

Reading the Built-In FraunchPad Accelerometer

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Chapter 1

FraunchPad Accelerometer

Simple sketch for the built-in FraunchPad accelerometer

Developed with [embedXcode](http://embedxcode.com)

Author

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See Also

ReadMe.txt for references

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

accelerometer_FR	
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Chapter 3

File Index

3.1 File List

Here is a list of all documented files with brief descriptions:

FRAM_ACC.pde	
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Chapter 4

Class Documentation

4.1 accelerometer_FR Class Reference

Accelerometer on FraunchPad.

```
#include <FraunchPad_Accelerometer.h>
```

Public Member Functions

- `accelerometer_FR ()`
Constructor.
- `void begin ()`
Initialisation.
- `String WhoAmI ()`
Who am I?
- `void calibrate ()`
Calibrate the accelerometer.
- `void get ()`
Acquire acceleration.
- `void gravityX100 (int32_t &x, int32_t &y, int32_t &z)`
Return gravity, X100 to avoid float.
- `void degreeX100 (int32_t &x, int32_t &y, int32_t &z)`
Return angle in degrees, X100 to avoid float.

4.1.1 Detailed Description

Accelerometer on FraunchPad.

4.1.2 Member Function Documentation

4.1.2.1 void accelerometer_FR::calibrate ()

Calibrate the accelerometer.

Note

To perform a calibration, place the FraunchPad on a horizontal table and press TOUCH2

4.1.2.2 void accelerometer_FR::degreeX100 (int32_t & x, int32_t & y, int32_t & z)

Return angle in degrees, X100 to avoid float.

```
Serial.print(x/10, DEC);    // integer part
Serial.print(".");          // decimal separator
Serial.print(x%100/10, DEC); // decimal part, first digit
Serial.print(x%10, DEC);    // decimal part, second digit
```

Parameters

x	angle on x axis
y	angle on y axis
z	angle on z axis

4.1.2.3 void accelerometer_FR::get ()

Acquire acceleration.

Note

Call this function prior to gravityX100 or degreeX100

4.1.2.4 void accelerometer_FR::gravityX100 (int32_t & x, int32_t & y, int32_t & z)

Return gravity, X100 to avoid float.

```
Serial.print(x/10, DEC);    // integer part
Serial.print(".");          // decimal separator
Serial.print(x%100/10, DEC); // decimal part, first digit
Serial.print(x%10, DEC);    // decimal part, second digit
```

Parameters

x	gravity on x axis
y	gravity on y axis
z	gravity on z axis

4.1.2.5 String accelerometer_FR::WhoAml ()

Who am I?

Returns

Who am I? string

The documentation for this class was generated from the following files:

- [FraunchPad_Accelerometer.h](#)
- [FraunchPad_Accelerometer.cpp](#)

Chapter 5

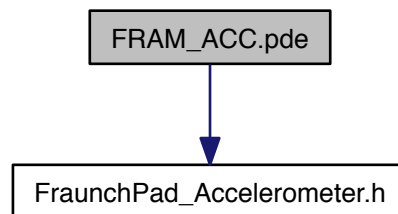
File Documentation

5.1 FRAM_ACC.pde File Reference

Main sketch.

```
#include "FraunchPad_Accelerometer.h"
```

Include dependency graph for FRAM_ACC.pde:



Functions

- void `printX100` (int32_t i)
Print for value X100.
- void `setup` ()
Setup.
- void `loop` ()
Loop.

Variables

- int32_t `x`
x axis variable
- int32_t `y`
y axis variable
- int32_t `z`

- z axis variable*
- [accelerometer_FR myAccelerometer](#)
Object.

5.1.1 Detailed Description

Main sketch.

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5.1.2 Function Documentation

5.1.2.1 void printX100 (int32_t i)

Print for value X100.

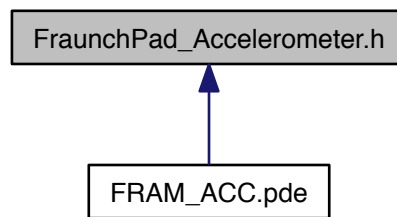
Parameters

<i>i</i>	value X100
----------	------------

5.2 FraunchPad_Accelerometer.h File Reference

Class library header.

This graph shows which files directly or indirectly include this file:



Classes

- class [accelerometer_FR](#)
Accelerometer on FraunchPad.

5.2.1 Detailed Description

Class library header.

Project FRAM_ACC

Developed with [embedXcode](#)

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