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# RA6T1 Group

## Handbook for RA6T1

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### Introduction

This document compiles useful information for each stage of device selection, development, and Mass production.

Please utilize this information, materials and application notes as a handbook when developing.

### Target Device

RA6T1 Group

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1. The table of information and materials needed for Device Selection, Development and Mass production.

### 1.1 Step1: Device Selection

This section summarizes the information that is useful for the preliminary survey phase (Step1-1) and for the evaluation phase of device performance and features (Step1-2) when selecting the device.

#### 1.1.1 Step1-1: Preliminary survey phase

#	Item	Content	Link
1	<b>Hardware information</b>	Datasheet	<a href="#">Doc</a>
2		RA Family Flyer	<a href="#">Doc</a>
3		RA Family Brochure	<a href="#">Doc</a>
4	<b>Products &amp; Solutions</b>	Video	<a href="#">Web site</a>
5		Blog	<a href="#">Web site</a>
6		Reference designs (Winning combination)	<a href="#">Web site</a>
7		Renesas academy	<a href="#">Web site</a>
8		Overview of product longevity program (PLP)	<a href="#">Web site</a>
9	<b>Product longevity program (PLP)</b>	Product selection (product selector) Note: Refer to PLP column in the chart.	<a href="#">Web site</a>
10	<b>Product Specification Comparison</b>	RA Family Product Selector	<a href="#">Web site</a>
11		Industrial Networks Brochure	<a href="#">Doc</a>
12		Motor Solution Brochure	<a href="#">Doc</a>
13		White Paper: Solving IoT Security Issues with Embedded Microcontrollers	<a href="#">Doc</a>
14		White Paper: Security for the Connected World	<a href="#">Doc</a>

## 1.1.2 Step1-2: Evaluation phase of device performance and features

#	Item	Content	Link
<b>User's Manual / Documentation</b>			
1	<b>Document</b>	User's manual: Hardware	<a href="#">Doc</a>
2		Technical update (errata information)	<a href="#">Web site</a>
3		Product change notice (PCN)	<a href="#">Web site</a>
4		RA Family NOMENCLATURE (the meaning of character in part number)	<a href="#">Doc</a>
5		Semiconductor reliability handbook	<a href="#">Doc</a>
6		RELIABILITY REPORT	<a href="#">Doc</a>
7		RoHS Product Options → Part Number → Environmental & Export Classifications	<a href="#">Web site</a>
<b>Evaluation board</b>			
8	<b>Solution board Reference design</b>	CPU Card for Motor Control	<a href="#">Web site</a>
9		Motor Control Evaluation System for RA Family - RA6T1 Group	<a href="#">Web site</a>
<b>Evaluation environment (set up method)</b>			
10	<b>Setup method</b>	RA family beginner's guide	<a href="#">Doc</a>
11	<b>Software tool</b>	RA Family Development Environment - RA Flexible Software Package (FSP)	<a href="#">Web site</a>
12		Migrating Projects to New FSP Version	<a href="#">Doc</a>
13		RSSK - Quick Start Guide	<a href="#">Doc</a>
14		RSSK Example Project Bundle	<a href="#">Doc</a>
15		RA smart configurator user's guide (tools for code generation)	<a href="#">Web site</a>
<b>Solution</b>			
16	<b>Motor and Inverter Control</b>	Motor and inverter control solutions	<a href="#">Web site</a>
17		Renesas motor workbench	<a href="#">Web site</a>
18	<b>Security</b>	IoT Security	<a href="#">Web site</a>
19		Security key management tool manual	<a href="#">Web site</a>
20		Flexible Software Package (FSP)	<a href="#">Web site</a>
21	<b>Functional safety</b>	Functional safety solutions for Industrial automation	<a href="#">Web site</a>
22		Functional safety solution for home appliances	<a href="#">Web site</a>
23		Functional safety solution for industrial automation	<a href="#">Doc</a>
24		Introduction to Renesas functional safety for industrial appliance(video)	<a href="#">Web site</a>
25		Introduction to Renesas functional safety for home appliance (video)	<a href="#">Web site</a>
26	<b>Artificial Intelligence (AI)</b>	AI solutions	<a href="#">Web site</a>
<b>Training</b>			
27	<b>Training information</b>	RA Family Video Library	<a href="#">Web site</a>
28		Software & Tool Course solution menu	<a href="#">Web site</a>
29		RA Family Software&Tool Course(Video Collection)	<a href="#">Web site</a>
<b>Partner</b>			
30	<b>Partner information</b>	Partner products (system solutions provider)	<a href="#">Web site</a>
31		RA Family Partner Ecosystem	<a href="#">Web site</a>

## 1.2 Step2: Product Design, Development

This section summarizes useful information for product design and development.

#	Item	Content	Link
1	<b>Board Design</b>	Quick design guide	<a href="#">Doc</a>
2		CAD Model Note: When you click the link in the CAD model column in the "Product Options" table on the product page, the CAD model information for each part# is displayed.	<a href="#">Web site</a>
3		board simulation model (IBIS)	<a href="#">Web site</a>
4		Design guide for main clock circuit and Sub-Clock circuit	<a href="#">Doc</a>
5		Notes regarding high-temperature operation	<a href="#">Doc</a>
6		Package information (package outline information, mount manual, etc.)	<a href="#">Web site</a>
7	<b>Software Design</b>	RA Flexible Software Package Documentation (Git Hub)	<a href="#">Web site</a>
8		Flash Memory Programming	<a href="#">Doc</a>
9	<b>Development environment</b>	Software and Tools	<a href="#">Web site</a>
10		How to videos - RA Family Software & Tool Course	<a href="#">Web site</a>
11		Supplemental user's manual for E2 /E2 Lite emulator	<a href="#">Doc</a>

## 1.3 Step3: Mass Production

#	Item	Content	Link
1	<b>Writing a program(Programmer)</b>	PG-FP6	<a href="#">Web site</a>
2	<b>Writing a program(Writing tool)</b>	Renesas flash programmer (GUI tool for PC)	<a href="#">Web site</a>
3	<b>Inspection(Application notes)</b>	Boundary Scan Description Language (BSDL) file *	<a href="#">Web site</a>

\* It requires My Renesas account to access the content.

## Supportive information

Get help from our technical staff and community.

#		Link
1	FAQ (frequently asked inquiries)	<a href="#">Web site</a>
2	RA forum (community)	<a href="#">Web site</a>
3	RA Online Training Modules	<a href="#">Web site</a>
4	Technical support	<a href="#">Web site</a>

**Revision History**

Rev.	Date	Description	
		Page	Summary
1.00	Sep. 2025	-	First edition issued
1.01	Jan. 2026	4	Corrected typos

For the most up-to-date information, please also refer to the product pages on our website (<https://www.renesas.com/en>). We appreciate your understanding.