

Handbook for RX130

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.

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Step1: MCU selection

Item		Content	Link
1	Hardware information	Datasheet	Doc
2	Products & Solutions	Video	Web site
3		Blog	Web site
4		Reference designs (Winning combination)	Web site
5	Product longevity program (PLP)	Overview of product longevity program (PLP)	Web site
6		Product selection (product selector) Note: Refer to PLP column in the chart.	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

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Step2: Designing and evaluating

Item		Content	Link
Common			
1	Hardware information	User's manual: Hardware	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.	Web site
4		Product change notice (PCN) *Select "Product change notice" from the options to the left of the Documentation section.	Web site
5		Part number guide for RX family product (the meaning of character in part number)	Doc
6		Semiconductor reliability handbook	Doc
7		RELIABILITY REPORT	Doc
8		RoHS Product Options → Part Number → Package information → RoHS Info	Web site
9	Software information	Instruction set for RXv1 core architecture (user's manual)	Doc
10	Evaluation board (for general purpose)	Renesas starter kit (all functions could be evaluated)	Web site
11		Target board (low-cost model)	Web site
12	Solution board	Capacitive touch evaluation system for RX130	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

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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		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. 		Web site	
5	Other	Resonator and matching circuit information		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		Examples of transitioning to low power consumption modes		Doc Sample	
Solution					
1	Capacitive touch	Portal page	Capacitive touch sensor solution	Web site	
2		Design guide	First step guide (CTSU capacitive touch introduction guide)	Doc	
3			The electrode design guide for capacitive touch (CSTU)		Doc
4			Capacitive touch noise immunity guide		Doc
5			The development guide for capacitive touch applications using QE and FIT		Doc

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Item		Content		Link
Solution				
6	Capacitive touch	Application notes	The development guide for 3D gesture recognition application using QE for capacitive touch	Doc
7			How to use QE for capacitive touch for renesas RX family with IAR EWRX	Doc
8			QE for capacitive touch advanced mode parameter guide	Doc
9			Touchless button demo solution sample software	Doc
				Sample
10			3D Gesture demo set small version (hardware)	Doc
11			3D Gesture demo set sample software	Doc
	Sample			
12	GUI	Portal page	Graphical user interface (GUI) solutions	Web site
13		Support information	RX family LCD-related FAQ list	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
	Sample			
17	Functional safety	Portal page	Functional safety solutions for Industrial automation	Web site
18			Functional safety solution for home appliances	Web site
19		Other information	Functional safety solution for industrial automation	Doc
20			Introduction to Renesas functional safety for industrial appliance(video)	Web site
21			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

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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
5				Sample
5			How to manage the access control for flash memory	Doc
6	Inspection	Design information	Boundary scan description language (BSDL) file	Not available

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