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How to get Geekworm UPS HAT battery capacity and voltage by using the I2C tools

Open the I2C device:

A5 SPI

A7 Serial

AA 1-Wire

A8 Audio A9 GL Driver

sudo raspi-config		
🚽 pr@raspberrypi: ~		
File Edit Tabs Help		
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Raspberry Pi Software Co	nfiguration Tool (raspi-config)	
1 Expand Filesystem 2 Change User Password 3 Boot Options 4 Wait for Network at Boot 5 Internationalisation Options 6 Enable Camera 7 Add to Rastrack 8 Overclock	Ensures that all of the SD card s Change password for the default u Choose whether to boot into a des Choose whether to wait for networ Set up language and regional sett Enable this Pi to work with the R Add this Pi to the online Raspber Configure overclocking for your P	
9 Advanced Options 0 About raspi-config	Information about this configurat	
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File Edit Tabs Help		
The Lat 1000 Help		
Raspberry Pi Software Con	ifiguration Tool (raspi-config)	
Al Overscan A2 Hostname A3 Memory Split	You may need to configure oversca Set the visible name for this Pi Change the amount of memory made	

Enable/Disable automatic loading

Enable/Disable shell and kernel m

Force audio out through HDMI or 3 Enable/Disable experimental deskt

<Back>

Enable/Disable one-wire interface 1

WIKI: http://www.raspberrypiwiki.com/index.php/Raspi_UPS_HAT_Board

<Select



Install the I2C-tools:

sudo apt-get install i2c-tools

To check the installation, please run command: *sudo i2cdetect -l*



Install python-smbus (Optional, If use the I2C-tools, it could not be installed): *sudo apt-get install python-smbus*

How to get the I2C device address (Optional):

sudo i2cdetect -y -a 1

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File Edit Tabs Help		
<pre>pi@raspberrypi: \$ i2cdetect -y -a</pre>	al Pabcdef	
00:		
20:		
40:		
60: 70:		
pi@raspberrypi:~ \$ 📕		

So "0x36" is the address of I2C device;

How to read the battery capacity:

sudo	i2cget	-f -y 1	0x36 4	w
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So "0xf2e8" is the capacity. (Hexadecimal ,swap between the high byte and low byte;) We will get "0x38f2" after we swap the high byte and low byte of the "0xf238".

Then, please turn "0x38f2" into a decimal number, 0x38f2 = 14578(Decimal number) And then, 14578/256=56.94

56.94 is the percentage of the electricity, that means the battery capacity is 56.94%.

How to read the voltage:

sudo i2cget -f -y 1 0x36 2 w

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	<mark>bi@r</mark> 0x80	ası b9	obe	ггу	pi:	~ \$	su	do :	i2c	get	- f	- y	1	0x3	62	w					
	pi@r	as	pbe	rry	pi:	~ \$															

"0x80b9" is the voltage, then swap the high byte and low byte, it will be "0xb980";

Please convert " 0xb980" to a decimal number, it will be 47488. Calculate the voltage: 47488* 78.125 / 1000000=3.71V PS: 78.125 is a fixed value(Don't change it); The 3.71V is the current voltage value

FAQ

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The battery chip need a continuous learning process during reading the battery capacity, we suggest that the battery should be fully charged at first, and then put off the electricity fully. Repeat like that after many times, the battery capacity will be gradually accurate. Note: When you trying, **DON'T** remove the battery plug, If you do, you need to retry again.

Contact to US

Please email to <u>szbhzc@gmail.com</u> if you have some questions.

How to get the capitity and voltage via driver

Please refer to here:

http://www.raspberrypiwiki.com/index.php/File:UserManual.pdf