

The information/materials required at the time of product development summarized and listed for each development phase.

Please use it as a handbook when developing.

Table of contents:

[Step1: MCU selection](#)

[Step2: Designing and evaluating](#)

[Step3: Mass production](#)

Step1: MCU selection


	Item	Content	Link
1	Hardware information	Datasheet	23E-A: Doc
			23E-B: Doc
2	Products & Solutions	Video	23E-A Web site
			23E-B Web site
3		Blog	23E-A: Web site
			23E-B: Web site
4	Reference designs (Winning combination)	23E-A: Web site	
		23E-B: Web site	
5	Product longevity program (PLP)	Overview of product longevity program (PLP)	Web site
6		Product selection (product selector)	23E-A: Web site
		Note: Refer to PLP column in the chart.	23E-B: Web site
7	Replacement information	Differences of specification among RX products	Doc
8		[SH/H8/H8S/H8SX/M16C/V850] → RX microcontroller migration guide	Doc
9		Design guide for migration between RX family differences in package external form	Doc

[Go to Top](#)

Step2: Designing and evaluating

Item		Content	Link
Common			
1	Hardware information	User's manual: Hardware	23E-A: Doc
			23E-B: Doc
2		RX family hardware manual guidance (how to read user's manual: hardware)	Doc
3		Technical update (errata information) *Select "Technical Update" from the options to the left of the Documentation section.	23E-A: Web site
4		Product change notice (PCN) *Select "Product change notice" from the options to the left of the Documentation section.	23E-A: Web site
			23E-B: Web site
5		Part number guide for RX family product (the meaning of character in part number)	23E-A: Doc
			23E-B: Doc
6	Semiconductor reliability handbook	Doc	
7	RELIABILITY REPORT	23E-A: Doc	
		23E-B: Doc	
8	RoHS Product Options → Part Number → Package information → RoHS Info	23E-A: Web site	
		23E-B: Web site	
9	Software information	Instruction set for RXv2 core architecture (user's manual)	Doc
10	Evaluation board (for general purpose)	Renesas solution starter kit for RX23E-A (all functions could be evaluated)	23E-A:Web site
11		Renesas solution starter kit for RX23E-B (all functions could be evaluated)	23E-B:Web site
12	Solution board	Industrial automation functional safety reference board	Web site
13	Partner information	Partner products (system solutions provider)	Web site
14		Partner products (trusted technology partners that deliver commercial-grade building blocks)	Web site

[Go to Top](#)

Item	Content	Link
Hardware design		
1	Design information	Hardware design guide Web site
2		Design guide for main clock circuit and Sub-Clock circuit Doc
3		Notes regarding high-temperature operation 23E-A: Doc 23E-B: Doc
4	Board simulates	ECAD, board simulation model (IBIS) Note: ECAD can be found by clicking on the respective part number of the product options.  23E-A: Web site 23E-B: Web site
5	Other	Resonator and matching circuit information 23E-A: Web site 23E-B: Web site
6		Package information (package outline information, mount manual, etc.) Web site
7	Development environment	Supplemental user's manual for E1/E20/E2 Lite/E2 emulator Doc
Software design		
1	Software information	Getting started with the RX family development environment Web site
2		Development tools for RX family Web site
3		Software environment (OS, middleware, drivers) Web site
4		RX smart configurator user's guide (tools for code generation) Doc
5	Training information	Smart configurator tutorial - create a LED blinking program using RX family MCU Web site
6		How to use tools and solutions (video clips) Web site
7	System design	Examples of transitioning to low power consumption modes Doc Sample

[Go to Top](#)

Item		Content	Link	
Solution				
1	Sensor measurement	Solution introduction information	Doc	
2		Portal page	Tiny board for digital loadcell	23E-A:Web site 23E-B:Web site
3			Thermoelectric peltier controller	23E-A:Web site
4			Channel-to-Channel isolated analog measurement system	23E-A:Web site
5			IO-Link temperature sensor solution	23E-A:Web site
6			6-Axis force sensor small board	23E-B:Web site
7			Application notes	Force sensor measurement example
8		Temperature measurement example using a thermocouple		23E-A:Doc 23E-A:Sample
9		Temperature measurement examples using resistance temperature detectors		23E-A:Doc 23E-A:Sample
10		Example of weight measurement using AC excited load cell		23E-B:Doc 23E-B:Sample
11		Example of 4-20mA transmitter using built-in D/A converter		23E-B:Doc 23E-B:Sample
12	GUI	Portal page	Web site	
13		Support information	Web site	
14		Application notes	QE for display GUI display application development guide using serial connection LCD	Doc
15			GUI sample program using serial LCD and emWin library	Doc Sample
16			Module for image rendering (emWin)	Doc
17				Sample
18				

[Go to Top](#)

Item		Content		Link
Solution				
19	Functional safety	Portal page	Functional safety solutions for Industrial automation	Web site
20			Functional safety solution for home appliances	Web site
21		Other information	Functional safety solution for industrial automation	Doc
22			Introduction to Renesas functional safety for industrial appliance(video)	Web site
23			Introduction to Renesas functional safety for home appliance (video)	Web site
Support				
1	Support information	FAQ (frequently asked inquiries)		Website
2		RX forum (community)		Website
3		Ask technical/sales support (support tickets)		Website

[Go to Top](#)

Step3: Mass production

Item		Content		Link
1	Writing a program	Programmer	PG-FP6	Web site
2		Writing tool	Renesas flash programmer (GUI tool for PC)	Web site
3	Firmware update	Application notes	Renesas MCU firmware update design policy	Doc
4			Firmware update module using firmware integration technology	Doc Sample
5			How to manage the access control for flash memory	Doc
6	Inspection	Design information	Boundary scan description language (BSDL) file	Not available

[Go to Top](#)