

1 Overview

The MFD Customer Frontend is a .NET application providing a user interface to MFD sensors using the MFD communication driver.

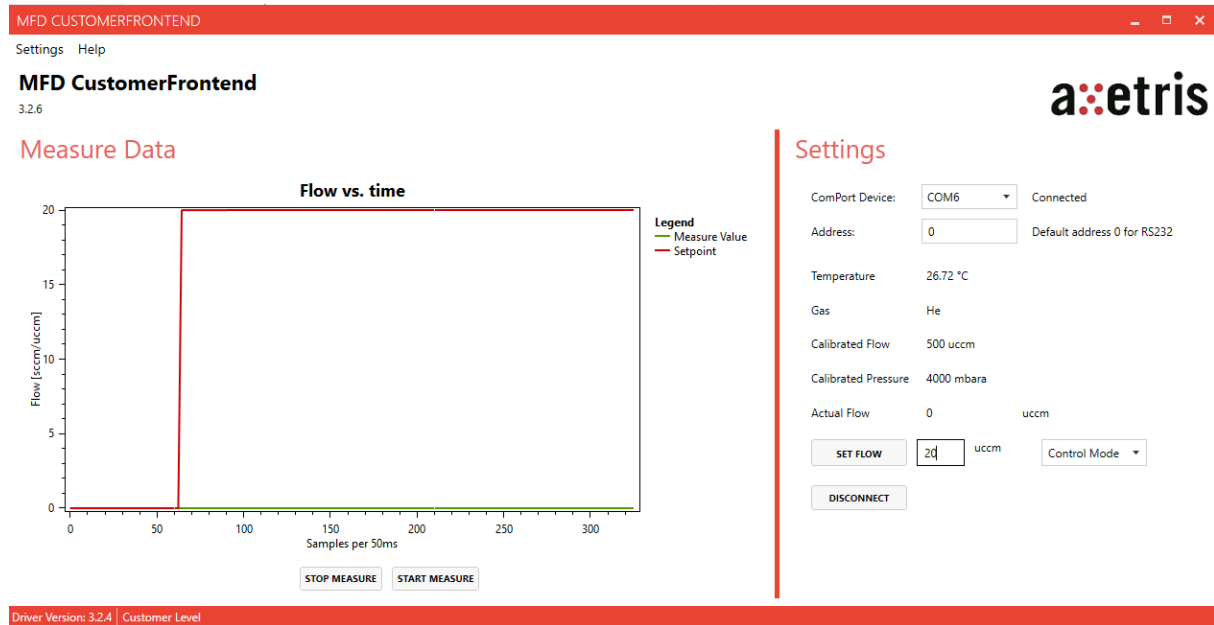


Figure 1 MFD Customer Frontend screenshot

Users have access to normal MFD functions including reading measurements and diagnostic data and setting a defined subset of parameters.

To provide technical support extended functions are granted to Technical Support Engineers having access to the restricted MFD Customer Frontend Secure Access application.

2 Content

1	Overview	1
2	Content.....	2
3	Install Frontend.....	2
4	Connect To Sensor.....	3
5	Display Sensor Information	4
6	Display Measurement Data	5
7	Record Data	6
8	Set Analog or Digital Control Mode	7
9	Display Device Parameters	8

3 Install Frontend

The application is deployed as a .NET Core self-contained single executable file.

No special installation process is needed.

The user only needs to download the file, store it locally and execute it.

It is also possible to store the file on a central file server and execute it from there.

However when using a USB-Converter you need to install the required drivers.

4 Connect To Sensor

Before you can use the device, you need to connect to the COM port that is connected with your Axetris device. Please make sure to install all necessary drivers when using a USB-converter. No Application specific installations are necessary.

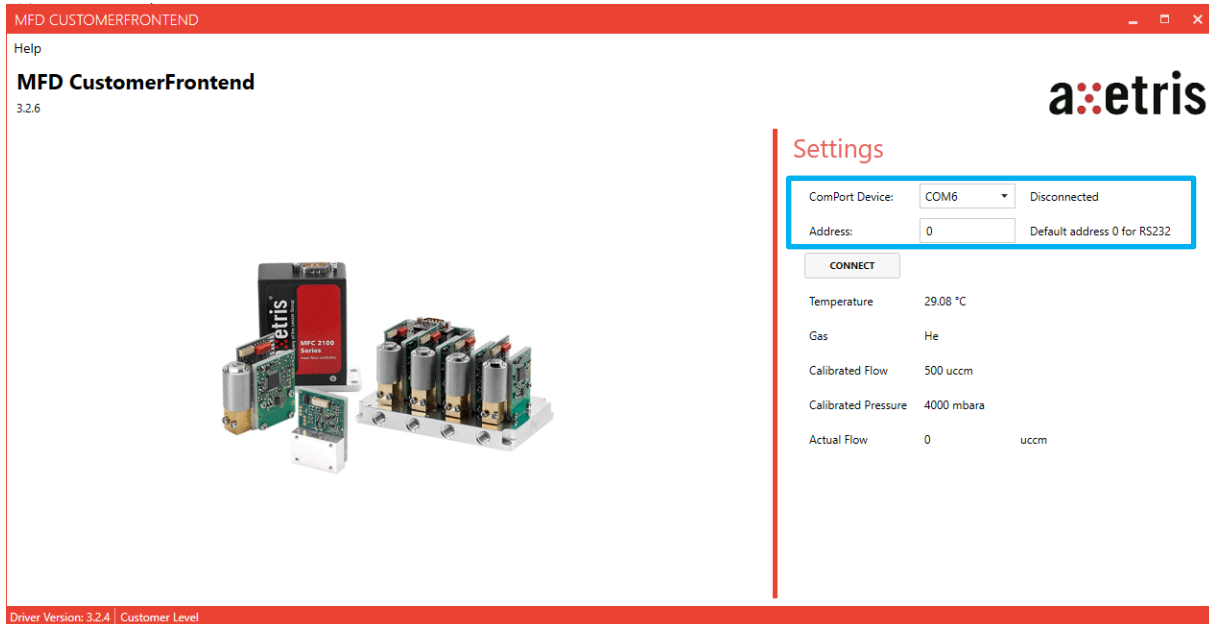


Figure 2 Connection options are displayed in the right part of the user interface

The user can connect to a sensor using the connection bar in the upper part of the user interface:

- choose a com port from a list of available ports.
- choose the RS485 address of the desired device.
 - **select address 0 for RS232 devices**
- click the Connect button to connect to the device.
- When connected the user can click the disconnect button to disconnect.

5 Display Sensor Information



Figure 3 Sensor Information displayed on the right side of the user interface

When connected to a sensor the Sensor Information is displayed on the right side of the user interface.

Sensor Information consist of three parts:

1. Serial Number.
2. Firmware Name.
3. Firmware Version
4. Device Temperature
5. Chosen calibration Gas
6. Full Scale Flow of chosen calibration [sccm]
7. Calibrated Pressure [mbar]
8. Actual Flow [sccm]

The user can right click on the Serial Number and copy the serial number string.

6 Display Measurement Data

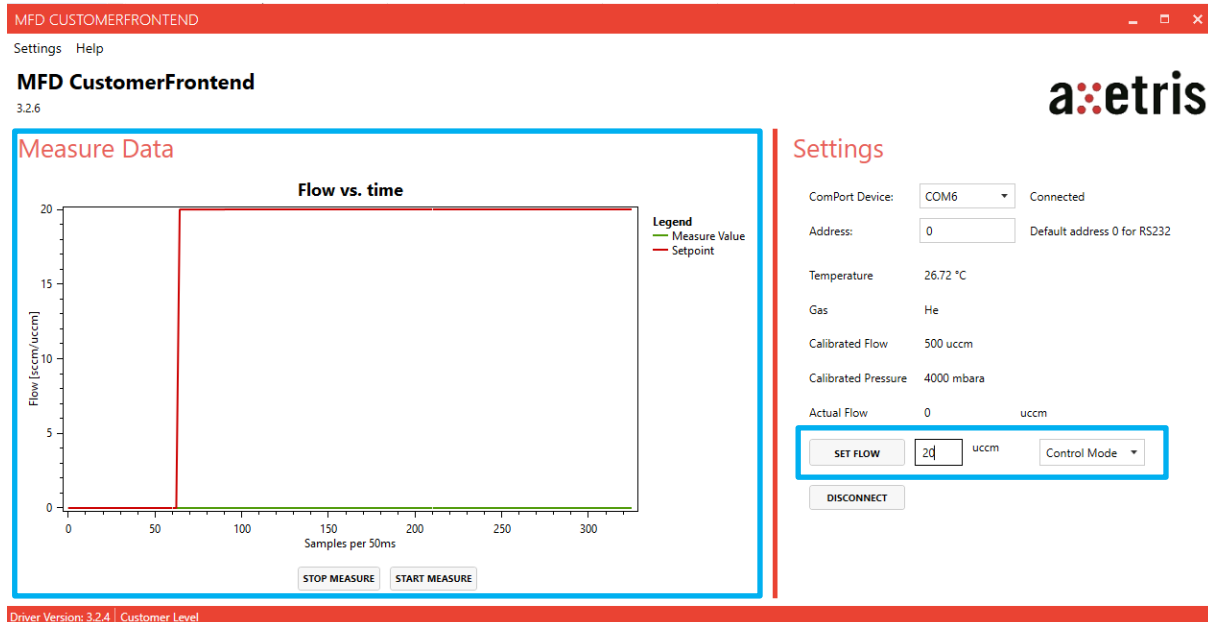


Figure 4 Measurement Data are displayed in the main view area first tab

When connected to a sensor the received measurement data are displayed in the main area of the user interface.

The current values are displayed using color coded labels:

- The **flow setpoint** is displayed in red and can be set in the right side of the frontend. There are 3 modes selectable:
 - Control Mode: Standard mode, valve controls selected setpoint
 - Open: Valve opens completely, no setpoint is controlled
 - Close: Valve closes completely, no setpoint is controlled
- The **current flow value** is displayed in green.

The following commands can be used to adjust the displayed data points:

- **Pan:** Right mouse button
- **Zoom:** Mouse wheel
- **Zoom by rectangle:** Ctrl+Right mouse button, Middle mouse button
- **Reset:** Ctrl+Right mouse button double-click, Middle mouse button double-click
- **Show 'tracker':** Left mouse button
- **Reset axes:** 'A', Home
- **Copy code:** Ctrl+Alt+C
- **Copy properties:** Ctrl+Alt+R

7 Record Data

To record data the start measure function needs to be pressed first.

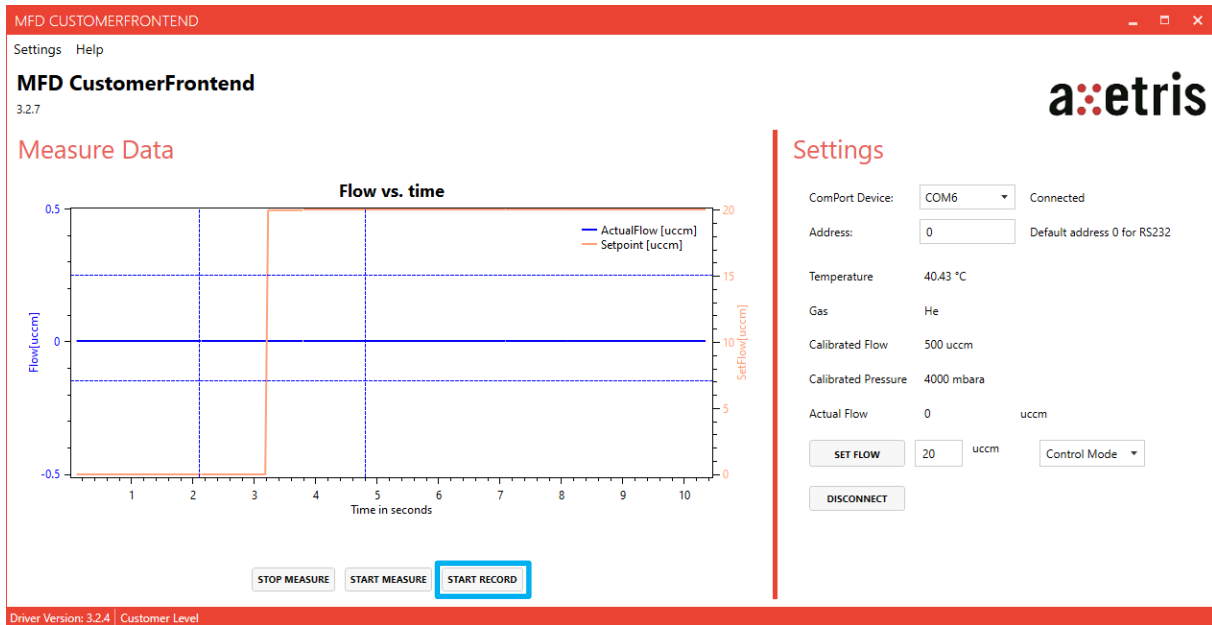


Figure 5 Record values button

When clicking on the start record button, the window opens to choose the file storage path:

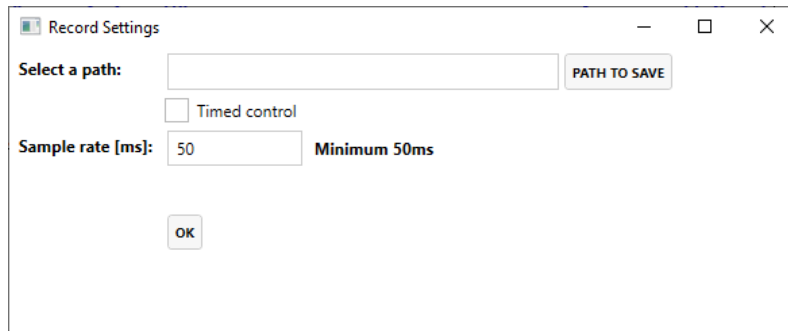


Figure 6 Record settings manual

It is possible to just start and stop manually by not choosing timed control

Select the path where the .txt file should be stored and the sample rate with which you would like to record.

Or mark the timed control option to get a fixed time to measure. The measurement will stop automatically and create the file after the desired time window.

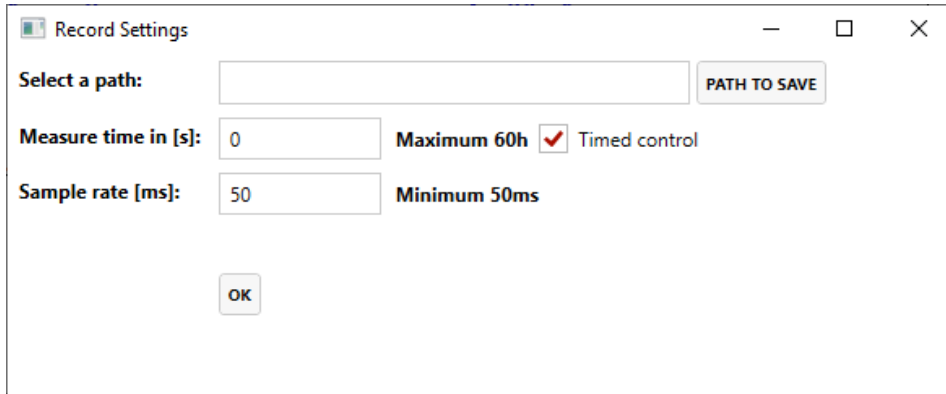


Figure 7 Record settings time controlled

8 Set Analog or Digital Control Mode

To set a Mass Flow Controller device to either Digital or Analog Control you can click on the desired option under the settings tap at the top

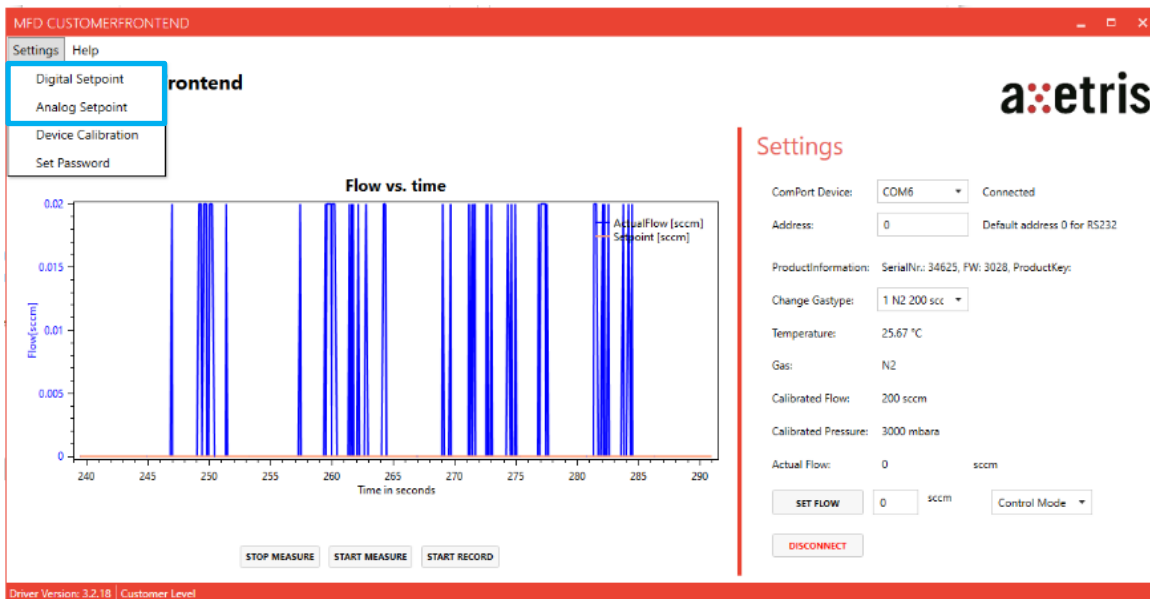


Figure 8 Set Digital or Analog control

9 Display Device Parameters

To see all calibrated data on the device you can click on device calibration.



Figure 9 Sensor Parameter in the Settings menu tab

The user can view the sensor parameters by clicking on the "Device Calibration" menu item in the "Settings" menu.

A new window showing a list of all available calibrations and parameters (can be different for your specific sensor and access level) will show up.

GASTYPE	GAS ID	MAX FLOW	UNIT CODE	REF P [MBAR A]	REF T [°C]	CALIB P [MBAR A]	CALIB T [°C]	HEAT CAPAC
1	N2	200	sccm	1013	0	3000	25	1045
2	0	0	0	0	0	0	0	0
3	N2	40	sccm	1013	0	3000	25	1045
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0

Figure 10 Available calibration data

By clicking the cross button, the new window closes.