

RE Common	RE01 1500KB	RE01 256KB	RE01B (Bluetooth® 5.0)
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Initialisation of evaluation board and development environment

Follow these steps: Select option 2 or 3 according to your preferred integrated development environment. Online training requires a user registration on MyRenesas.

Step	Item	Action	Content type	Content name	Link	Link	Link	Link
1	User's Manual	Get	Manual	RE01 User's Manual	-	Link	Link	Link
2	How to use the evaluation board	Get	Evaluation board information	RE01 User's Manual	-	Link	Link	Link
			Evaluation board purchase site	Online Distributor	-	Link	Link	Link
3	How to launch IAR EWARM	Operation	Online training	RE Family Development Environment Settings (Module 1)	Link	-	-	-
		Install	Installer	EWARM Installer (General)	Link	-	-	-
4	How to launch Renesas e ² studio	Operation	Online training	RE Family Development Environment Settings (Module 1)	Link	-	-	-
		Install	Installer	e ² studio installer (General)	Link	-	-	-
			Installer	e ² studio installer (as of August 18, 2021)	Link	-	-	-
		Operation	Video	How to use e ² studio	Link	-	-	-

Current measurement

Please follow these steps:

Step	Item	Action	Content type	Content name	Link	Link	Link	Link
1	Understanding low power functions	Study	Application notes	Mode transitions and use cases for reducing power consumption in the RE01 1500KB group using SOTB processes (Refer to re01 256KB group RE01B group as the concept is the same.)	Link	-	-	-
2	Understanding low power functions	Study	Online training	RE Family Low Consumption (Module 3)	Link	-	-	-
3	Current evaluation method	Operation	Sample code	Current measurement sample code for each low power mode	Link	-	-	-

Energy Harvesting Evaluation

Please study the operation of the energy harvesting control circuit as below.

Step	Item	Action	Content type	Content name	Link	Link	Link	Link
1	Understanding energy harvest control circuits	Study	Online training	RE Family Energy Harvest (Module 4)	Link	-	-	-
2	How Energy Harvest QuickStart Works	Study	Sample code	Demonstration of MIP-LCD display using only a solar panel	-	Link	Link	-
3	How Energy Harvest Battery Maintenance Free Power Management Works	Operation	Sample code	Demonstrations to control energy storage and consumption with solar panels and supercapacitors	Link	-	-	-

Program Development

Please follow these steps:

Step	Item	Action	Content type	Content name	Link	Link	Link	Link
1	Get the Software Development Kit	Get	Driver software (C source version)	Software Development Kit (as of August 18, 2021)	-	Link	Link	Link
			Driver software (GUI Configurator version)	Software Development Kit + Smart Configurator (as of August 18, 2021)	Link	-	-	-
2	Understanding the Software Development Kit	Study	Application notes	Software Development Kit Startup Guide	-	Link	Link	Link
3	How to use the Software Development Kit	Operation	Online training	How to use the Renesas RE Family driver Startup_peripherals (Module 2)	Link	-	-	-
4	Low Level Sample Code	Get	Sample code	Low-level sample code for each peripheral function	Link	-	-	-

Hardware Design

Please use the following information to develop your hardware design.

Step	Item	Action	Content type	Content name	Link	Link	Link	Link
1	Get reference schematics	Get		RE01 Evolution Kit Schematic	-	Link	Link	Link
2	Get reference block diagrams	Get		RE01 Evolution Kit User's Manual	-	Link	Link	Link
3	HW Design Guide	Get		MCU part	-	Link	Link	Link
				RF transceiver part	-	-	-	Link
4	Resonator information	Get	Main clock matching data	Kyocera	-	Link	Link	-
			Main clock matching data	Murata select Renesas Electronics, and enter R7F0E01	-	Link	Link	-
			Subclock matching data	Seiko Instruments	-	Link	Link	-
			Bluetooth clock matching data	NDK	-	-	-	Link
5	IBIS Model	Get			-	Link	Link	-

Wireless Communication

Please download the following application notes and sample code to help use wireless communications.

Item	Action	Content type	Content name	Link	Link	Link	Link
Bluetooth@Low Energy	Get	Driver software, sample code	BLE SDK and sample code	-	-	-	Link
LoRaWAN	Get	Sample code	Temperature and humidity sensor + LoRaWAN + Energy Harvesting sample code	-	-	Link	-
Celuller(Cat.M1, NBIoT)	Get	Sample code	AWS connection via Celuller	-	Link	Link	-

Sensor

Please download the following application notes and sample code to work with Renesas sensors.

Item	Action	Content type	Content name	Link	Link	Link	Link
Lighting Sensor USL29125	Get	Sample code	Lighting sensor sample code	-	Link	-	-
Temperature and Humidity Sensor HS3001	Get	Sample code	Temperature and humidity sensor + LoRaWAN + Energy Harvesting sample code	-	-	Link	-
GPS	Get	Sample code	GPS+ Energy Harvesting Sample Code	-	-	Link	-
Microphone	Get	Sample code	AMI speech recognition sample code	-	-	Link	-

Digital signal processing

Please download the following sample code to understand how to use Renesas DSP library.

Item	Action	Content type	Content name	Link	Link	Link	Link
IIR Filter	Get	Sample code	CMSIS DSP Library IIR Sample Code	-	Link	-	-
FIR Filter	Get	Sample code	CMSIS DSP Library FIR Sample Code	-	Link	-	-
FFT	Get	Sample code	CMSIS DSP Library FIR Sample Code	-	Link	-	-
Application Example: Voice Recognition	Get	Sample code	Toshiba Voice Recognition Sample Code	-	-	Link	-
		Sample code	AMI Speech Recognition Sample Code	-	-	Link	-