Viavi ONA800/1000 and TB5800 sample python scripts

Provided is a collection of Python scripts that are samples of how to automate the Viavi TB5800 and other TB/ONA products. Feel free to use these scripts as is, to edit them, or to copy parts of the code into your own scripts.

Download the latest scripts at: https://github.com/teracommbrad/ONA-python-scripts

*All files are provided as examples of how to do simple Python automation scripts. No warranty is expressed or implied. Feel free to use these scripts and*

*Note: Scripts require Python3.*

Example Videos:

1. ONA/TBERD Python scripts overview: <https://youtu.be/vSscTDxzGTc>
2. TBERDCommandLine.py: <https://youtu.be/zh5kEfv-Hao>
3. TBERD5800FileParser.py: <https://youtu.be/qw6mcMTpXkE>
4. TBERD5800GUISample.py: <https://youtu.be/0aqa7XiHXfY>

TBERDCommandLine.py:

Program that runs a terminal command line with simple commands such as peek, poke, scpi commands, load/close TB5800 apps. Dependency: TBERD5800Controls.py.

To start: Enter terminal and navigate to the directory with the python scripts.

>Python3 TBERDCommandLine.py

Commands:

APP : Brings up apps and starts an app chosen by user, closing others

MULTIAPP : Brings up apps and starts an app chosen by user, not closing others

START appname : Starts appname and closes all other apps.

appname may be multiple words, including arguments (60 second default timeout)

Example: START TermEth100GL2Traffic 1

MULTISTART appname : Starts appname, not closing any other apps

CURR : Gets Current Running apps, with an arrow to the current running app

PEEK page addr : Peek address with given page

Example : PEEK 0 0x56

PEEK addr : Peek address

Example : PEEK 0x56

POKE page addr value : poke page, address with value

Example : POKE 0 0x56 0x01

POKE addr value : poke address with value

Example : POKE 0x56 0x01

DELAY value : Delay value seconds

SCPI command : send scpi with given command; command may be multiple words

Example: SCPI :SYST:APPL:CAPP?

HELP : Provides help

EXIT or QUIT: Exit program

CLOSEAPP : Brings up prompt to exit app

CLOSEAPP appId : Exits app with given appId

ACTIVE : Select an active app based on prompt

Note: Closing app can take 5-10 seconds AFTER command is sent and received

Command names are not case-sensitive

Arguments/values are case sensitive

TBERD5800FileParser.py:

Python program that does simple automation scripts using a list in a text file (testcmd.txt). Option to output to a text file or to the terminal. Dependency: TBERD5800Controls.py.

To start: > python3 tberd5800fileparser.py -h

options:

-h, --help show this help message and exit

--app APP, -a APP TB5800 Application Name

--ipaddr IPADDR, -i IPADDR

The IP address of the TB5800

--infile INFILE, -f INFILE

The input file to read

--outfile OUTFILE, -o OUTFILE

The output file to write to; writes to terminal if none provided

--listcommands, -l Bring up list of commands

--delay DELAY, -D DELAY

Default delay between commands

--noapp, -N

\* No arguments uses default settings in the code:

defaultApp="TermEth100GL2Traffic 1"

defaultIP='192.168.200.2'

defaultFileName='testcmd.txt'

Examples:

>python3 tberd5800fileparser.py -i 192.168.200.2 -f testcmd.txt

Runs the commands in file testcmd.txt, output to terminal, ip address=192.168.200.2, application=TermEth100GL2Traffic 1

>python3 tberd5800fileparser.py -o output.txt

As above but output to “output.txt” file

TBERD5800GUISample.PY

Make sure you set the IP address in the python code to match your instrument. For more information see the GUI sample video: <https://youtu.be/0aqa7XiHXfY>

Libraries/dependencies:

TBERD5800Controls.py: Library that contains functions and setup for opening ethernet sockets and communicating with TB5800

Note on Blank Display: Remote sessions blank the instrument screen by default. The screen can be made visible using “DEBUG=True” in the code. Note this is for debugging only and is note recommended or supported by Viavi.

#When DEBUG=True, uses \*REM VISIBLE ON (for debugging only)

#Otherwise, when DEBUG is False, uses \*REM command

DEBUG=False

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Downloading Tkinter libraries for python