Advanced OEM Solutions

Evaluation Kit

Version 1.1.4.1 and 1.1.5.0

Revision

2012/09/01	0.0.13.0	Creation
2012/09/01	0.0.14.0	Detailed information about evaluation usefulness
2012/11/26	1.0.5.1	The user needs to load the setup to display the B-scan.
2013/03/25	1.1.1.0	Support for 64-bit computers/operating systems.
2013/12/09	1.1.4.1	Update all the documentation.

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1 Introduction

Evaluation kits are special packages built with unique features. These packages can be used without any hardware and are for the sole purpose of evaluating the software. It can be used until a predefined day and hour.

1.1 Usefulness

Here are benefits of the evaluation kit:

- Although “OEMPASector” and “OEMPATool” operation is simpler with the evaluation kit, it is still mostly the same.
- The use of “EmuMon” to debug the software.
- The user can write a custom application software with the evaluation kit
    - Read back of an OEMPA hardware setup (with EmuMon instead of the hardware). See paragraph “Setup readback”.
    - Display acquisition data. Only available for the default setup file that comes with the Evaluation Kit.
    - “EmuMon” can be evaluated to debug the users custom software application.

1.2 Special features

All features of standard kits are not available from the evaluation kit. Here are unique features of the evaluation kit:

- Installation folders are specific:
    - Folders “AOS\OEMPA X.Y.Z.I” are replaced by “AOSEvaluation\OEMPA X.Y.Z.I”.
- Kernel dynamic link library
    - The default IP address is “127.0.0.1” (for connection with EmuMon) instead of “192.168.1.11” (connection with hardware).
- “EmuMon” software
    - An emulator port is automatically created at startup time to wait for a connection.
    - An acquisition data file is automatically loaded when a new connection (from “OEMPASector” or “OEMPATool” applications) is accepted.
    - “Emulator dialog” is automatically opened at startup.
- “OEMPASector” software
    - After connection, the corrected view is automatically shown.
    - “Enable” checkbox is not used
    - The acquisition data filter on the setting identifier is off.
- “OEMPATool” software
    - The “Hardware” dialog is automatically opened with the correct IP address.

For detailed information about “OEMPASector” and “OEMPATool”, please refer to the relevant documentation. For detailed information about “EmuMon”, please refer to its documentation.

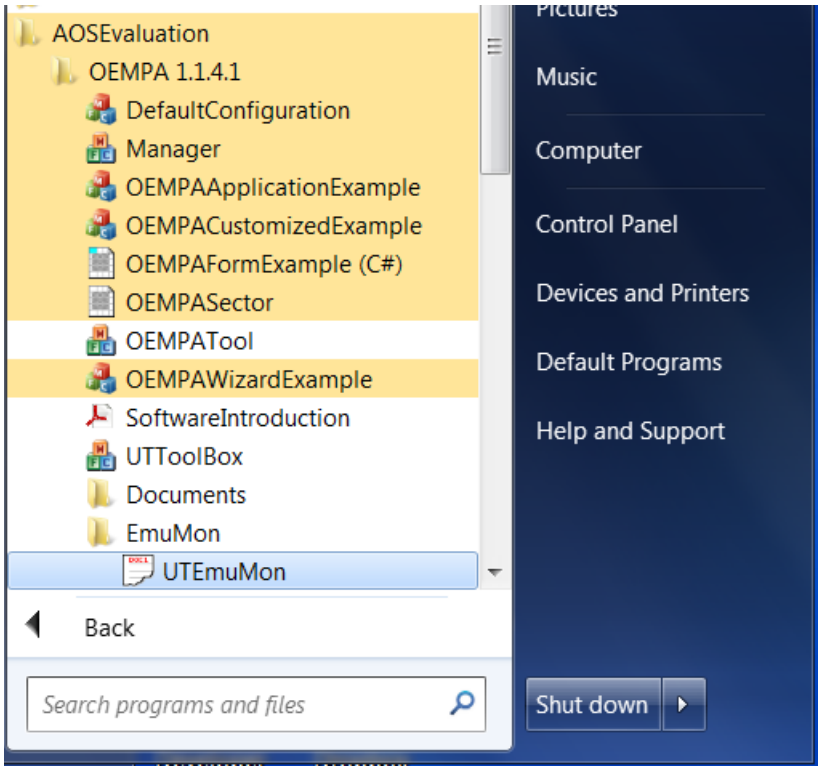
1.3 Limitations

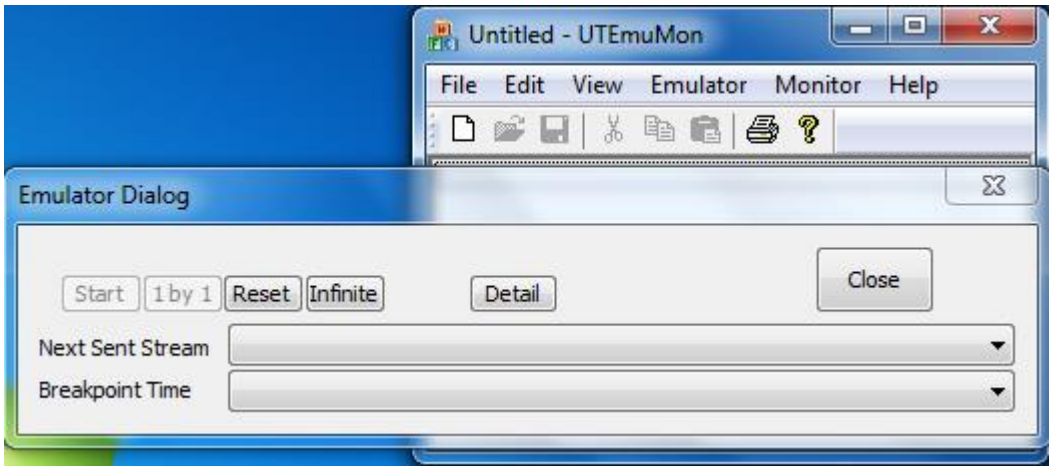
The “EmuMon” software is used to emulate the hardware. This emulation is restricted.

- Only one acquisition data file (previously acquired with a specific setup) is delivered, so it is not possible to change the gain, the cycle count, etc… you can only get acquisition data for the delivered setup.
    - For example: if you change the gain, the acquisition data will still be the same.
- The delivered acquisition data file has no encoder information, so it is not possible to enable the encoder.
- Acquisition data are sent by “EmuMon” only if you press the button “Start” of “Emulator Dialog” of “EmuMon”. The API function to enable the pulser is useless.
- The wizard is not fully available (delays are set to 0).
- The EmuMon menu “File/Flash Update” is not available.
- Some evaluation kits have special limitations:
    - You should be connected to the internet to run the evaluation software.
    - Time limitation: after the trial period expires, the evaluation will be out of date, and it will be impossible to use.

2 EmuMon

The order of operations to get things started: First you run EmuMon and secondly you run the application software (“OEMPASector” or “OEMPATool”, but not both simultaneously).

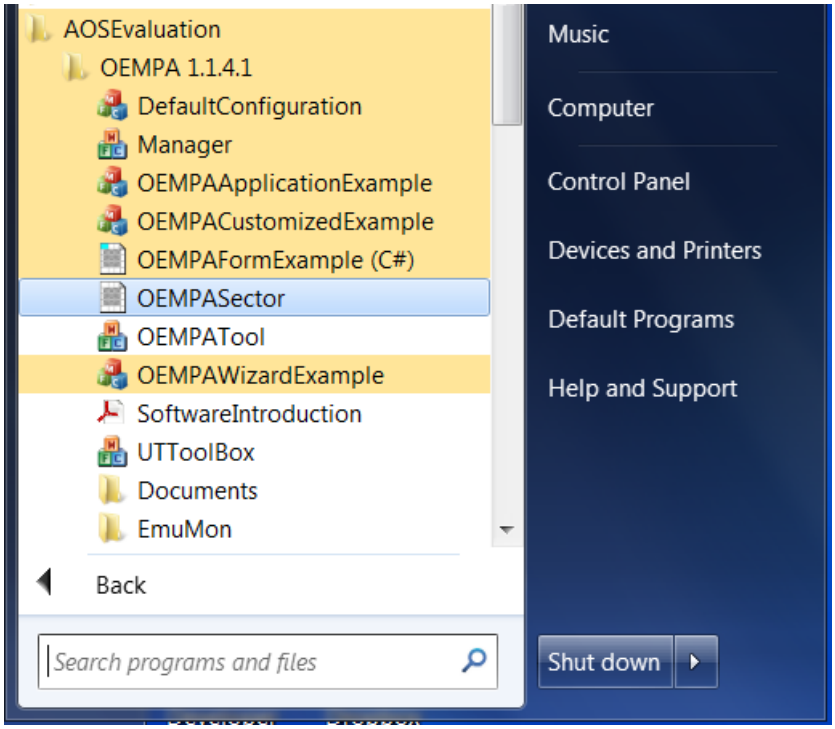




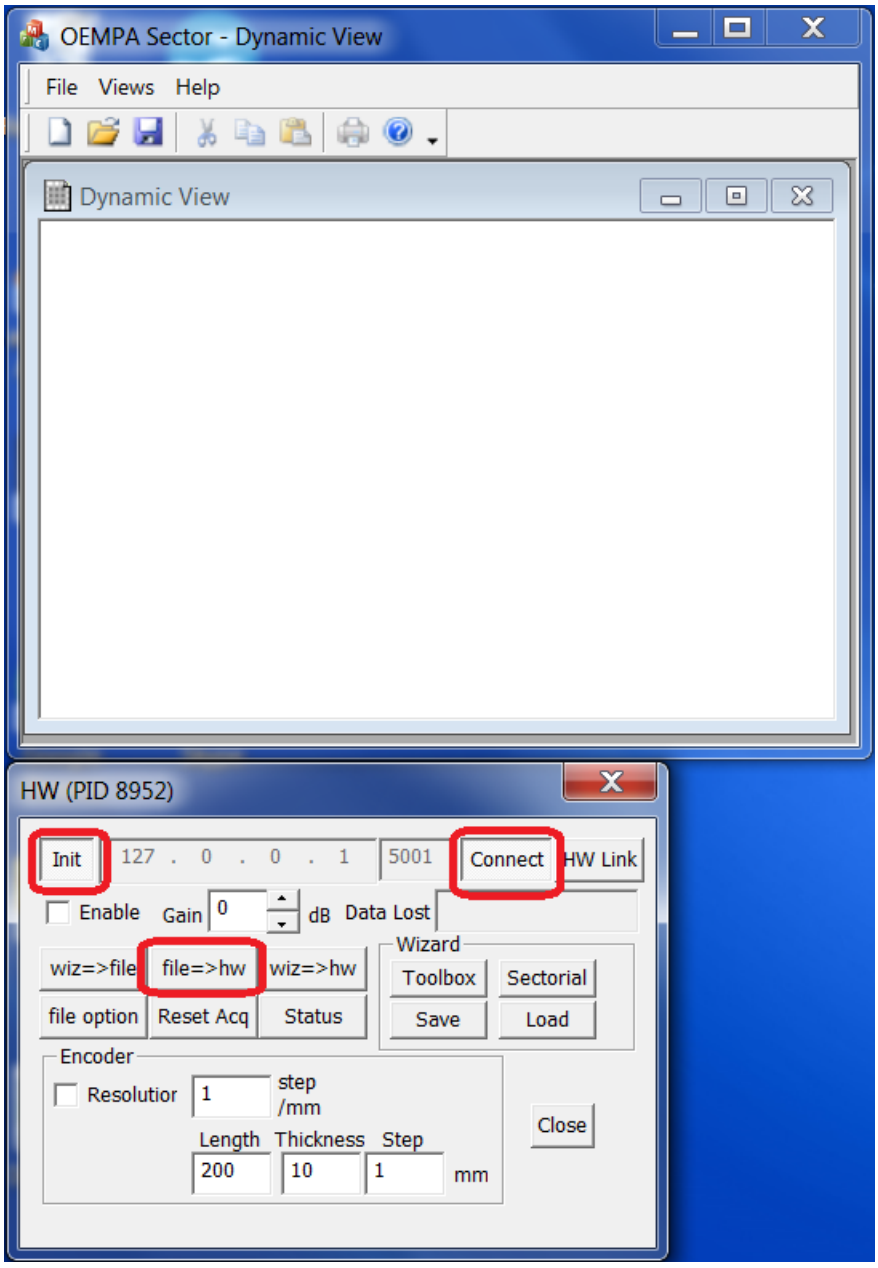
The emulator port is automatically created for you and the “Emulator dialog” is also automatically opened. EmuMon is now waiting for an external socket connection.

3 OEMPASector

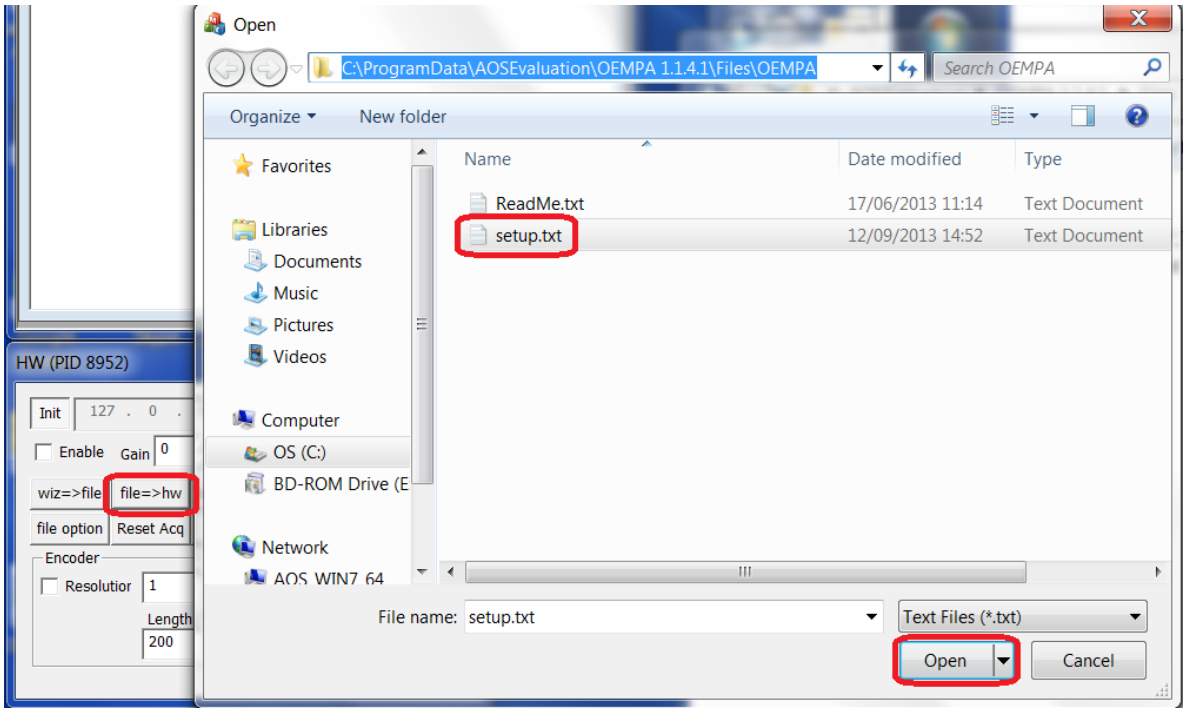
Run “OEMPASector” from the windows menu.



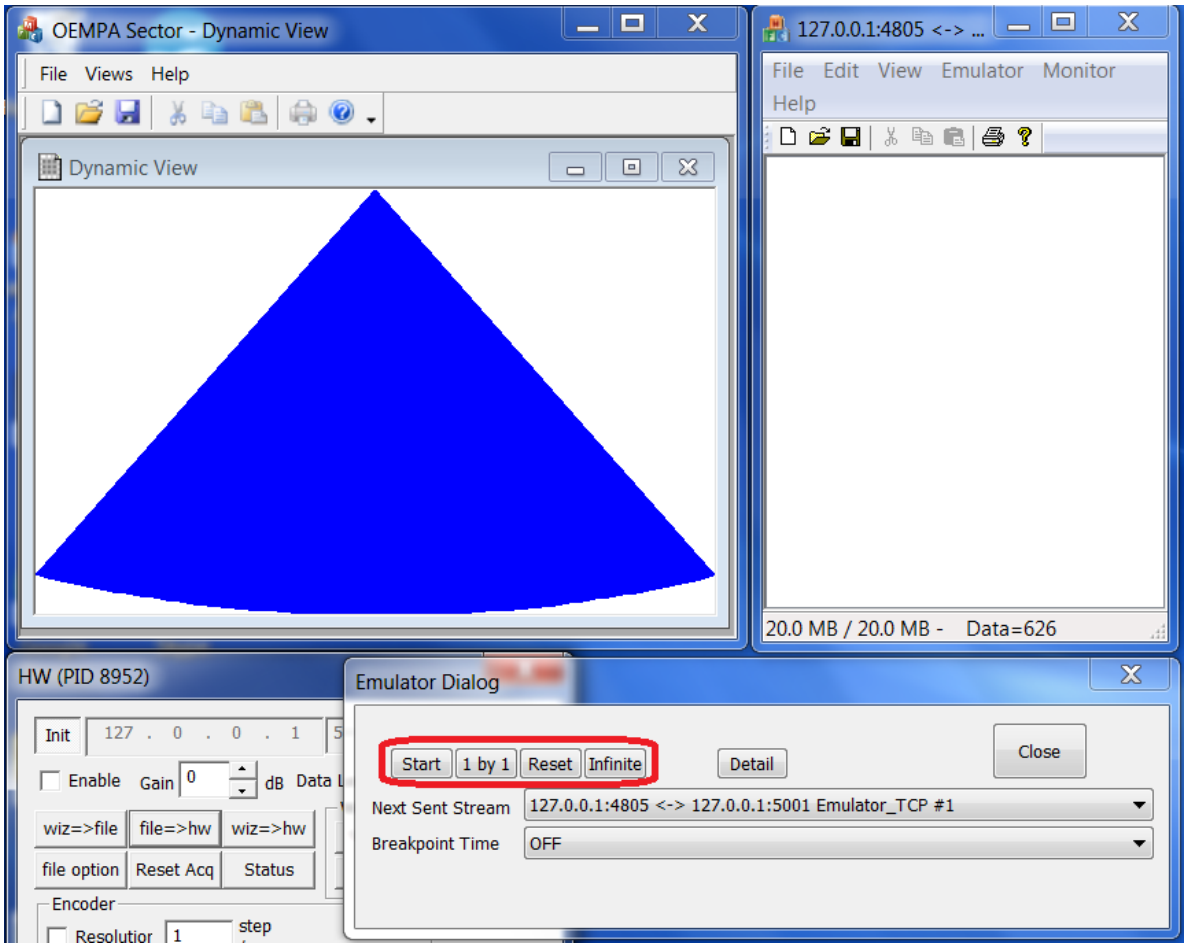
The “HW” dialog is displayed as below.



1. You can press “Init” to create the kernel object instances.
2. Then press “Connect” from the “HW” dialog of “OEMPASector” to connect with the emulator port of “EmuMon”.
3. When the connection is established, EmuMon automatically loads the default acquisition file that has been saved previously when the hardware was connected. “OEMPASector” automatically displays the default corrected view.
4. Then from “OEMPASector”, you need to load the OEMPA setup file by which acquisition data was acquired. Click the button “file=>hw” and select the file “setup.txt”:



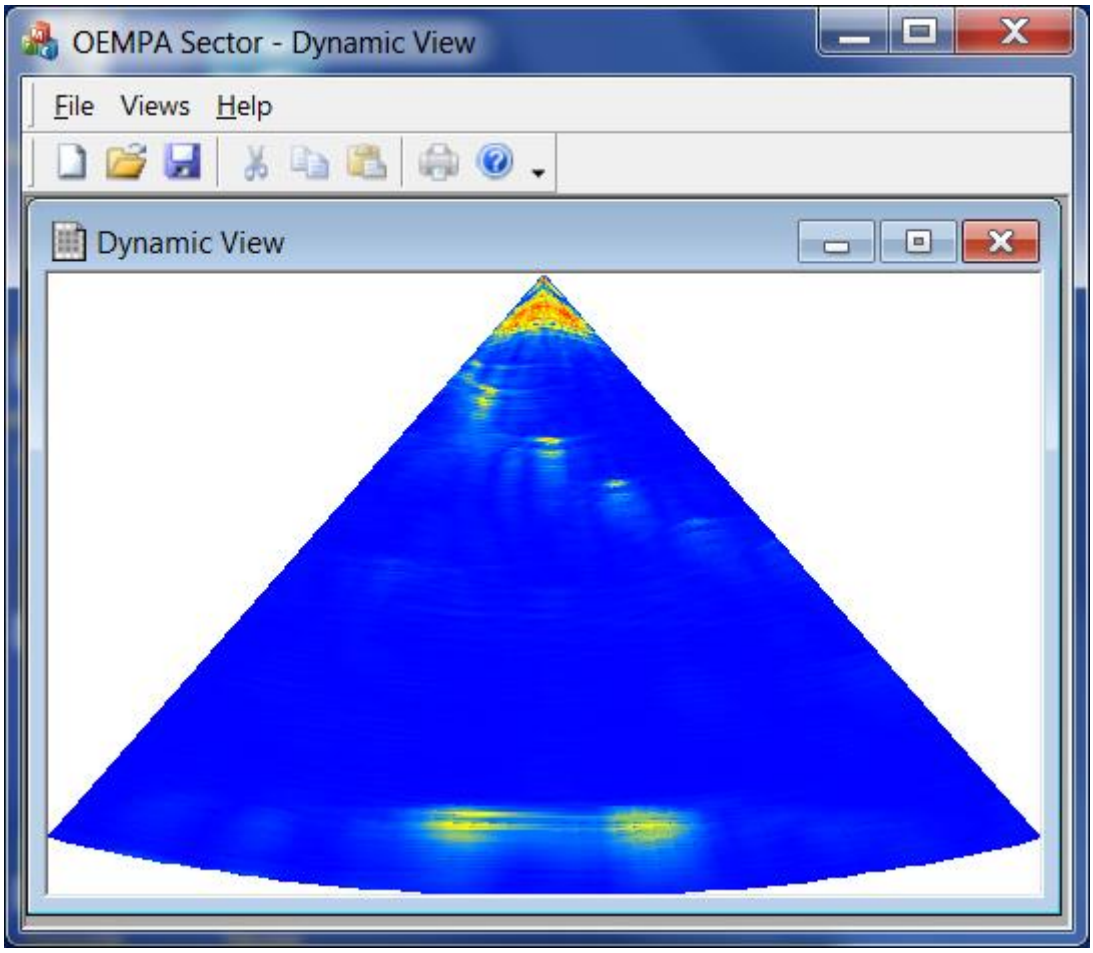
Here is the final screen capture:



Now you can click any button of the “Emulator Dialog”:

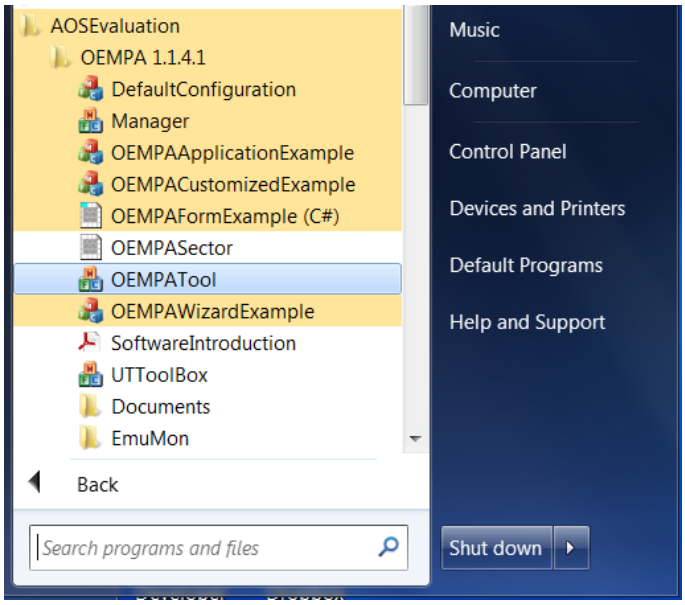
Button	**Feature**
Start/Stop	To start and stop the simulation.
Reset	To restart the simulation from the first stream of the acquisition data file.
Infinite	To automatically restart the simulation when all streams have been sent. (i.e. plays in a loop)
1 by 1	To send the current stream, where more than one a-scan is inside one stream (or one sub-stream).

For example, the following will be displayed if you press “Start”:

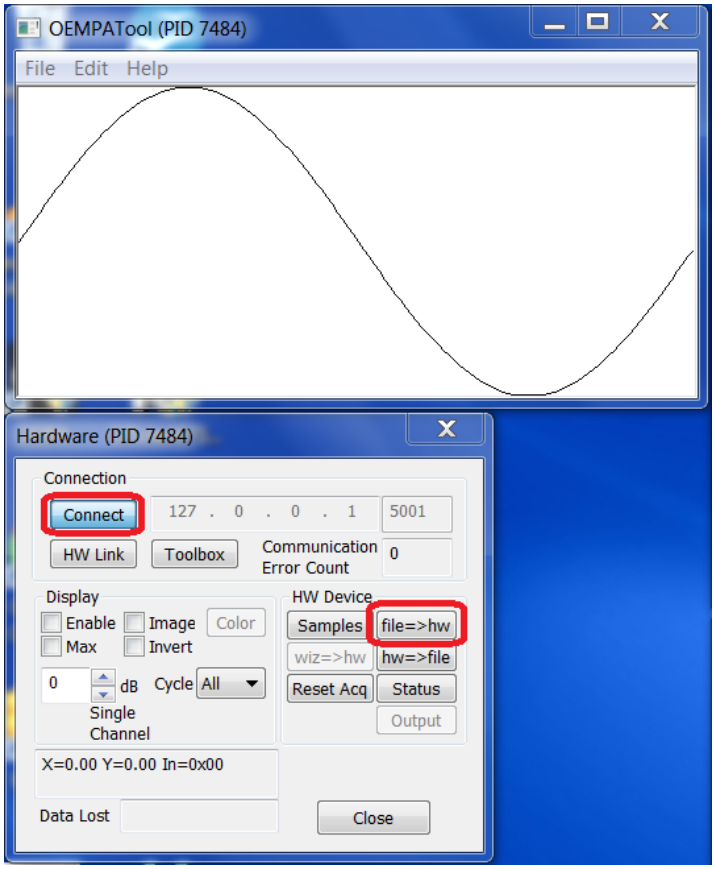


4 OEMPATool

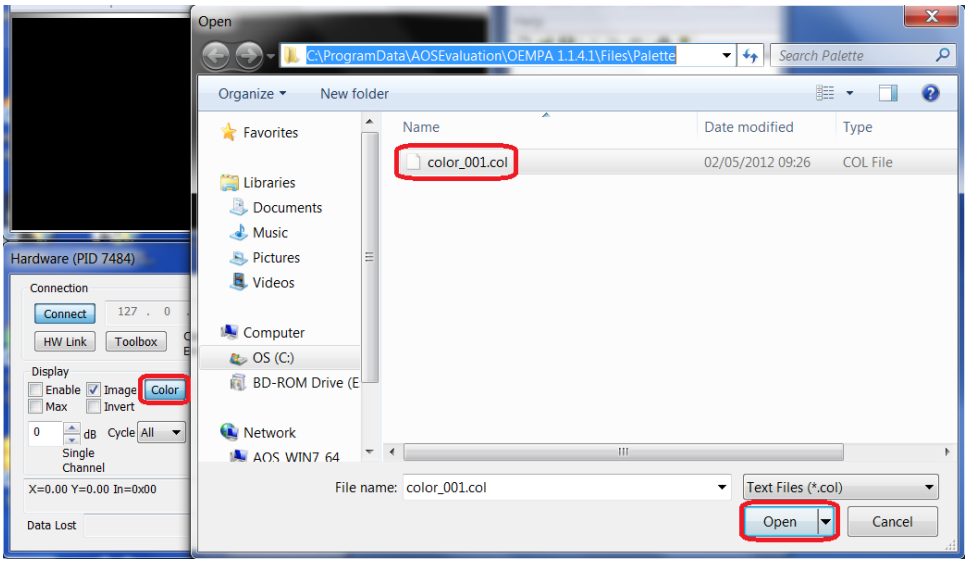
Run “OEMPATool” from the windows menu.



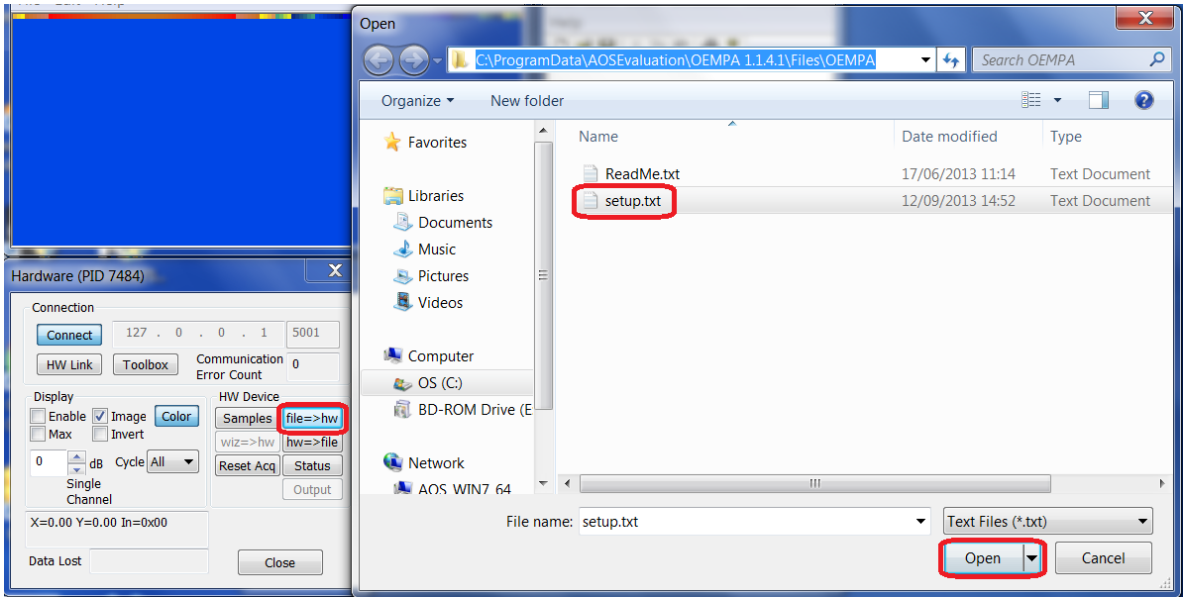
The “Hardware” dialog is automatically displayed.



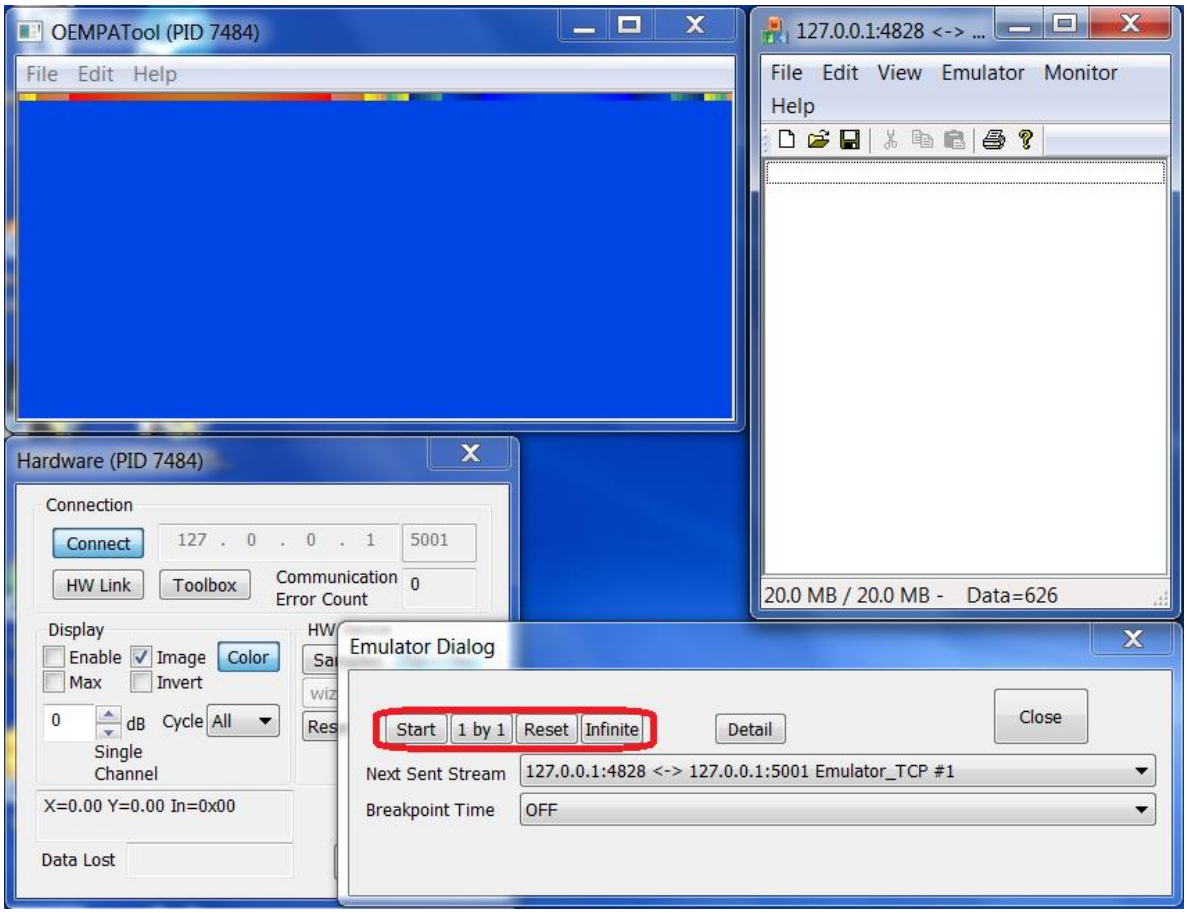
1. Press “Connect” from the “HW” dialog of “OEMPATool” to connect with the emulator port of “EmuMon”.
2. When the connection is established, EmuMon automatically loads the default acquisition file that was saved previously when the hardware was connected.
3. Check the checkbox “Image” from the “HW” dialog. You can also load the default color palette “color_001.col”.



4. Then you can load the OEMPA setup file by which acquisition data was acquired. Click the button “file=>hw” and select the file “setup.txt”:



The final screen will appear as the following:



Now you can press any button of the “Emulator Dialog”:

Button	**Feature**
Start/Stop	To start and stop the simulation.
Reset	To restart the simulation from the first stream of the acquisition data file.
Infinite	To automatically restart the simulation when all streams have been sent. (i.e. plays in a loop)
1 by 1	To send the current stream (or sub-stream).

For example, if you Click “Start”: