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 **Author**

fortolano

RFduino Newbie



Posts: 6

Karma: +0/-0



Topic: Help: how to read the Battery level (Read 2621 times)



Help: how to read the Battery level

« **on:** April 25, 2014, 07:09:32 PM »

Hello everyone,
I've purchased RFduino along with a few of its shields, including the CR2032 battery shield.
Everything works great, but I would like to be able to make RFduino read the battery level of the coin cell battery and transmit that information via BLE radio through a service or characteristic. I know there is a GATT service for such implementation, and have used it with other BLE modules, but I am not sure if RFduino supports it or if there is another way to implement a "battery level check".

I would appreciate any help and guidance on this.

Thanks in advance,
Flavio

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mkay

RFduino Team



Posts: 404

Karma: +15/-0



Re: Help: how to read the Battery level

« **Reply #1 on:** May 14, 2014, 10:27:44 AM »

Hi Flavio,

To measure the voltage on VDD, you can use:

```
analogReference(VBG); // Sets the Reference to 1.2V band gap
analogSelection(VDD_1_3_PS); //Selects VDD with 1/3 prescaling as the
analog source
int sensorValue = analogRead(1); // the pin has no meaning, it uses VDD pin
float batteryVoltage = sensorValue * (3.6 / 1023.0); // convert value to voltage
Serial.println(batteryVoltage);
```

Currently we don't have a battery service, so you can take the batteryVoltage

and send it your BLE central device using RFDuinoBLE.send

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Isnyman

RFDuino Sr. Member



Posts: 133

Karma: +1/-0



Re: Help: how to read the Battery level

« **Reply #2 on:** June 10, 2014, 08:23:54 AM »

This may be a dumb question, but where can we find a list of the custom commands and options related to RFDuino?

For example

```
analogReference(VBG); // Sets the Reference to 1.2V band gap
analogSelection(VDD_1_3_PS); //Selects VDD with 1/3 prescaling as the
analog source
```

and a previous one discussed for I2C

```
Wire.beginOnPins(0, 1 );
```

These are not in the Programming reference and seem to crawl out of the woodwork only when someone asks or digs through some library files. Sorry if I am missing something.

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econway

RFDuino Newbie



Posts: 11

Karma: +0/-0



Re: Help: how to read the Battery level

« **Reply #3 on:** June 11, 2014, 02:02:53 AM »

Hi Isnyman

The analogXXX() functions are part of the standard Arduino library
<http://arduino.cc/en/Reference/analogRead>

The Wire.XXX() functions are part of the Wire library, which RFDuino provide a modified version of.

<http://arduino.cc/en/reference/wire>

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Isnyman

RFDuino Sr. Member



Posts: 133

Karma: +1/-0



Re: Help: how to read the Battery level

« **Reply #4 on:** June 11, 2014, 07:12:53 AM »

I Understand that. However I don't believe analogSelection(VDD_1_3_PS); is an Arduino command or that Wire.beginOnPins(0, 1); is either. Thats all I am asking is if there is an API document referencing all the functions that are specific to RFDuino built in libraries.

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econway

RFDuino Newbie



Posts: 11

Karma: +0/-0



Re: Help: how to read the Battery level

« **Reply #5 on:** June 11, 2014, 08:44:48 AM »

Apologies. I have not seen such a document, but have found such nuggets of information in the header files.

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mkay

RFDuino Team

Re: Help: how to read the Battery level



Posts: 404
Karma: +15/-0



Noble

RFduino Newbie



Posts: 11
Karma: +0/-0



tolson

Global Moderator



Posts: 592
Karma: +17/-0



« **Reply #6 on:** June 12, 2014, 05:23:31 PM »

Hi Guys,

There is a programming reference you can find under the downloads tab here:
<http://www.rfduino.com/product/rfd22102-rfduino-dip/> Its actually due for an update soon.

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Re: Help: how to read the Battery level

« **Reply #7 on:** June 13, 2014, 09:30:57 AM »

Dear Mkey,
How can we make the program to show us battery level every specific time (ex, every two hours)?
Thanks

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Re: Help: how to read the Battery level

« **Reply #8 on:** June 13, 2014, 11:22:22 AM »

Quote from: Nabeel on June 13, 2014, 09:30:57 AM

How can we make the program to show us battery level every specific time (ex, every two hours)?

Depends on what else, if any, you want to do. If you just want to do something every two hours and in the mean time do nothing you can put it to sleep.

Code: [Select]

```
void loop(){
  RFduino_ULPDelay(HOURS(2));
  // your code here
}
```

Perhaps if you want to do other things but check for something every 2 hours..

Code: [Select]

```
int myTimeInterval = 2000; // Time interval in milliseconds.
int myTimeVar = millis(); // scratch variable

void setup(){

}

void loop(){

  if(test_myTimeInterval()){
    // Do this every myTimeInterval
  }
  // other stuff
}

bool test_myTimeInterval(){
```

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SamDecrock

RFduino Newbie



Posts: 10

Karma: +0/-0

**Re: Help: how to read the Battery level**

« **Reply #9 on:** September 05, 2015, 03:39:30 AM »

Hey Mkay,

Is there something we should or may place in the setup() function. Like the first 2 lines perhaps?



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