RX660 handbook for engineers

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	Overview of product longevity program (PLP)	Web site
6	(PLP)	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	Web site
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)	Web site
4		Part number guide for RX family product (the meaning of character in part number)	Doc
5		Semiconductor reliability handbook	Doc
6		RELIABILITY REPORT	Doc
7		RoHS Product Options → Part Number → Package information → RoHS Info	Web site
8	Software information	Instruction set for RXv3 core architecture (user's manual)	Doc
9	Evaluation board (for general purpose)	Target board for RX660 (low-cost model)	Web site
10		Renesas starter kit for RX660 (all functions could be evaluated)	Web site
11	Solution board	Industrial automation functional safety reference board	Web site
12	Partner information	Partner products (system solutions provider)	Web site
13		Partner products (trusted technology partners that deliver commercial-grade building blocks)	Web site
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

Item			Content	Link
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	GUI	Portal page	Graphical user interface (GUI) solutions	Web site
2		Support information	RX family LCD-related FAQ list	Web site
3		Application notes	QE for display GUI display application development guide using serial connection LCD	Doc
4			GUI sample program using serial LCD and emWin Library	Doc | Sample
5			Module for image rendering (emWin)	Doc | Sample
6	Functional safety	Portal page	IEC61508 functional safety solutions for industry	Web site
7		Other information	Functional safety solution for industrial automation	Web site
8			Introduction to Renesas functional safety	Web site
Support				
1	Support information		FAQ (frequently asked inquiries)	Web site
2			RX forum (community)	Web site
3			Ask to technical support Note: Please click login in the upper right corner	Web site

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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	Not available

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