

BMA4xy

Desktop Development 2.1 User Manual



BMA4xy User Manual

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1 About user manual

This manual describes the installation and usage of the Development Desktop 2.1 User Interface(DD2.1 UI); a Windows based PC software application and related embedded firmware/software developed by **Bosch Sensortec** for demonstration and evaluation of sensors.

1.1 Who should read this manual

This information intended to users who wish to use DD2.1 UI to demonstrate use of the BMA4xy.

1.2 DD2.1 UI Overview

DD2.1 UI is a PC based software used to read, capture, and display sensor data. To display the sensor data of BMA4xy on DD2.1 UI, mount the sensor on the **Bosch Sensortec** application board. This is a universal demonstration environment for **Bosch Sensortec** sensor products.

Bosch Sensortec sensors are mounted on sensor specific shuttle boards. All sensors shuttle boards have an identical footprint and can be plugged into the application board's shuttle board socket. DD2.1 UI automatically detects the sensor that has been plugged in and starts the corresponding software application.

1.3 Sensor Communication:

DD2.1 UI software supports both SPI and I²C to communicate with the sensor.

1.4 Graphical display:

DD2.1 UI displays the sensor data and interrupts in different graphical formats.

1.5 Data logging:

DD2.1 UI offers data logging of the sensor data.

2 About the BMA4xy

The technical specifications of the BMA4xy sensor are as seen below:

Table 1 : The technical specifications of the BMA4xy sensor

Parameter	Technical Data
Digital Resolution	12 bit
Resolution (in $\pm 2g$ range)	0.98 mg
Measurement ranges (programmable)	$\pm 2 g$, $\pm 4 g$, $\pm 8 g$, $\pm 16 g$
Sensitivity (calibrated)	$\pm 2 g$: 1024 LSB/g $\pm 4 g$: 512 LSB/g $\pm 8 g$: 256 LSB/g $\pm 16 g$: 128 LSB/g
Zero-g offset (typ., over life-time)	± 80 mg
Noise density (typ.)	140 $\mu g/\sqrt{Hz}$
Bandwidths (programmable)	1600 Hz ... 1.5 Hz
Digital inputs/outputs	SPI & I2C, 2x digital interrupt pins
Supply voltage (VDD)	1.62 ... 3.6 V
Output Data Rate (ODR)	(A): 12.5 Hz ... 1.6 kHz (G): 25 Hz ... 6.4 kHz
I/O supply voltage (VDDIO)	-40 ... +85°C
Current consumption - full operation - low-power mode	150 μA 13 μA (at 50Hz data rate)
FIFO data buffer	1 kB
LGA package	2 x 2 x 0.95 mm ³
Shock resistance	10,000 g x 200 μs

3 Getting Started

The below sections highlight the procedure to set up connections between BMA4xy, DD2.1 UI and the PC.

3.1 Setting Up the board-PC connection

The procedure to connect sensor to PC via USB is as below:

- Install DD2.1 UI.
- Insert the shuttle board and application board.

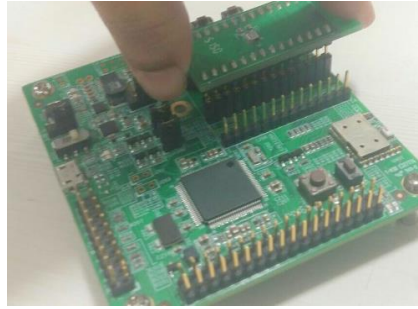


Figure 1 : Insert sensor for APP2.0



Figure 2 : Insert sensor for APP3.0

► Connect the board and PC using a USB cable/Bluetooth.

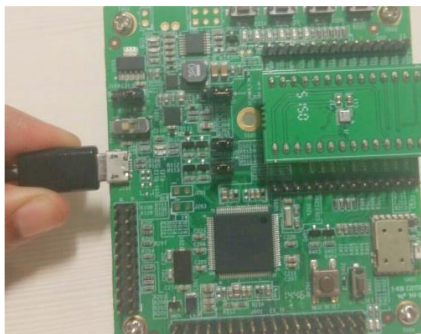


Figure 3 : Connect board and PC for APP2.0



Figure 4 : Connect board and PC for APP3.0

- Turn the on/off switch **ON**. The LED glows.



Figure 5 : Connection complete for APP2.0



Figure 6 : Connection complete for APP3.0

3.2 Startup View

To start the DD2.1 UI software:

Click Start -> Programs -> Development Desktop 2.1.

Or

Double click the DD2.1 UI software icon  on the desktop.

The Graphical User Interface (GUI) of the software is as seen below:

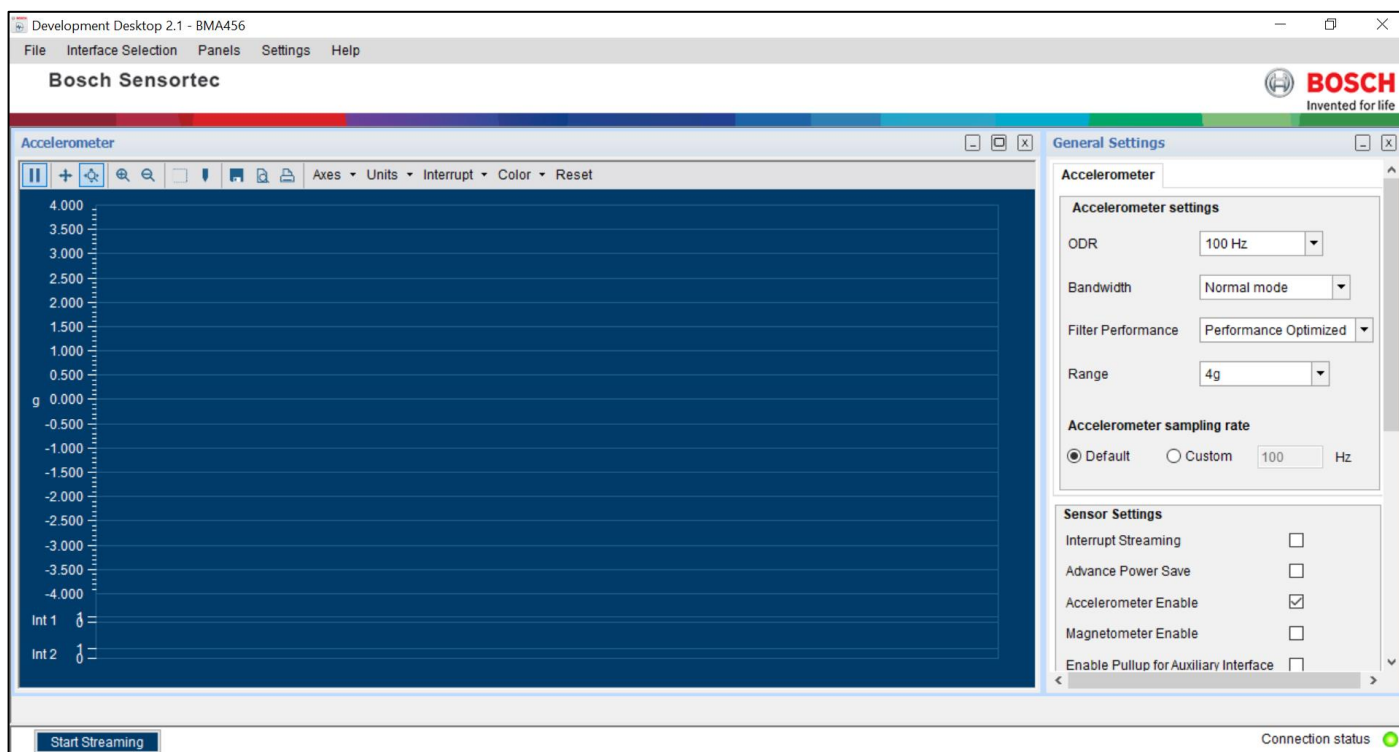


Figure 7 : DD2.1 UI Startup View

► When the PC and board are connected, the Communication Status glows green as shown below:

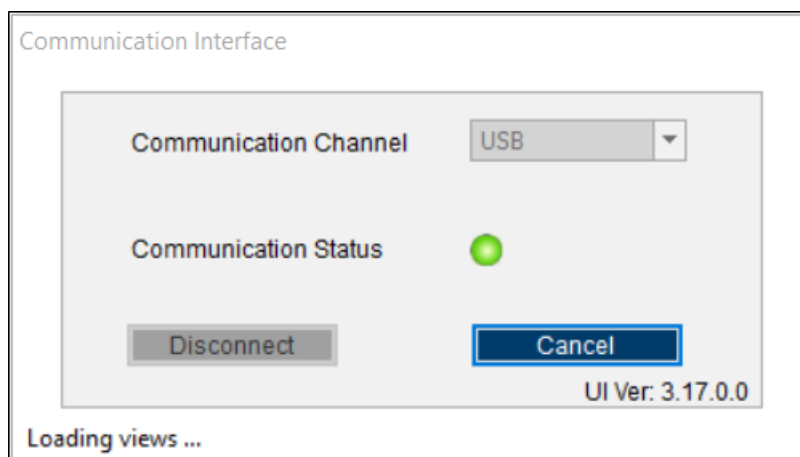



Figure 8 : Communication Status

► The communication status is also indicated at the bottom right of the GUI at all times:

Connection status 

► Other menu options include:

1. File
2. Interface Selection
3. Panels
4. Settings
5. Help

These menu options are explained in detail in the following sections.

3.2 Upgrading Firmware

3.3.1 For App 2.0 Board:

To upgrade the firmware of DD2.1 UI to match the current version, follow the steps below:

► Click **Menu -> Settings-> Firmware Upgrade**. The following window appears:

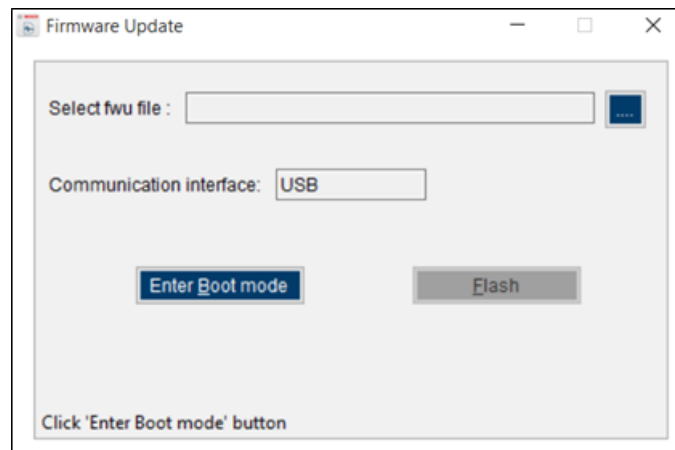


Figure 9 : Firmware upgrade window

► Click Enter Boot mode.

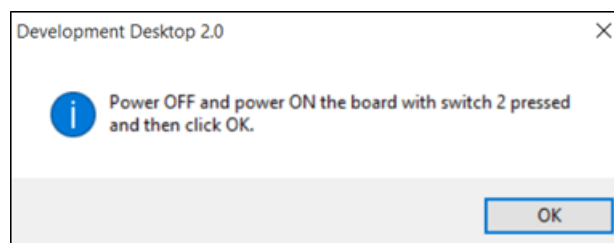


Figure 10 : Application Boot Loader

- Switch off board, and press **Switch 2**. In Application board, all four LEDs will glow simultaneously.
- Click **OK**.
- All four LEDs will glow simultaneously.
- Press **OK**.

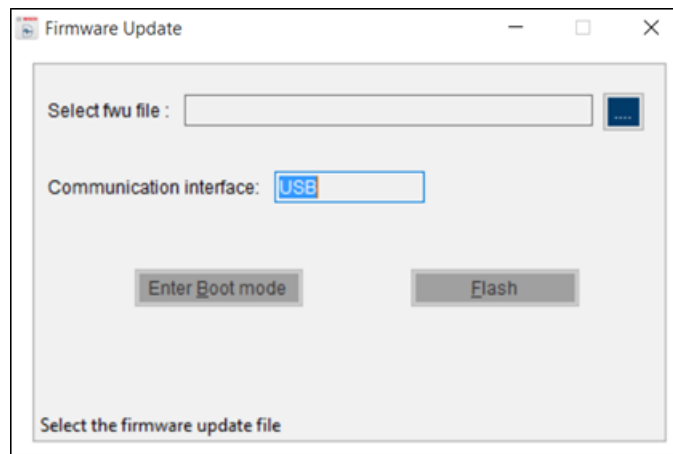


Figure 11 : Boot mode Detected

- Select the default firmware update file (*.fwu2) from the DD2.1 UI installation directory in the folder **Firmware**.
- Click **Flash**.

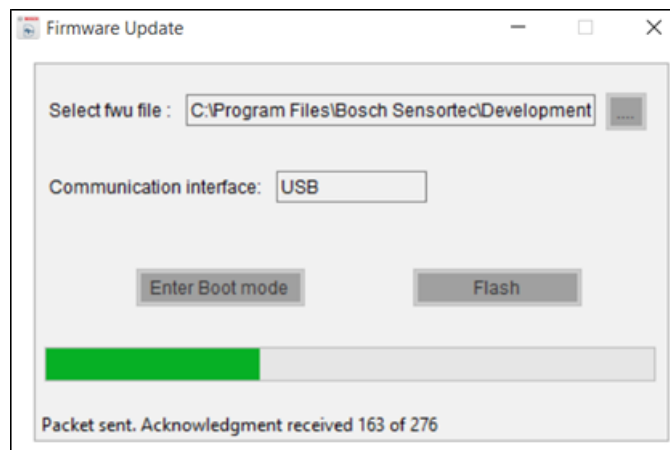


Figure 12 : Firmware upgrade completion

- Once firmware upgrade is complete, restart the application board, and DD2.1 UI.

3.3.2 For App 3.0 Board:

To upgrade the firmware of DD2.1 UI to match the current version, follow the steps below:

1. Click **Menu -> Settings-> Firmware Upgrade**. The following window appears:

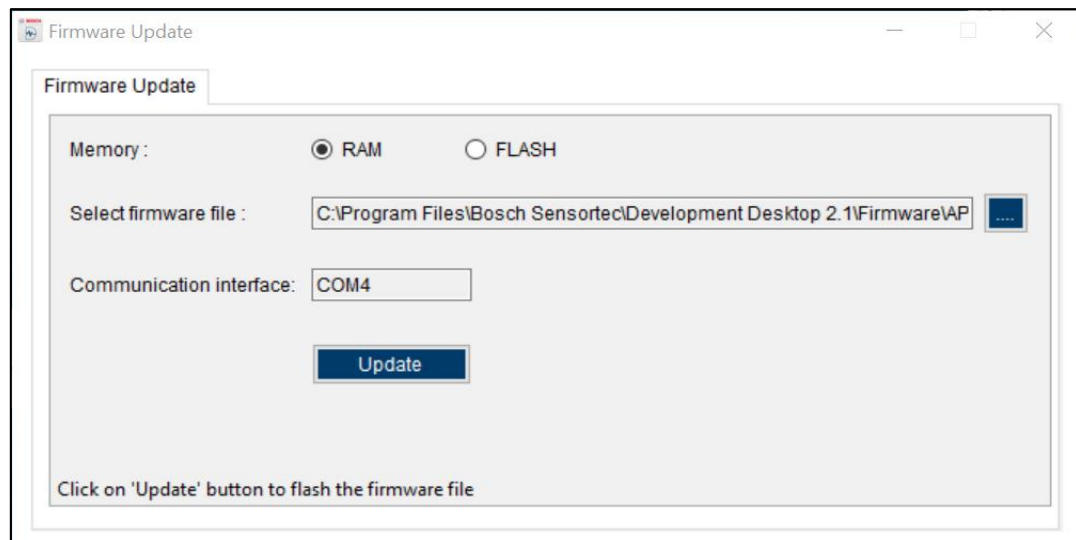


Figure 13 : Firmware upgrade window

Default firmware file (*.bin) will be automatically chosen from the DD2.1 UI installation directory in the folder **Firmware\App3.0**.

2. Choose RAM or Memory option to flash the latest recommended firmware file.
3. The file path will get automatically chosen/selected in the select firmware file path textbox. User can also select the firmware as required.
4. Click on **Flash**.
5. DD2.1 recommended firmware is COINES_bridge firmware for App3.0 shuttle board. If the user chose to flash DD firmware, a popup message will be shown. User can still choose the DD firmware and proceed.

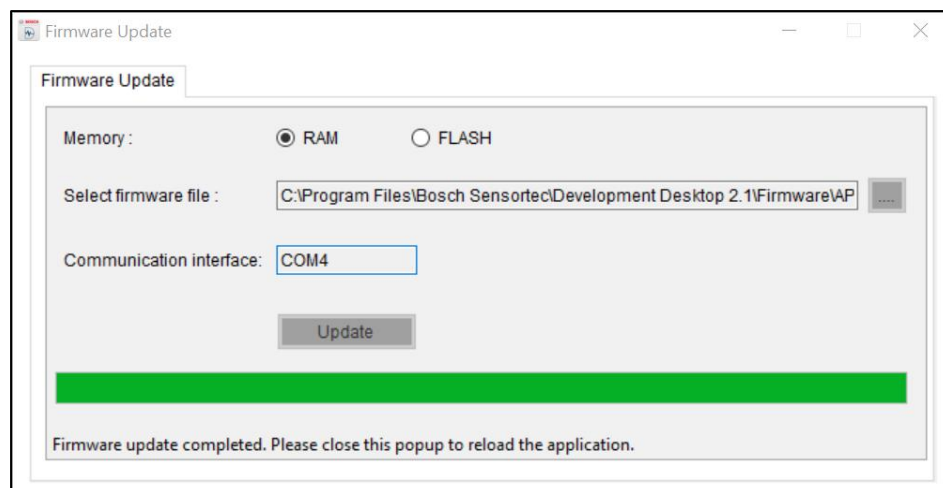


Figure 14 : Firmware upgrade completion

6. Once firmware update is completed, Please close the popup and DD 2.1 application will get automatically reloaded.

4 Working with DD2.1 UI

The functions of BMA4xy in DD2.1 UI are discussed in the below sections.

4.1 Sensor Data Monitoring

DD2.1 UI offers sensor data monitoring for both accelerometer and magnetometer in BMA4xy.

4.1.1 Accelerometer

- To view accelerometer data, go to **Menu -> Panels -> Accelerometer**, or click **Ctrl+A**.
- When an interrupt occurs, the changes in accelerometer data can be seen in the interrupt plotter.

4.1.2 Magnetometer

- ▶ To view Magnetometer data, go to **Menu -> Panels -> Magnetometer**, or click **Ctrl+M**.

4.2 General Settings

The General Settings panel is present in the right side of the DD2.1 UI screen. The various general settings available in BMA4xy as discussed in the below sections:

4.2.1 Accelerometer Settings

The accelerometer settings panel is as seen below:

Figure 15 : Accelerometer settings

► ODR: To choose the Output Data Rate (ODR), select the relevant values from the drop-down list which are:

- 12.5 Hz
- 25 Hz
- 50 Hz
- 100 Hz
- 200 Hz
- 400 Hz
- 800 Hz
- 1600 Hz

► Bandwidth: To set a bandwidth, the user must select any one of the following options from the bandwidth drop-down list

- OSR4 Mode
- OSR2 Mode
- Normal mode
- CIC Mode

Note: Across all bandwidths, the ODR value options remain the same.

► Filter Performance: For optimized performance, the different filter performance options available are:

1. Power Optimized (power consumed). The different bandwidths available in this filter are:
 1. No Averaging
 2. Average 2samples
 3. Average 4samples
 4. Average 8samples
 5. Average 16samples
 6. Average 32samples
 7. Average 64samples
 8. Average 124samples

Note: Only ODR that supports the power optimized bandwidth are displayed.

2. Performance Optimized (output accuracy). The different bandwidths available in this filter are:
 1. OSR4 mode
 2. OSR2 mode
 3. Normal mode
 4. CIC mode

Note: The bandwidth names are as per the DD2.1 UI.

- Range: To set a range, the user must select any one of the following options from the range drop-down list
 1. 2g
 2. 4g
 3. 8g
 4. 16g

Note: Across all bandwidths, the range value options remain the same.

- The two sampling rates offered by DD2.1 UI for BMA4xy are:
 - Default: A pre- defined sampling rate value supported by the sensor. A pre-defined sampling rate value.
 - Custom: User-defined sampling rate value. Custom sampling rate can only be a value between 0.78 Hz and 1600 Hz.
- Select relevant value by clicking the radio button next to the option name.

Note: When the DD2.1 UI is launched, sampling rate will be Default. When you wish to input a custom sampling rate, please enter the value next to the corresponding option.

4.2.2 Magnetometer Settings

The magnetometer settings panel is as seen below:

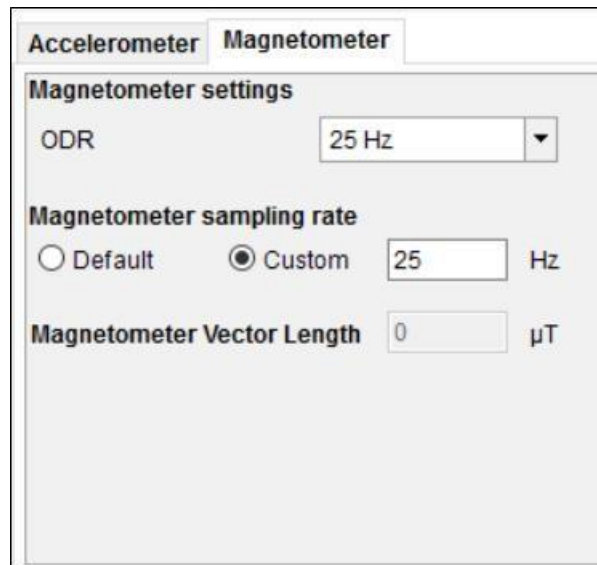


Figure 16 : Magnetometer settings

► ODR: To choose the Output Data Rate (ODR), select the relevant values from the drop-down list. The possible ODR values are:

1. 1.56 Hz
2. 3.12 Hz
3. 6.25 Hz
4. 12.5 Hz
5. 25 Hz
6. 50 Hz
7. 100 Hz
8. 200 Hz

► The two sampling rates offered by DD2.1 UI for the BMA4xy sensors are:

Default: A pre- defined sampling rate value supported by the sensor.

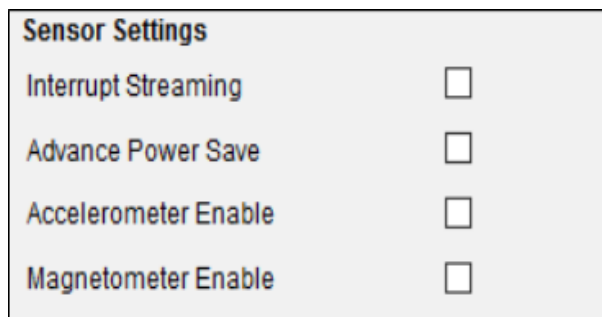
Custom: User-defined sampling rate value. Custom sampling rate can only be a value between 0.78 Hz and 800 Hz.

► Select relevant value by clicking the radio button next to the options.

Note: When the DD2.1 UI is launched, sampling rate will at Default. When you wish to input a custom sampling rate, please enter the value next to the corresponding option.

4.2.3 Sensor Settings

The sensor settings panel is as seen below:




Sensor Settings	
Interrupt Streaming	<input type="checkbox"/>
Advance Power Save	<input type="checkbox"/>
Accelerometer Enable	<input type="checkbox"/>
Magnetometer Enable	<input type="checkbox"/>

Figure 17 : Sensor settings

- ▶ **Interrupt Streaming:** In Interrupt, data is streamed as and when data is ready. Select relevant value by clicking the radio button next to the options.
- ▶ **Advance Power Save:** To save power (power optimization), check the box next to **Advance Power Save**.
- ▶ **Accelerometer Enable:** To enable accelerometer sensor, check the box next to **Accelerometer Enable** in the **General Settings** panel.
- ▶ **Magnetometer Enable:** To enable magnetometer sensor, check the box next to **Magnetometer Enable** in the **General Settings** panel.
- ▶ **Temperature Enable:** To enable Temperature sensor, check the box next to **Temperature Enable** in the **General Settings** panel.

4.2.4 Temperature

While data streaming in the plotter, the real time temperature is updated in the given box as shown below:



Temperature	30	°C
-------------	----	----

Figure 18 : Temperature

- ▶ To select **Primary Interface Data**, select the checkbox next to the option.
- ▶ To select **OIS Data**, select the checkbox next to the option.
- ▶ The temperature value is updated when:
 1. **Settings -> Temperature**, checkbox is checked.

4.2.5 Reset

- ▶ To reset all values to its default state, click **Reset Sensor**
- ▶ When reset, the following values are reset to their default value as seen below:
 1. Accelerometer
 1. ODR – 100 Hz
 2. Bandwidth – Normal mode
 3. Filter Performance – Performance Optimized
 4. Range – 4g
 5. Accelerometer sampling rate – Default

4.2.6 PO Reset

- To reset sensor values to default state, click **PO Reset**

4.3 Interface Selection

Interface Selection has two menu options as seen:

4.3.1 Board Communication

- To check communication between board and DD2.1, go to **Menu -> Interface Selection -> Board Communication**, or click **Ctrl+Shift+B**.

If the board and application are connected, **Communication Status** will be green as seen:

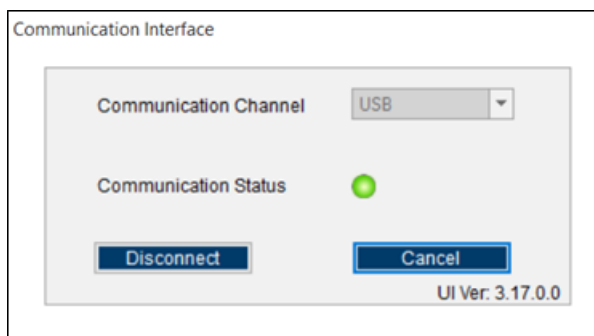


Figure 19 : Communication status green

- Click **Disconnect** to break the communication.
- Click **Cancel** to exit the window.
- If the board and application are not connected, the **Communication Status** will be red as seen:

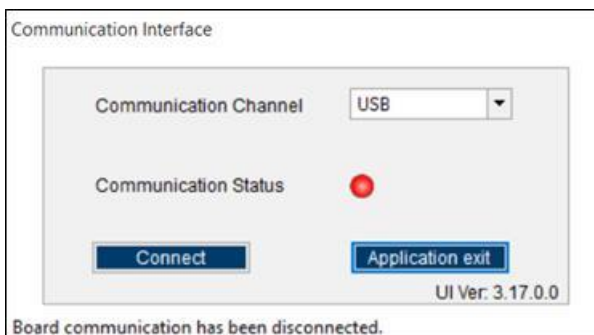


Figure 20 : Communication status red

- Click **Connect** to establish connection.
- Click **Application exit** to close DD2.1 UI.

4.3.2 Sensor Interface

- ▶ To select between the two available interfaces (SPI and I²C), go to **Menu -> Interface Selection -> Sensor Interface**, or click **Ctrl+Shift+I**.
- ▶ The following window appears:

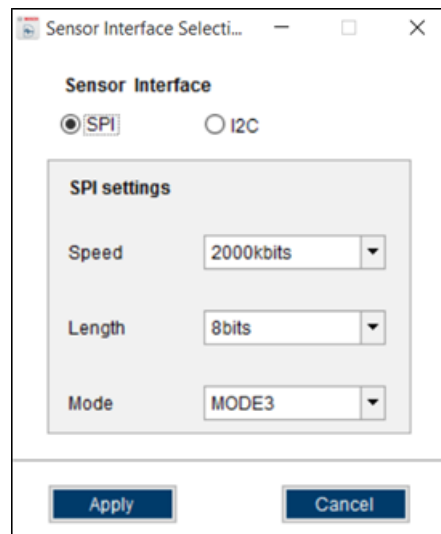


Figure 21 : SPI interface settings

Note: By default, the sensor interface is in SPI.

- Select the relevant SPI Address. SPI speed and SPI Mode.
- Click Apply.
- To select I²C, click the appropriate radio button. The following window appears:

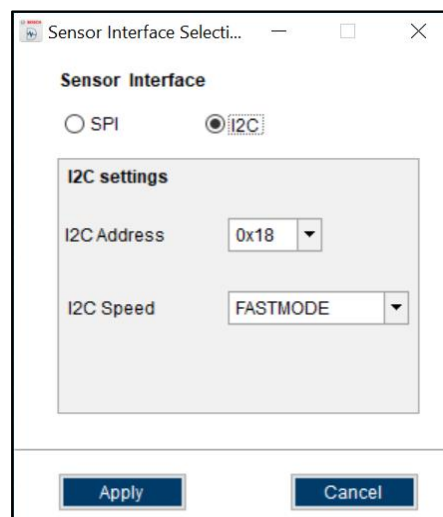


Figure 22 : I2C interface settings

- Select the relevant **I²C Address** and **I²C speed**.
- Click **Apply**.

Note: Sensor Interface Selection in the UI is disabled when the sensor is streaming data.

4.4 Panels

- To choose the panels for which you wish to view data, go to **Menu -> Panels**.

The different panels available for BMA4xy are:

4.4.1 Configuration

- To view the Configuration settings panel, go to Menu -> Panels -> Configuration or click **Ctrl + C**. The following window appears:

any_motion	no_motion	sig_motion	step_counter	tilt	pickup	glance_detector	wakeup	general_settings
threshold: 0AA (0x0 - 0x7FF)	threshold: 0AA (0x0 - 0x7FF)	threshold: 0133 (0x0 - 0x7FFF)	watermark_level: 000 (0x0 - 0x3FF)	threshold: 0 (0x0 - 0xF)	enable: 0 (0x0 - 0x1)	enable: 0 (0x0 - 0x1)	enable: 0 (0x0 - 0x1)	identification: 0445
duration: 0005 (0x0 - 0x1FFF)	duration: 0005 (0x0 - 0x1FFF)	skip_time: 096 (0x0 - 0x1FF)	reset_counter: 0 (0x0 - 0x1)	enable: 0 (0x0 - 0x1)				map_x_axis: 0
x_en: 0 (0x0 - 0x1)	x_en: 0 (0x0 - 0x1)	enable: 0 (0x0 - 0x1)	en_detector: 0 (0x0 - 0x1)					map_x_axis_sign: 0
y_en: 0 (0x0 - 0x1)	y_en: 0 (0x0 - 0x1)	proof_time: 32 (0x0 - 0x7F)	en_counter: 0 (0x0 - 0x1)					map_y_axis: 1
z_en: 0 (0x0 - 0x1)	z_en: 0 (0x0 - 0x1)		param_1: 0132 (0x0 - 0xFFFF)					map_y_axis_sign: 0
			param_2: F1CC (0x0 - 0xFFFF)					map_x_axis: 2
			param_3: 0084 (0x0 - 0xFFFF)					map_z_axis: 0
			param_4: D939 (0x0 - 0xFFFF)					
			param_5: 0007 (0x0 - 0xFFFF)					
			param_6: EAC9 (0x0 - 0xFFFF)					
			param_7: FD54 (0x0 - 0xFFFF)					

Figure 23 : Configuration Settings

Refer to [Interrupt View](#) for more information on mapping the interrupts.

- Once the interrupt is mapped, simulate the interrupt that has to be triggered.
- Once the interrupt is generated, the following will happen:
 1. The corresponding LED (to the interrupt) will glow green.
 2. The interrupt will be plotted in the DD2.1 UI plotter.
- Using the above procedure, some of the interrupts in BMA4xy which can be enabled and verified using DD2.1 UI are as seen below:
 - 1.Any motion
 - 2.No Motion
 - 3.Step detector/Counter
 - 4.Activity
 - 5.Sig motion
 - 6.Tilt
 - 7.Pickup
 - 8.Glance detector
 - 9.Wakeup
 - 10.Orientation

- 11. Wrist wear wakeup
- 12. Single Tap
- 13. Double Tap
- 14. Uphold to wake

4.4.2 Accelerometer

- ▶ To view the real-time accelerometer data in the plotter, go to **Menu -> Panels -> Accelerometer**, or click **Ctrl+A**.
- ▶ Refer to [Accelerometer](#) for more information on accelerometer settings.

4.4.3 Magnetometer

- ▶ To view the real-time magnetometer data in the plotter, go to **Menu -> Panels -> Magnetometer**, or click **Alt+M**.
- ▶ Refer to [Magnetometer](#) for more information on magnetometer settings.

4.4.4 Interrupts

- ▶ To view the Interrupts panel, go to **Menu -> Panels -> Interrupts**, or click **Ctrl+I**.
- ▶ When an interrupt occurs, the corresponding interrupt will glow green in the Interrupts panel as seen in the below figure:

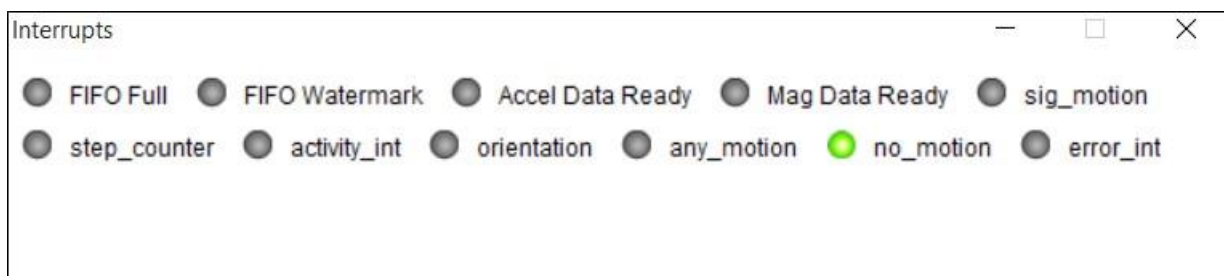


Figure 24 : Interrupts

- ▶ Refer to [Interrupt View](#) for more information on interrupt mapping.

4.4.5 Memory Map

- ▶ To view **Memory Map** options, go to **Menu -> Panels -> Memory Map**. A drop-down appears as seen below:

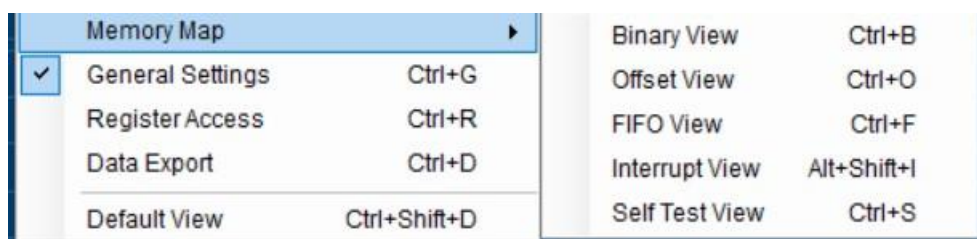


Figure 25 : Memory map

The different options within **Memory Map** are described in the below sections:

Binary View

- ▶ To view the data in binary format, go to **Menu -> Panels -> Memory Map -> Binary View**, or click **Ctrl+B**.
- ▶ The following panel appears:

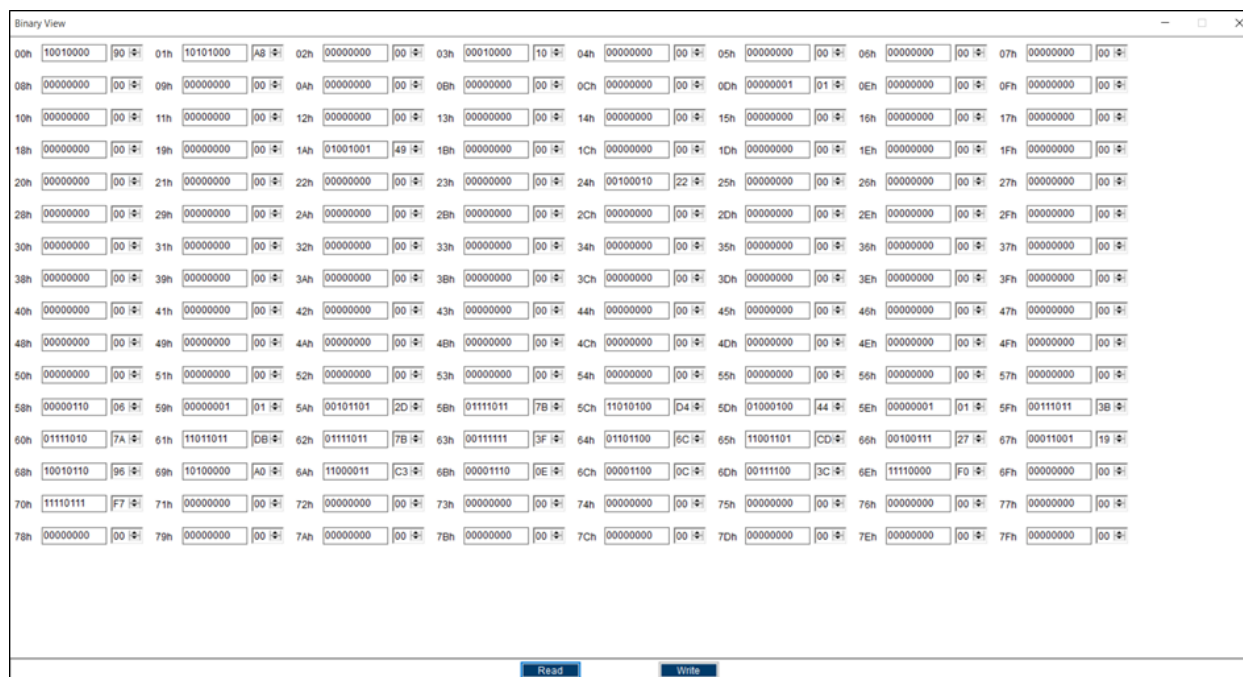


Figure 26 : Binary view

► **Binary View** is used to read or write values into multiple registers in one view. To implement this, follow the below steps:

1. Enter the value in the box alongside the register name.
2. As per requirement, click **Read/Write**.

Offset View

- To set offset values for BMA4xy, go to **Menu -> Panels -> Memory Map -> Offset View**, or click **Ctrl+O**.
- The following window appears:

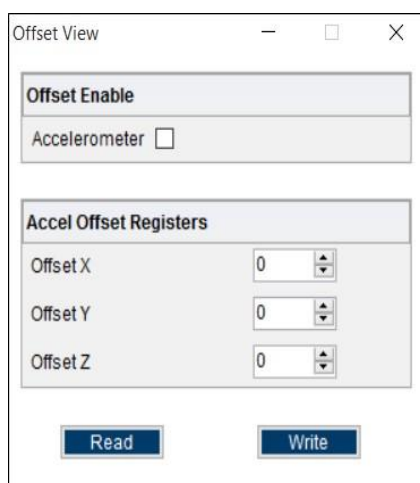


Figure 27 : offset view

► **Offset view** is used to allow the user to provide user defined offset values in which the sensor data is compensated.

Note: In BMA4xy, Offset can be enabled for Accelerometer.

- The sensor values are displayed in the **FIFO Data** data grid.
- Click **Start FIFO Streaming** to stream FIFO data in the accelerometer panel.
- Click **FIFO Data Log** to store data plotted/read during FIFO streaming/reading.

1.5.1.1 Interrupt View

- To map the interrupts in **Interrupt View**, go to **Menu -> Panels -> Memory Map -> Interrupt View**, or click **Alt+Shift+I**.
- The following window appears:

The screenshot shows the 'Interrupt View' window with the following components:

- In Out Control - Interrupt 1** and **In Out Control - Interrupt 2**: Each has five settings (Trigger, Level, Behaviour, Output Enable, Input Enable) with a value of 0 and a label (Level, Active low, Push-pull, Output disabled, Input disabled).
- INT Mapping** table:

	Data ready	sig_motion	step_counter	activity_int	orientation	any_motion	no_motion	error_int
Int1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Int2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Latch settings**: Latch Interrupt 0 Non latched.
- Buttons**: Read, Write.

Figure 29 : Interrupt view

- Enable Int1, or Int 2, or both. To accomplish this:
 1. Set **Trigger** to 1. The **Trigger** settings will change from **Level** to **Edge**.
 2. Set **Output Enable** to 1. The **Output Enable** value will change from **Output Disabled** to **Output Enabled**.
 3. Select the parameters for which the interrupt has been configured.

Refer to [Configuration](#) for more information on enabling the interrupts.

- Click **Write** to write the new values into the sensor.
- To view the interrupts in the plotter, click **Start Streaming**.

4.4.7 Self-Test View

- To conduct self-test of the three axes in **Accelerometer**, go to **Menu -> Panels -> Memory Map -> Self-Test View**, or click **Ctrl+S**. The following window appears:



Figure 30 : selftest view

- Click Self-Test.
- The results of the self-test are displayed in the same window as seen below:



Figure 31 : selftest pass

4.4.8 General Settings

- To view the General Settings panel, go to **Menu -> Panels -> General Settings**, or click **Ctrl+G**.
- Refer [General Settings](#) for more information.

4.4.9 Register Access

- To go to Register Access, go to **Menu -> Panels -> Register Access**, or click **Ctrl+R**.
- The following window appears:



Figure 32 : Register access

Register Access is used to read or write values into a register. To implement this, follow the below steps:

1. Enter the hexadecimal register address in **Address [h]**.
2. Enter the hexadecimal data you wish to read/ write in **Data [h]**.
3. Select the data bits into which data has to be written or read from.
4. As per requirement, click **Read/Write**.

4.4.10 Data Export

- To save the output values plotted by DD2.1 UI, go to **Menu -> Panels -> Data Export**, or click **Ctrl+D**.
- By default, the data values are logged into a text (.txt) file in the destination folder of DD2.1 UI.
- The steps to follow data logging are as seen:
 1. Go to **Menu -> Panels-> Data Export**, or click **Ctrl + D**. The following window is displayed.

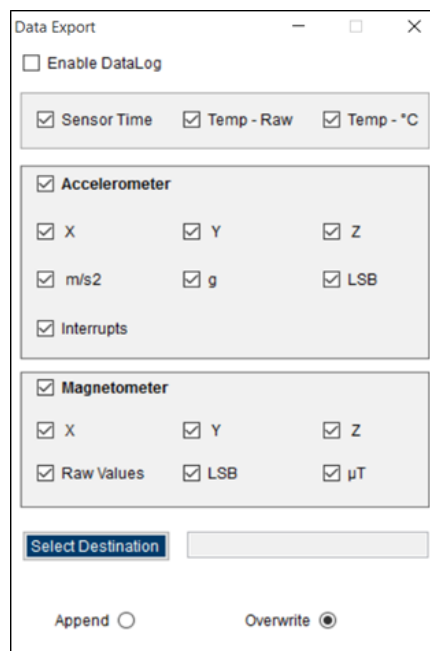


Figure 33 : Data export

2. Check the checkbox **Enable Data Log**.
3. Click **Select Destination** and select required destination folder.

Note: The data log will be stored in the destination folder selected by you.

4. To log new data into the selected file, click **Append**.

Or

To erase old data from the selected file and log new data in its place, click **Overwrite**.

5. Click **Start streaming** button to plot the sensor data in the plotter.
6. Click Stop streaming to end the plotting of the sensor data.

- The output of the sensor data is saved in the desired destination path.

4.4.11 Default View

- To view the Default View, go to Menu -> Panels -> Default View, or click Ctrl+Shift+D.
- The DD2.1 UI will revert to its default GUI view.
- The panels available in this view are:
 1. Accelerometer Panel
 2. Interrupts Panel
 3. General Settings Panel

Note: The Magnetometer panel will only be visible if Magnetometer Enable has been checked in the General Settings panel.

4.4.12 RAM update using Menu

- To view this menu, go to Menu -> Panels -> RAM Update, or press Alt + R.
- This menu item helps the user to choose the RAM files of the corresponding Smart sensor variant and update the chosen RAM file in the sensor.
- This menu item is not visible by default. This menu shall be made visible, through "DevelopmentDesktop2.1.exe.config" file available in the DD2.1 UI installed path.

4.4.13 Device Initialization:

- The RAM images that are supported for BMI2xy variants are shown in this panel. This is available as a child panel inside the "**General settings**" panel.
- The following variants of BMA4xy support more than one RAM image and they are shown in DD2.1 UI

- **BMA456**

1. **Wearable**

1. Single tap, Any motion. No motion and Wrist wear wake up, step counter features are available
2. SIZE of FIFO is 2Kb.

2. **Hearable**

1. Any motion, No motion, step counter, tap detector, in ear detection features are available.
2. Size of FIFO is 2Kb.

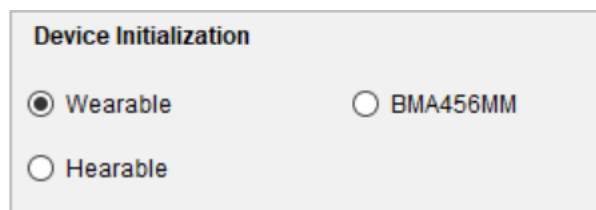


Figure 34 : BMA456

5 General Troubleshooting

Follow below guidelines while working with DD2.1 UI:

- ▶ Ensure that the shuttle board (with a valid sensor) is seated properly in the application board.
- ▶ Ensure that the PC-board connection is properly established.
- ▶ When switching on/ off DD2.1 UI, close and restart DD2.1 UI.
- ▶ Ensure that at least one channel is selected.

Follow these steps to check the USB connection:

1. Click **My Computer -> Manage -> Computer Management**.
2. Go to **System Tools -> Device Manager**.
3. Click on BST board and check for the USB connection.

Sometimes, data transfer between PC and application board does not work despite the USB device being properly enumerated in the Device Manager.

This could be because the application board is older or that the USB PID and VID has been used with that computer before. In this case, Windows is unable to install the required drivers automatically.

Follow these steps to check the USB connection:

1. Right-click on the USB-device corresponding to your application board (if you are not sure which device corresponds to your application Board, unplug all other USB devices like keyboard and mouse temporarily).

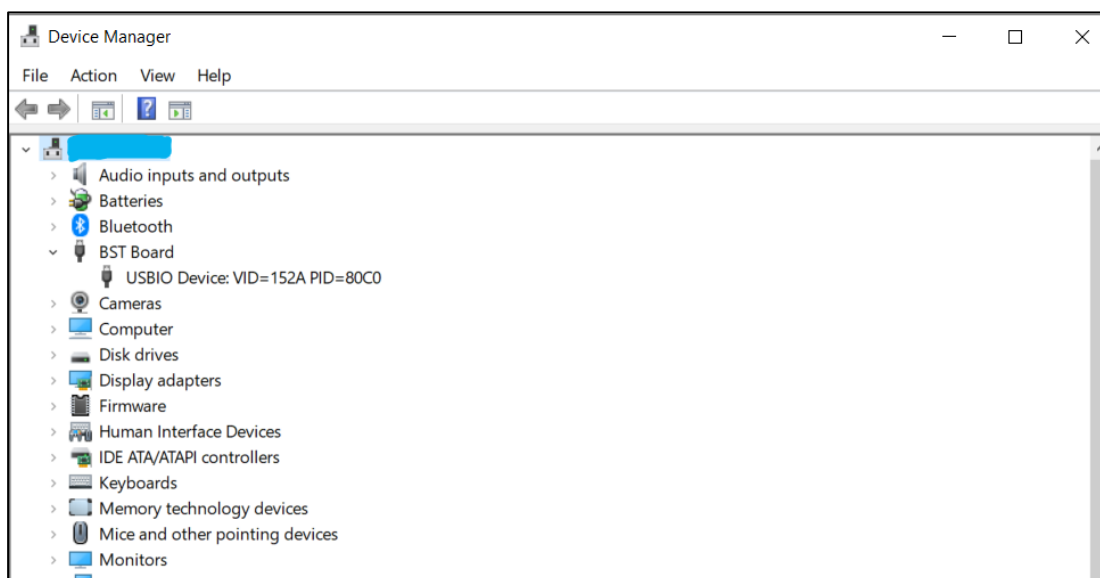


Figure 35 : Selecting USB device corresponding to application board

2. Click **Action -> Scan for hardware changes**. The new USB driver installed automatically. Thereafter, the device communication will function properly.

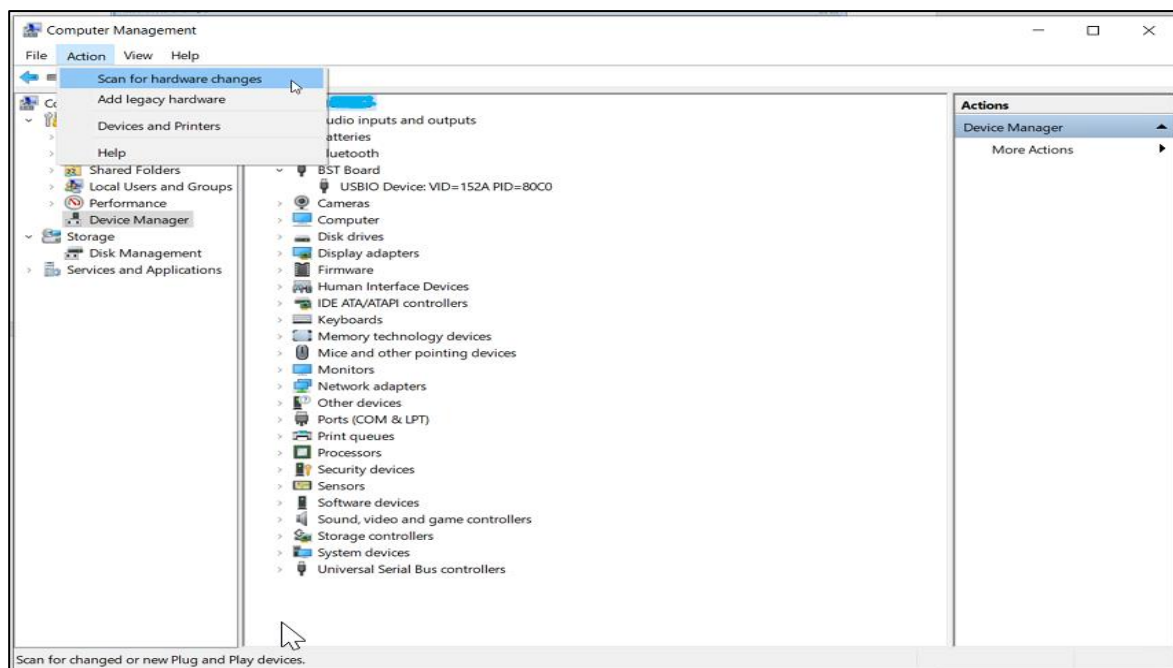


Figure 36 : USB driver installation

The following table lists some of the possible faults that you might encounter and the troubleshooting method.

Table 2 : Troubleshooting Fixing

Condition	Possible cause	Solution
If Communication Status remains grey red after checking the Start Button .	Application Board is turned off.	Power on the application Board and restart the DD2.1 application. If the board is powered by rechargeable battery, ensure that the battery is charged.
Unable to locate the data logged file.	Destination path not properly defined.	Locate the file in the setup path of Development Desktop.
Error message Please connect application Board is displayed.	Application Board is not connected properly.	Ensure that the PC is connected with the application Board properly. If the board is powered by rechargeable battery, ensure that the battery is charged.
Error message Please connect Shuttle Board is displayed.	Shuttle Board is not fixed properly.	Ensure that the Shuttle Board is correctly fixed in the Development Board.
Error message Please select a path or file for logging is displayed.	Destination path for saving the logged data is not defined.	Select the Data Export option in the file menu and specify the destination path.

Error message Please select File from File Menu → Data Export option to proceed is displayed.	Destination path not selected.	In the file menu, select the Data Export option and select the destination path.
Error message Please Connect Valid Sensor is displayed.	Wrong sensor fixed on the application Board.	Ensure that correct sensor is fixed on the application Board.
Graph for x, y, z channel not plotted.	Channel x, y, z not checked.	Ensure that x, y, z channels are checked.

6 Legal disclaimers

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7 Document history and modification

Rev. No	Chapter	Description of modification/changes	Date
1.0		Initial release	January 2019
1.1		Adopt to new format	August 2020
1.2		Updated DD application version	April 2023

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