

# Getting Started Guide

## IAR KickStart Kit™ for Renesas R-IN32M4-CL3

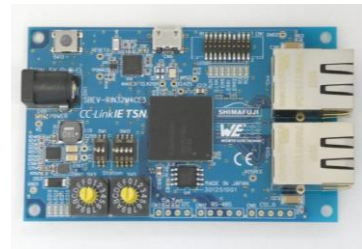
This guide briefly describes how to get started using IAR Embedded Workbench® with the I-jet Lite debug interface, to run an example application on the target system R-IN32M4-CL3 Board (Board name is SBEV-RIN32M4CL3).

For more detailed information, see the IAR Embedded Workbench® user guides, which can be reached from the Help menu or the IAR Information Center in the IAR Embedded Workbench IDE.

### Hardware Features

#### R-IN32M4-CL Board (The board name is SBEV-RIN32M4CL3)

- R-IN32M4-CL Cortex-M4 device
- User LEDs
- User SWs
- Reset button
- JTAG/SWD/ETM Trace connector 20 pin 0.05”
- 2xEthernet (RJ45) connectors
- Power up through USB-micro B connector or with external power supply
- RoHS/CE compliant



#### I-jet Lite debug probe\*

- MCU support: ARM7/9/11, Cortex-M/A/R devices
- JTAG/SWD debugging support
- Flash download into supported evaluation boards
- Up to 5V target interface voltage



- MIPI-20 cable and USB-micro cable
- Fully integrated with IAR Embedded Workbench for Arm (v8.50 or later)
- CE compliant

*\* Used with starter kit only. For more advanced debugging features, please choose IAR I-jet debug probe.*

## Install IAR Embedded Workbench for ARM

- 1 Download the software and documentation for the R-IN32M4-CL3 Starter Kit board from [http://www.iar.com/kit\\_updates](http://www.iar.com/kit_updates).
- 2 Run the software installation .exe file, it may take a while for the installation files to unpack.
- 3 Click **Install IAR Embedded Workbench® for ARM** and follow the prompt instructions to install the product. We recommend that you use the default directories on your installation.
- 4 When you start IAR Embedded Workbench for the first time, the License Wizard will open unless you already have an activated valid license. Choose Register with IAR Systems to get an evaluation license (the internet access is needed).



Figure 1 - Register to get an evaluation license

- 5 Click **Register**, choose a time or code size limited evaluation license, and then register to get your license number, which will be delivered to you via e-mail within a few minutes.
- 6 Activate the license in the License Wizard window.

You may register both the time or code size limited evaluation licenses, active and switch in between from the **License Manager**. For more information, see the IAR Embedded Workbench, Licensing Guide, under \IAR Systems\Embedded Workbench x.0\common\doc.

For the latest all software and documentation, please visit [www.iar.com/kit\\_updates](http://www.iar.com/kit_updates).

## Getting started - Set up the evaluation board

- 1 Connect your computer and the I-jet Lite debug probe using the USB-micro cable (packing with the I-jet Lite). Do not connect the I-jet Lite to the evaluation board yet.  
The “USB” LED on the front side of the I-jet Lite will be lit with green when Windows completes searching for a USB driver.
- 2 Connect the I-jet Lite to the JTAG/SWD/ETM Trace connector.
- 3 Connect your computer and USB-micro B connector for power supply on board using the USB-micro cable.

## Run example application

1. We assume that you have some working knowledge of the IAR Embedded Workbench IDE. For a quick introduction, see the documents and tutorials under Product explorer

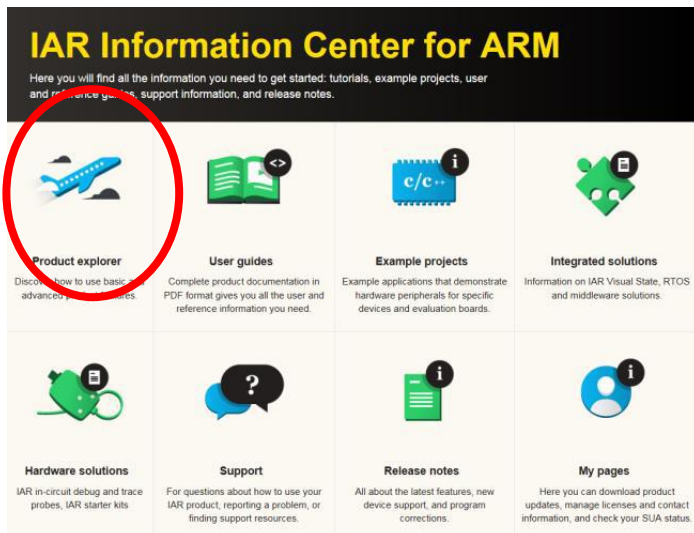


Figure 2- IAR Information Center for ARM

2. From the Start menu, start the IAR Embedded Workbench IDE by choosing **All Programs> IAR Systems> IAR Embedded Workbench for ARM x.xx >IAR Embedded Workbench**. You will get straight into the IAR Information Center for ARM.
3. You can download the example projects from the web site of Renesas Electronics: <https://www.renesas.com/eu/en/products/factory-automation/r-in32m4-cl3.html#sampleCodes>  
Note: To use the example projects, you need to register “My Renesas”. and you need to prepare CC-Link IE TSN (Master) MELSEC iQ-R. Please refer to the user manual comes with the Renesas Electronics example project.z
4. Click the link “Project” for “IAR EWARM / ICC ARM”.
5. Select RIN32M4-CL3-CCTSN-samplesoft\Software\CCLinkIE\_TSN\project\IAR\main.eww to launch IAR Embedded Workbench
6. main.eww is loaded. Choose the RamDebug build configuration

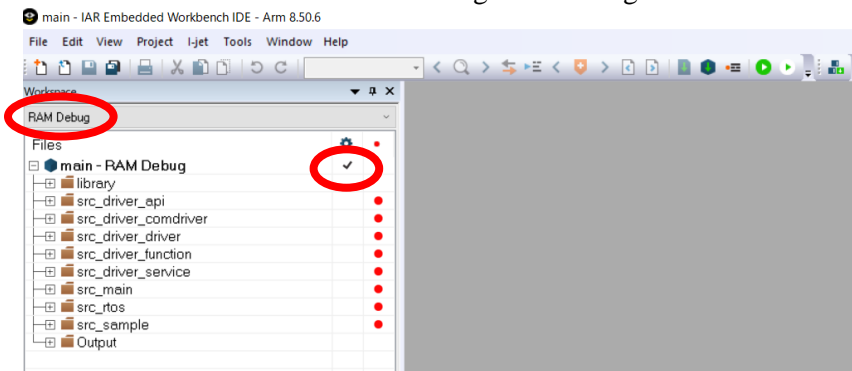

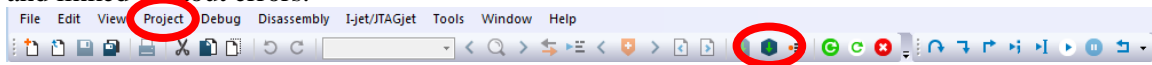




Figure 3– Build configuration

7. Choose **Project>Make** or click the  button on the toolbar. The project should be compiled and linked without errors.



8. Click the  button to download your program to the evaluation board. The file `main.c` is now open in the Editor window and the program is stopped at the start.

9. Click the  button to start the application.

Notes: How to use sample program is described in the user manual. “rin32m4-ccietsn.pdf” in sample program you downloaded from My Renesas

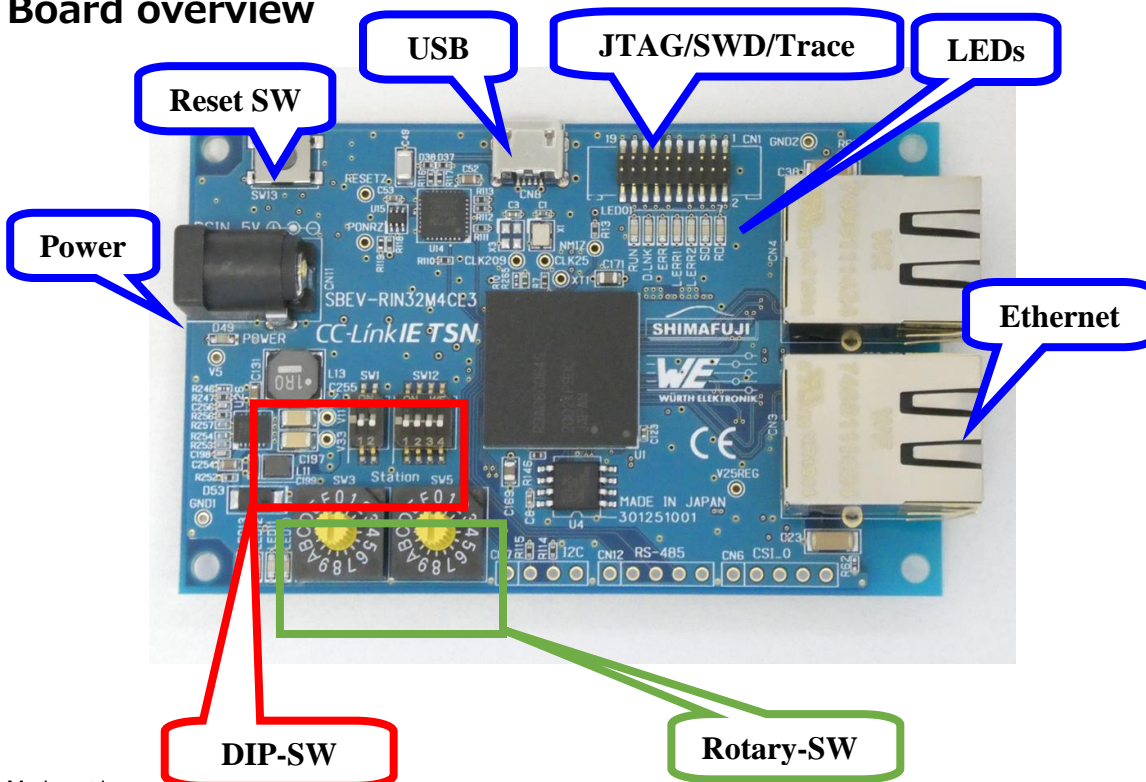
\*The board name of this starter kit is written “SBEV-RIN32M4CL3” in this manual.

10. To explore the C-SPY debugging features or change the I-jet Lite settings, choose the **View and I-jet/JTAGjet** menu.

11. To stop C-SPY, click the  button.

12. To exit C-SPY, click the  button.

## Board overview



Mode setting

DIP-SW	SW1-1	SW1-2
		Boot Mode
0	SerialFlash(Default)	External
1	IRAM	Internal (Default)

Rotary-SW	CC-Link IE TSN	CC-Link IE Field
SW3	1 (Default)	0
SW5	2 (Default)	2

Figure 1 – R-IN32M4-CL3 Board layout

## Target power supply for the evaluation board

We recommend supplying power via the USB connector for further use of the evaluation board.

\*Note: The power supply via debug probe may cause voltage drop / current limitation from USB VBUS power (5V 500MA max.)

### Troubleshooting

If you are unable to find the cause of a problem, try resetting the evaluation board by using the reset button on the board. Then restart the C-SPY Debugger in the IAR Embedded Workbench IDE. You can also try disconnecting and reconnecting the power to the evaluation board, pressing the reset button and then restarting C-SPY.

### Disclaimer

Information given in this document is intended as a help for the user. IAR Systems shall not be held liable for any losses or problems arising from using the information given in this document.

IAR KickStart Kit content	Trademarks etc.
<ul style="list-style-type: none"> <li>• Welcome letter</li> <li>• R-IN32M4-CL3 evaluation board</li> <li>• I-jet Lite incl. USB-micro cable</li> <li>• USB-micro B cable</li> </ul>	<p>IAR Systems, IAR Embedded Workbench, C-SPY, visualSTATE, IAR KickStart Kit, I-jet, IAR and the IAR Systems logotype are trademarks or registered trademarks owned by IAR Systems AB.</p> <p>All other trademarks or registered trademarks mentioned in this document are the properties of their respective owners.</p> <p>© Copyright 2020 IAR Systems AB</p> <p>Part number: GS-RIN32M4-CL3-IL First edition: October 2020</p>