Reading the Built-In FraunchPad Accelerometer

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Contents

Chapter 1

FraunchPad Accelerometer

Simple sketch for the built-in FraunchPad accelerometer

Developed with embedXcode

Author

Rei Vilo
http://embedxcode.weebly.com

Date

20/09/12 21:48

Version

103

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:

Chapter 3

File Index

3.1 File List

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

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::WhoAmI ( )

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

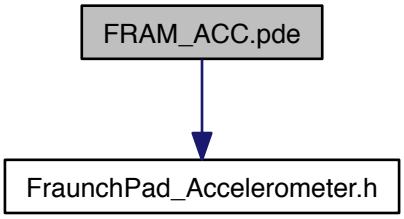
File Documentation

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.

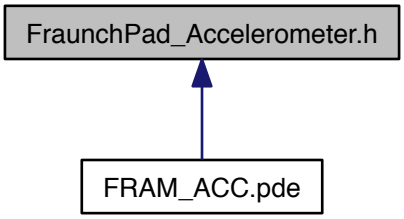
Parameters

i	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

Author

Rei Vilo
http://embedxcode.weebly.com

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