Handbook for RX72M

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 RXv3 core architecture (user’s manual)	Doc
10	Evaluation board (for general purpose)		Renesas starter kit+ (all functions could be evaluated)	Web site
11	Solution board	CPU card	RX72M CPU card with RDC-IC Industrial NW support	Web site
12			CPU Card for motor control	Web site
13	Solution board		Industrial automation functional safety reference board	Web site
14			FSoE reference Kit with RX MCU	Web site
15	Partner information		Partner products (system solutions provider)	Web site
16			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			Guidelines for full-speed USB2.0 board design	Doc
5			Ethernet Hardware Design Guide	Doc
6	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
7	Other		Resonator and matching circuit information	Web site
8			Package information (package outline information, mount manual, etc.)	Web site
9	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
Solution				
1	Cloud	Portal page	RX cloud connectivity solution	Web site
2	Security	Portal page	RX Family TSIP Security Solutions	Web site
3		Support tools for secure functions	Security key management tool manual	Web site
4		Hardware Security IP Driver	TSIP (Trusted Secure IP) driver (binary version)	Doc Sample
5		Other information	Video	Web site

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Item			Content	Link
Solution				
6	GUI	Portal page	Graphical user interface (GUI) solutions	Web site
7		Support information	RX family LCD-related FAQ list	Web site
8		Application notes	GUI development sample using QE for display [RX]	Doc
				Sample
9			QE for display [RX] user's manual	Doc
				Sample
10			WVGA display sample program using GLCDC	Doc
				Sample
11			WQVGA display sample program using GLCDC	Doc
				Sample
12			Module for image rendering (emWin)	Doc
				Sample
13	Industrial network	Portal page	RX72M network solution	Web site
14		Application notes	Industrial ethernet protocol sample program for CPU card	Doc
				Sample
15			Sample programs for major industrial ethernet and fieldbus protocols	Doc
				Sample
16			Encoder BLDC motor control using EtherCAT communications	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
22	Voice recognition	Portal page	Voice recognition solutions	Web site
23		Application notes	Voice recognition demonstration(AmiVoice Micro)	Doc
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
				Sample
5			How to manage the access control for flash memory	Doc
6	Inspection	Design information	Boundary scan description language (BSDL) file	Web site

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