★ CPE656TL-10 Created by Corey 18 Sep 2015 14:55 PeerReview

# Review Hardware Documentation

Priority: **Normal**
Type: **Task**
State: **Submitted**
Assignee: **Stephen**
Subsystem: **No Subsystem**
Fix versions: **Unscheduled**
Affected versions: **Unknown**
Fixed in build: **Next Build**
Estimation: **?**

Updated by Corey 03 Oct 2015 02:50

Comments (9) History

**Corey** — 18 Sep 2015, 21:38

Looking at the documentation provided by Stephen. It looks pretty complete and is in sync with the observations that I saw when doing some preliminary searches online.
I noticed that a lot of the boards that you pointed out were IMU only boards. Could you provide a suggestion on platforms to use where we would mount those IMU boards onto?
I just want to make sure that we have a game plan for not only measuring data with enough precision, but to also confirm that we have a system (per Dr. Kulick's request) that is as off-shelf as possible and is capably to sending measurements realtime from the train.

**Rashad** — 28 Sep 2015, 05:04

Rashad - Reviewed hardware documentation

**Corey** — 01 Oct 2015, 04:30

Attached is the latest from Stephen .

**Corey** — 01 Oct 2015, 04:33

I strongly recommend that we add one of the following to the list. The main reason being is the risk of time being spent integrating hardware with the board. These should fit and removes the need to do that.
http://femto.io/products/imuduino
https://www.tiny-circuits.com/products/tiny-duino.html

I think that it would be good for us to have both options.

**Stephen** — 01 Oct 2015, 06:37

After having reviewed those, I think the IMUduino would be the best to add of the two.

**Stephen** — 01 Oct 2015, 17:20

Here is the document with the additions from yesterday.

- added quantity breakdown
- added IMUduino

I added the IMUduino to the parts list, since it looks like the absolute simplest to use. The integrate Bluetooth might be useful as well.

**Rashad** — 02 Oct 2015, 00:16

Good to me so the G force range of the IMU we ended up getting is +-16g? Am I reading that correct? I'm guessing we weren't able to find anything with a smaller range?

**Corey** — 02 Oct 2015, 04:03

Not really, ADXL212 is the closest I could find, and I'm not even sure that those are still available. From Stephen 's research, most accelerometers support up to +/- 16 g and have a +/- 2g mode.

**Corey** — 03 Oct 2015, 02:50

Document looks good to me.