Reading the Built-In FraunchPad Thermometer

1.01

Generated by Doxygen 1.8.2

Mon Oct 8 2012 20:59:52

Contents

Chapter 1

FraunchPad NTC Thermometer

Simple sketch for the built-in FraunchPad NTC

Developed with embedXcode

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Date

Oct 08, 2012

Version

101

See Also

- Table algorithm by larsie — Tue Apr 03, 2012 1:18 pm
  http://www.43oh.com/forum/viewtopic.php?f=10&p=18608#p18608
- NTC table generated with TDK / Epcos NTC R/T Calculation 5.0
  http://www.epcos.com/designtools/ntc/index.html
  Select B57560G1104 for NTC 100 k = 25 oC
  with temperature scaling = 5 oC, lower limit = -25 oC and upper limit = + 75 oC

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 NTC_FR Class Reference

Temperature NTC on FraunchPad.

`#include <FraunchPad_NTC.h>`

Public Member Functions

- NTC_FR ()
  Constructor.
- void begin ()
  Initialisation.
- String WhoAmI ()
  Who am I?
- void get ()
  Acquire temperature.
- void celsiusX10 (int32_t &t)
  Return temperature in degrees celsius, X10 to avoid float.
- void fahrenheitX10 (int32_t &t)
  Return temperature in degrees fahrenheit, X10 to avoid float.

4.1.1 Detailed Description

Temperature NTC on FraunchPad.

4.1.2 Member Function Documentation

4.1.2.1 void NTC_FR::celsiusX10 (int32_t & *t*)

Return temperature in degrees celsius, X10 to avoid float.

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

Parameters

t	temperature in degrees celsius

4.1.2.2 void NTC_FR::fahrenheitX10 (int32_t & *t*)

Return temperature in degrees fahrenheit, X10 to avoid float.

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

Parameters

t	temperature in degrees celsius

4.1.2.3 void NTC_FR::get ( )

Acquire temperature.

Note

Call this function prior to degreeX10 or fahrenheitX10

4.1.2.4 String NTC_FR::WhoAmI ( )

Who am I?

Returns

Who am I? string

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

- FraunchPad_NTC.h
- FraunchPad_NTC.cpp

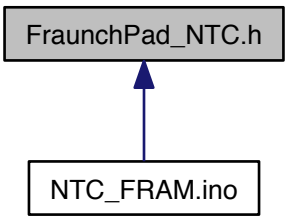
Chapter 5

File Documentation

5.1 FraunchPad_NTC.h File Reference

Library header.

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



Classes

- class NTC_FR

  Temperature NTC on FraunchPad.

5.1.1 Detailed Description

Library header.

Project FRAM_TEMP

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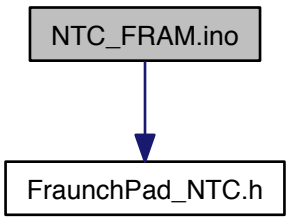
  http://www.epcos.com/designtools/ntc/index.html
  Select B57560G1104 for NTC 100 k = 25 oC
  with temperature scaling = 5 oC, lower limit = -25 oC and upper limit = + 75 oC

5.2 NTC_FRAM.ino File Reference

Main sketch.

```
#include "FraunchPad_NTC.h"
```

Include dependency graph for NTC_FRAM.ino:



Functions

- void printX10 (int32_t i)
  Print for value X10.
- void setup ()
  Setup.
- void loop ()
  Loop.

Variables

- int32_t temperature

  temperature X10
- NTC_FR myNTC

  NTC.

5.2.1 Detailed Description

Main sketch.

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101

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See Also

ReadMe.txt for references

5.2.2 Function Documentation

5.2.2.1 void printX10 (int32_t *i*)

Print for value X10.

Parameters

i	value X10

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