How to detect human presence to measure heart rate using AFE44xx ?

Rutvij Trivedi

Prodigy 190 points
Community Member

Other Parts Discussed in Thread: AFE4490

Hi all,

I have a query related to AFE4490 module.

I have tested the attached "PulseOxy.c" file to calculate heart rate using AFE4490 and it gives me very well values using the algorithm shown in this file.

Which i got it from

http://www.ti.com/tool/TIDA-00010

Now my query is when i take my finger from the module and put any other object , it does the same , i mean it count the HR using reflection and calculation.

So can any body help me to find a way in which it works only upon detection of human / living being and on other objects/non living being it discard the calculation ?

Please let me know if is there any documentation or any guidances are available on the same .

Also please let me know if i can provide any more details.

Thanks & Regards,

Rutvij

[0412.PulseOx_HRM.c](#)

[Fullscreen](#)

```
1   /*
2    * Copyright (C) 2013 University of Texas at Dallas
3    *                    Embedded Systems and Signal Processing Lab
4    *                                   and
5    *                    Texas Instruments Incorporated
6    *
7    *  All rights reserved.
8    *
9    *
10   *
11   *
12   *
13   *
14   *
15   *
16   *  Redistribution and use in source and binary forms, with or without
17   *  modification, are permitted provided that the following conditions
18   *  are met:
19   *
20   *  Redistributions of source code must retain the above copyright
21   *  notice, this list of conditions and the following disclaimer.
22   *
23   *  Redistributions in binary form must reproduce the above copyright
24   *  notice, this list of conditions and the following disclaimer in the
25   *  documentation and/or other materials provided with the distribution.
26   *
27   *  Neither the names of Texas Instruments Incorporated nor
28   *  The University of Texas at Dallas nor the names of
29   *  their contributors may be used to endorse or promote products derived
30   *  from this software without specific prior written permission.
```

[over 9 years ago](#)

[Amy Schnoor](#) *over 9 years ago*   [TI__Mastermind](#) 18285 points

Rutvij,

We have received your post and hope to have a response back to you soon.

[Rutvij Trivedi](#) *over 9 years ago* *in reply to [Amy Schnoor](#)*   [Prodigy](#) 190 points

Hi Amy Schnoor,

Thank you for the response.

Sooner favourable response would be greatly appreciable.

Thanks & Regards,

Rutvij.

[Rutvij Trivedi](#) *over 9 years ago* *in reply to [Rutvij Trivedi](#)*   [Prodigy](#) 190 points

Hello,

Is there any updates ?
Please let me know if any details from my side are missing.

Thanks & Regards,
Rutvij.

Amy Schnoor *over 9 years ago* *in reply to* *Rutvij Trivedi*   TI__Mastermind 18285 points

Rutvij,

We don't have any documentation on this, but you might be able to add a reference position (in codes or volts) in your firmware and if it hits that spot a human is detected. Just an idea, but you will need to figure out what that reference point might be.

Rutvij Trivedi *over 9 years ago* *in reply to* *Amy Schnoor*   Prodigy 190 points

Hi Amy Schnoor,

Thank you for the replay.

And apologies for asking again but I didn't understand the scenario you just explained so can you please elaborate it more ?

Also I have attached the sample code in the main question with its link , so if possible can you guide me from the code how it should be done ?
or what should be the procedure or any other way around .

That would be greatly helpful.

One more thing I want to add here is I have a AFE44xoSPO2EVM GUI and when I attach the EVM and put a finger on module I am getting sawtooth waveforms and using this same register settings in the above mentioned source code I am able to calculate the heart rate but in GUI using the same settings if instead of putting finger, now if I put any other object I am getting random waveforms which are not the SPO2(sawtooth) waveforms.

Thanks & Regards,
Rutvij.

sadasivam arumugam *over 8 years ago* *in reply to* *Amy Schnoor*   Intellectual 940 points

In reply to your answer. Kindly, tell me if we put a reference position in code or volts, either object can hit at the same rate as human do. is this valid?

About TI

Quick links

Buying

Connect with us

Texas Instruments has been making progress possible for decades. We are a global semiconductor company that designs, manufactures, tests and sells analog and embedded processing chips. Our products help our customers efficiently manage power, accurately sense and transmit data and provide the core control or processing in their designs.

Accessibility | Cookie policy | Privacy policy | Terms of sale | Terms of use | Trademarks

Website feedback

Previewing Staged Changes