# CREATOR pro Standard SDK Build Environment Setup - IAR V1.0

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# 1. Introduction

This document describes the use of CREATOR pro standard SDK to debug the program, the standard SDK provides IAR project for the user reference.
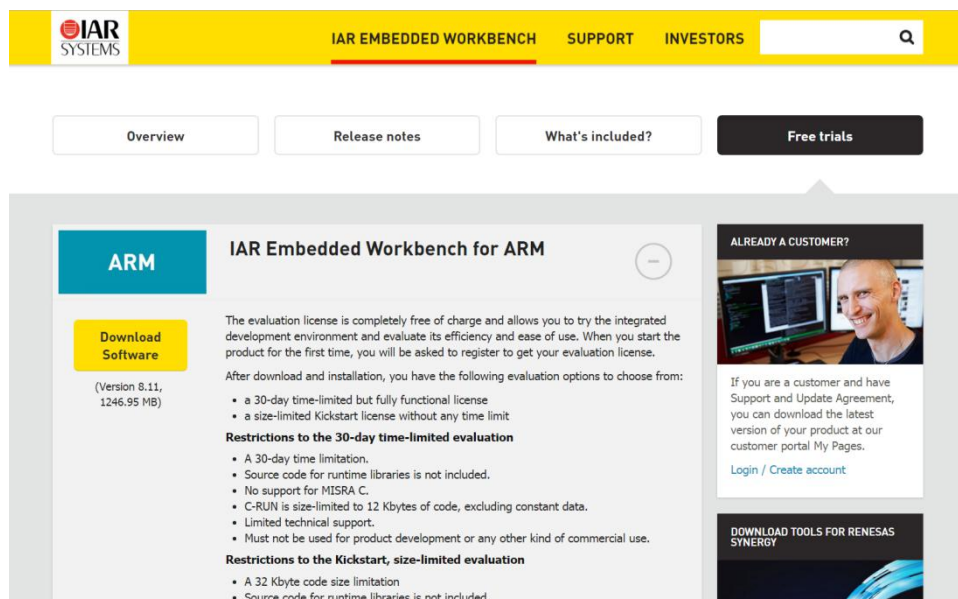
About the CREATOR pro standard SDK,Can go to RAK official github download:

https://github.com/RAKWireless/CREATOR-Standard-SDK
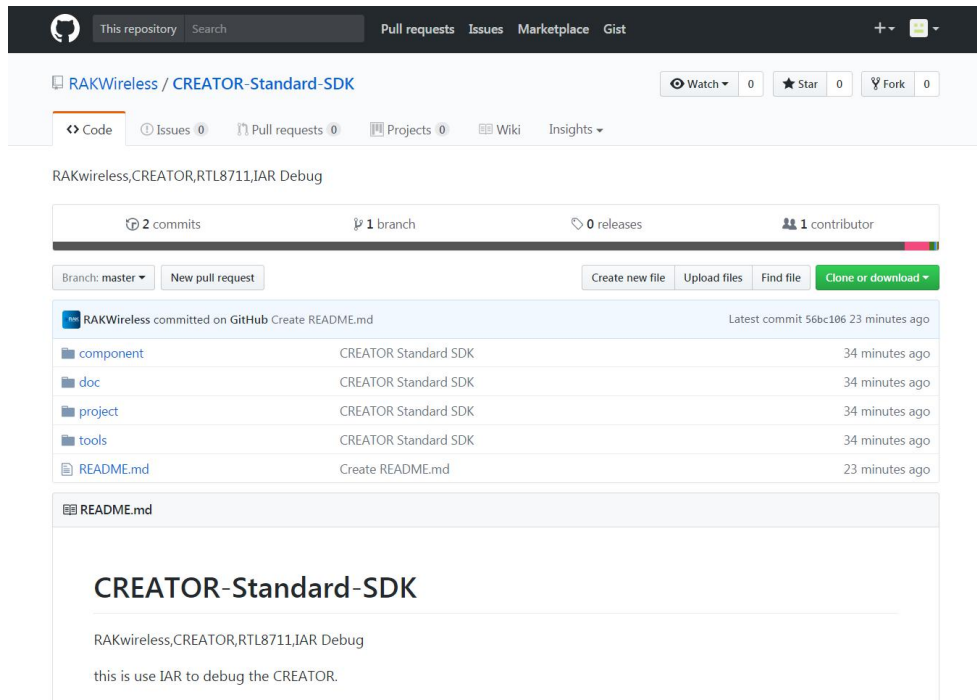


About IAR tools can be downloaded from this site：

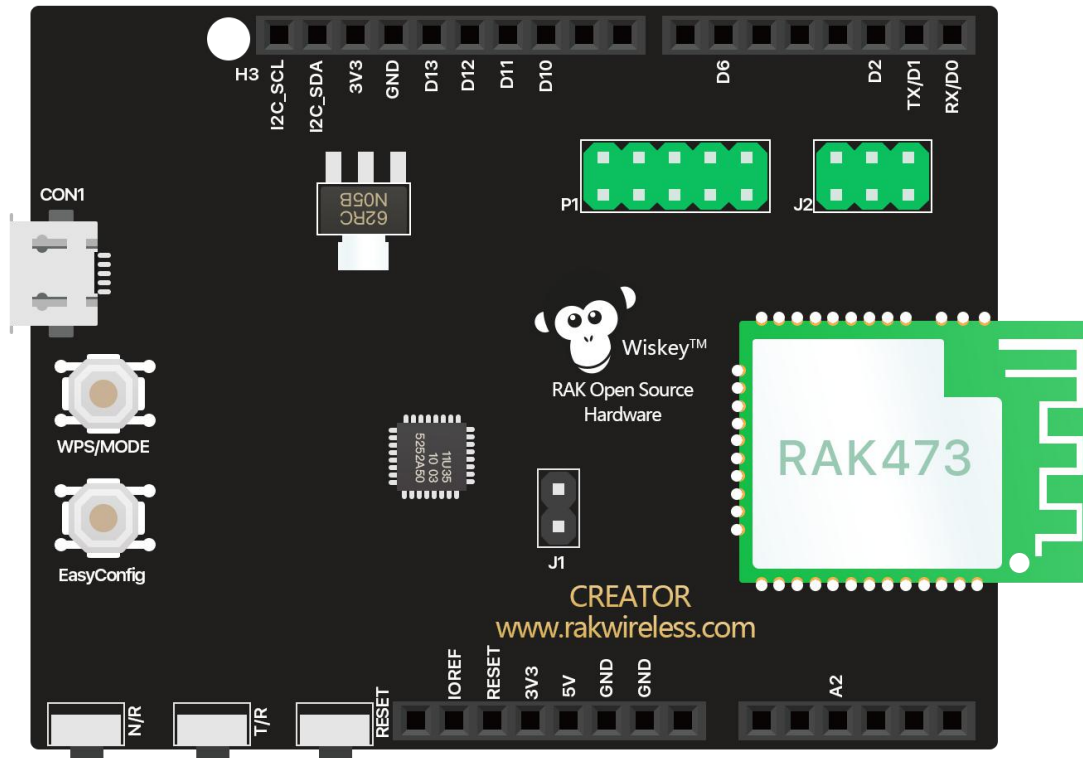https://www.iar.com/iar-embedded-workbench/#!?currentTab=free-trials



It is important to note that you must use IAR version greater than 7.20. Because only after this IAR tool to support CMSIS-DAP.

## 2. Board Information

- IC: RTL8711AM
- Module: RAK473
- HDK version: CREATOR pro V1.0



| Label | Function | Description |
|-------|----------|-------------|
| J1 | Power pin | The pin used to test the power consumption of the module |
| J2 | UART switch pin | Can be used to switch CON1 connected to the serial port |
| CON1 | Power | To the module power supply, and do serial output information |
| P1 | JLINK | Available for JLINK download program |
| Key | WPS/MODE | Backup |
| | EasyConfig | Backup |
| N/R | DAP Reset | Reset DAP chip button |
| T/R | DAP ISP function | Start DAP ISP button |
| RESET | RESET | Reset the RAK473 module(Reset 8711AM) |

For a description of the hardware of the module, see the documentation: CREATOR Hardware introduction manual

## 3. Debugging method

CREATOR pro supports two kinds of online debugging methods, one is to use CMSIS-DAP way, the other is the common use of j-link debugging, Below to introduce two kinds of debugging methods.
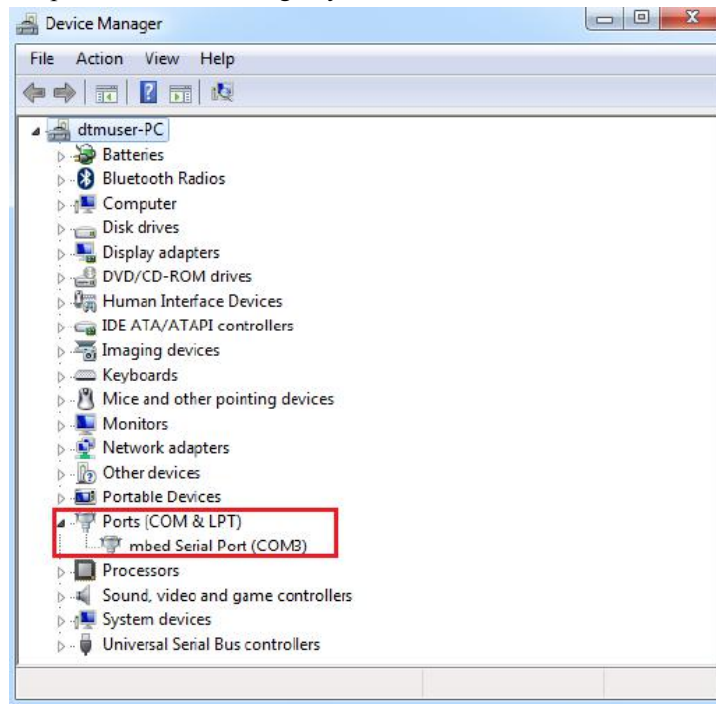
### 3.1 CMSIS-DAP

①The CREATOR pro development board supports CMSIS-DAP debugger, DAP debugger. It requires installing "serial to USB driver" at first. Serial to USB driver can be found intools\serial_to_usb\mbedWinSerial_16466.
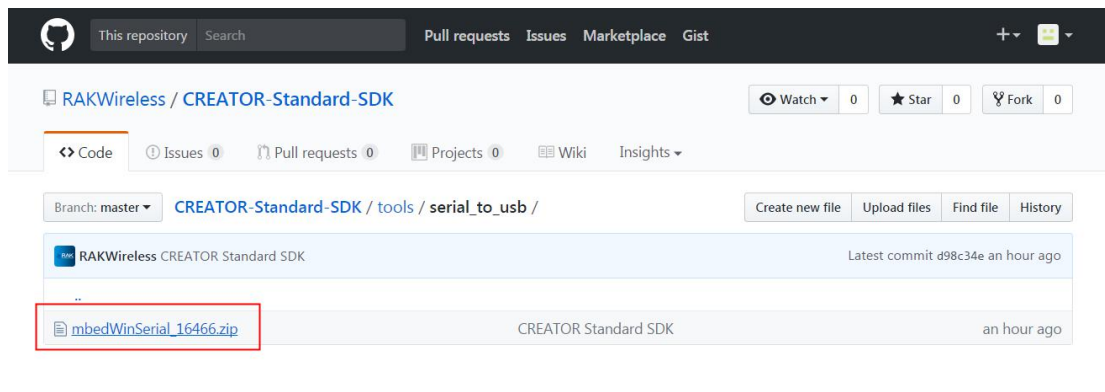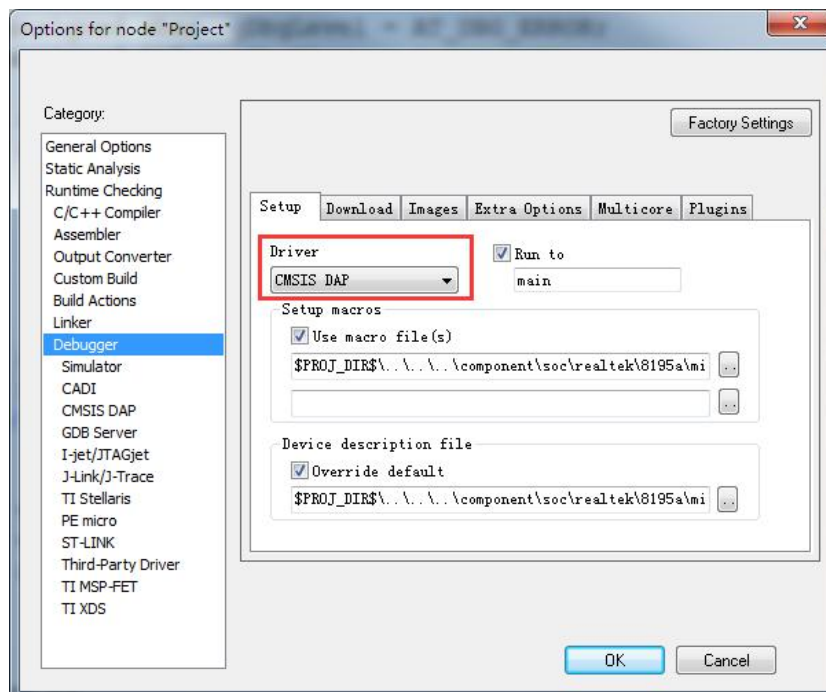


②After installing the driver. Then Connect board to the PC with micro-USB cable.
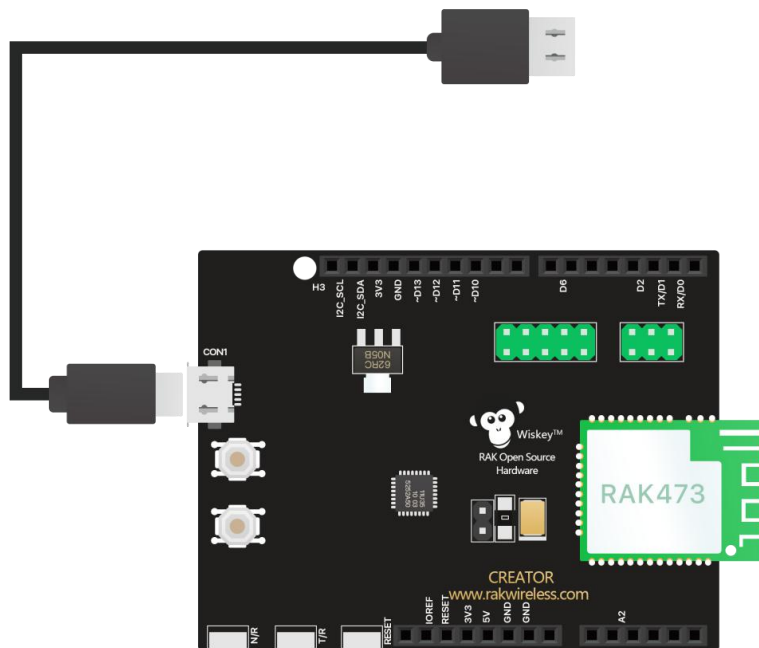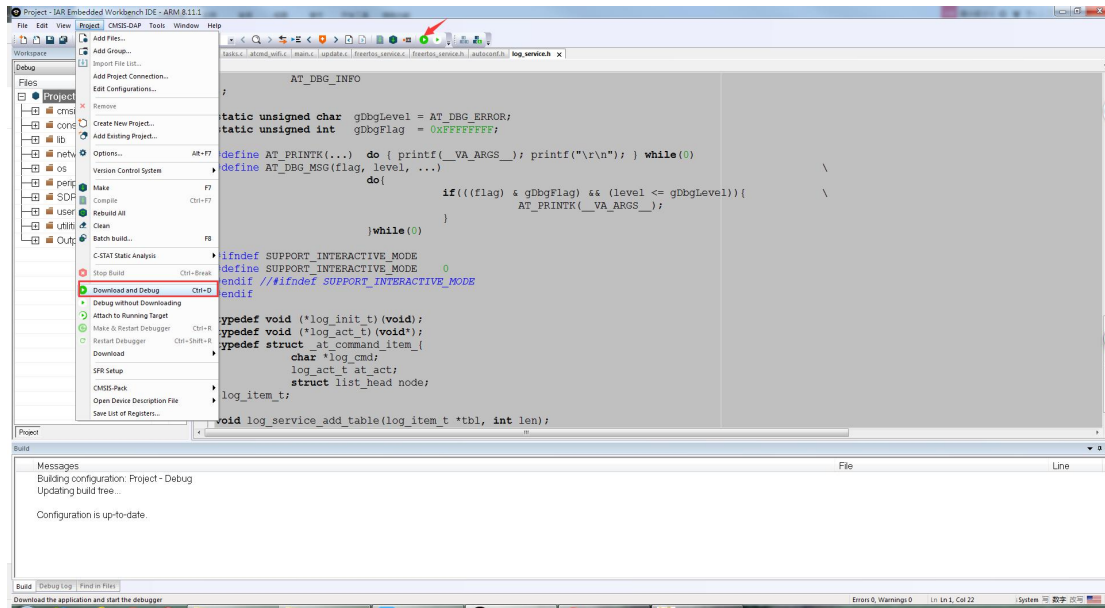
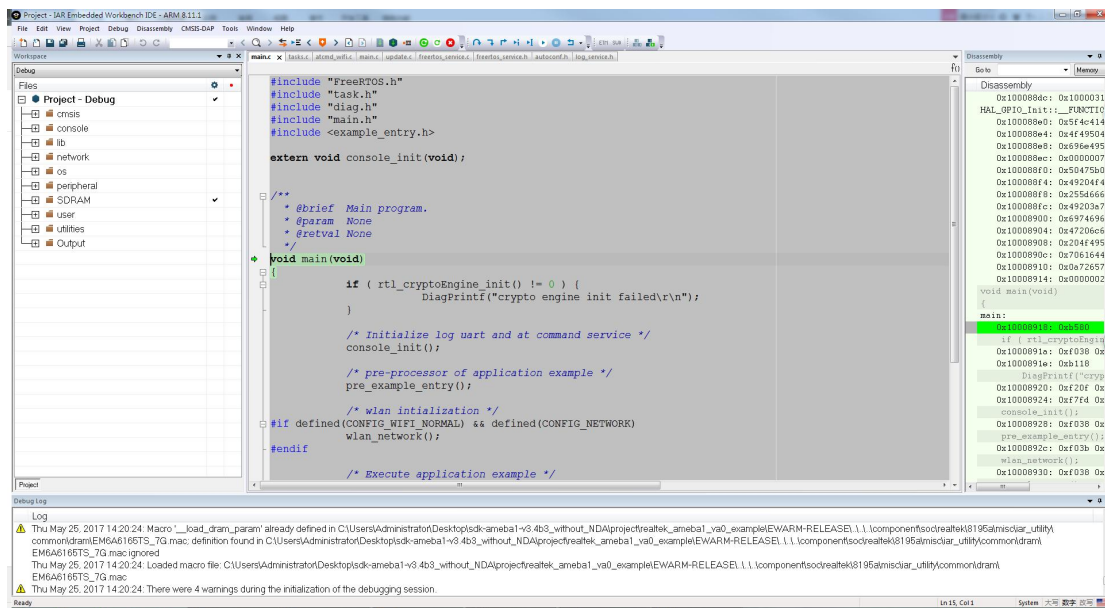③Open the computer resource manager, you can see mbed Serial Port.



④Use IAR tool open the project on the github download, set the debug way is CMSIS-DAP.
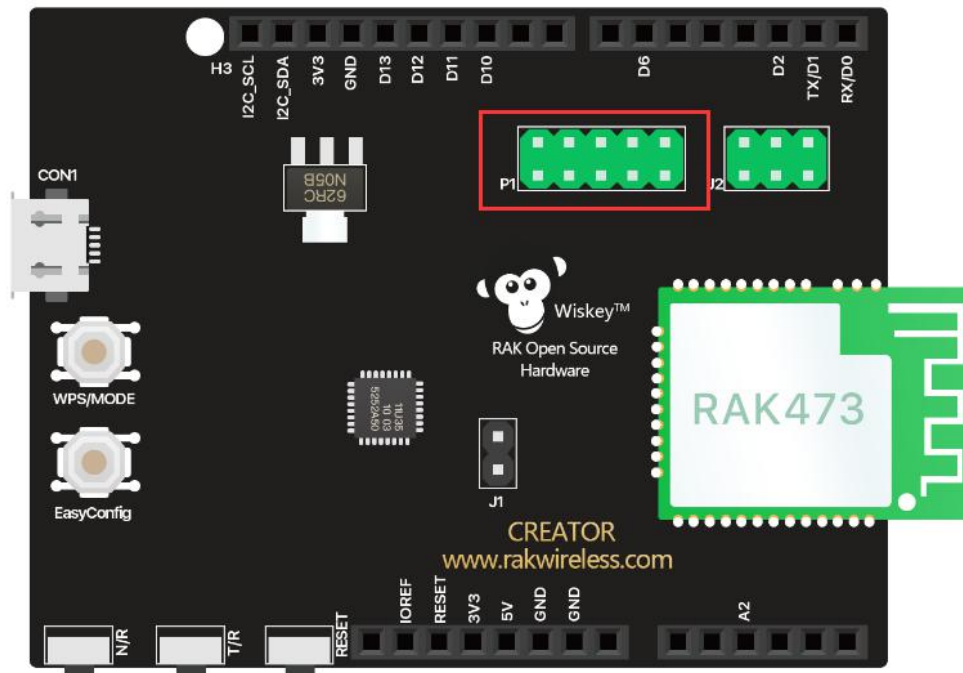
⑤And then click "Project" -> "Download and Debug".



⑥Finally, you can download and debug the program.

## 3.2 J-Link(JTAG/SWD)

In the CREATOR pro development board, we set aside the JTAG standard interface, can be used for developers to debug.



If the developer wants to use this JTAG interface, you need to connect to the corresponding interface j-link, in our development board corresponding to the foot of the silk screen information.

①Before using J-link debugging, you need to press the CREATOR pro development board T/R button(Keep pressing), disable the DAP chip, because the DAP chip pin and JTAG pin conflict, it must first disable the chip.
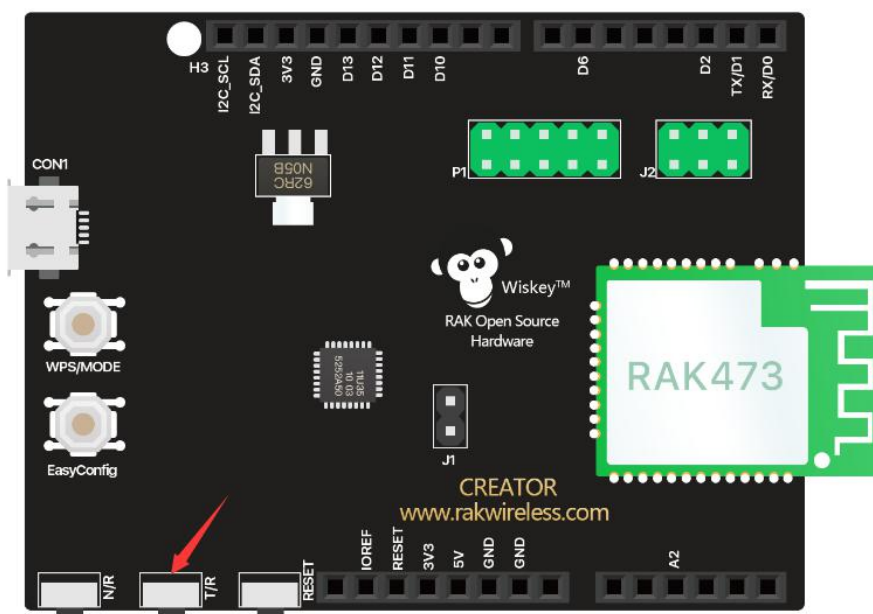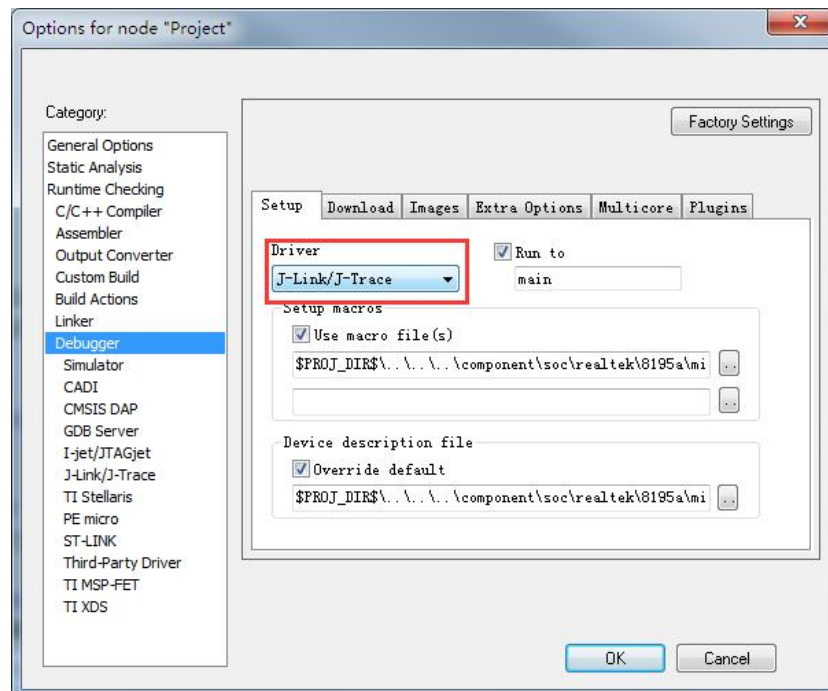
②Disable the DAP chip, and then through the micro USB to the CREATOR pro development board power supply, power supply is successful, you can release the T/R button. and Press the module reset button.
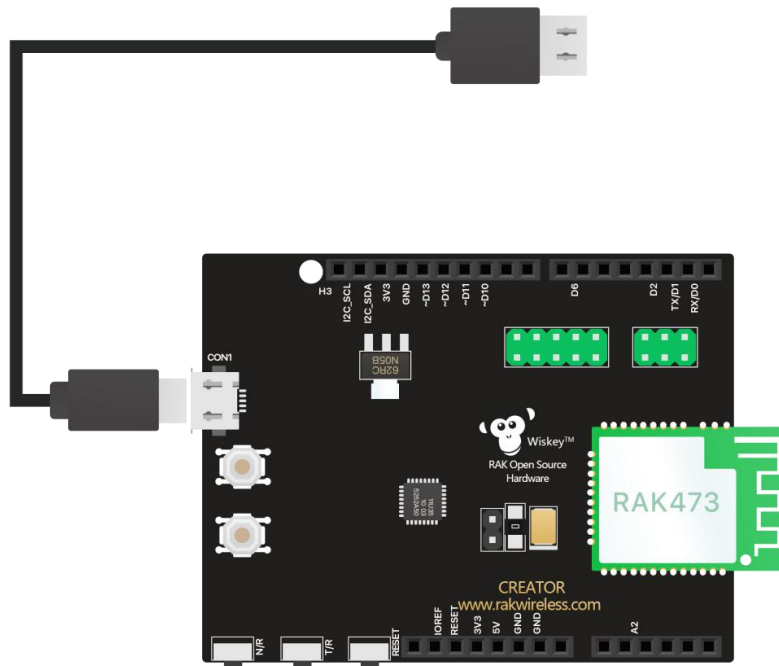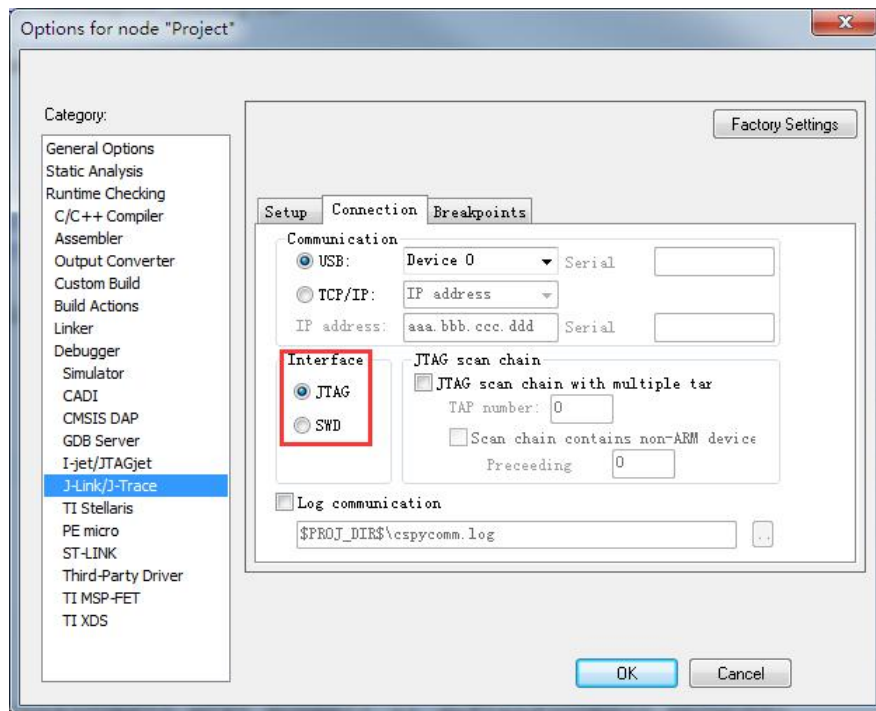


③Then use the IAR tool to open the standard SDK project file. Set the debug mode to J-Link.
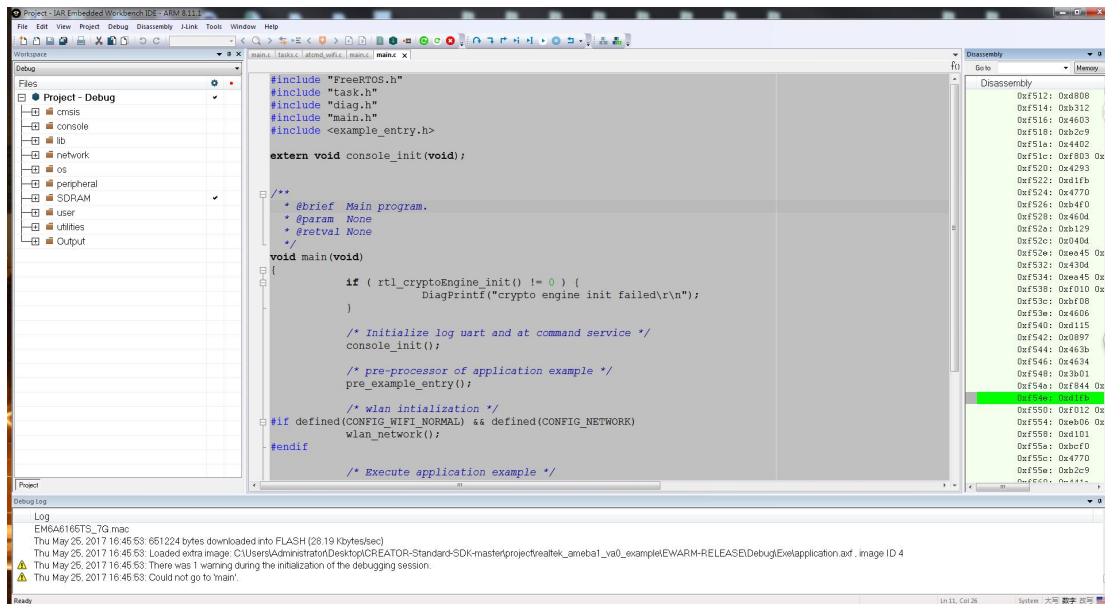
④You can also set the download mode here to JTAG or SWD.



⑤Finally you can debug the module online.



If you have any questions, please feel free to contact us. You can consult our technical forum:
http://support.rakwireless.com/Or send an email to: ken.yu@rakwireless.com

# 4. Version

| Version | Author | Date | Content modification |
|---------|--------|------|----------------------|
| V1.0 | Chace.cao | 2017/05/24 | Create document |