posifa TECHNOLOGIES

QUICK START GUIDE

131 E. Brokaw Road | San Jose CA 95112 | +1 (408) 392-0989 | info@posifatech.com | www.posifatech.com

PMF Mass Air Flow Sensors I²C Evaluation Kit

Posifa Technologies has created this Quick Start Guide to allow you to test our PMF sensors using Posifa's free PC software (requires Windows 10 operating system) and a third-party USB / I²C adapter board (must be purchased separately).

Evaluation Kit PC Software

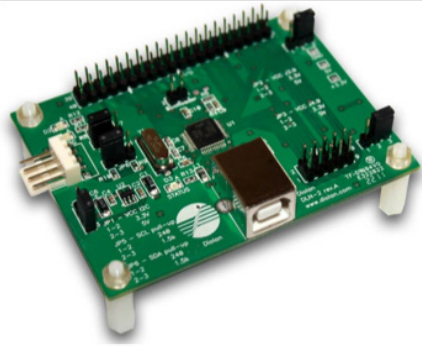
Download the ZIP file PMF-I2C-EVAL-V1.4.zip from the following link:

https://drive.google.com/open?id=1u-XQJeO04cJXJiey0Eb-Aex7TLmX1hJ-

Recommended USB-I²C Adapter Board

Diolan DLN-2 USB-I2C/SPI/GPIO Adapter

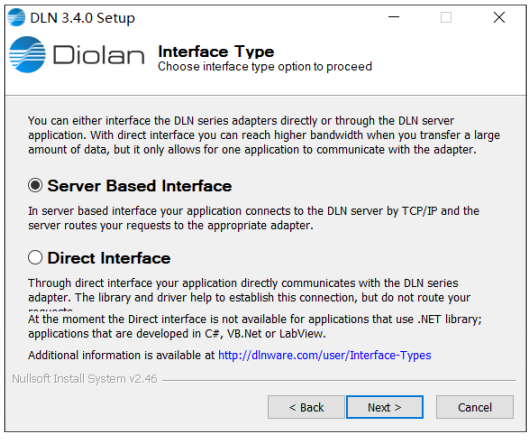
Available at https://diolan.com/dln-2



Configuration of DLN-2

- JP1(Vcc I2C): 1,2 3.3V
- JP2: 2-3, 5V
- JP3: 2-3, 5V
- JP5 (SCL pull-up): 2-3, 1.5K
- JP6 (SDA pull-up): 2-3, 1.5K

Please note the "MS Windows Setup Package" and U2C-12 Device Firmware Uploader must be installed on your PC before the DLN-2 adapter can be used. You can find these downloads at http://dlnware.com/Downloads . When installing the MS Windows Setup Package, please make sure you select "Server Based Interface" as illustrated in the screen shot. If you run into any problems with subsequent steps, please also install "I2CBridge.1.0.0.exe [zip]," which you can download from the same location, http://dlnware.com/Downloads .



131 E. Brokaw Road | San Jose CA 95112 | +1 (408) 392-0989 | info@posifatech.com | www.posifatech.com

Set-Up Instructions

Step 1. Use jumper cables to connect the PMF sensor to the DLN-2 USB/I2C adapter board (Figure 1)

- Refer to individual PMF series datasheets for actual sensor module pin assignments
- Ensure that PMF sensor is powered from a power supply, and the ground pins of PMF sensor and the adapter board are connected to the ground of the power supply (Figure 2)

Pin	Description
1	To device SCL
2	N/C
3	To device GND
4	To device SDA

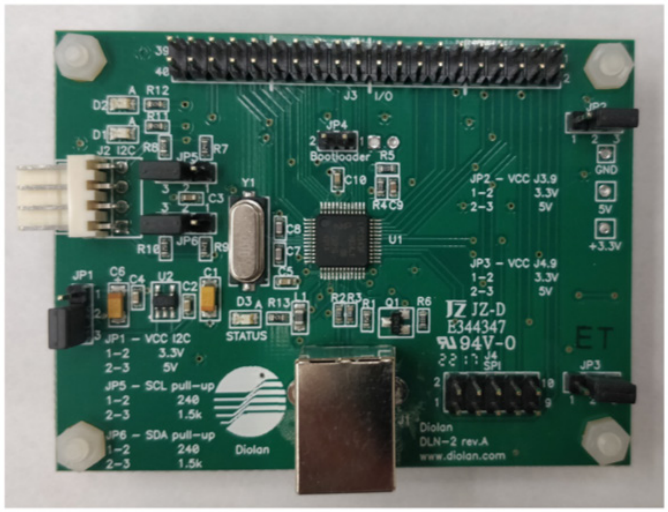


Figure 1

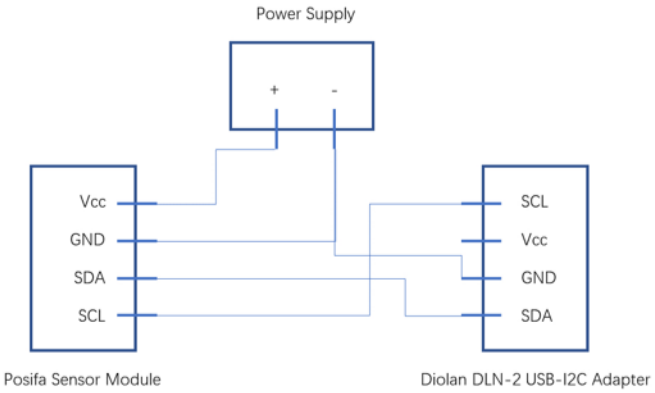


Figure 2

131 E. Brokaw Road | San Jose CA 95112 | +1 (408) 392-0989 | info@posifatech.com | www.posifatech.com

Step 2. Connect the DLN-2 USB-I2C adapter to a Windows PC via a USB cable (not provided)

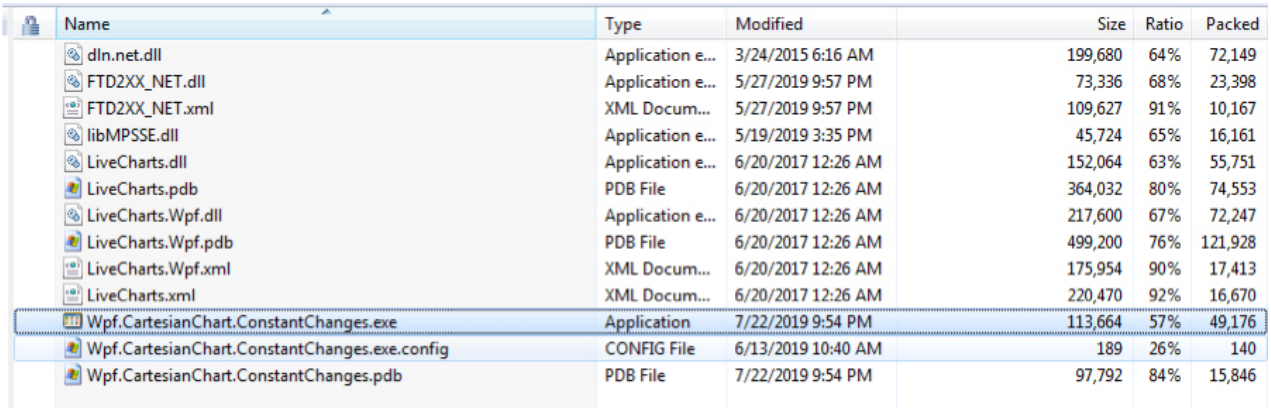
This will power up the adapter board.

Step 3. Turn on the power supply

This will power up the PMF sensor. Please ensure that the PMF sensor is powered on AFTER the adapter board is powered on.

Step 4. Unzip PMF-I2C-EVAL-V1.4.zip

- Keep all files in the same unzipped folder. Do not edit or modify any files
- Open the single .exe file in the folder (see Figure 3)



Name	Type	Modified	Size	Ratio	Packed
dln.net.dll	Application e...	3/24/2015 6:16 AM	199,680	64%	72,149
FTD2XX_NET.dll	Application e...	5/27/2019 9:57 PM	73,336	68%	23,398
FTD2XX_NET.xml	XML Docum...	5/27/2019 9:57 PM	109,627	91%	10,167
libMPSSE.dll	Application e...	5/19/2019 3:35 PM	45,724	65%	16,161
LiveCharts.dll	Application e...	6/20/2017 12:26 AM	152,064	63%	55,751
LiveCharts.pdb	PDB File	6/20/2017 12:26 AM	364,032	80%	74,553
LiveCharts.Wpf.dll	Application e...	6/20/2017 12:26 AM	217,600	67%	72,247
LiveCharts.Wpf.pdb	PDB File	6/20/2017 12:26 AM	499,200	76%	121,928
LiveCharts.Wpf.xml	XML Docum...	6/20/2017 12:26 AM	175,954	90%	17,413
LiveCharts.xml	XML Docum...	6/20/2017 12:26 AM	220,470	92%	16,670
Wpf.CartesianChart.ConstantChanges.exe	Application	7/22/2019 9:54 PM	113,664	57%	49,176
Wpf.CartesianChart.ConstantChanges.exe.config	CONFIG File	6/13/2019 10:40 AM	189	26%	140
Wpf.CartesianChart.ConstantChanges.pdb	PDB File	7/22/2019 9:54 PM	97,792	84%	15,846

Figure 3

131 E. Brokaw Road | San Jose CA 95112 | +1 (408) 392-0989 | info@posifatech.com | www.posifatech.com

Step 5. Start measuring data

- A sensor data graph with time tracked on the x-axis and air flow on the y-axis will appear (Figure 4)
- Click on "Get Data" to start receiving data from the PMF sensor

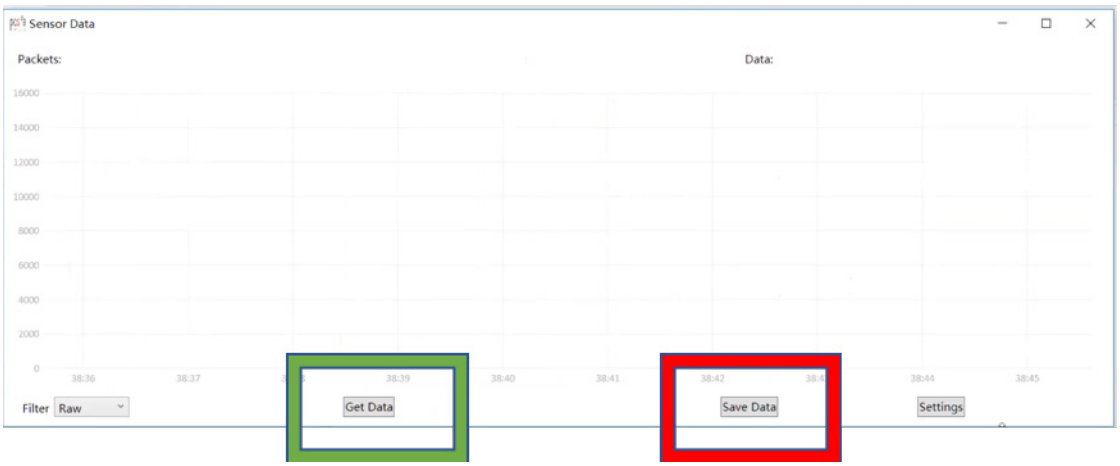


Figure 4

Step 6. Select the type of filtering you require

You may select Raw, which displays data collected directly from the evaluation board, or an n-point moving average (where n = 16, 32, 64, 128, or 256) of the data collected from the evaluation board (Figure 5).

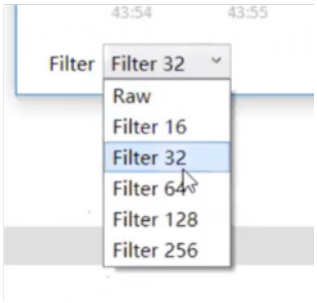


Figure 5

Step 7. Save your data

- Click on "Stop," then click on "Save Data"
- Data is available to be saved as a .csv file