

RAK Online Compiler

Quick Start Guide

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www.RAKwireless.com

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1. Where is RAK online compiler?

RAK online compiler IP address is 47.112.137.11

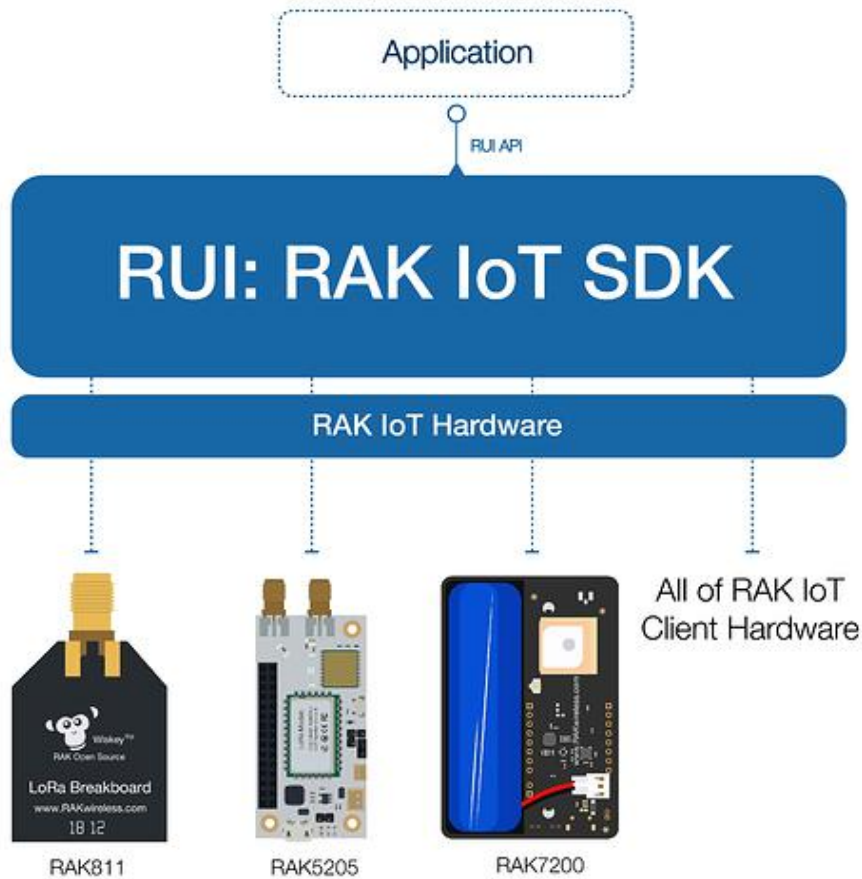
2. How can you login RAK online compiler?

Now, you can only login RAK online compiler through SSH, and we'll develop a webpage UI for it in future. The SSH account and password can be allocated to you after you apply in this topic:

<https://forum.rakwireless.com/t/rak-online-compiler-for-you-to-compile-your-customized-firmware-based-on-rui/662>

3. How to use RAK online compiler to compile a customized firmware?

Firstly, you need an application source code. You can download one of products practice from https://github.com/RAKWireless/Products_practice_based_on_RUI, or you can write a customized application based RUI by calling RUI APIs.



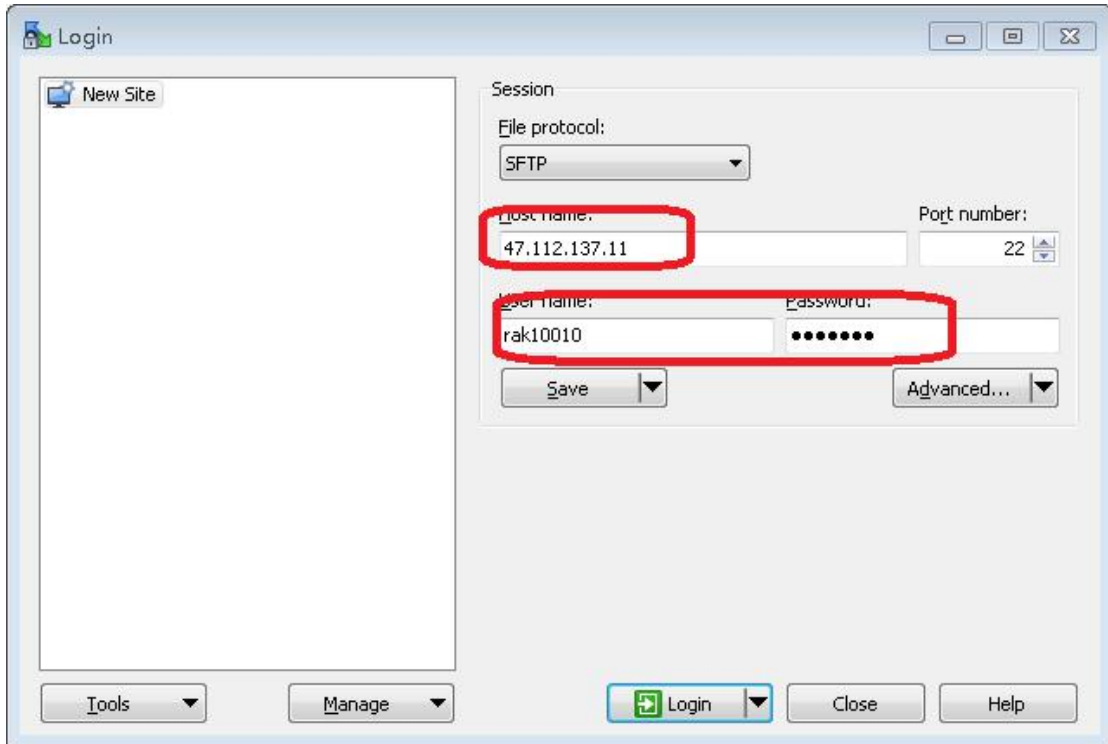
Then, you can use RAK online compiler to compile the application with RUI to get a customized firmware. The following steps show you how to use RAK online compiler:

Step 1: upload Application

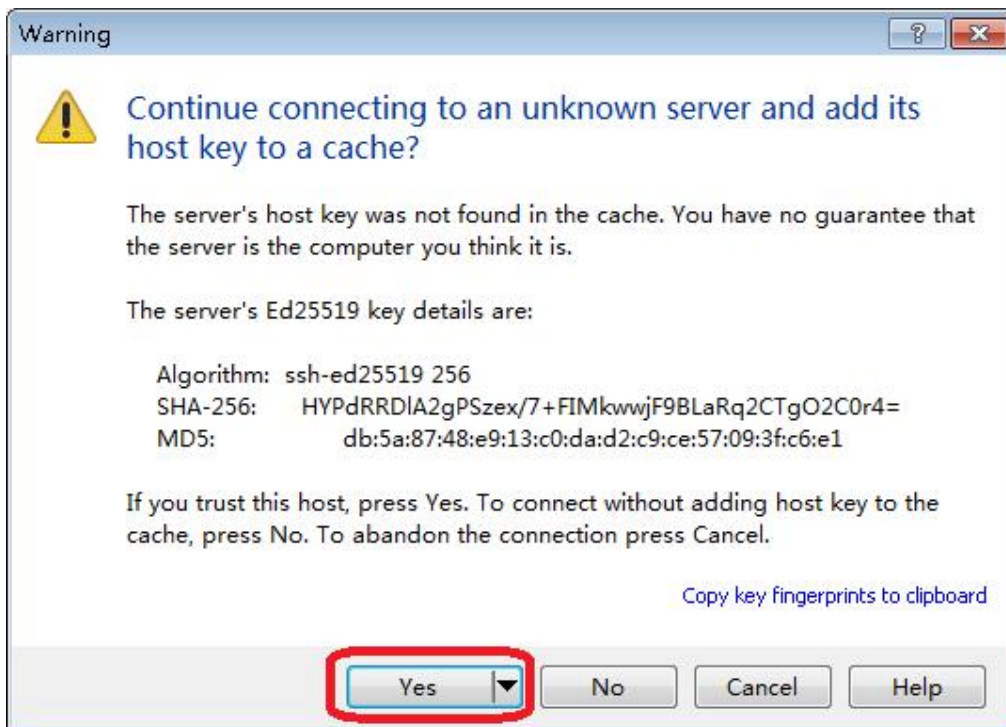
if you are using Windows, you can download WinSCP tool from here freely:

<https://winscp.net/eng/downloads.php>

and do as follow:

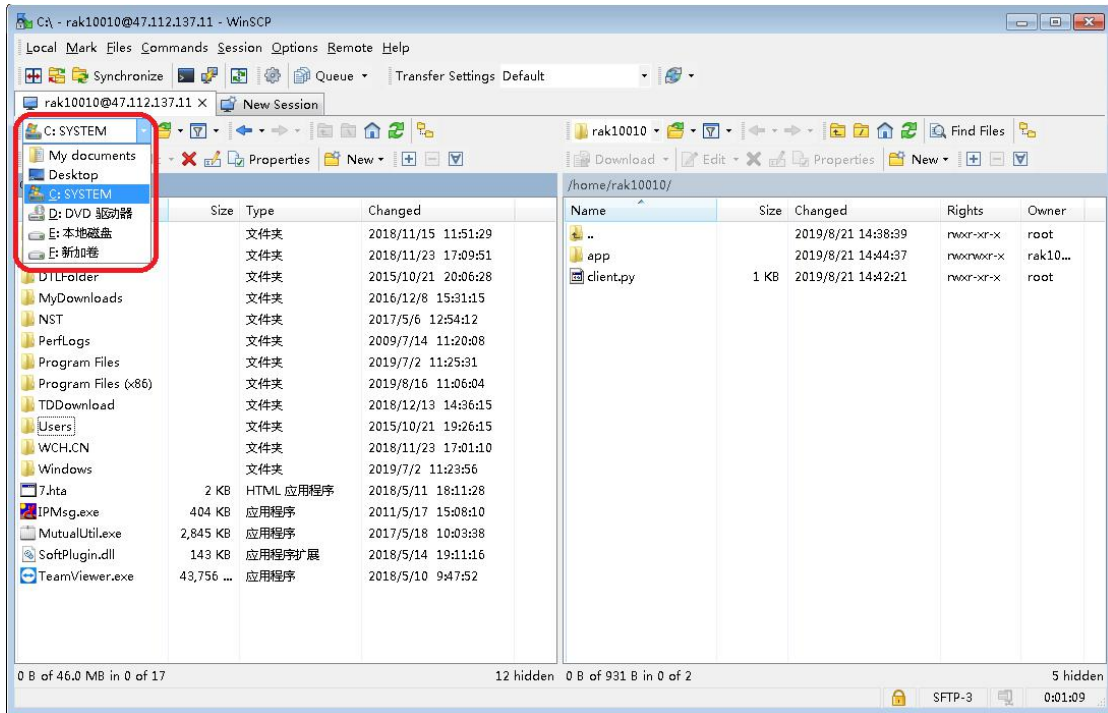


“Login”

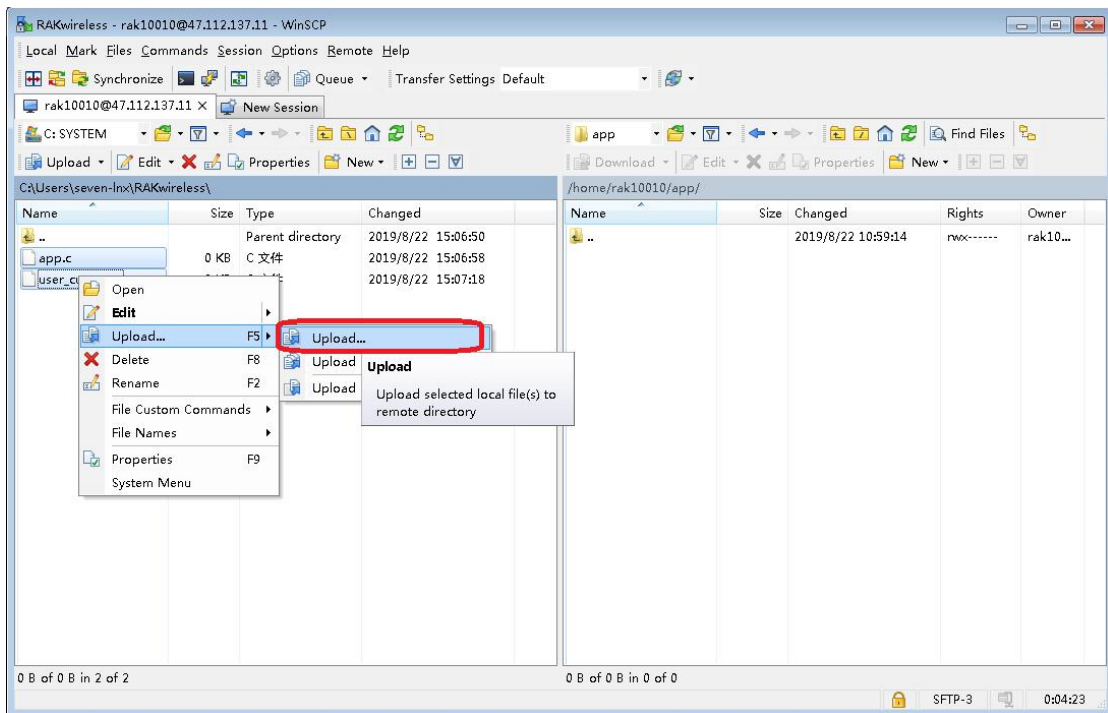


“Yes”

Then you can see the following page:



The left is your PC and the right is RAK online compiler. Just select the folder of your application source code in the left page, and select the “application” folder in the right page. Then upload:



Step 2: compile your customized firmware

Login RAK online compiler through SSH:


```

CC      utilities.c
CC      at_cmd.c
CC      lora_config.c
CC      rw_lora.c
CC      rui.c
CC      p2p.c
CC      partition.c
CC      BME680.c
CC      lis3dh.c
CC      gps.c
CC      gps_driver.c
CC      gps_translate.c
CC      app_RAK811.c
CC      uart.c
CC      i2c.c
CC      gpio.c
CC      delay.c
CC      eeprom.c
CC      fifo.c
CC      timer.c
CC      adc.c
AS      startup_stm321151xba.s
text   data   bss   dec   he
x      filename
94044  1132   11676  106852  1a164 _build/stm_xx.elf
arm-none-eabi-objcopy -O ihex _build/stm_xx.elf _build/stm_xx.hex
arm-none-eabi-objcopy -O binary -S _build/stm_xx.elf _build/stm_xx.bin
~/rui_compile

You can view the details in the file ~/app/build-xxxx/build-xxxx.log.

end compile
  
```

Great! You've compiled a customized firmware successfully.

Next step, let's export the firmware binary file:

After refreshing on the right page, you should see a new folder named "build-....." like this:

/home/rak10002/application/			
名字	大小	已改变	权限
..		2019/8/23 10:32:02	rw-r--r--
build-20190826132321		2019/8/26 13:23:36	rw-r--r--
app_RAK811.c	13 KB	2019/8/22 18:35:04	rw-rw-r--

Open this folder, and you will see the firmware binary file:

/home/rak10002/application/build-20190826132321/			
名字	大小	已改变	权限
..		2019/8/26 13:26:37	rw-rw-r--
build-20190826132321.log	3 KB	2019/8/26 13:23:36	rw-r--r--
stm_xx.bin	129 KB	2019/8/26 13:23:36	rw-r--r--

Just download this file to your PC.

OK, that's all about how to use RAK online compiler to compile your own customized firmware.

Once you have completed the above steps and got a customized firmware, you can flash it into RAK IoT module according to the document of that module. You can find all documents of RAK IoT modules on RAK website: <https://downloads.rakwireless.com/en/>