TEI0015 - Data capture Demo

Table of Content

- Table of Content
- Download
- Setting up Visual Analog and running the data capture demo
- Quick test with a terminal program

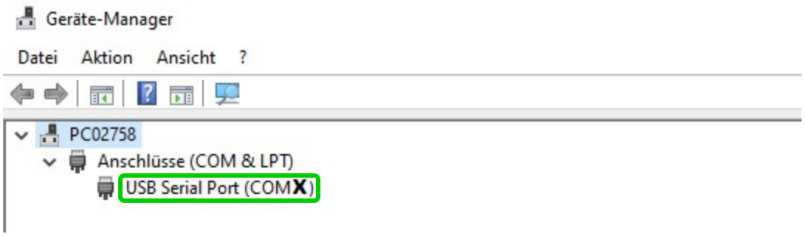
Download

Compressed folder, containing all necessary files for the demo - **Download-Link**
The compressed folder needs to be extracted, so that the contend can be used inside other programs.

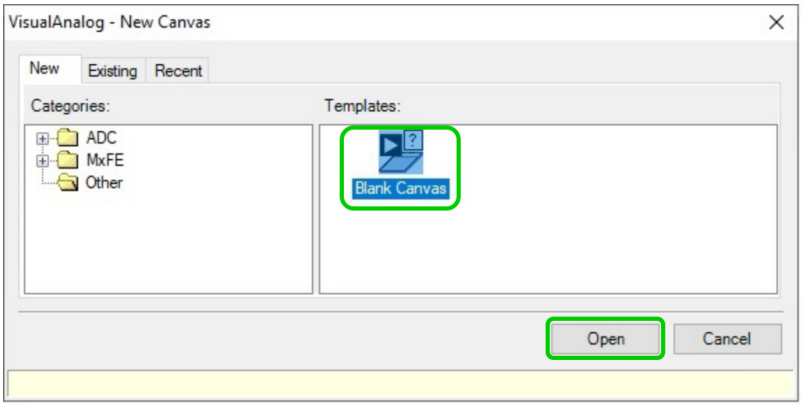
The demo itself requires the installation of **Visual Analog** (Version 1.9.48.1) - **Download Link**

Setting up Visual Analog and running the data capture demo

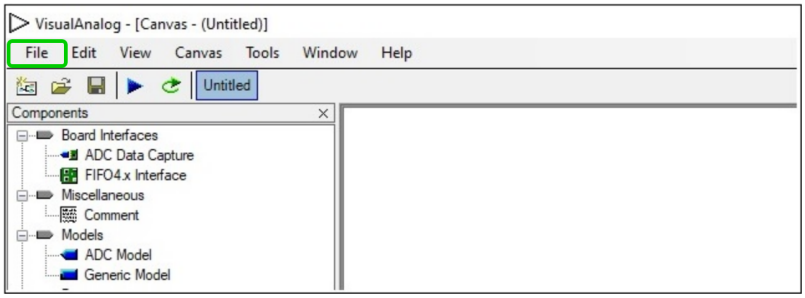
1. Determine the modules COM port number
    a. Open the device manager, **right click** onto **windows start menu** symbol and select **device manager**
    b. Open ports and identify the port used by the module, the number is here marked with an **X**



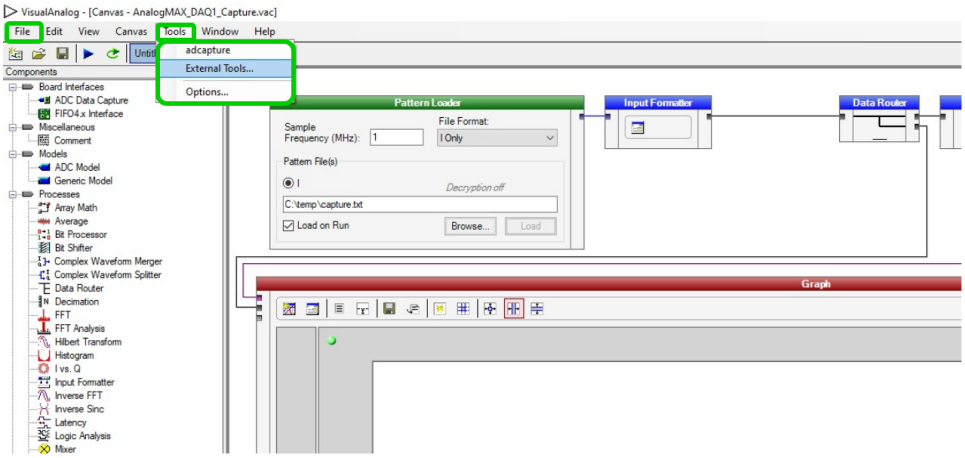
2. Setup Visual Analog
    a. Start **Visual Analog** and open a **Blank canvas**



Via **File** **Open** point to the file **AnalogMAX_DAQ1_Capture.vac** from the demo folder.

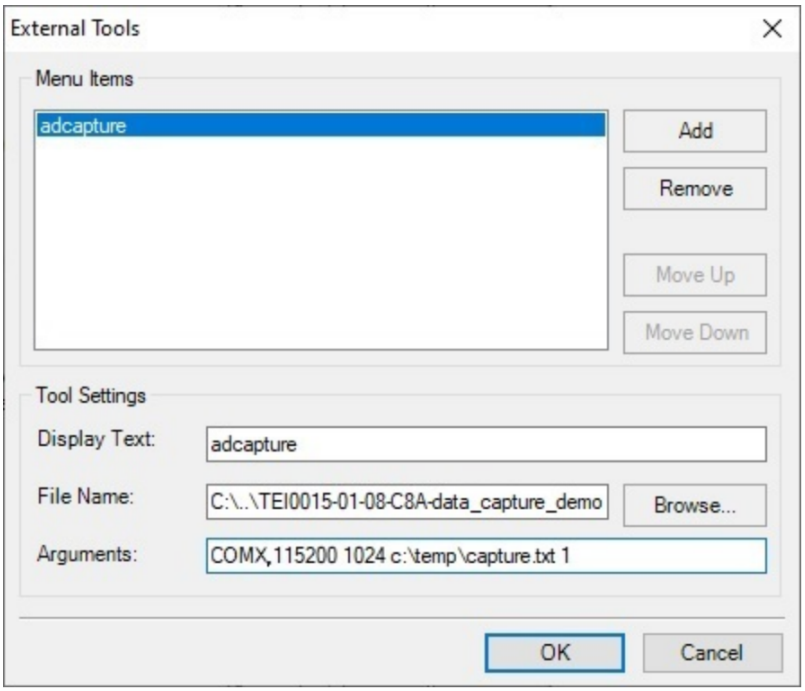


b. Press **Tools External Tools...** to prepare the usage of **adcapture.exe**, in the new appearing window



c. Click **Add** in the new opened window and insert the name "adcapture" in the **Display Text**.
Click **Browse...** and select the file "adcapture.exe" from the downloaded demo.
Into **Arguments** insert "COM**X**,115200 1024 c:\temp\capture.txt 1", where the **X** in COM**X** is a placeholder for your comport number.

To finish the setup press **OK**.



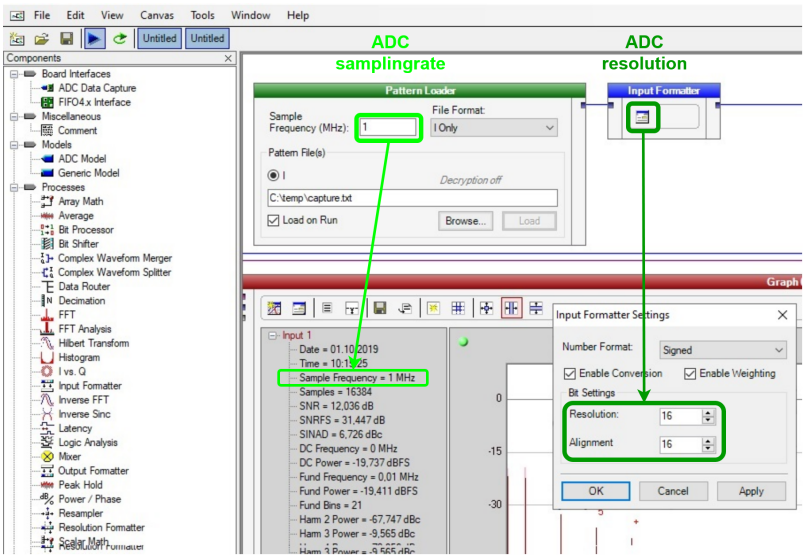
Parameter description:
COM14 - COM port which is used for the connection.
115200 - Baud rate which is used for the connection.
1024 - Amount of K samples to read, minimum 64 and maximum is 1024.
c:\temp\capture.txt - File name and path which specifies where to storage the data.
1 - Command to adjust for the modules gain, possible values are:
TEI0015 and TEI0016: 1 for a gain of 1, 2 for a gain of 2, 4 for a gain of 4 and 8 for a gain of 8
TEI0023: 1 for a gain of 0.25, 2 for a gain of 0.5, 3 for a gain of 1, 4 for a gain of 2, 5 for a gain of 4, 6 for a gain of 8 and 7 for a gain of 16

d. Befor running the demo, in Visual Analog, fill into the **Pattern Loader** the **ADC sampling** rate of your module:
TEI0015 - 2 MHz / Resolution - 18 bit
TEI0016-0x-08-C8**A** - 0.5 MHz / Resolution - 16 bit
TEI0016-0x-08-C8**B** - 1 MHz / Resolution - 16 bit
TEI0023 - 2 MHz / Resolution - 18 bit

This sampling rate is only changed, when the demo has been run.

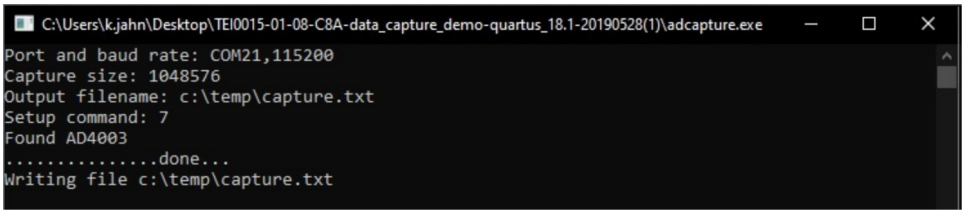
It is often necessary to fill in the value two times before it is recognized.
In dependency to the language settings, 0.5 MHz is sometimes not recognized,
try instead of the separation point (0.5) a separation comma (0,5) or without the zero (.5 ,5)
In the graph section, one can check the present sampling rate

e. In addition, the **ADC resolution** needs to be adjusted also. In the **Input Formatter Box**, press onto the small Button, and adjust in the new appearing window the resolution.



3. Launch adcapture

   a. To run the demo, select the above inserted tool by selecting **Tools adcapture**, a new window opens
   b. The window shows the activity of the tool "adcapture", the picture below shows it, when it is finished



   c. In Visual Analog, use "F5" or press **Canvas Run** to update the screen



Quick test with a terminal program

1. Figure out the correct COM port number for the AnalogMAX DAQ1 board
    a. Open the device manager.
    b. Open ports and identify the port used by the AnalogMAX DAQ1 as visible in Figure 10.
2. Open terminal and set the parameters (example use for putty).
    a. Set the connection type to Serial.
    b. Set the "Serial line" to your above found COM port.
    c. Set the "Speed" to 115200.
    d. Use "Open" to start the connection.
3. Type following character for the appropriate usage.
    a. "?" to get the ID (AnalogMAX DAQ1 will return "1", DAQ2 will return "2")
    b. "t" to trigger ADC capture into the memory - 1M samples.
    c. "." to get one ADC sample.
    d. "+" to get 128 samples.
    e. "*" to get 16*1024 samples.