



## User Guide for PSoC® 4 MCUs with AliOS Things SDK

1. Please visit the following link to download the IDE tool PSoC® Creator™ 4.2 for Cypress PSoC MCUs:

[www.cypress.com/psoccreator](http://www.cypress.com/psoccreator)

PSoC® Creator™ Integrated Design Environment (IDE)

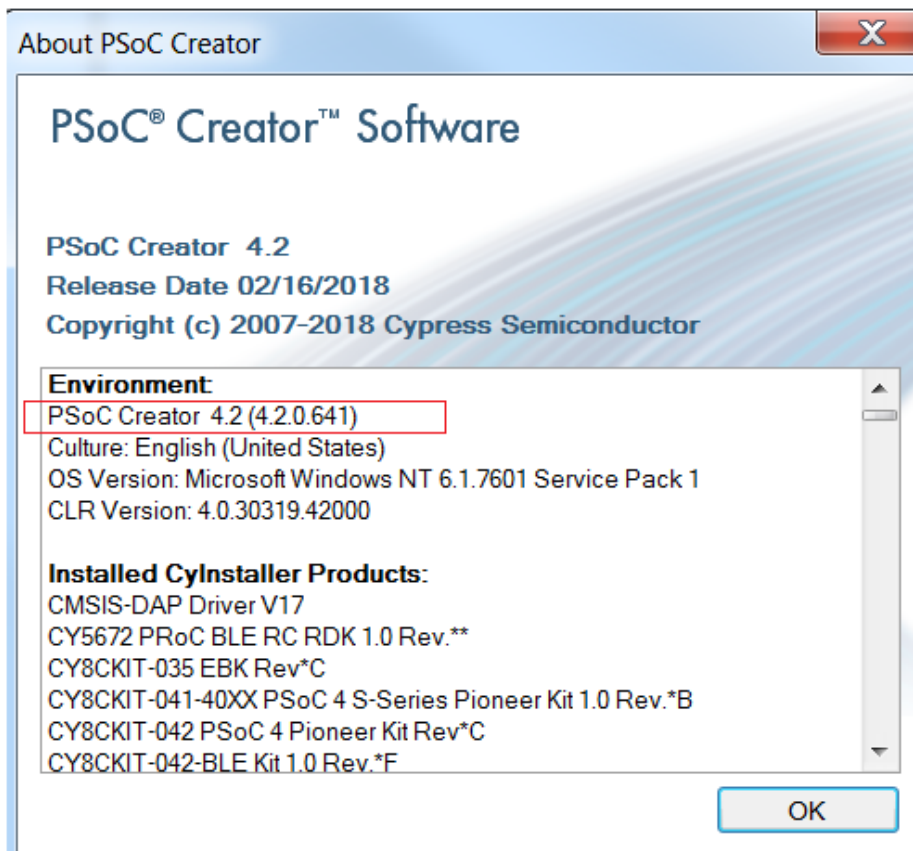


Download PSoC Creator  
for Windows

Download PSoC Creator  
for Windows using Akamai  
Download Manager

PSoC Creator Developer  
Community

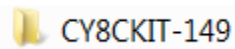
2. Install PSoC Creator 4.2 IDE tool, please check and make sure the version is **4.2.0.641**





AliOS  
Things

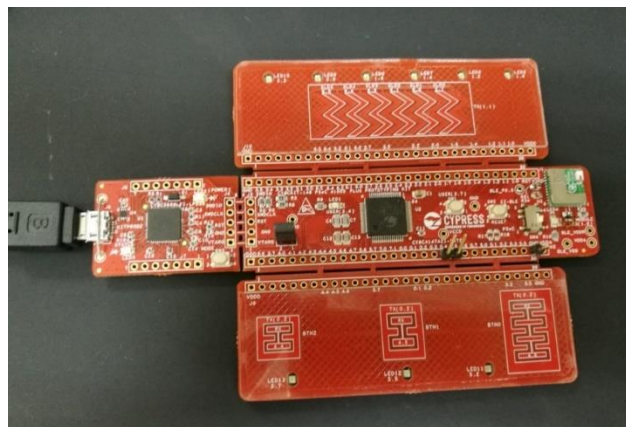
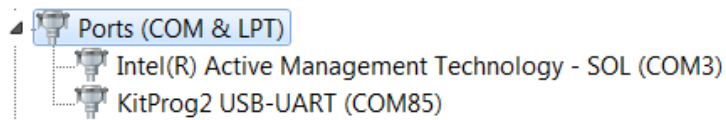
3. Get the PSoC AliOS-Things SDK file “**alios-v1.3.0.zip**”, and uncompress it.  
(Note: The SDK file alios-v1.3.0.zip is based on AliOS-Things 1.3.0 version)  
<https://github.com/alibaba/AliOS-Things/releases/tag/v1.3.0>
4. Open the folder “**alios-v1.3.0**” and go to the path **projects/Creator**, you can find a folder “**CY8CKIT-149**” which is a development kit of Cypress’ PSoC 4 MCUs.



To find more information on this kit, such as hardware design files schematic, PCB layout and software installation package for the development kits, please check [CY8CKIT-149](#)

**Reminder:** Please download and install the software package of dev kit before setting up the hardware system.

5. Connect MicroUSB cable from PC to the dev kit CY8CKIT-149 as below, it needs a couple minutes for the driver install on Windows system, and then you can find the **KitProg2 USB-UART** COM port information as below in DEVICE MANAGER of your Windows OS.



6. Double click to open the file **rhinorun.cywrk** in the path **projects\Creator\CY8CKIT-149\rhinorun.cydsn**



AliOS  
Things

TopDesign	2018/8/7 14:29	File folder
cyapicallbacks.h	2018/7/20 13:40	C/C++ Header
main.c	2018/7/20 13:40	C Source
rhinorun.cydwr	2018/7/20 13:40	CYDWR File
rhinorun.cypj	2018/8/3 17:51	PSoC Creator Project
rhinorun.cywrk	2018/8/3 17:38	PSoC Creator Workspace

This is the project file that runs AliOS-Things RTOS kernel rhino.

7. In the PSoC Creator IDE tool, find the “Program” button as below to compile and download the program HEX file.

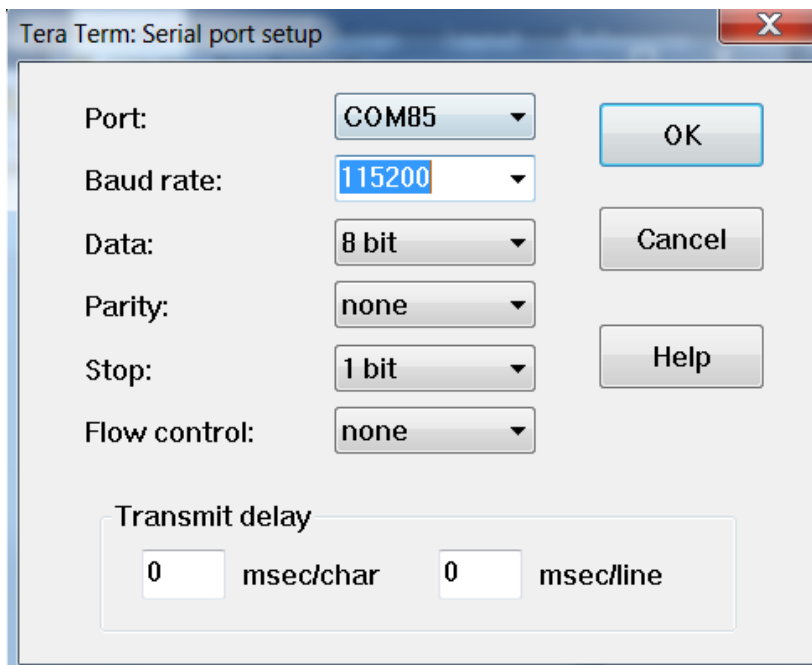
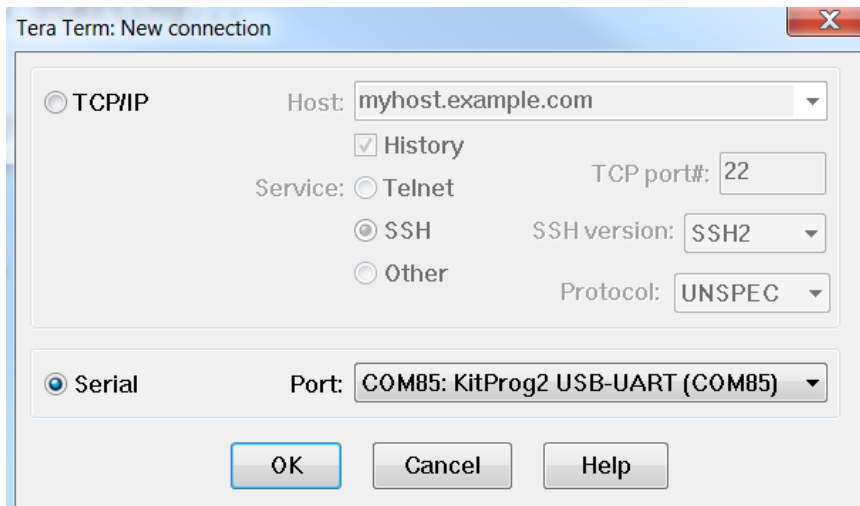


```
Flash used: 35908 of 131072 bytes (27.4%).  
SRAM used: 5952 of 16384 bytes (36.3%). Stack: 1024 bytes. Heap: 1024 bytes.  
----- Build Succeeded: 08/07/2018 15:19:46 -----  
Programming device 'PSoC 4100S Plus CY8C4147AZI-S475' with file 'C:\wh\PSoc6\alios-v1.3.0\pro:  
Device ID Check  
Erasing...  
Programming of Flash Starting...  
Protecting...|  
Verify Checksum...  
Finished Programming  
Device 'PSoC 4100S Plus CY8C4147AZI-S475' was successfully programmed at 08/07/2018 15:19:52.
```



8. Open one Serial port terminal tool like **Tera Term**, set the baud rate to 115200, Data 8bit, Parity None and Stop 1bit.

Here is one Tera Term tool download link: <http://ttssh2.osdn.jp/>





9. The result of the program for Rhino kernel is shown as below:

```
demo_task here!  
rhino memory is 1589!  
hello world! count 0  
hello world! count 1  
hello world! count 2  
hello world! count 3  
hello world! count 4  
hello world! count 5  
hello world! count 6  
hello world! count 7  
hello world! count 8  
hello world! count 9  
hello world! count 10
```

#### **Reference Files and Links**

1. <http://www.cypress.com/products/32-bit-arm-cortex-m0-psoc-4>
2. <http://www.cypress.com/products/psoc-creator-integrated-design-environment-ide>
3. <http://www.cypress.com/documentation/other-resources/psoc-creator-user-guide>