

# **megawin ADC Studio User Manual**

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## **1. Preface**

### **1.1. Purpose of document**

Describes how to operate the software to control the MAD2418.

### **1.2. Glossary of terms and abbreviations**

## 2. Interface Description

2.1. Launch the program, as shown as the Figure 1.

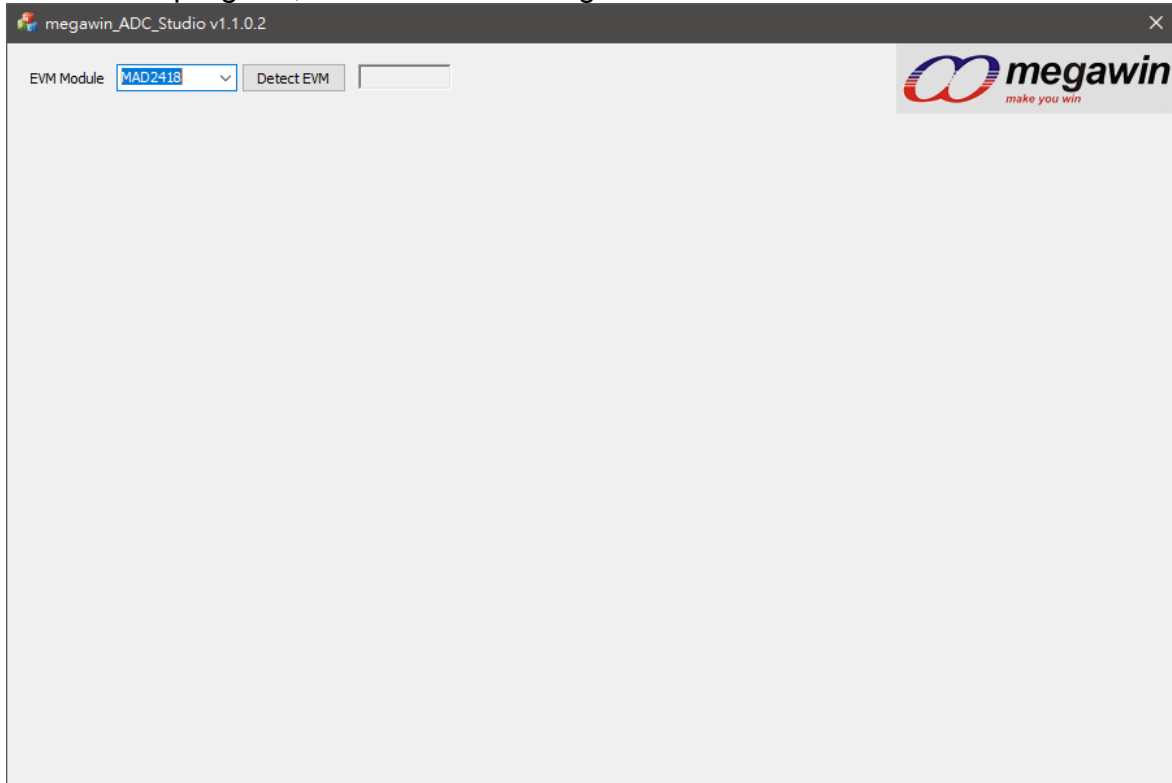


Figure 1

2.2 Select MAD2418 in EVM Module then click “Detect EVM”( 1 as shown as Figure 2). megawin ADC studio will find the proper com port and show the com port number as shown as 2 in Figure 2.

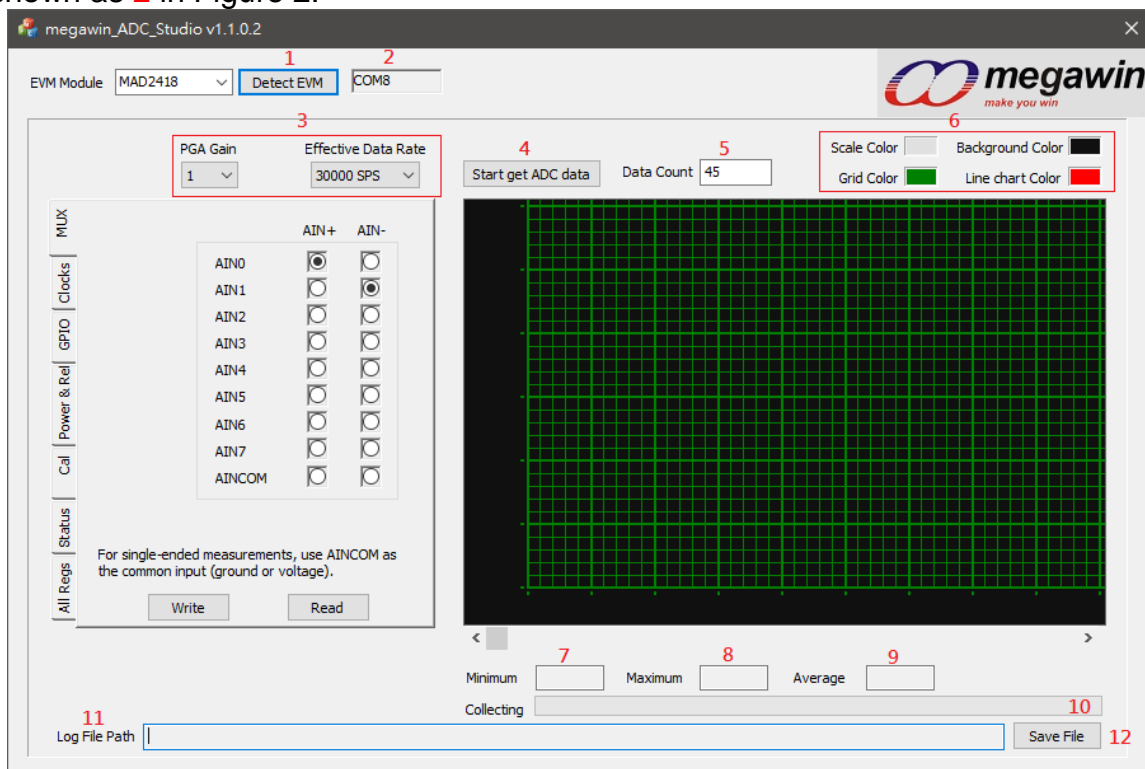


Figure 2

2.3 The left side of megawin ADC Studio has setting tabs for Mux channels, Cal. Reg..., as shown 3 in Figure2, user can set PGA Gain, Effective , and Data Rate. Can click "Write" or "Read" to write or read setting.

2.4 The right side of megawin ADC studio:

Start get ADC data : Start to get date from ADC (as shown 4 in Figure 2).

Data Count : the counts for ADC data, the default is 45(as shown 5 in Figure 2).

Scale Color 、 Background Color 、 Grid Color and Line chart Color : User can set the color for display (as shown 6 in Figure 2).

Minimum : The minimum value of ADC data, decimal. (as shown 7 in Figure 2) ◦

Maximum : The maximum value of ADC data, decimal. (as shown 8 in Figure 2) ◦

Average : The average value of ADC data, decimal. (as shown 9 in Figure 2) ◦

Collecting : The process status of getting ADC data. (as shown 10 in Figure 2) ◦

2.5 The bottom side of megawin ADC studio.

Log File Path : The path of log file and user can save file for ADC data in log file. (as shown 11 in Figure 2) ◦

2.6 Save File : megawin ADC studio will plot graph after getting ADC data. It will save file as CSV and binary file format as two files after click "Save File" (as shown 12 in Figure 2).

2.7 MUX tab: Set the channel to ADC pin to AIN+ and AIN-. **AIN+ and AIN- cannot set to the same channel.**

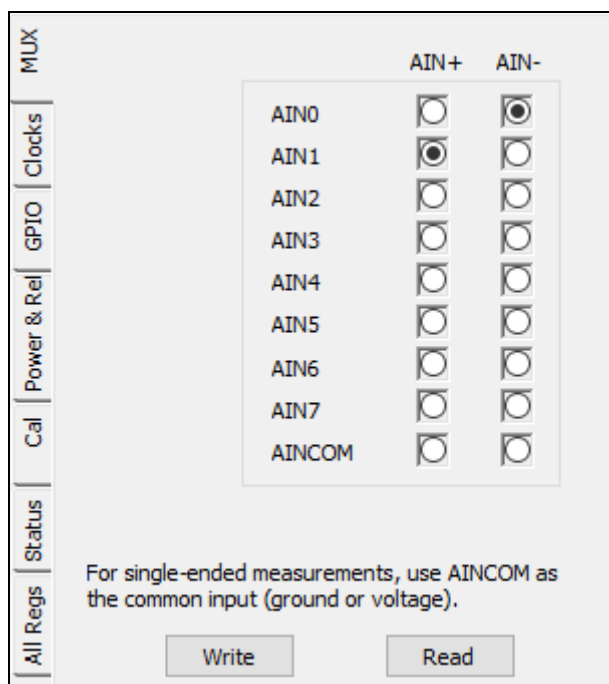


Figure 3

## 2.8 Clocks tab : set the clock out rate

Figure 4 shows the Clocks tab interface. The left sidebar contains tabs: All Regs, Status, Cal, Power & Rel, GPIO, Clocks, and MUX. The main area displays the following settings:

- Clock In: 7.680000MHz
- Clock Source: Crystal
- Clock Out Rate: Off
- Clock Out: 0.000000MHz

At the bottom, there are Write and Read buttons.

(Figure 4)

## 2.9 GPIO tab : Set I/O mode of D0~ D3. They can be read level as input or set High/Low level as output.

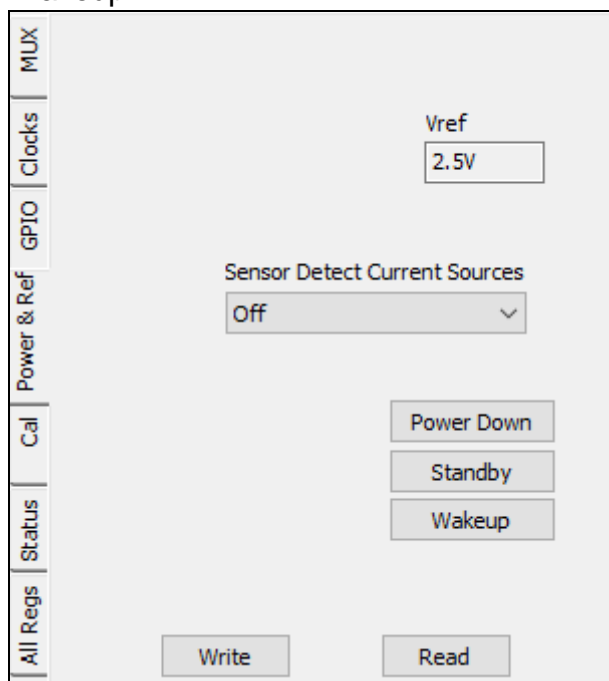
Figure 5 shows the GPIO tab interface. The left sidebar contains tabs: All Regs, Status, Cal, Power & Rel, GPIO, Clocks, and MUX. The main area displays the following settings:

	Output	I/O Mode		
		Output	Input	
D3	L	<input type="radio"/>	<input checked="" type="radio"/>	L
D2	L	<input type="radio"/>	<input checked="" type="radio"/>	L
D1	L	<input type="radio"/>	<input checked="" type="radio"/>	L
D0	L	<input checked="" type="radio"/>	<input type="radio"/>	L

At the bottom, there are Write and Read buttons.

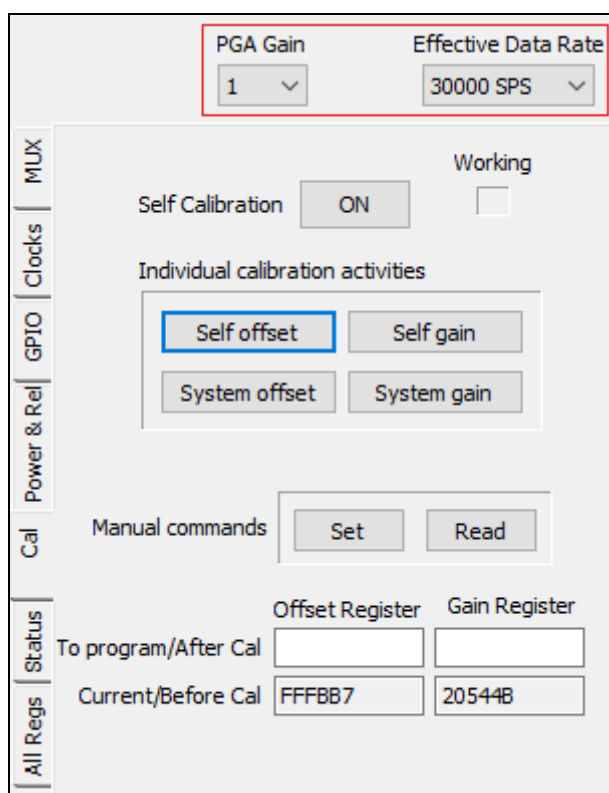
(Figure 5)

## 2.10 Power & Rel tab : Set Sensor Detect Current Sources 、Power Down 、Standby and Wakeup ◦



(Figure 6)

## 2.11 Cal tab : The readback value of offset and gain are not the same as the last time. Please refer the details in the datasheet. Although, it is calibration tab but PGA gain and Effective Data cannot be set as the Red block in Figure 7.



(Figure 7)

## 2.12 Status tab : Show ID and enable Buffer

Left sidebar tabs: All Regs, Status, Cal, Power & Rel, GPIO, Clocks, MUX

ID:

ORDER: ☒ MSB First ☐ LSB First

BUFEN: ☐ Enable Analog Input Bufer

Buttons: Write, Read

(Figure 8)

## 2.13 All Regs tab : The setting of 2.4~2.9 can be access in this tab. “Sync” button can copy the value of Read to Write.

	Write	Read
STATUS	<input type="text" value="00"/>	<input type="text" value="30"/>
MUX	<input type="text" value="00"/>	<input type="text" value="01"/>
ADCON	<input type="text" value="00"/>	<input type="text" value="20"/>
DRATE	<input type="text" value="00"/>	<input type="text" value="F0"/>
IO	<input type="text" value="00"/>	<input type="text" value="E1"/>
OFC0	<input type="text" value="00"/>	<input type="text" value="B7"/>
OFC1	<input type="text" value="00"/>	<input type="text" value="FB"/>
OFC2	<input type="text" value="00"/>	<input type="text" value="FF"/>
FSC0	<input type="text" value="00"/>	<input type="text" value="4B"/>
FSC1	<input type="text" value="00"/>	<input type="text" value="54"/>
FSC2	<input type="text" value="00"/>	<input type="text" value="20"/>

Buttons: Write, Read, Sync (highlighted)

(Figure 9)



### **3. Simple Operation**

3.1 Configure Input and Output. Select MUX. Currently, the EVM2418 only supports AIN+ as AIN1 and AIN- as AIN0. Due to software limitations, AIN+ and AIN- cannot be set to the same channel simultaneously. To configure this:

First, set AIN+ to AIN2.

Set AIN- to AIN0.

Change AIN+ back to AIN1.

Click Write.

3.2 Set data counts for ADC data. The default is 45 counts.

3.3 Please click "Save file" if user need to save ADC data.

3.4 Can change the color for graph curves by colored boxes.

3.5 Click "Start Get ADC data" to get ADC data. Please use scrollbar if the data counts are over 45.

#### 4. **Revision History**

Version	Description	Date
v1.00	Initial	2026/04/09
V1.01	Modify 2.11	2026/04/24