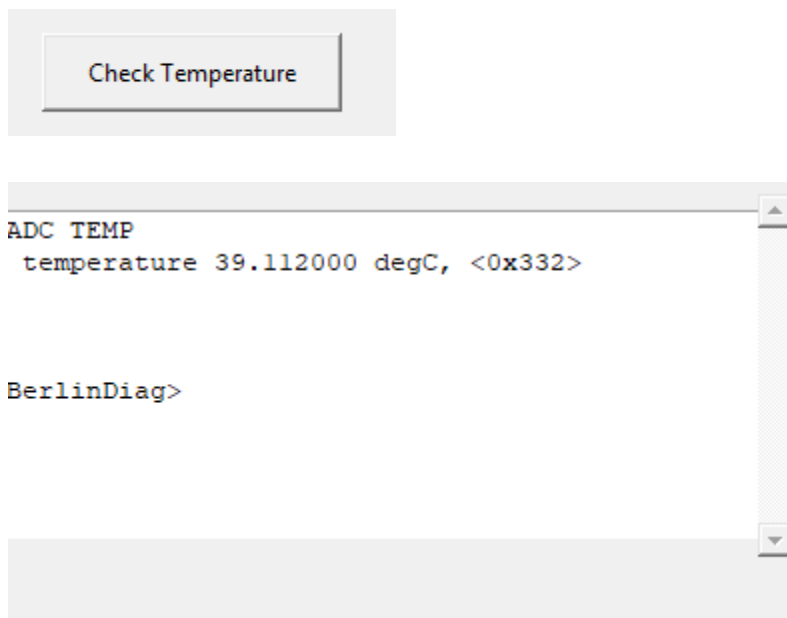
- Press button, **“Check Speed”** and the information will show in the text box.



gfx3DSysClk	frequency 200
avioSysClk	frequency 200
vppSysClk	frequency 600
[AVP11A5]	
eddcClk	frequency 100
avioBiuClk	frequency 250
[AVP11A2]	
zspClk	frequency 100
tspClk	frequency 200
tenRefClk	frequency 100

- **7. (Check Temperature)**

- Press the button, “**Check Temperature**” and the information will show in the text box.



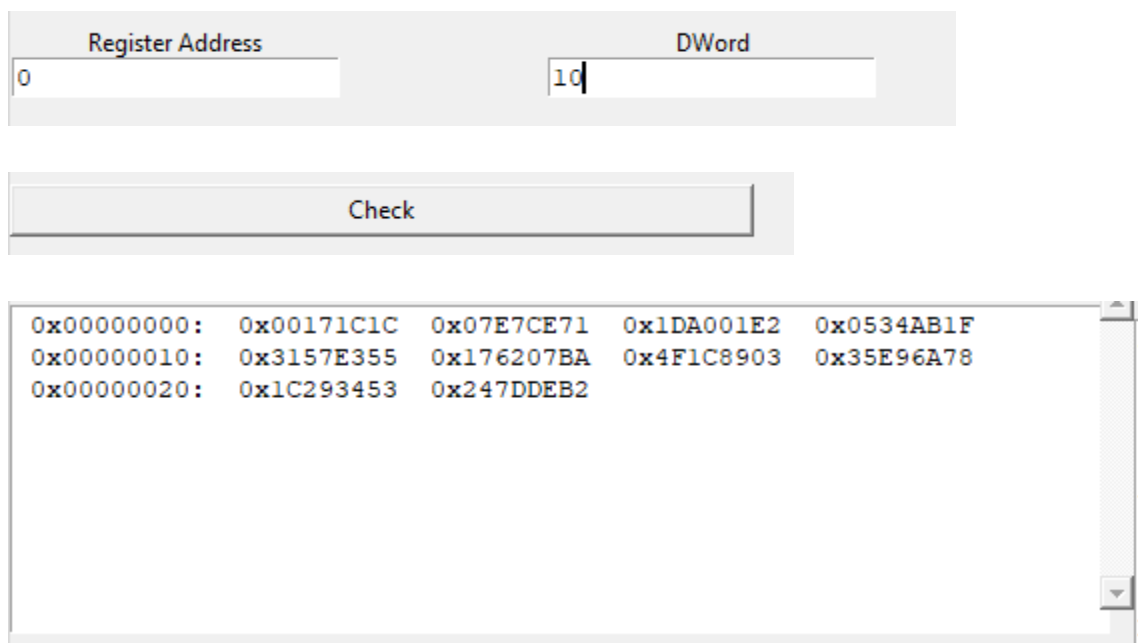
Check Temperature

ADC TEMP
temperature 39.112000 degC, <0x332>

BerlinDiag>

- **8. (check content for specific address)**

- Type register address and how many word you want to read. Next, press button “**Check**” and the information will show in the text box.



Register Address DWord

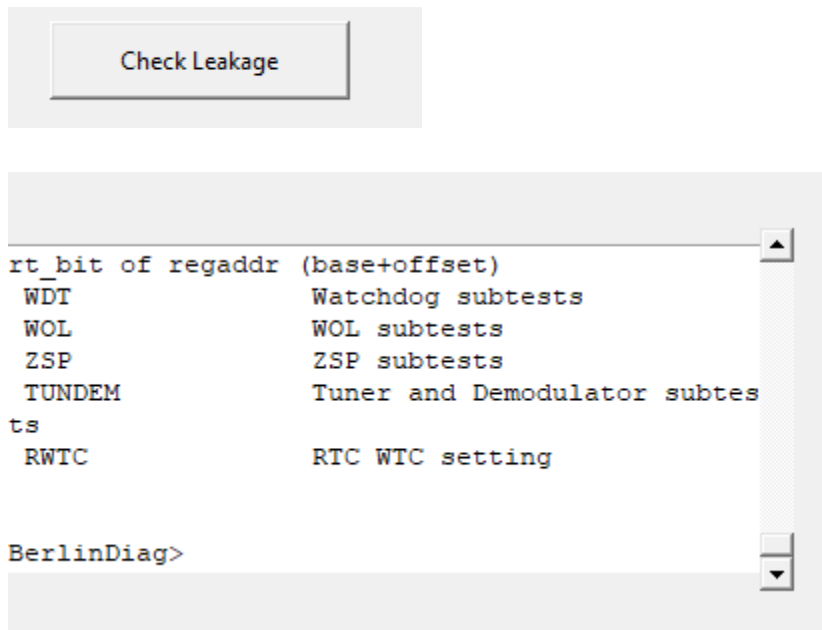
0 10

Check

0x00000000: 0x00171C1C 0x07E7CE71 0x1DA001E2 0x0534AB1F
0x00000010: 0x3157E355 0x176207BA 0x4F1C8903 0x35E96A78
0x00000020: 0x1C293453 0x247DDEB2

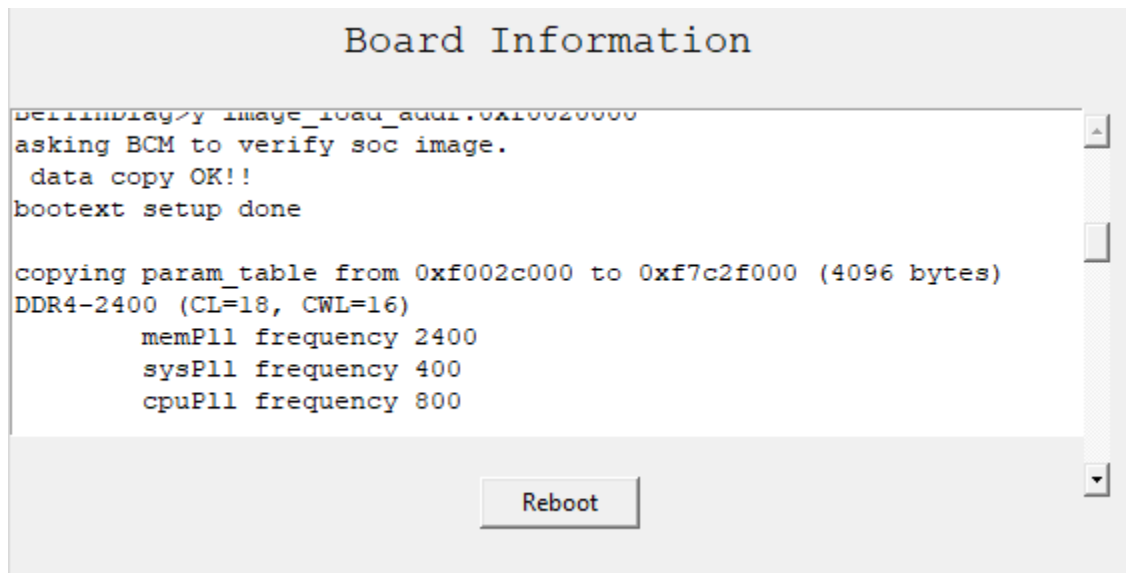
- **9. (Check Leakage)**

- Press the button, “**Check Leakage**” and the information will show in the text box.

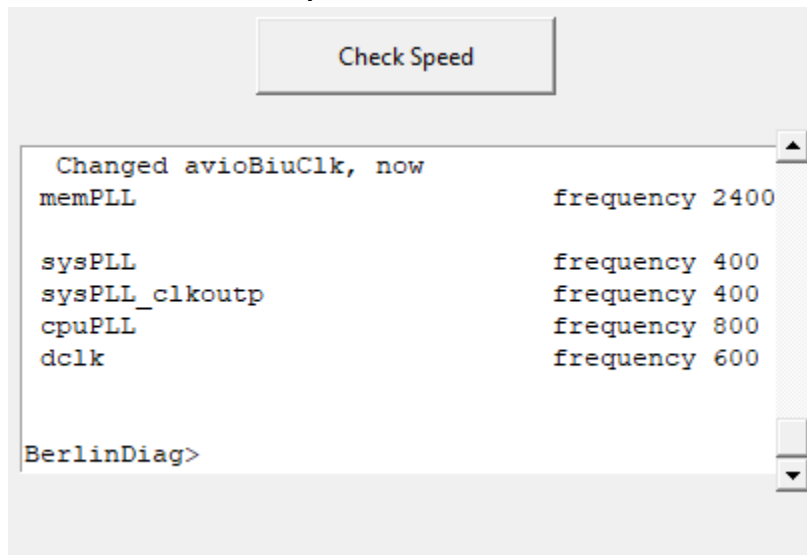


1.1 Applications

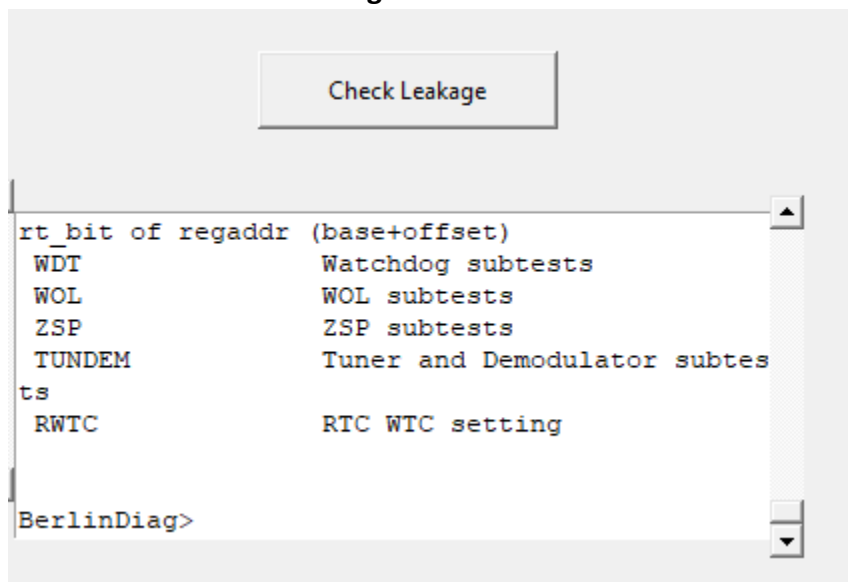
1.1.1 Catch Board Information



1.1.2 Catch Information of Speed



1.1.3 Catch Information of Leakage



1.1.4 Catch Information of Temperature

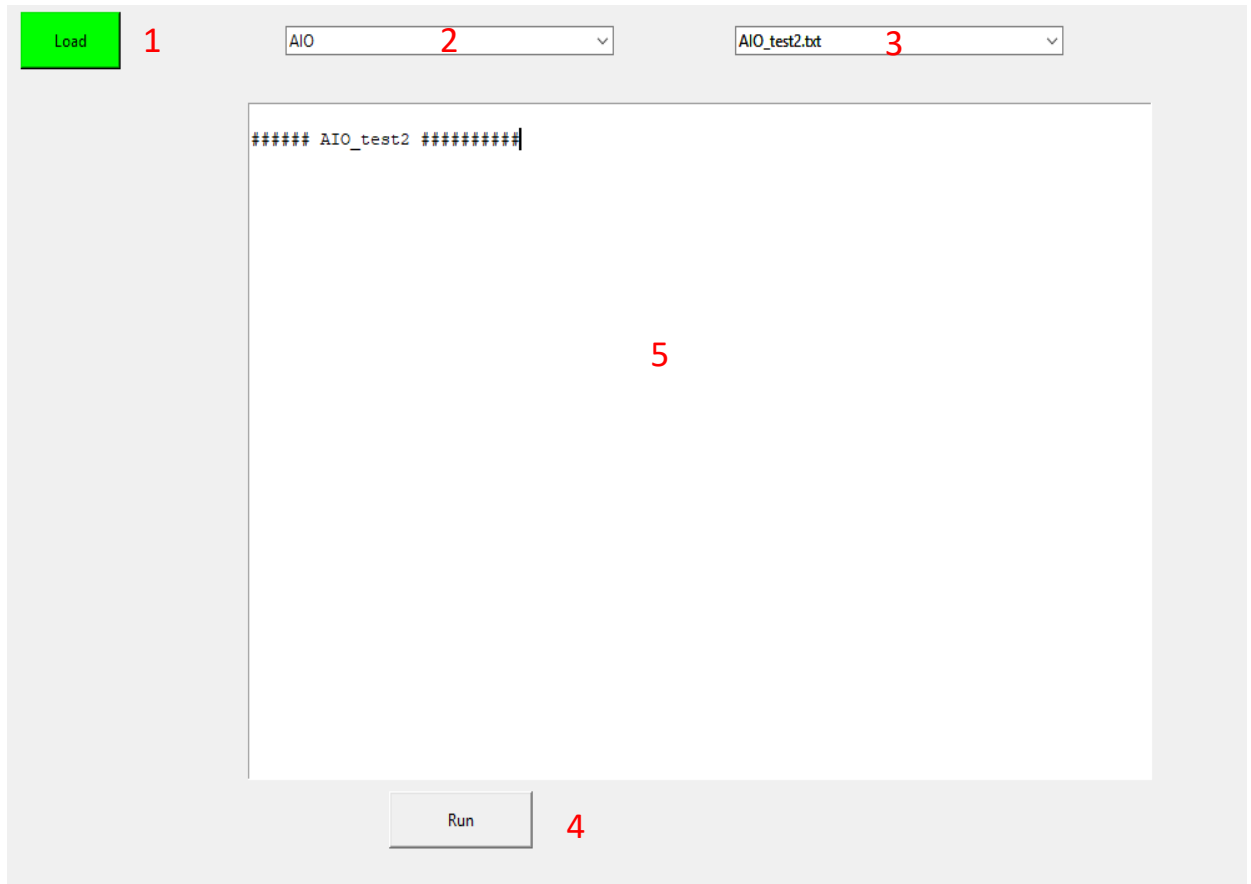
Check Temperature

nfcEccClk	frequency 100
bcmClk	frequency 100

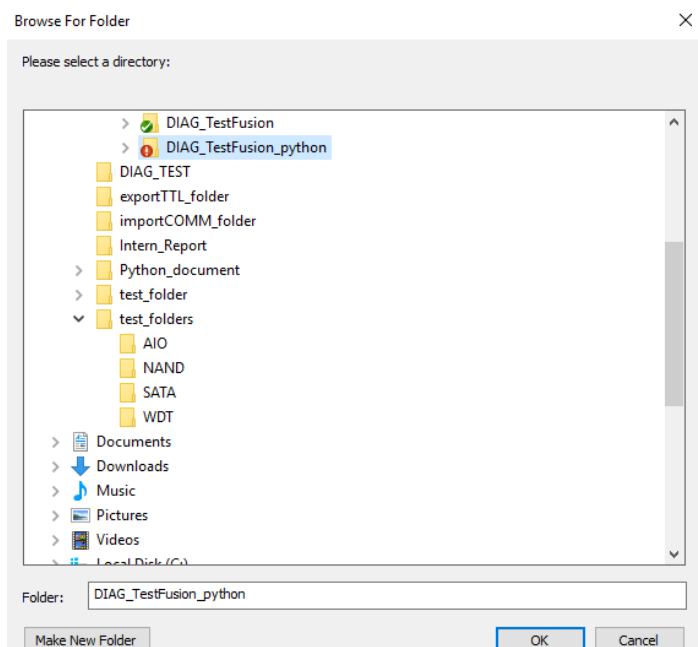
BerlinDiag>ADC TEMP
temperature 36.040001 degC, <0x32A>

BerlinDiag>

2.Test Suite

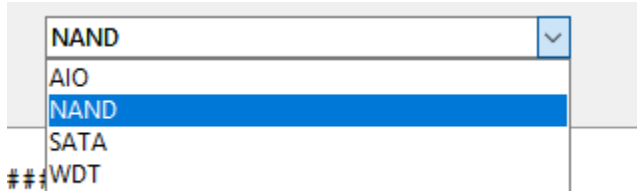


- **1.**
Press “**Load**” and then pop window will show up. Next, choose a file folder, which may contain many folders inside.



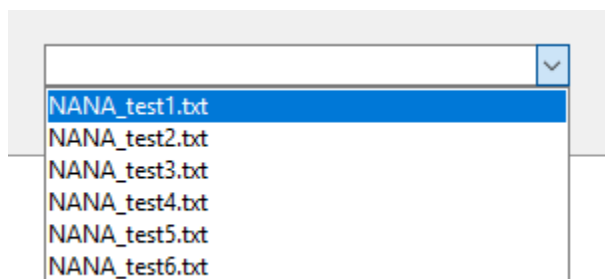
- **2.**

- Choose a folder



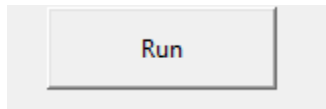
- **3.**

- Choose a file from the folder you choose.



- **4.**

- Press the button after you choose the specific file.



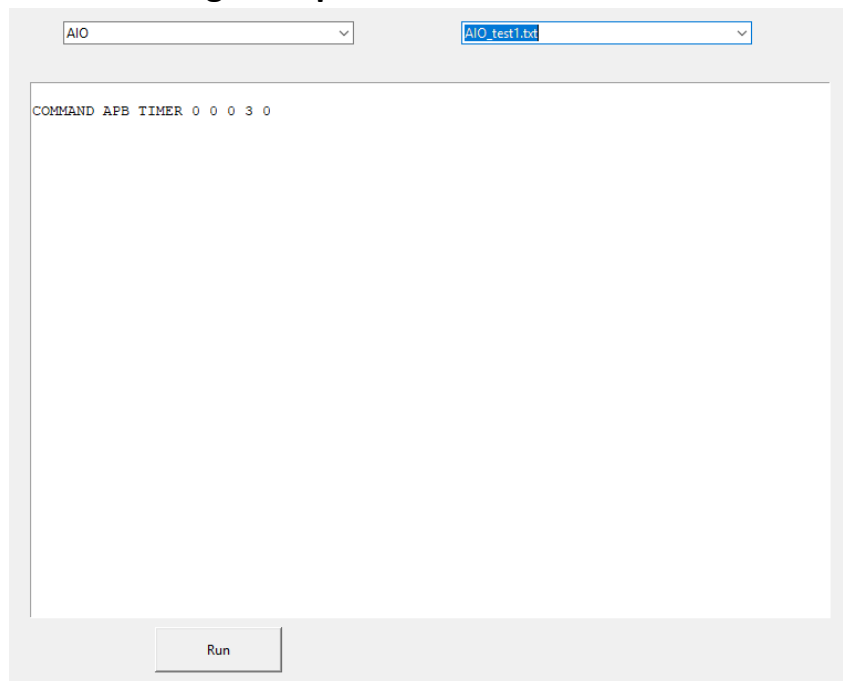
- **5.**

- Show the content of the file we choose.

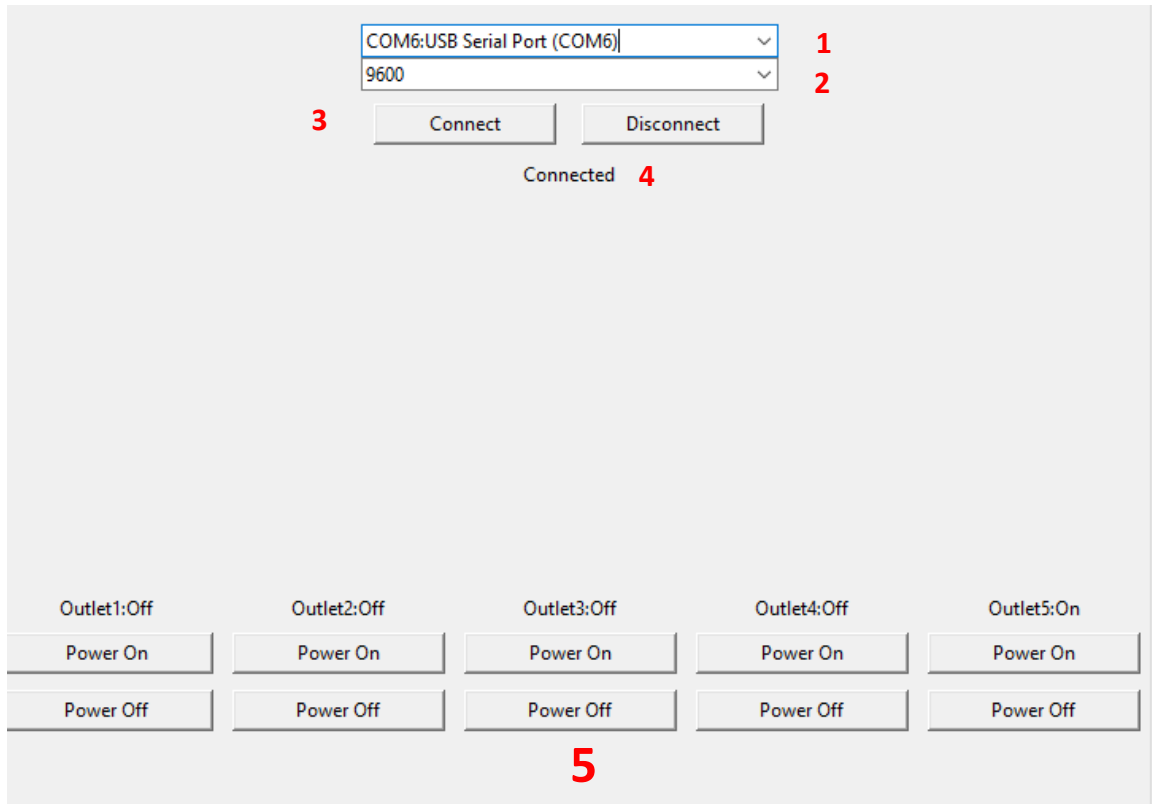
```
COMMAND APB TIMER 0 0 0 3 0
```

2.1 Applications

2.1.1 Run the Single Script

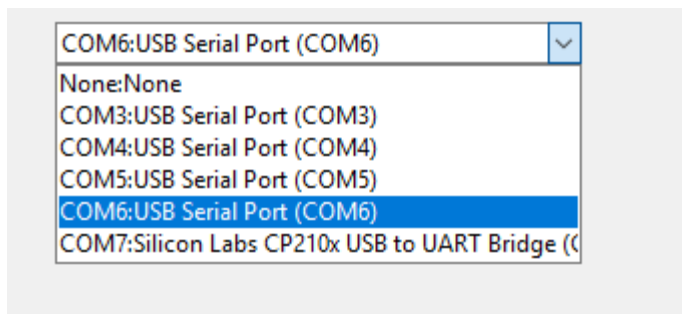


3. Power Control



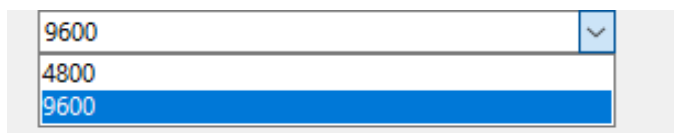
- 1.

- Choose the com port of board.



- 2.

- Choose the baud rate.



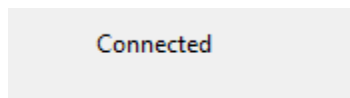
- **3.**

- After choosing the com port and baud rate, press the button “**Connect**” to connect the board.



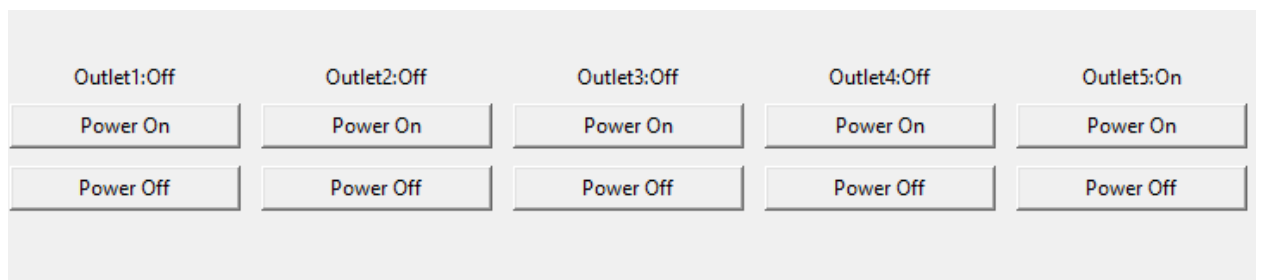
- **4.**

- Once the board is connected, the label will show “Connected”.



- **5.**

- Choose the power switch, depend on what power slot we use.



3.1 Applications

3.1.1 Power Switch

None:None

4800

Connect

Disconnect

Disconnected

Outlet1:Off	Outlet2:Off	Outlet3:Off	Outlet4:Off	Outlet5:Off
Power On	Power On	Power On	Power On	Power On
Power Off	Power Off	Power Off	Power Off	Power Off

4. Test Slot

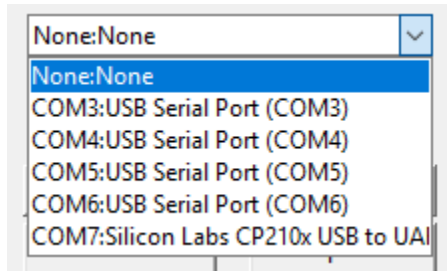
The screenshot shows a software interface for testing multiple slots. On the left, there are five test slot configurations (Test Slot: 0, 1, 2, 3, 4). Each slot has three dropdown menus (None:None, 4800, None) and four buttons (Connect, Disconnect, Start Test, Stop Test). A red '1' is placed over the 'None:None' dropdown of Test Slot: 1. Below the slots, there are input fields for 'START TIME: Slot0', 'START TIME: Slot3', 'START TIME: Slot1', 'START TIME: Slot4', and 'START TIME: Slot2'. A red '2' is placed over the 'START TIME: Slot1' input field. On the right, there is a large empty rectangular area with a red '3' next to it. At the top right, there is a dropdown menu labeled 'test slot 0'. At the bottom right, there is a 'Load Script' button.

- **1**

- **Label:** number of slot means the number of power switch.

Test Slot: 0

- **STEP1:** choose the com port.



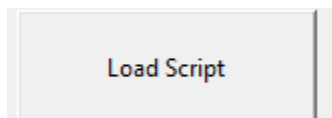
- **STEP2:** choose the baud rate



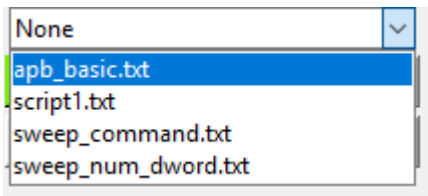
- **STEP3:** press the button “**Connect**” for connecting the board.
If connect, successfully.



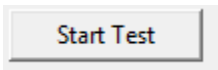
- **STEP4:** press the button “**Load Script**” for loading the script we want to run.



If load, successfully, the files will be shown in the combo box.



- **STEP5:** choose a file we want to run and press the button **“Start Test”**.

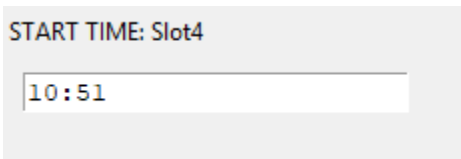


- **STEP6:** press the button **“Stop Test”**, when you want to terminate the test.
If stop, successfully.



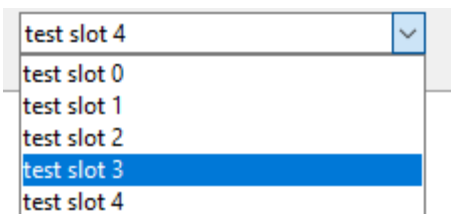
• 2

- Check the start running time of test.



• 3

- Choose the test slot you want to check from combo box.

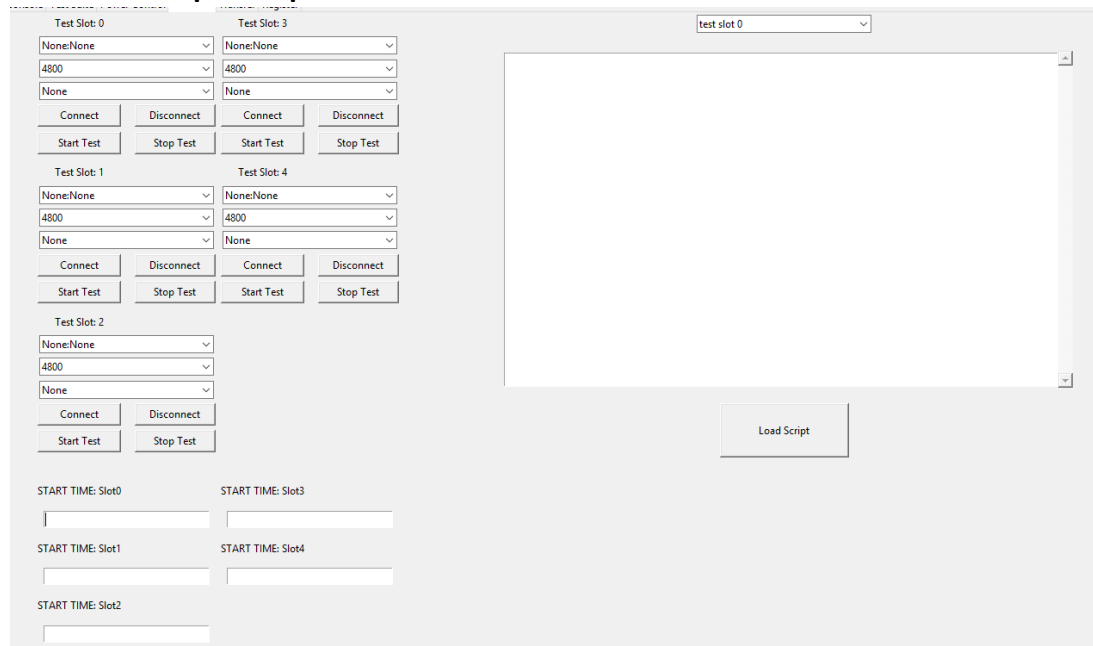


Then, the content of slot you choose will show in the text box.



4.1 Applications

4.1.1 Run the Multiple Scripts

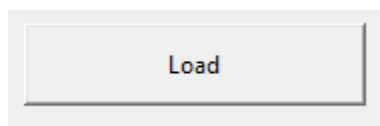


5. Transfer



- **1**

- Load the TTL script and transfer to regular command.
- **STEP1:** press the button “**Load**” for loading TTL script.



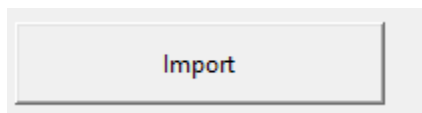
- **STEP2:** After loading the TTL script, the content of TTL script will show in the text box.

```
wait 'BerlinDiag>'
sendln '2C MEM COPY A00000 A80000 40000 20'
wait 'BerlinDiag>'
sendln 'MEM COPY B00000 B80000 40000 20'
wait 'BerlinDiag>'
sendln 'WAIT2C 30 3'
wait 'BerlinDiag>'
sendln 'WAIT2C 30 2'
wait 'BerlinDiag>'
sendln 'WAIT2C 30 1'
wait 'BerlinDiag>'
sendln 'SUM READ'
wait 'BerlinDiag>'
sendln 'ADC TEMP'
wait 'BerlinDiag>'

;      call mtest_off

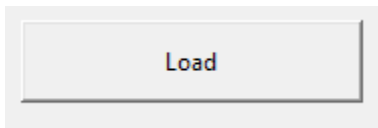
; cpu vdec x 2 + cbyte + v4g
sendln '4C CPU VDEC 50'
wait 'BerlinDiag>'
sendln '3C MEM CBYTE02 700000 800000 50'
wait 'BerlinDiag>'
sendln '2C VDEC DECV2G 20'
wait 'BerlinDiag>'
sendln 'CPU VDEC 50'
wait 'BerlinDiag>'
sendln 'WAIT2C 30 3'
wait 'BerlinDiag>'
sendln 'WAIT2C 30 2'
wait 'BerlinDiag>'
```

- **STEP3:** press the button “**Import**” for transferring the TTL script to command and save the result in certain folder.

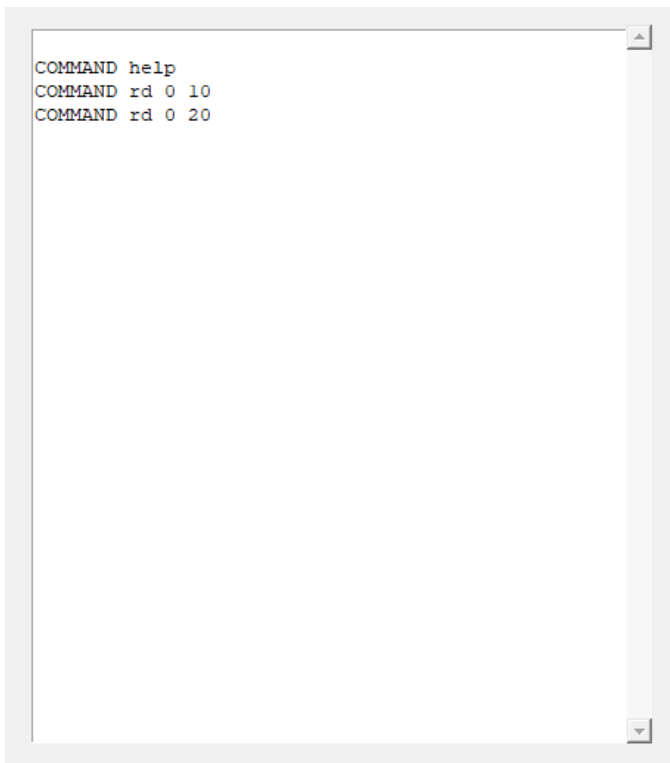


- **2**

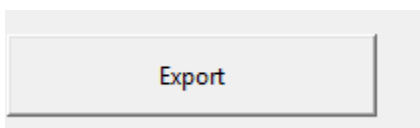
- Load the command script and transfer to TTL script.
- **STEP1:** press the button “**Load**” for loading command script.



- **STEP2:** After loading the command script, the content of command script will show in the text box.



- **STEP3:** press the button “**Export**” for transferring the command to TTL script and save the result in certain folder.



5.1 Applications

5.1.1 TTL / Command Convert

TTL -> Command

```
sendln 'SUM READ'
wait 'BerlinDiag>'

sendln 'ADC TEMP'
wait 'BerlinDiag>'
sendln 'GIC SGI F 0'
wait 'BerlinDiag>'

sendln '2C VOP SETRES 64'
wait 'BerlinDiag>'

; 8bit, yuv420
sendln '2C VOP SETHDMI 2 3'
wait 'BerlinDiag>'

; MAIN 4K 420SP 8 bit
sendln '2C VOP SETINPFMT 0 2 0'
wait 'BerlinDiag>'

; PIP 4K 420sp 8 bit
sendln '2C VOP SETINPFMT 1 1 0'
wait 'BerlinDiag>'

; GFX1 4K ARGB 8 bit
sendln '2C VOP SETINPFMT 2 1 0'
wait 'BerlinDiag>'
pause 1

; open MAIN plane
```

Load

Import

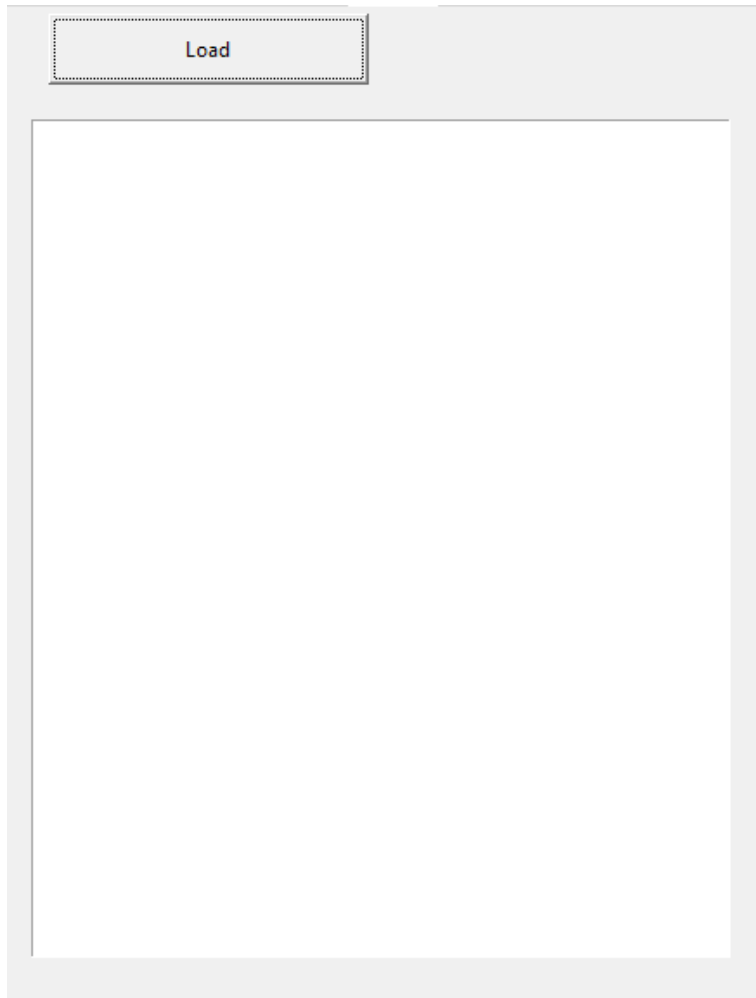
Command -> TTL

```
COMMAND help
COMMAND rd 0 10
COMMAND rd 0 20
```

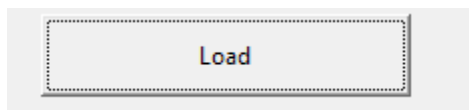
Load

Export

6. Register



- **STEP1:** press the button “**Load**” for loading the certain register file.



- **STEP2:** the information will show in the text box.

```
## test1 ##  
## number of register = 10 ##  
  
0x55667788  
0xAABBCCDD  
0x11223344  
0x22334455  
0x66778899  
0x33445566  
0x44556677  
0x55667788  
0x77889900  
0x8899AABB
```

6.1 Applications

6.6.1 Load the txt file of Register

Load

```
## test1 ##  
## number of register = 10 ##  
  
0x55667788  
0xAABBCCDD  
0x11223344  
0x22334455  
0x66778899  
0x33445566  
0x44556677  
0x55667788  
0x77889900  
0x8899AABB
```