RA FAMILY

Industry-Leading Arm® Cortex®-M Family,
Delivering the Ultimate Promise of Security,
Connectivity and Intelligent IoT

2024.04

INTRODUCING THE RA FAMILY

Delivering the Ultimate Promise of IoT with Software Flexibility

CONTENT

Strong Security

- Leading-edge, integrated Renesas Security IP
- An extra layer of embedded hardware security providing tamper detection and resistance to side-channel attacks
- Integrated Arm® v8-M TrustZone®

Arm Core

- Arm Cortex®-M23 core for the most cost/power sensitive applications
- Arm Cortex-M4/M33 cores to deliver the best balance of performance and power
- Arm Cortex-M85 core with Helium™ technology for unprecedented performance

Flexible Software Solution

- Supported by an open and flexible ecosystem concept, the Flexible Software Package (FSP)
- Can be replaced and expanded by any other RTOS or middleware

Best-in-Class Peripheral IP

- Excellent HMI capacitive touch technology
- The industry's highest code flash memory capacity
- Wide range of connectivity solutions

What is the Renesas RA Family?

The flexible Renesas Advanced (RA) 32-bit MCUs are industry leading 32-bit MCUs with the Arm Cortex-M23, -M33, -M4 and -M85 processor cores and PSA Certified™ assurance. The RA Family delivers key advantages compared to competitive Arm Cortex-M MCUs by providing stronger embedded security, superior CoreMark® performance, and ultra-low power operation. PSA Certified provides customers the confidence and assurance to quickly deploy secure IoT endpoint and edge devices, and smart factory equipment for Industry 4.0.

- Renesas Advanced: Innovative market-leading products based on Arm Cortex-M cores
- Ultimate promise of IoT security by further enhancing Renesas' popular Secure Crypto Engine (SCE) IP
- Best-in-class peripheral IP provided by Renesas
- Easy development of IoT edge applications using the Flexible Software Package

RENESAS RA

Arm Core — High performance using Arm Cortex-M Cores

Up to 2MB — High Flash memory integration

Security — Renesas' leading security IP with options based on TrustZone

USB CAN-FD Ethernet — Broad connectivity

Scalable — 16-pin to 224-pin packages
32MHz to 480MHz performance
Feature and pin compatible

RA Family Overview

The Renesas RA Family lineup can be separated into four product series. Each of these series has a unique feature set, making it ideal for various applications and market needs.

The RA8 Series is the high-end product series targeting the highest performance, highest integration and advanced security. The RA8 Series supports operation at CPU speeds over 240MHz with single or dual core, with the largest Flash and RAM integration to suit applications where performance really matters most.

The RA6 Series offers the widest integration of communication interfaces, with integrated Ethernet and TFT display drivers. Memory densities range from 128KB Flash to 2MB Flash. The RA6 Series offers up to 240MHz performance running on the Cortex-M4 or Cortex-M33 core with TrustZone. The RA6 Series supports full security integration, making these devices widely desired for security applications.

The RA4 Series balances the requirements for low power with the demand for connectivity. It offers up to 1MB Flash and a wide range of communication interfaces. The utilized core is the Cortex-M4 or Cortex-M33 with TrustZone and additional security IP integration. Memory densities range from 128KB Flash up to 1MB Flash. These devices provide a CPU frequency of up to 100MHz.

On the lower end is the RA2 Series, where the low power requirements of an application matter most for these device definitions. To achieve the best performance, special power-down modes are provided, making these devices well suited for battery-powered applications. The RA2 Series provides memory densities of up to 256KB embedded Flash and a wide single voltage supply range of 1.6V to 5.5V. These devices use the Cortex-M23 core at up to 64MHz.

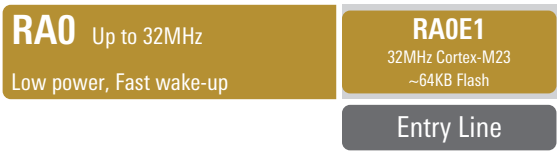
The RA0 series is the lowest power series within the RA Family, featuring up to 64KB Flash and a wide voltage supply range of 1.6V to 5.5V. The utilized core is the Cortex-M23 at up to 32MHz.

Series	Group					
RA8 Over 240MHz Highest Performance, Largest Flash and RAM	**RA8M1** 480MHz Cortex-M85 ~2MB Flash	**RA8D1** 480MHz Cortex-M85 ~2MB Flash				**RA8T1** 480MHz Cortex-M85 ~2MB Flash
RA6 Up to 240MHz Advanced Performance, Connectivity, Security, Scalability	**RA6M3** 120MHz Cortex-M4 ~2MB Flash	**RA6M5** 200MHz Cortex-M33 ~2MB Flash	**RA6E2** 200MHz Cortex-M33 ~256KB Flash			**RA6T2** 240MHz Cortex-M33 ~512KB Flash
	RA6M2 120MHz Cortex-M4 ~1MB Flash	**RA6M4** 200MHz Cortex-M33 ~1MB Flash	**RA6E1** 200MHz Cortex-M33 ~1MB Flash			**RA6T3** 200MHz Cortex-M33 256KB Flash
	RA6M1 120MHz Cortex-M4 512KB Flash					**RA6T1** 120MHz Cortex-M4 ~512KB Flash
RA4 Up to 100MHz Excellent power/high-performance mix, Security		**RA4M3** 100MHz Cortex-M33 ~1MB Flash	**RA4E2** 100MHz Cortex-M33 128KB Flash			
	RA4M1 48MHz Cortex-M4 256KB Flash	**RA4M2** 100MHz Cortex-M33 ~512KB Flash	**RA4E1** 100MHz Cortex-M33 ~512KB Flash		**RA4W1** 48MHz Cortex-M4 512KB Flash	**RA4T1** 100MHz Cortex-M33 ~256KB Flash
RA2 Up to 64MHz Low power, Fast wake-up, Capacitive Touch			**RA2E3** 48MHz Cortex-M23 ~64KB Flash	**RA2A2** 48MHz Cortex-M23 ~512KB Flash		
		RA2L1 48MHz Cortex-M23 ~256KB Flash	**RA2E2** 48MHz Cortex-M23 ~64KB Flash	**RA2A1** 48MHz Cortex-M23 256KB Flash		
			RA2E1 48MHz Cortex-M23 ~128KB Flash			
RA0 Up to 32MHz Low power, Fast wake-up			**RA0E1** 32MHz Cortex-M23 ~64KB Flash			
	Mainstream Line / Low Power		Entry Line	Rich Analog	Wireless	Motor Control

RA0 Series

The RA0 series is the RA Family's value line 32-bit MCU, offering excellent cost effectiveness and ultra-low power consumption. It delivers up to 32MHz of CPU performance using Arm Cortex-M23 core with up to 64KB of embedded flash memory and a wide supply voltage range from 1.6V to 5.5V. In addition, implements the optimized peripherals for reduced BOM cost and simplified design for the low-end MCU market. The RA0 series is ideal for cost-sensitive applications such as Low power and Lower cost for consumer electronics, System control for small appliances, Industrial system control and Building automation.

RA0 Series Product Groups



RA0 Series Benefits

- Best-in class Active/Standby power consumption for Arm Cortex-M23 microcontroller
- Reduction of system current consumption by low power process, low power system and features.
- Reduced BOM cost with on-chip peripheral functions, including high precision (1.0%) and wide operating temp range supported high-speed oscillator, 5V tolerant ports and background operation data flash supporting 1 million erase / program cycles.
- Connectivity to various modules through abundant serial functions
- Support many kinds of application by Wide voltage/temp range, and Safety features.

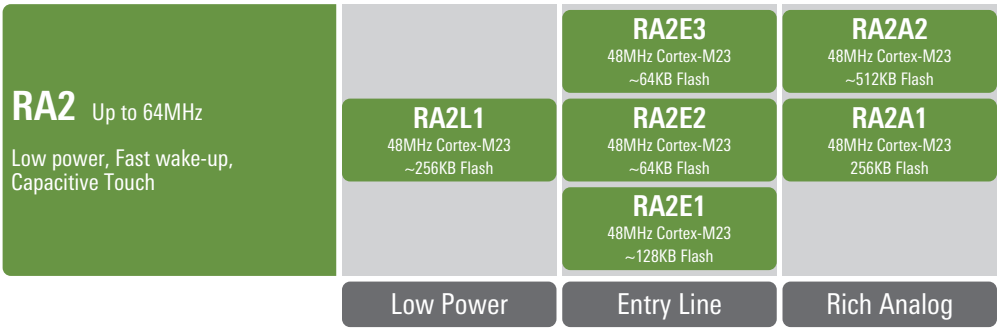
Overview of each Product Groups

- The RA0E1 group is a basic, simple MCU in the entry line of the RA0 series. It supports up to 64KB of code flash, 12KB of SRAM memory, and a wide operating voltage range of 1.6V to 5.5V.

RA2 Series

The RA2 Series is the RA Family's entry-level 32-bit MCU, offering excellent cost, performance, and ultra-low power consumption. It delivers up to 64MHz of CPU performance using an Arm Cortex-M23 core with up to 256KB of embedded flash memory and a wide single voltage supply range from 1.6V to 5.5V. With cutting-edge peripherals like high accuracy analog and capacitive touch sensing, the RA2 Series is ideal for system control or user interface applications such as healthcare devices, home appliances, office equipment, and measuring equipment.

RA2 Series Product Groups



RA2 Series Benefits

- RA2 Series use Arm cortrex-M23 core which most compact and efficient Cortex-M implementation based on Armv8-M architecture profile offering high code density, low gate count, Thumb-2 instruction set, and hardware divide features.
- Large product lineup is from 16 up to 100 pin and Flash memory size starting from 16KB up to 512KB, including some very small package options, including QFN, LGA, BGA and smallest WLCSP
- Best-in class Active/Standby power consumption for Arm Cortex-M23 microcontroller
- On-chip analog components include a high accuracy 16-bit ADC, 24-bit sigma-delta ADC, fast response 12-bit DAC, rail-to-rail low-offset operational amplifiers, and high-speed/low-power comparators
- Reduced cost with on-chip peripheral functions, including high precision (1.0%) high-speed oscillator, temperature sensor, 5V tolerant ports and background operation data flash supporting 1 million erase/program cycles
- Enhanced capacitive touch sensing unit (CTSU) with high sensitivity and high noise immunity that realizes intuitive, high-quality HMI designs
- Various communication interfaces such as USB, CAN and I^3C, which support IoT applications

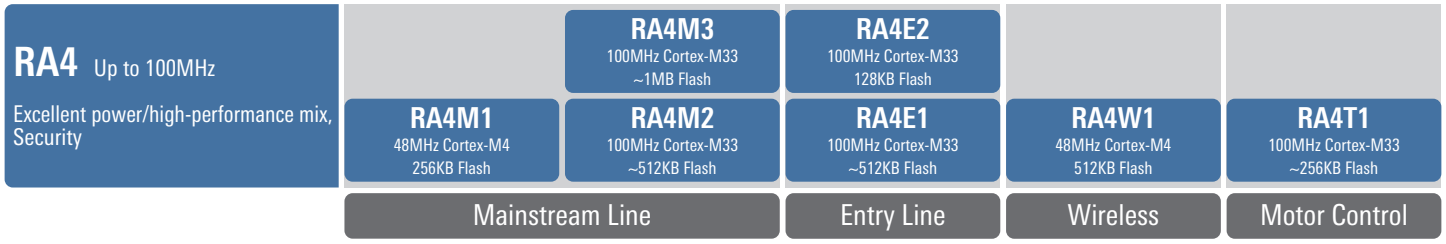
Overview of each Product Groups

- RA2L1 Group is Industry leading ultra-low power 32-bit Arm Cortex-M23 MCU. RA2L1 also features an enhanced Capacitive Touch Sensing Unit (CTSU2), a set of serial communication interfaces, highly accurate converters and timers.
- RA2E1 Group is entry level general-purpose MCU. RA2E1 provides pin and peripheral compatibility with the RA2L1 group and is ideal for battery-operated applications and other systems requiring high performance and low-energy consumption.
- RA2E2 Group offers ultra-low power operation and high speed serial communication with smallest package options of 20-pin and 24-pin QFN and 16-pin wafer-level CSP package, satisfying the needs of cost-sensitive and space-constrained applications.
- RA2E3 Group provides an optimized feature set for cost-sensitive applications by supporting pin-to pin and peripheral compatibility with RA2E1 Group. Ultra-low power consumption contributes to energy-efficient system design, required for IoT applications and battery-operated systems to achieve longer battery life.
- RA2A1 provides highly integrated, high-accuracy analog capabilities. This group of ICs offers a complete MCU with analog solution for signal conditioning and measurement.
- RA2A2 Group is an entry-line, single chip 32-bit Arm MCU supporting rich peripheral features to deliver better a design experience that allows high level analog sensing while reducing power consumption, system cost and overall footprint.

RA4 Series

The RA4 Series bridges the need for reasonable low power with the demand for connectivity and performance. These MCUs deliver up to 100MHz of CPU performance using an Arm Cortex-M33 core or M4 core with up to 1MB of embedded flash memory. The series offers a wide set of peripherals, including USB, CAN/CAN FD, I3C, ADC, Bluetooth Low Energy 5.0, capacitive touch, segment LCD controller, and additional security IP integration, making it suitable for IoT, industrial equipment, home appliances, office equipment, healthcare products, and meters.

RA4 Series Product Groups



RA4 Series Benefits

- Secure element functionality providing better performance, unlimited secure key storage, key management, and lower BOM cost
- High-performance and low power at the same time with 81µA/MHz while running the CoreMark algorithm from flash at 100MHz
- High-integration up to 1MB code flash memory with background operation and flash block SWAP operation for flexible and memory optimized firmware updates, 8KB data flash memory, and 128KB SRAM with Parity/ECC
- Rich connectivity with Bluetooth 5.0, USB 2.0 Full-Speed, CAN/CAN FD, SDHI, QSPI, I2C, I3C, HDMI-CEC, and advanced analog
- Wide range of compact BGA packages available for applications where space is at a premium

Overview of each Product Groups

- RA4M1 Group uses the high-performance 48 MHz Arm® Cortex®-M4 core and offers a segment LCD controller and a capacitive touch sensing unit input for applications such as user interfaces and meters where low power along with a large number of capacitive touch channels and a segment LCD controller are required.
- RA4M2 group uses a high-performance 100 MHz Arm Cortex-M33 core with TrustZone along with an advanced secure crypto engine, offering the features of a secure element on-chip and the ability to secure your application. The RA4M2 is suitable for IoT applications requiring multiple communication channels with support for USB, CAN an d QSPI as well as multiple channels of I2C and SCI, a large embedded SRAM, and low active power consumption.
- RA4M3 group uses the high-performance 100 MHz Arm Cortex-M33 core with TrustZone along with an advanced secure crypto engine, and support for applications that require large on-chip Flash and SRAM. The RA4M3 security engine offering the features of a secure element on-chip and Trustzone allows you to secure your application. The RA4M3 is suitable for IoT applications requiring multiple communication channels with support for USB, CAN and QSPI as well as multiple channels of I2C and SCI, and low active power consumption.
- RA4E1 group uses the high-performance 100 MHz Arm Cortex-M33 core with TrustZone and supports large on-chip Flash and SRAM. The RA4E1 has been developed to support entry IoT applications requiring a value optimized feature set, total system cost reduction and an optimized mixture of high performance and lowest active power consumption while still offering a wide range of connectivity features.
- RA4E2 Group offers high-performance and optimized peripheral functions along with the smallest package options including space saving 36-pin BGA and 32-pin QFN packages. These satisfy the needs of both cost-sensitive and space-constrained applications.
- RA4T1 Group offers optimized peripheral functions for motor control and inverter control with small 32-pin QFN and LQFP package options. These satisfy the needs of high-performance, cost-sensitive and spaceconstrained applications.

RA6 Series

The RA6 Series offers the widest integration of communication interfaces as well as the best performance level. These MCUs aim for up to 240MHz of CPU performance using an Arm Cortex-M4 or M33 core and a memory range from 128KB to 2MB Flash. The series offers Ethernet, USB Full Speed and High Speed, QSPI, OctaSPI, CAN/CAN FD, I³C, and TFT display driver integration. The embedded security engines are full of features you can leverage in your higher-level solutions with secure element services. The RA6 Series addresses a broad range of applications for IoT endpoints such as white goods, meters, and other industrial and consumer applications.

RA6 Series Product Groups

RA6 Up to 240MHz

Advanced Performance, Connectivity, Security, Scalability

Mainstream Line		Entry Line	Motor Control
RA6M3 120MHz Cortex-M4 ~2MB Flash	**RA6M5** 200MHz Cortex-M33 ~2MB Flash	**RA6E2** 200MHz Cortex-M33 ~256KB Flash	**RA6T2** 240MHz Cortex-M33 ~512KB Flash
RA6M2 120MHz Cortex-M4 ~1MB Flash	**RA6M4** 200MHz Cortex-M33 ~1MB Flash	**RA6E1** 200MHz Cortex-M33 ~1MB Flash	**RA6T3** 200MHz Cortex-M33 256KB Flash
RA6M1 120MHz Cortex-M4 512KB Flash			**RA6T1** 120MHz Cortex-M4 512KB Flash

RA6 Series Benefits

- Secure element functionality providing better performance, unlimited secure key storage, key management, and lower BOM cost
- High-performance and low-power with 80µA/MHz while running the CoreMark algorithm from flash at 200MHz
- High-integration up to 2MB code flash memory with background operation, Dual-bank, and flash block SWAP operation for extremely flexible and memory optimized firmware updates, 8KB Data flash memory, and 512KB SRAM with Parity/ECC
- Rich connectivity with Ethernet MAC controller, CAN FD, USB 2.0 High-Speed and Full-Speed, SDHI, Quad and Octa SPI, I²C, I³C, HDMI-CEC, and advanced analog with three sample and hold per ADC, PGA and high-speed comparators
- Wide range of compact BGA packages available for applications where space is at a premium

Overview of each Product Groups

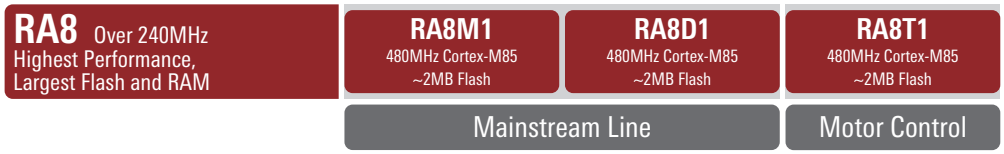
- RA6M1 group uses a high-performance, 120MHz Arm Cortex-M4 core optimised to provide an attractive price for cost sensitive applications. The RA6M1 is suitable for IoT applications requiring security, large, embedded SRAM and low power consumption. With support for a wide range of connectivity requirements including USB, CAN, QSPI and SDHI as well as multiple channels of SCI, SPI and I²C.
- RA6M2 uses a high-performance, 120MHz Arm Cortex-M4 core and offers Ethernet MAC with individual DMA, to ensure high data throughput along with advanced security functions and a wide range of other connectivity features such as USB and QSPI, as well as multiple channels of CAN, SDHI, SCI, SPI and I²C. The RA6M2 is suitable for IoT applications requiring Ethernet, security, large, embedded SRAM, and low active power consumption.
- RA6M3 uses a high-performance, 120MHz Arm Cortex-M4 core and offers a TFT controller with 2D accelerator and JPEG decoder. Additionally, the RA6M3 MCU offers Ethernet MAC with individual DMA and USB high-speed interface to ensure high data throughput along with a wide range of other connectivity features as well as advanced security functions. The RA6M3 is suitable for IoT applications requiring TFT, Ethernet, security, large, embedded SRAM, and USB High Speed (HS).
- RA6M4 uses a high-performance, 200MHz Arm Cortex-M33 core with TrustZone along with an advanced secure crypto engine, offering the features of a secure element on-chip and the ability to secure your application. The RA6M4 includes an integrated Ethernet MAC with individual DMA ensures high data throughput along with a wide range of other connectivity options including USB, CAN, SDHI, QSPI and OctaSPI. The RA6M4 is suitable for IoT applications requiring Ethernet, advanced security, large embedded SRAM, and low active power consumption.

- RA6M5 uses a high-performance, 200MHz Arm Cortex-M33 core with TrustZone along with an advanced secure crypto engine, offering the features of a secure element on-chip and the ability to secure your application. The RA6M5 offers large on-chip memories with up to 2Mbytes of on-chip Flash and 512Kbytes of SRAM, it also includes a wide range of connectivity functionality including an integrated Ethernet MAC with individual DMA ensures high data throughput along with a wide range of other connectivity options including USB, CAN, SDHI, QSPI and OctaSPI. The RA6M5 is suitable for IoT applications requiring Ethernet, advanced security, large embedded memories and low active power consumption.
- RA6E1 uses a high-performance, 200MHz Arm Cortex-M33 core with TrustZone and provides the perfect, cost effective entry point into the RA Family of microcontrollers. The RA6E1 is suitable for entry IoT applications requiring streamlined feature and connectivity integration including Ethernet and large on-chip memories, and provides unprecedented performance with 790.75 CoreMark, which are 3.95 CoreMark / MHz.
- RA6E2 Group offers best-in-class performance as an entry-line microcontroller while pursuing cost optimization. Pin and peripheral compatibility with the RA4E2 group makes it ideal for applications requiring higher performance, small footprint, and lower pin counts.
- RA6T1 Group combines an Arm Cortex-M4 at 120MHz and a rich peripheral function for motor such as PWM timer, high-speed 12-bit ADC, PGA, comparator. It can also control up to two brushless DC motors with one chip.
- RA6T2 combines an Arm Cortex-M33 with a hardware accelerator for motor control and high-speed flash memory for high-speed real-time performance at 240MHz. It can also realize high-speed, high-response motor algorithms and improve parallel processing performance such as other communication processing.
- RA6T3 is pin and function compatible with the RA4T1 group and can be seamlessly upgraded, making it an ideal solution for motor control and inverter control applications requiring higher performance.

RA8 Series

The RA8 series are the Industry's first high performance 32-bit MCUs featuring the Arm Cortex-M85 (CM85) with a feature set optimized to address diverse general purpose as well as HMI/graphics, motor control and voice and vision AI applications in industrial, home appliance, consumer, medical and building and office automation market segments. The RA8 MCUs integrate the high-performance CM85 core with large flash and SRAM, multiple connectivity options (Ethernet, CAN-FD, I²C/I³C, SPI, Octal SPI etc.), graphics peripherals (LCD controller with parallel RGB and MIPI-DSI interfaces, 2D graphics drawing engine, 16-bit camera interface), analog features and external memory interfaces, to address the diverse needs in these market segments.

RA8 Series Product Groups



RA8 Series Benefits

- Unprecedented performance of 6.39 Coremarks/MHz or over 3000 Coremarks with the RA8 Series MCUs running at 480MHz. These MCUs bridge the gap between MCUs and MPUs and enable compute intensive applications with the lower power and ease-of-use of an MCU.
- Advanced Security with TrustZone, leading-edge cryptographic accelerators for symmetric and asymmetric cryptography with the latest Renesas Security IP, immutable storage for first stage bootloader on-chip, secure boot and tamper and side-channel protection
- High integration enable lower BOM costs and simplified design for our customers, with large embedded flash and SRAM, rich peripheral set, graphics integration, several connectivity options, multiple external memory interfaces, and timer and analog features.
- Advanced graphics capabilities enable high resolution HMI/Graphics and Vision AI applications by combining the high performance of the CM85 core and Helium with graphics features such as graphics LCD controller with parallel RGB and MIPI-DSI interfaces, large on-chip SRAM, 2D graphics drawing engine, 16bit camera interface and 32-bit external memory interface.
- Lower overall system power consumption with multiple low power sleep and standby modes, CPU sleep modes, low speed active modes, a wide operating voltage range, Vcc/Vcc2 domain and DCDC and external power supply options.
- Comprehensive solutions that include Flexible Software Package, development tools, EKs and solutions.

Overview of each Product Groups

- RA8M1 Group based on the Arm Cortex-M85 core with TrustZone and Helium, running at up to 480MHz are high performance general-purpose MCUs optimized for a broad range of applications in industrial, metering, office automation, consumer and medical applications. The RA8M1 MCUs are suited for compute intensive applications that require the high performance of the CM85 core accelerated with Helium, advanced security and the rich peripheral set including many connectivity options (CAN-FD, USBHS/FS, Ethernet, I²C/I³C. Octal SPI, SPI etc.), external memory interfaces, analog and timing features and functional safety.
- RA8D1 Group based on the Cortex-M85 core with TrustZone and Helium, and running at up to 480MHz, are specialized MCUs for advanced HMI, high resolution graphics and Vision AI applications. These MCUs feature an LCD Controller with RGB and MIPI-DSI interface, 2D drawing engine, a 16-bit camera interface and a 32-bit SDRAM interface, very suited for high resolution graphics. In addition, these devices include advanced security, several connectivity options (CAN-FD, USBHS/FS, Ethernet, I²C/I³C. Octal SPI, SPI etc.), external memory interfaces, and analog and timing features.
- RA8T1 Group based on the Cortex-M85 core with TrustZone and Helium, running at up to 480MHz, are specialized MCUs with a feature set optimized to address diverse real-time control such as motor control, power supply and so on, in industrial automation (IA), building automation (BA) and smart home (HA) markets. These MCU are optimized for single and dual motor control applications and predictive maintenance AI use cases. For motor control, RA8T1 MCUs have 14ch PWM timers which operate at 120MHz, 2 A/D converters and 3ch sample-and-hold (on ADC unit0), 2ch analog comparators, port output enable circuit, and more. In addition, various communication features such as Ethernet MAC, CAN FD, USB FS, and I²C/I³C enable connectivity with other devices.

Target Applications and Markets

The Renesas RA Family targets various application fields. Due to its scalability, the RA Family offers parts which cover many different applications and customer needs.

The feature set of the Renesas RA Family is well suited for industrial applications due to its long product life with 105° Celsius support. Dedicated analog feature integration like ADC, PGA, and comparators, combined with powerful and flexible timers, makes the RA Family an ideal fit for motor control applications.

Features like connectivity peripherals, hardware-accelerated cryptography, and scalability make the whole RA Family a perfect fit for customers who want to design secure and connected products in areas such as building or industrial automation.

Customers with Electricity Metering applications will enjoy the scalability and long product life of the RA Family, in addition to the on-chip security engines.

The integrated Capacitive Touch interface, combined with the scalability of the RA Family, make the RA Family an ideal fit for white goods applications, enabling innovative HMI designs.

	Best Suitable Product Series	Application Examples	
Industrial Automation	RA0, RA2, RA4, RA6, RA8	▪ Robotics ▪ Door Openers ▪ AC Drive	▪ AC Servo ▪ UPS ▪ Functional Safety
Building Automation	RA0, RA2, RA4, RA6, RA8	▪ Fire Panels ▪ HVAC ▪ Boiler Control	▪ Vending Machines ▪ Motion Detection ▪ Monitoring Systems
Metering	RA2, RA4, RA6, RA8	▪ Electricity Meters ▪ Automated Meter Reading ▪ Network Cards	▪ Flow Meters ▪ Power Meters
Home Appliance	RA0, RA2, RA4, RA6, RA8	▪ HVAC ▪ Air Cleaners ▪ Coffee Machines	▪ Vacuum Cleaners ▪ Cleaning Robots ▪ White Goods
Connectivity	RA0, RA2, RA4, RA6, RA8	▪ ASi5 / IO-Link Gateways ▪ Communication Gateways ▪ Data Concentrators	▪ Wired Ethernet ▪ Fleet Tracking
Security	RA4, RA6, RA8	▪ Fire Detectors ▪ Burglar Detection ▪ Panel Control	▪ Door Openers ▪ Monitoring Systems ▪ Access Control
Motor Control	RA4, RA6, RA8	▪ Brushless DC Motors ▪ Induction Motors ▪ Stepper Motors	▪ Magetic Encoders ▪ Optical Encoders ▪ Hall Sensors
Low Power	RA0, RA2, RA4	▪ IO-Link Sensors ▪ Heat Cost Allocators ▪ Portable Audio Devices	▪ Smoke Detectors ▪ IoT Sensing Nodes ▪ Wearable Devices
HMI	RA2, RA6, RA8	▪ Voice Recognition ▪ Capacitive Touch Panels ▪ Printers	▪ Vending Machines ▪ Home Appliances ▪ Medical Equipment
Wireless	RA4	▪ Wearable Devices ▪ Healthcare ▪ Panel Control	▪ Gateway Units ▪ Door Openers ▪ Smart Home

Integrated Hardware-based Security

In the rapidly growing area of IoT and highly-connected devices, increasing consumer awareness and government legislation is forcing embedded device manufacturers to take the topic of security seriously. Already under the constraints of needing to create cost- and energy-efficient solutions, developers nowadays are required to design and implement security with limited additional time and budget.

The RA Family was designed with security in mind and scalable hardware-based security features including:

- Isolated cryptographic operations with integrated security engines
- Unlimited secure key storage
- Hardware-enforced isolation using Arm® TrustZone® technology
- Side-channel protections

The Flexible Software Package provides integrated, easy-to-configure support for these features, and a collection of Application Projects enables you to easily incorporate them into your design.

The RA Family has achieved the following certifications, providing assurance of these security capabilities and giving you confidence in your product's security.

- PSA Certified Level 1 and Level 2
- SESIP
- NIST CAVP

IEC61508 Functional Safety Solution

The importance of functional safety is increasing in order to prevent hazards and risks to people, machinery, and the environment from failure or error at the manufacturing site. However, designing the system and being certified under functional safety standards such as IEC 61508 requires a great deal of effort and time, which increases cost and could delay the product release significantly compared to non-safe development.
Renesas offers a one-stop functional safety solution comprised of general-purpose 32-bit microcontrollers (MCUs) with software solution components.

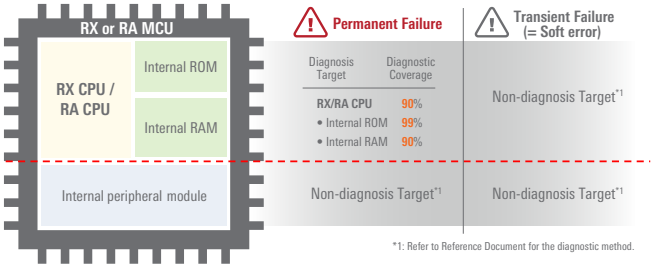
Solution Introduction

The Self-Test Software Kit provides a self-diagnostics software library for microcontroller, a complete safety manual, user guide and IEC61508 SIL3 Certificate test report certified by TÜV Rheinland Industrie Service GmbH (Germany). For safe system development, developers can use the information they require from the safety manual and make use of the self-diagnostics software library to alleviate the burden on microcontroller-level development to conform to functional safety.

Functional Safety
TÜVRheinland CERTIFIED
www.tuv.com
ID 0600000000

This Kit diagnoses the permanent failure of CPU, internal ROM, and internal RAM.

* Please refer to the reference document for permanent failure diagnosis of other modules and transient failure diagnosis.



Target Application

Safety System for:

- AC Servo & Drive
- Remote IO
- Programmable Logic Controller
- Sensor and Actuator


Industrial Robot Arm

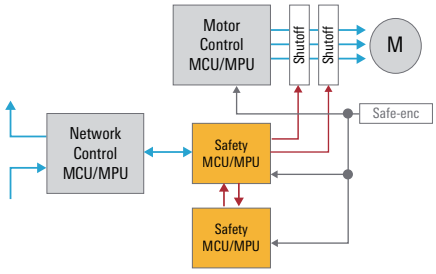

PLC


AC Drive, Inverter

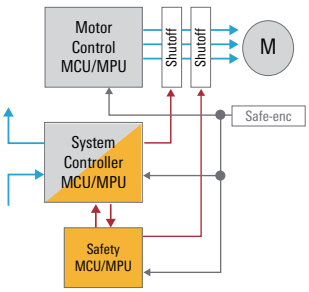

Light Curtain, Sensor

Target Safety System Example (Motor Control + Network Control + Safety)

Example 1



Example 2



IEC 60730 Safety Classes Support

VDE

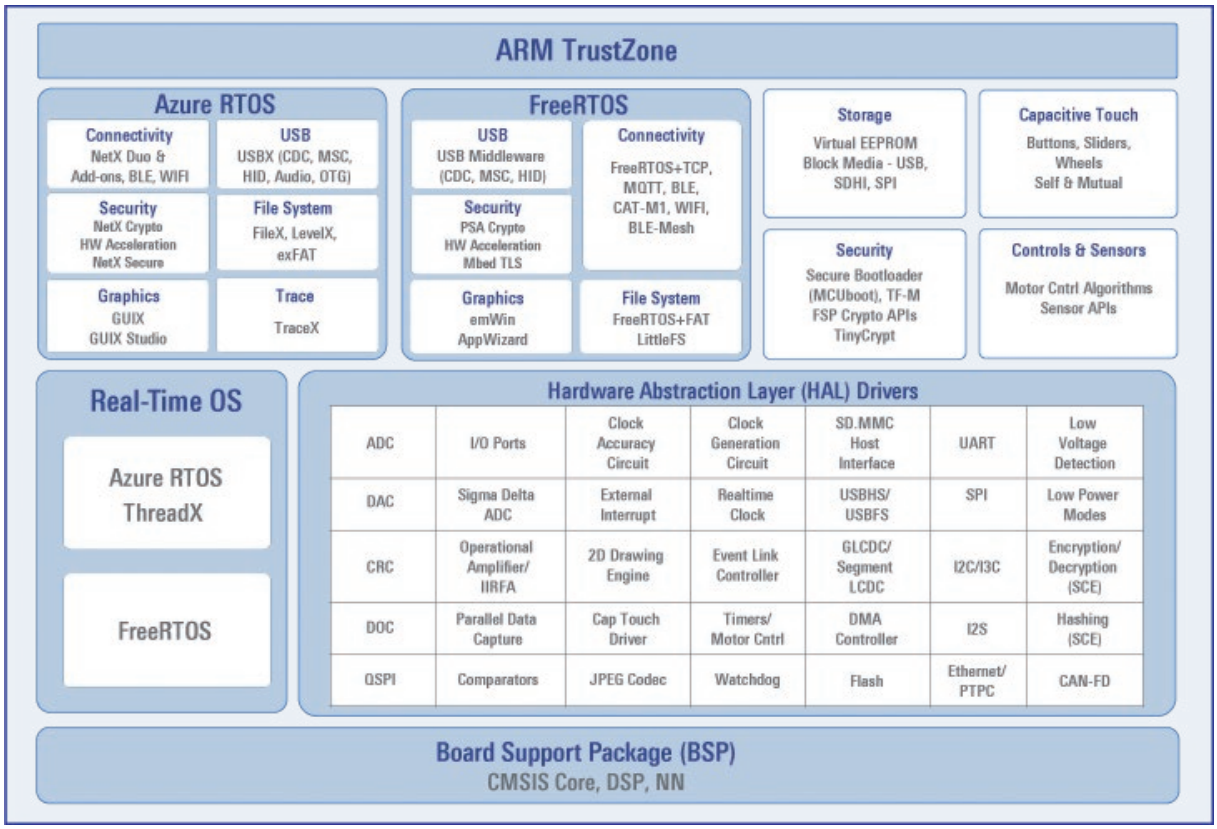
The IEC/UL 60730 is the harmonized safety standard for household appliances.
It describes requirements for automatic controls including heating and air-conditioning applications. Renesas offers for the RA Family a self-test library to fulfill Class B requirements of the IEC 60730 standard, as this is the most commonly used requirement.
The related Appendix H lists all the specific faults that must be tested and details the need to place the equipment into a safe state for any single point failure.
In response to the need of designing IEC/UL 60730 certified applications, Renesas provides an RA Family IEC 60730 Self-Test Library designed to reduce the burden on customers developing their own solutions. The package comes with the sample code and the certification done by VDE.

Flexible Software Package

The Renesas Flexible Software Package (FSP) is an enhanced software package designed to provide easy-to-use, scalable, high-quality software for embedded system designs using Renesas RA Family Microcontrollers. With the support of Arm® TrustZone® and other advanced security features, FSP provides a quick and versatile way to build secure, connected IoT devices using production-ready drivers, Azure® RTOS, FreeRTOS™, and other middleware stacks.

FSP uses an open software ecosystem and provides flexibility in using bare-metal programming, included Azure RTOS or FreeRTOS, your preferred RTOS, legacy code, and third-party ecosystem solutions.

The combination of the flexible open architecture of the FSP plus the wide choice of 3rd party solutions as part of the Arm ecosystem increases the range of choice for application development. This means that developers can choose the software model that best suits their needs while utilizing Renesas's excellent Arm-based silicon solutions as well as speed up the implementation time of complex areas like connectivity and security.



Benefits

- Provides an easy-to-use, scalable, high-quality software for embedded system designs using the Renesas RA Family of Arm microcontrollers
- Includes best-in-class HAL drivers with high performance and low memory footprint
- Middleware stacks with Azure RTOS and FreeRTOS integration are included to ease the implementation of complex modules like communication and security
- The e² studio IDE provides support with intuitive configurators and intelligent code generation to make programming and debugging easier and faster
- Uses an open software ecosystem and provides flexibility in using bare-metal programming, included Azure RTOS and FreeRTOS, your preferred RTOS, legacy code, and third-party ecosystem solutions
- Integrated package with all required components for easy setup and starting development (single installer with e² studio, CMSIS packs, tool chain and SEGGER J-Link drivers)
- Complete source code available through GitHub

Development Environment

The RA family development environment offers flexibility in terms of different supported on-chip debuggers, IDEs, and compilers. Customers can use the Renesas e² studio, Keil MDK and IAR Embedded Workbench. All tools can use the RA configurators for FSP driver and middleware selection and configuration, in addition to pin mapping and clock tree configuration.

Overview

	Renesas e² studio	IAR Systems Embedded Workbench for Arm	Keil Microcontroller Development Kit
Compilers	- GCC - LLVM - Arm Compiler * - IAR Arm Compiler *	- IAR Arm Compiler *	- Arm Compiler *
Debugger probes	- Renesas E2/E2 Lite - SEGGER J-Link	- Renesas E2/E2 Lite - SEGGER J-Link - IAR I-Jet	- SEGGER J-Link - Keil ULINK (limited support)
Smart Configurator	Built-in - BSP - Clock - Pin - Drivers - Interrupts	Supplied as RASC - BSP - Clock - Pin - Drivers - Interrupts	Supplied as RASC - BSP - Clock - Pin - Drivers - Interrupts
Application specific configurator	- QE for Capacitive Touch - QE for BLE - QE for AFE - Motor Control Workbench	NA	NA

*: Compiler must be purchased and licensed directly from 3rd-party.

Benefits

The eclipse-based e² studio along with a GCC or LLVM compiler and SEGGER J-Link debugger is the primary development solution for RA MCUs and Flexible Software Package (FSP). e² studio offers a complete development flow from initial project generators, graphical FSP configuration and comprehensive debugger options.

As the RA MCU family includes TrustZone-enabled devices, configuration options ensure that a development engineer can concentrate on the application rather than the underlying technology.

Renesas recognizes that Arm based MCUs benefit from a wide ecosystem, so we have worked with Keil and IAR Systems to develop the RA Smart Configurator (RASC) that inherits all the FSP configurator options from e² studio to extend the rich development options into the MDK and EWARM IDEs. To complement the powerful SEGGER J-Link probes, RA MCUs are also supported by the Renesas E2 and E2 Lite debug probes.

Production programming options are available from Renesas (RFP and PG-FP6) in addition to numerous 3rd-party solutions such as SEGGER Flasher and PEMicro Cyclone. Please contact your preferred partner to request RA production device programing support.

RA Microcontroller Kits

Effortless Innovation Made Possible

The RA microcontroller kits enable users to effortlessly evaluate the features of different RA MCU Groups & develop sophisticated IoT & embedded systems applications. The kits are based on a novel architecture that provides an unparalleled combination of standardization & flexibility. The kit design helps users shorten the learning curve & accelerate development, providing more time for differentiated innovation or taking products to market faster. Users can utilize rich on-board features along with their choice of popular ecosystem add-ons to bring their big ideas to life.

Innovation Ready

A winning combination of standardization & flexibility that enables shorter learning curve & faster time to market

Ecosystem Ready

Enhance functionality on your terms & choose from hundreds of 3rd-party add-ons from popular ecosystems

World Ready

Compliant with many international standards. Documentation available in English & Japanese

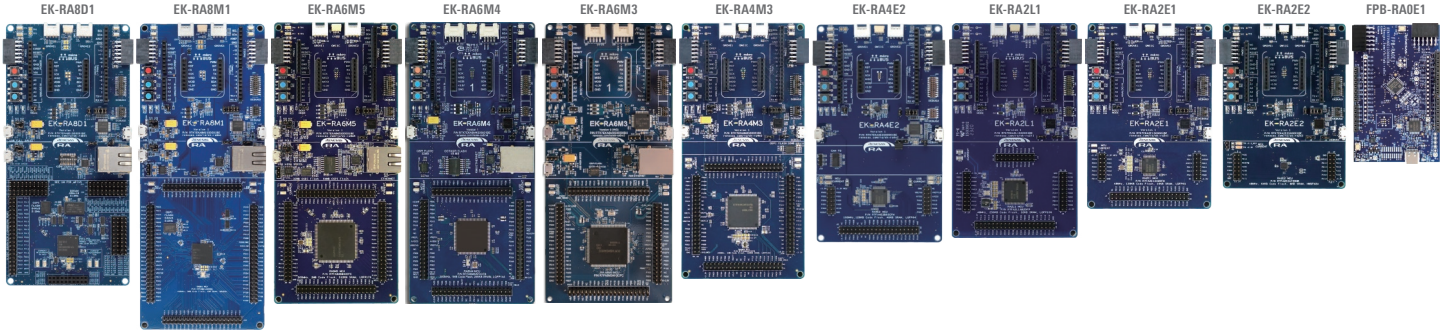
Fun Ready

Take the guesswork out of your innovation experience for an unmatched, systematic & methodical approach to start developing

Differentiation that Sets You Apart

The RA microcontroller kits portfolio consists of a variety of kits to suit many use cases such as functional evaluation, getting started reference, prototyping, proof-of-concepts, solutions demo, research & academia.

RA Kits Portfolio	RA8 MCU Series	RA6 MCU Series	RA4 MCU Series	RA2 MCU Series	RA0 MCU Series
General-purpose kits ■ Differentiated functionality ■ Remarkable ease of use ■ Broad ecosystem compatibility ■ Multiple debugging modes ■ Feature scalability & expansion across RA MCU series: RA6, RA4 & RA2	EK-RA8M1 EK-RA8D1	EK-RA6M5 EK-RA6M4 EK-RA6M3 EK-RA6M3G EK-RA6E2	EK-RA4M3 EK-RA4M2 EK-RA4E2	EK-RA2E2 EK-RA2E1 EK-RA2L1 EK-RA2A2	
■ Basic MCU pin access ■ Limited ecosystem compatibility ■ Basic on-board debugging ■ Design reuse across Renesas MCU families: RA, RX, RL78 & Synergy		EK-RA6M2 EK-RA6M1 FPB-RA6E1 FPB-RA6E2	EK-RA4M1 EK-RA4W1 FPB-RA4E1 FPB-RA4E2	EK-RA2A1 FPB-RA2E1 FPB-RA2E2 FPB-RA2E3	FPB-RA0E1
Application-specific kits ■ References for specific end-applications	MCK-RA8T1 Motor	CK-RA6M5 Cloud MCK-RA6T3 Motor MCK-RA6T2 Motor RSSK-RA6T1 Motor RSSK-RA6M2 Touch VOICE-RA6E1 VUI	MCK-RA4T1 Motor VOICE-RA4E1 VUI	RSSK-RA2L1 Touch VOICE-RA2L1 VUI	
3rd-Party/Partner kits ■ Access to partner's ecosystem & tools		M13-RA6M3-EK	RA4M1 Clicker	-	



Examples of RA Microcontroller Kits

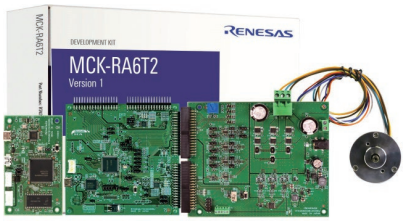
Learn more: renesas.com/ra/kits

Motor Control Solution

RA Motor Control Development Kits are development kits that enables easy evaluation of motor control using permanent magnet synchronous motors (brushless DC motors). These kits are configured to run the application note sample code that can be downloaded from the homepage. In addition, development support tools such as Renesas Motor Workbench, which can analyze and tune motors, and QE for Motor are available, so you can immediately start evaluating motor control using the RA-T series.

Features

- The CPU board is equipped with the RA-T series devices as the motor control MCU.
- Inverter board for 3-phase BLDC motor
- Supports 3-shunt current sensing
- Overcurrent detection
- Supports Motor Control Development Support Tool Renesas Motor Workbench



MCK-RA6T2 (RTK0EMA270S00020BJ)

	RA8T1	RA6T1	RA6T2	RA6T3	RA4T1
Motor control evaluation Kits	MCK-RA8T1 (RTK0EMA5K0S00020BJ)	RSSK-RA6T1 (RTK0EMA170S00020BJ)	MCK-RA6T2 (RTK0EMA270S00020BJ)	MCK-RA6T3 (RTK0EMA330S00020BJ)	MCK-RA4T1 (RTK0EMA430S00020BJ)
Included items	RA8T1 CPU board Inverter board (MCI-LV-1) Communication board (MC-COM) Permanent magnet synchronous motor Accessories (cables, standoffs, etc.)	RA6T1 CPU card Inverter board (RTK0EM0000B10020BJ) Permanent magnet synchronous motor Accessories (cables, standoffs, etc.)	RA6T2 CPU board Inverter board (MCI-LV-1) Communication board (MC-COM) Permanent magnet synchronous motor Accessories (cables, standoffs, etc.)	RA6T3 CPU board Inverter board (MCI-LV-1) Permanent magnet synchronous motor Accessories (cables, standoffs, etc.)	RA4T1 CPU board Inverter board (MCI-LV-1) Permanent magnet synchronous motor Accessories (cables, standoffs, etc.)

Capacitive Touch Sensing Solution

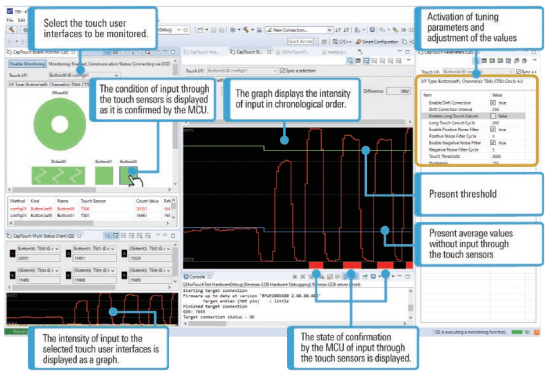
Renesas offers revolutionary design to switching devices and equipment with our 2nd generation capacitive touch solution that enables a user-friendly environment to support manufacturing processes and lowers hurdles in capacitive touch sensor development.

QE for Capacitive Touch is a solution toolkit that runs in the e^2 studio integrated development environment. It speeds up the development of integrated systems utilizing capacitive touch sensors by simplifying tasks such as configuring initial settings or tuning the sensitivity of the touch interface.

The capacitive touch evaluation system includes a CPU board and a self-capacitance evaluation board for use as a touch application board. It has everything you'll need to get started evaluating applications incorporating buttons, sliders, and wheels.

QE for Capacitive Touch: Development Assistance Tool for Capacitive Touch Sensors

Monitoring and parameter adjustment functions



Capacitive Touch Evaluation System for RA6M2

For more information, visit https://www.renesas.com/rssk-touch-ra6m2

Capacitive Touch Evaluation System for RA2L1

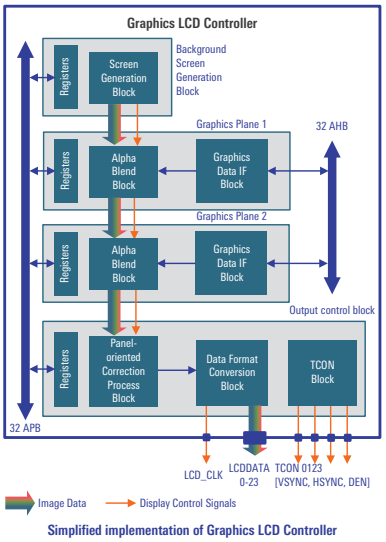
For more information, visit https://www.renesas.com/rssk-touch-ra2l1

Graphics Solution

Renesas offers rich graphics solutions that address demanding HMI requirements in diverse application areas. The graphics solutions include the RA MCU hardware, comprehensive graphics software and tools, and a rich set of ecosystem partner solutions.

The RA8D1 and RA6M3 MCUs support a rich set of peripherals including a graphics LCD controller with RGB parallel interface and MIPI-DSI interface (on RA8D1 only) that offloads the main CPU and drives a variety of TFT displays. Both devices also support a 2D drawing engine, and on and off–chip memory for storage of graphics assets and frame buffers. The RA6M3 also supports a JPEG codec. Together with easy-to-use graphics APIs and AppWizard GUI tools, these devices enable development of sophisticated graphics applications.

The EK-RA8D1 and EK-RA6M3 Evaluation Kits enable users to seamlessly evaluate the features of the RA8D1 and RA6M3 MCUs and develop embedded systems applications using Renesas' Flexible Software Package (FSP and e2 Studio IDE. The EK-RA8D1 and EK-RA6M3 kits consist of EK boards featuring the RA8D1 and RA6M3 MCUs with on-chip graphics LCD controller and graphics expansion boards featuring a TFT LCD panel with capacitive touch overlay. The EK-RA8D1 supports a MIPI-DSI based LCD panel, and the RA6M3 support a parallel RGB panel. The RA8D1 EK also includes on-board Octal Flash and SDRAM memory and a camera module.



Simplified implementation of Graphics LCD Controller

Analog Sensing Solution

Renesas provides development assistance tool for developing embedded systems that perform high-accuracy sensing for AFE (Analog Front End) integrated microcontrollers. The AFE configuration can be set or changed by using a circuit diagram. Possible to adjust analog signals while viewing the AD conversion results (waveform and histogram) on the monitor screen without the need for an oscilloscope.

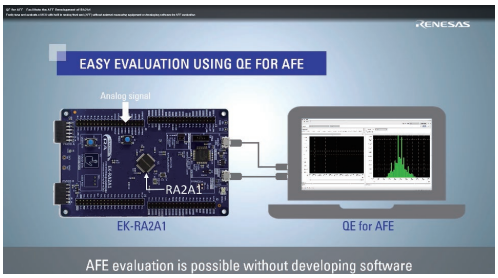
QE for AFE

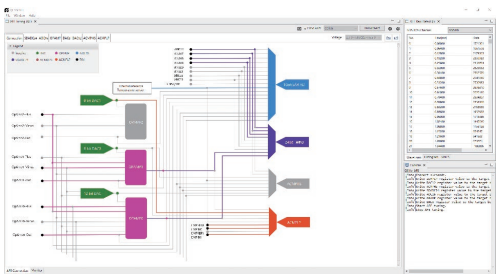
The Renesas QE (Quick and Effective) tool solution goes beyond conventional development tools by providing detailed support for developing various applications.

Key features of QE for AFE

- GUI configuration for intuitive operation
- Stand-alone operation without depending on User's specific development environment
- Auto code generation capability of AFE configuration by using e² studio plug-in version

Target device: RA2A1, RX23E-B, RA2A2





Endpoint AI/ML Solution

Optimized Performance and Scalability

- Renesas RA family MCUs excel in low power consumption and high performance, making them ideal for energy-efficient TinyML applications. The RA family offers a wide range of MCUs, ensuring scalability and seamless migration across different projects.

Advanced Security Features

- RA family MCUs come with the latest integrated security features ensuring data privacy and protecting TinyML applications from potential cyber threats.

Support for a Wide Range of ML Tools

- EAI translator that provides efficient conversion from a variety of ML frameworks into C/C++.
- Reality AI's end-to-end cloud tool streamlines the ML development process from data acquisition to deployment.
- Compatibility with open-source inference software such as TensorFlow Lite for microcontrollers.

Cutting-Edge TinyML Solutions with Industry-Leading Partners

- Easily integrate vision AI like person detection from PlumerAI, person authentication with AIZIP, and enhance interactions using local voice triggers powered by Cyberon.
- Elevate projects with seamless, production-grade solutions.

RA Family Partners

Renesas is enabling a comprehensive partner ecosystem to deliver an array of software and hardware building blocks that will work out-of-the-box with Renesas RA Family MCUs. The Renesas RA ecosystem will help accelerate the development of IoT applications, including core technologies such as security, safety, connectivity, and HMI among others.

Expansive Third Party Solutions Portfolio

- 200+ partners, 300+ solutions and growing
- Coverage across all key IoT technologies
- Robust GTM and strong digital drumbeat

Commercial Grade Building Block Solutions

- Commercial grade software
- Work out-of-box with Renesas products
- Bundling options for select solutions

Problem Solving at Heart

- Address specific design problems
- Address specific skill-set gaps
- Customer-centric approach

Partner Overview

The partner overview shown might not be complete since the partner network is extending almost daily. For best reference and latest data, we recommend checking our webpage at: www.renesas.com/ra-partners

RA Family Selection Guide

Series	Group	Part Number	CPU	Max. Freq (MHz)	Code Flash (KB)	Data Flash (KB)	SRAM (KB)	Package Type	Pin Count	Package Code	Package dimension (mm)	Package pitch	I/O Ports	Operating Voltage Range (V)	Operating Temperature Range	External Memory Bus (bit)	Floating Point Unit	DMA/ DTC	External Interrupt Pins	32-bit ULPT (ch)	32-bit High Res Timer (ch)	32-bit Enhanced Timer (ch)	32-bit Timer (ch)	16-bit High Res Timer (ch)	16-bit Enhanced Timer (ch)	16-bit Timer (ch)	8-bit Timer (ch)	AGT	WDT	RTC	24-bit Sigma-Delta A/D Converter (ch)	16-bit A/D Converter (ch)	14-bit A/D Converter (ch)	12-bit A/D Converter (ch)	10-bit A/D Converter (ch)	12-bit D/A Converter (ch)	10-bit D/A Converter (ch)	8-bit D/A Converter (ch)	High-Speed Analog Comparator (ch)
RA0	RA0E1	R7FA0E1073CFJ	Arm Cortex-M23	32	64	1	12	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	29	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	10	0	0	0	0	0
		R7FA0E1073CNH	Arm Cortex-M23	32	64	1	12	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	29	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	10	0	0	0	0	0
		R7FA0E1073CNK	Arm Cortex-M23	32	64	1	12	QFN	24	PWQN0024KG-A	4 x 4 x 0.5	0.5	21	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	8	0	0	0	0	0
		R7FA0E1073CSC	Arm Cortex-M23	32	64	1	12	LSSOP	20	PLSP0020JB-A	6.5 x 4.4 x 1.45	0.65	17	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	6	0	0	0	0	0
		R7FA0E1073CNL	Arm Cortex-M23	32	64	1	12	QFN	16	PWQN0016KD-A	3 x 3 x 0.8	0.5	13	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	5	0	0	0	0	0
		R7FA0E1053CFJ	Arm Cortex-M23	32	32	1	12	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	29	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	10	0	0	0	0	0
		R7FA0E1053CNH	Arm Cortex-M23	32	32	1	12	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	29	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	10	0	0	0	0	0
		R7FA0E1053CNK	Arm Cortex-M23	32	32	1	12	QFN	24	PWQN0024KG-A	4 x 4 x 0.5	0.5	21	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	8	0	0	0	0	0
		R7FA0E1053CSC	Arm Cortex-M23	32	32	1	12	LSSOP	20	PLSP0020JB-A	6.5 x 4.4 x 1.45	0.65	17	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	6	0	0	0	0	0
		R7FA0E1053CNL	Arm Cortex-M23	32	32	1	12	QFN	16	PWQN0016KD-A	3 x 3 x 0.8	0.5	13	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	0	0	0	8	0	1	1	Yes	0	0	0	5	0	0	0	0	0
RA2	RA2A1	R7FA2A1AB3CFM	Arm Cortex-M23	48	256	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	49	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	8	17	0	0	0	1	0	2	1
		R7FA2A1AB3CNE	Arm Cortex-M23	48	256	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	33	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	6	12	0	0	0	1	0	2	1
		R7FA2A1AB3CNF	Arm Cortex-M23	48	256	8	32	QFN	40	PWQN0040KC-A	6 x 6 x 0.8	0.5	25	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	4	0	2	2	Yes	4	8	0	0	0	1	0	2	1
		R7FA2A1AB2CBT	Arm Cortex-M23	48	256	8	32	BGA	36	PLBG0036GA-A	5 x 5 x 1.4	0.8	22	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	3	0	2	2	Yes	2	5	0	0	0	1	0	2	1
		R7FA2A1AB3CFJ	Arm Cortex-M23	48	256	8	32	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	20	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	4	0	2	2	Yes	2	5	0	0	0	1	0	2	1
	RA2A2	R7FA2A2AD3CFP	Arm Cortex-M23	48	512	8	48	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	71	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	13	0	0	0	2	0	0	6	0	8	2	Yes	7	0	0	4	0	0	0	0	0
		R7FA2A2BD3CFP	Arm Cortex-M23	48	512	8	48	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	77	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	13	0	0	0	2	0	0	6	0	8	2	Yes	4	0	0	4	0	0	0	0	0
		R7FA2A2BD3CFN	Arm Cortex-M23	48	512	8	48	LQFP	80	PLQP0080KB-B	12 x 12 x 1.7	0.5	59	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	13	0	0	0	2	0	0	6	0	8	2	Yes	4	0	0	4	0	0	0	0	0
		R7FA2A2BD3CFM	Arm Cortex-M23	48	512	8	48	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	43	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	12	0	0	0	2	0	0	5	0	8	2	Yes	4	0	0	2	0	0	0	0	0
	RA2L1	R7FA2L1AB3CFP	Arm Cortex-M23	48	256	8	32	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	85	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	19	0	1	0	0	0
		R7FA2L1AB2DFP	Arm Cortex-M23	48	256	8	32	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	85	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	19	0	1	0	0	0
		R7FA2L1AB3CFN	Arm Cortex-M23	48	256	8	32	LQFP	80	PLQP0080KB-B	12 x 12 x 1.7	0.5	69	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	17	0	1	0	0	0
		R7FA2L1AB2DFN	Arm Cortex-M23	48	256	8	32	LQFP	80	PLQP0080KB-B	12 x 12 x 1.7	0.5	69	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	17	0	1	0	0	0
		R7FA2L1AB3CFM	Arm Cortex-M23	48	256	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	53	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	13	0	1	0	0	0
		R7FA2L1AB2DFM	Arm Cortex-M23	48	256	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	53	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	13	0	1	0	0	0
		R7FA2L1AB3CFL	Arm Cortex-M23	48	256	8	32	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	37	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1AB2DFL	Arm Cortex-M23	48	256	8	32	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	37	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1AB3CNE	Arm Cortex-M23	48	256	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	37	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1AB2DNE	Arm Cortex-M23	48	256	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	37	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1A93CFP	Arm Cortex-M23	48	128	8	32	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	85	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	19	0	1	0	0	0
		R7FA2L1A92DFP	Arm Cortex-M23	48	128	8	32	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	85	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	19	0	1	0	0	0
		R7FA2L1A93CFN	Arm Cortex-M23	48	128	8	32	LQFP	80	PLQP0080KB-B	12 x 12 x 1.7	0.5	69	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	17	0	1	0	0	0
		R7FA2L1A92DFN	Arm Cortex-M23	48	128	8	32	LQFP	80	PLQP0080KB-B	12 x 12 x 1.7	0.5	69	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	17	0	1	0	0	0
		R7FA2L1A93CFM	Arm Cortex-M23	48	128	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	53	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	13	0	1	0	0	0
		R7FA2L1A92DFM	Arm Cortex-M23	48	128	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	53	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	6	0	2	2	Yes	0	0	0	13	0	1	0	0	0
		R7FA2L1A93CFL	Arm Cortex-M23	48	128	8	32	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	37	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1A92DFL	Arm Cortex-M23	48	128	8	32	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	37	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1A93CNE	Arm Cortex-M23	48	128	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	37	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA2L1A92DNE	Arm Cortex-M23	48	128	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	37	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	4	0	0	3	0	2	2	Yes	0	0	0	9	0	1	0	0	0
	RA2E1	R7FA2E1A93CBU	Arm Cortex-M23	48	128	4	16	BGA	64	PVBG0064LB-A	4.0 x4.0 x 0.99	0.4	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A92DBU	Arm Cortex-M23	48	128	4	16	BGA	64	PVBG0064LB-A	4.0 x4.0 x 0.99	0.4	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A93CFM	Arm Cortex-M23	48	128	4	16	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A93CFK	Arm Cortex-M23	48	128	4	16	LQFP	64	PLQP0064GA-A	14 x 14 x 1.7	0.8	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A92DFM	Arm Cortex-M23	48	128	4	16	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A92DFK	Arm Cortex-M23	48	128	4	16	LQFP	64	PLQP0064GA-A	14 x 14 x 1.7	0.8	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A93CFL	Arm Cortex-M23	48	128	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A92DFL	Arm Cortex-M23	48	128	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A93CNE	Arm Cortex-M23	48	128	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A92DNE	Arm Cortex-M23	48	128	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A93CLM	Arm Cortex-M23	48	128	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A92DLM	Arm Cortex-M23	48	128	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A93CFJ	Arm Cortex-M23	48	128	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A92DFJ	Arm Cortex-M23	48	128	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A93CNH	Arm Cortex-M23	48	128	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A92DNH	Arm Cortex-M23	48	128	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A93CDA	Arm Cortex-M23	48	128	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
		R7FA2E1A92DDA	Arm Cortex-M23	48	128	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
		R7FA2E1A73CBU	Arm Cortex-M23	48	64	4	16	BGA	64	PVBG0064LB-A	4.0 x4.0 x 0.99	0.4	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A72DBU	Arm Cortex-M23	48	64	4	16	BGA	64	PVBG0064LB-A	4.0 x4.0 x 0.99	0.4	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A73CFM	Arm Cortex-M23	48	64	4	16	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A73CFK	Arm Cortex-M23	48	64	4	16	LQFP	64	PLQP0064GA-A	14 x 14 x 1.7	0.8	56	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A72DFM	Arm Cortex-M23	48	64	4	16	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A72DFK	Arm Cortex-M23	48	64	4	16	LQFP	64	PLQP0064GA-A	14 x 14 x 1.7	0.8	56	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A73CFL	Arm Cortex-M23	48	64	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A72DFL	Arm Cortex-M23	48	64	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A73CNE	Arm Cortex-M23	48	64	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A72DNE	Arm Cortex-M23	48	64	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A73CLM	Arm Cortex-M23	48	64	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A72DLM	Arm Cortex-M23	48	64	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A73CFJ	Arm Cortex-M23	48	64	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A72DFJ	Arm Cortex-M23	48	64	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A73CNH	Arm Cortex-M23	48	64	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A72DNH	Arm Cortex-M23	48	64	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A73CDA	Arm Cortex-M23	48	64	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
		R7FA2E1A72DDA	Arm Cortex-M23	48	64	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
		R7FA2E1A53CFL	Arm Cortex-M23	48	32	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A52DFL	Arm Cortex-M23	48	32	4	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A53CNE	Arm Cortex-M23	48	32	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A52DNE	Arm Cortex-M23	48	32	4	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E1A53CLM	Arm Cortex-M23	48	32	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A52DLM	Arm Cortex-M23	48	32	4	16	LGA	36	PWLG0036KB-A	4.0 x4.0 x 0.76	0.5	30	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	6	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	12	0	0	0	0	0
		R7FA2E1A53CFJ	Arm Cortex-M23	48	32	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A52DFJ	Arm Cortex-M23	48	32	4	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A53CNH	Arm Cortex-M23	48	32	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A52DNH	Arm Cortex-M23	48	32	4	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E1A53CDA	Arm Cortex-M23	48	32	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
		R7FA2E1A52DDA	Arm Cortex-M23	48	32	4	16	WLCSP	25	SUBG0025LB-A	2.14 x2.27 x 0.5	0.4	21	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	7	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	8	0	0	0	0	0
	RA2E2	R7FA2E2A74CNK	Arm Cortex-M23	48	64	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A73CNK	Arm Cortex-M23	48	64	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A72DNK	Arm Cortex-M23	48	64	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A74CNJ	Arm Cortex-M23	48	64	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A73CNJ	Arm Cortex-M23	48	64	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A72DNJ	Arm Cortex-M23	48	64	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A74CBY	Arm Cortex-M23	48	64	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A73CBY	Arm Cortex-M23	48	64	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A72DBY	Arm Cortex-M23	48	64	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A54CNK	Arm Cortex-M23	48	32	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A53CNK	Arm Cortex-M23	48	32	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A52DNK	Arm Cortex-M23	48	32	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A54CNJ	Arm Cortex-M23	48	32	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A53CNJ	Arm Cortex-M23	48	32	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A52DNJ	Arm Cortex-M23	48	32	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A54CBY	Arm Cortex-M23	48	32	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A53CBY	Arm Cortex-M23	48	32	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A52DBY	Arm Cortex-M23	48	32	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A34CNK	Arm Cortex-M23	48	16	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A33CNK	Arm Cortex-M23	48	16	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A32DNK	Arm Cortex-M23	48	16	2	8	QFN	24	PWQN0024KG-A	4 x 4 x 0.8	0.5	20	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	8	0	0	0	0	0
		R7FA2E2A34CNJ	Arm Cortex-M23	48	16	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A33CNJ	Arm Cortex-M23	48	16	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A32DNJ	Arm Cortex-M23	48	16	2	8	QFN	20	PWQN0020KC-A	4 x 4 x 0.8	0.5	16	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	7	0	0	0	0	0
		R7FA2E2A34CBY	Arm Cortex-M23	48	16	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 125	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A33CBY	Arm Cortex-M23	48	16	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
		R7FA2E2A32DBY	Arm Cortex-M23	48	16	2	8	WLCSP	16	SUBG0016LB-A	1.87 x 1.84 x 0.55	0.4	12	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	0	0	0	6	0	2	2	No	0	0	0	4	0	0	0	0	0
	RA2E3	R7FA2E3073CFL	Arm Cortex-M23	48	64	2	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3072DFL	Arm Cortex-M23	48	64	2	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3073CNE	Arm Cortex-M23	48	64	2	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3072DNE	Arm Cortex-M23	48	64	2	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3073CFJ	Arm Cortex-M23	48	64	2	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3072DFJ	Arm Cortex-M23	48	64	2	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3073CNH	Arm Cortex-M23	48	64	2	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3072DNH	Arm Cortex-M23	48	64	2	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3053CFL	Arm Cortex-M23	48	32	2	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3052DFL	Arm Cortex-M23	48	32	2	16	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3053CNE	Arm Cortex-M23	48	32	2	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3052DNE	Arm Cortex-M23	48	32	2	16	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	40	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	8	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	13	0	0	0	0	0
		R7FA2E3053CFJ	Arm Cortex-M23	48	32	2	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3052DFJ	Arm Cortex-M23	48	32	2	16	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3053CNH	Arm Cortex-M23	48	32	2	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 105	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0
		R7FA2E3052DNH	Arm Cortex-M23	48	32	2	16	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	26	1.6 to 5.5	Ta=-40 to 85	No	No	0/1	4	0	0	0	1	0	0	6	0	2	2	Yes	0	0	0	10	0	0	0	0	0

Low-Power Analog Comparator (ch)	PGA (ch)	OPAMP (ch)	Temp. Sensor (ch)	Ethernet (ch)	EtherCat (ch)	USBFS (host ch/ device ch)	USBHS (host ch/ device ch)	CAN (ch)	CAN-FD (ch)	SCI (ch)	SPI (ch)	I²C (ch)	I³C (ch)	IICA	UARTA	LIN (ch)	SSI (ch)	QSPI (ch)	OSPI (ch)	SDHI (ch)	IrDA	Wireless	Segment LCD	Graphics LCD controller	MIPI Interfaces (DSI/CSI)	Camera I/F (Parallel)	JPEG codec	2D drawing engine	Capacitive Touch (ch)	ECC SRAM	Security & Encryption	Suggested Kits
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	2	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	2	0	0	0	1	1	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG	FPB-RA0E1
2	0	3	1	0	0	(0/1)	(0/0)	1	0	3	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	26	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A1
2	0	2	1	0	0	(0/1)	(0/0)	1	0	3	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	16	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A1
2	0	1	1	0	0	(0/1)	(0/0)	1	0	3	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A1
2	0	1	1	0	0	(0/1)	(0/0)	1	0	3	1	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	9	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A1
2	0	1	1	0	0	(0/0)	(0/0)	1	0	3	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A1
0	7	0	1	0	0	(0/0)	(0/0)	0	0	5	1	2	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A2
0	4	0	1	0	0	(0/0)	(0/0)	0	0	5	1	2	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A2
0	4	0	1	0	0	(0/0)	(0/0)	0	0	5	1	2	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A2
0	4	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2A2
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	32	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	1	0	5	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2L1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	30	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	20	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	14	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	11	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
2	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E1, FPB-RA2E1
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	1	1	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID; TRNG; AES(128/256)	EK-RA2E2, FPB-RA2E2
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3
0	0	0	1	0	0	(0/0)	(0/0)	0	0	3	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	No	128-bit Unique ID	FPB-RA2E3

RA Family Selection Guide

Series	Group	Part Number	CPU	Max. Freq (MHz)	Code Flash (KB)	Data Flash (KB)	SRAM (KB)	Package Type	Pin Count	Package Code	Package dimension (mm)	Package pitch	I/O Ports	Operating Voltage Range (V)	Operating Temperature Range	External Memory Bus (bit)	Floating Point Unit	DMA/ DTC	External Interrupt Pins	32-bit ULPT (ch)	32-bit High Res Timer (ch)	32-bit Enhanced Timer (ch)	32-bit Timer (ch)	16-bit High Res Timer (ch)	16-bit Enhanced Timer (ch)	16-bit Timer (ch)	8-bit Timer (ch)	AGT	WDT	RTC	24-bit Sigma-Delta A/D Converter (ch)	16-bit A/D Converter (ch)	14-bit A/D Converter (ch)	12-bit A/D Converter (ch)	10-bit A/D Converter (ch)	12-bit D/A Converter (ch)	10-bit D/A Converter (ch)	8-bit D/A Converter (ch)	High-Speed Analog Comparator (ch)
RA4	RA4M1	R7FA4M1AB3CFP	Arm Cortex-M4	48	256	8	32	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	84	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	6	0	2	2	Yes	0	0	25	0	0	1	0	2	0
		R7FA4M1AB2CLJ	Arm Cortex-M4	48	256	8	32	LGA	100	PTLG0100JA-A	7 x 7 x 1.05	0.65	84	1.6 to 5.5	Ta=-40 to 85	No	Single	4/1	15	0	0	0	2	0	0	6	0	2	2	Yes	0	0	25	0	0	1	0	2	0
		R7FA4M1AB3CFM	Arm Cortex-M4	48	256	8	32	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	52	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	6	0	2	2	Yes	0	0	18	0	0	1	0	2	0
		R7FA4M1AB3CNB	Arm Cortex-M4	48	256	8	32	QFN	64	PWQN0064LB-B	8 x 8 x 0.8	0.4	52	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	6	0	2	2	Yes	0	0	18	0	0	1	0	2	0
		R7FA4M1AB3CFL	Arm Cortex-M4	48	256	8	32	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	36	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	4	0	0	2	Yes	0	0	14	0	0	1	0	2	0
		R7FA4M1AB3CNE	Arm Cortex-M4	48	256	8	32	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	36	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	4	0	0	2	Yes	0	0	14	0	0	1	0	2	0
		R7FA4M1AB3CNF	Arm Cortex-M4	48	256	8	32	QFN	40	PWQN0040KD-A	6 x 6 x 0.8	0.5	28	1.6 to 5.5	Ta=-40 to 105	No	Single	4/1	15	0	0	0	2	0	0	2	0	0	2	Yes	0	0	11	0	0	1	0	2	0
	RA4M2	R7FA4M2AD3CFP	Arm Cortex-M33	100	512	8	128	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	78	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	13	0	2	0	0	0
		R7FA4M2AD3CFM	Arm Cortex-M33	100	512	8	128	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	44	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	9	0	2	0	0	0
		R7FA4M2AD3CFL	Arm Cortex-M33	100	512	8	128	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
		R7FA4M2AD3CNE	Arm Cortex-M33	100	512	8	128	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
		R7FA4M2AC3CFP	Arm Cortex-M33	100	384	8	128	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	78	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	13	0	2	0	0	0
		R7FA4M2AC3CFM	Arm Cortex-M33	100	384	8	128	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	44	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	9	0	2	0	0	0
		R7FA4M2AC3CFL	Arm Cortex-M33	100	384	8	128	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
		R7FA4M2AC3CNE	Arm Cortex-M33	100	384	8	128	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
		R7FA4M2AB3CFP	Arm Cortex-M33	100	256	8	128	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	78	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	13	0	2	0	0	0
		R7FA4M2AB3CFM	Arm Cortex-M33	100	256	8	128	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	44	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	9	0	2	0	0	0
		R7FA4M2AB3CFL	Arm Cortex-M33	100	256	8	128	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
		R7FA4M2AB3CNE	Arm Cortex-M33	100	256	8	128	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	30	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	7	0	2	0	0	0
	RA4M3	R7FA4M3AF3CBM	Arm Cortex-M33	100	1024	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AF2CBM	Arm Cortex-M33	100	1024	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AF3CFB	Arm Cortex-M33	100	1024	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AF3CFP	Arm Cortex-M33	100	1024	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA4M3AF3CBQ	Arm Cortex-M33	100	1024	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AF2CBQ	Arm Cortex-M33	100	1024	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AF3CFM	Arm Cortex-M33	100	1024	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AE3CBM	Arm Cortex-M33	100	768	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AE2CBM	Arm Cortex-M33	100	768	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AE3CFB	Arm Cortex-M33	100	768	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AE3CFP	Arm Cortex-M33	100	768	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA4M3AE3CBQ	Arm Cortex-M33	100	768	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AE2CBQ	Arm Cortex-M33	100	768	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AE3CFM	Arm Cortex-M33	100	768	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AD3CBM	Arm Cortex-M33	100	512	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AD2CBM	Arm Cortex-M33	100	512	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AD3CFB	Arm Cortex-M33	100	512	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA4M3AD3CBQ	Arm Cortex-M33	100	512	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA4M3AD2CBQ	Arm Cortex-M33	100	512	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	4	0	6	2	Yes	0	0	0	8	0	2	0	0	0
	RA4E1	R7FA4E10D2CFM	Arm Cortex-M33	100	512	8	128	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	44	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	2	0	5	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA4E10D2CNE	Arm Cortex-M33	100	512	8	128	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	30	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	2	0	5	2	Yes	0	0	0	7	0	1	0	0	0
		R7FA4E10B2CFM	Arm Cortex-M33	100	256	8	128	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	44	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	2	0	5	2	Yes	0	0	0	9	0	1	0	0	0
		R7FA4E10B2CNE	Arm Cortex-M33	100	256	8	128	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	30	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	2	0	5	2	Yes	0	0	0	7	0	1	0	0	0
	RA4E2	R7FA4E2B93CBB	Arm Cortex-M33	100	128	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	12	0	1	0	0	0
		R7FA4E2B92CBB	Arm Cortex-M33	100	128	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	12	0	1	0	0	0
		R7FA4E2B93CFM	Arm Cortex-M33	100	128	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	12	0	1	0	0	0
		R7FA4E2B93CNE	Arm Cortex-M33	100	128	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	8	0	1	0	0	0
		R7FA4E2B93CBC	Arm Cortex-M33	100	128	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA4E2B92CBC	Arm Cortex-M33	100	128	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA4E2B93CNH	Arm Cortex-M33	100	128	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	5	0	1	0	0	0
	RA4W1	R7FA4W1AD2CNG	Arm Cortex-M4	48	512	8	96	QFN	56	PVQN0056LB-A	7 x 7 x 0.9	0.4	34	1.8 to 3.6	Ta=-40 to 85	No	Single	4/1	12	0	0	0	4	0	0	3	0	2	2	Yes	0	0	8	0	0	1	0	2	0
	RA4T1	R7FA4T1BB3CFM	Arm Cortex-M33	100	256	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	12	0	2	0	0	3
		R7FA4T1BB3CFL	Arm Cortex-M33	100	256	4	40	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA4T1BB3CNE	Arm Cortex-M33	100	256	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA4T1BB3CFJ	Arm Cortex-M33	100	256	4	40	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3
		R7FA4T1BB3CNH	Arm Cortex-M33	100	256	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3
		R7FA4T1B93CFM	Arm Cortex-M33	100	128	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	12	0	2	0	0	3
		R7FA4T1B93CFL	Arm Cortex-M33	100	128	4	40	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA4T1B93CNE	Arm Cortex-M33	100	128	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA4T1B93CFJ	Arm Cortex-M33	100	128	4	40	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3
		R7FA4T1B93CNH	Arm Cortex-M33	100	128	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3

Low-Power Analog Comparator (ch)	PGA (ch)	OPAMP (ch)	Temp. Sensor (ch)	Ethernet (ch)	EtherCat (ch)	USBFS (host ch/ device ch)	USBHS (host ch/ device ch)	CAN (ch)	CAN-FD (ch)	SCI (ch)	SPI (ch)	I^{2}C (ch)	I^{3}C (ch)	IICA	UARTA	LIN (ch)	SSI (ch)	QSPI (ch)	OSPI (ch)	SDHI (ch)	IrDA	Wireless	Segment LCD	Graphics LCD controller	MIPI Interfaces (DSI/CSI)	Camera I/F (Parallel)	JPEG codec	2D drawing engine	Capacitive Touch (ch)	ECC SRAM	Security & Encryption	Suggested Kits
2	0	4	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	1	0	0	0	No	No	Yes	No	No	No	No	No	27	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
2	0	4	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	1	0	0	0	No	No	Yes	No	No	No	No	No	27	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
2	0	3	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	24	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
2	0	3	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	0	0	0	0	No	No	Yes	No	No	No	No	No	24	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
2	0	1	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	15	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
2	0	1	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	15	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
1	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	4	1	2	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	10	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4M1
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	2	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	1	0	6	1	1	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	4	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M2
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	0	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	1	No	No	No	No	No	No	No	No	20	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	1	0	0	(1 / 1)	(0 / 0)	2	0	6	1	2	0	0	0	0	1	1	0	0	No	No	No	No	No	No	No	No	7	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K)/DSA; SHA224/SHA256; GHASH; Tamper Detection; Arm TrustZone	EK-RA4M3
0	0	0	0	0	0	(1 / 1)	(0 / 0)	1	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	FPB-RA4E1
0	0	0	0	0	0	(1 / 1)	(0 / 0)	1	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	FPB-RA4E1
0	0	0	0	0	0	(1 / 1)	(0 / 0)	1	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	FPB-RA4E1
0	0	0	0	0	0	(1 / 1)	(0 / 0)	1	0	4	1	1	0	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	FPB-RA4E1
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 1)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
0	0	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	1	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	EK-RA4E2
1	0	1	1	0	0	(1 / 1)	(0 / 0)	1	0	4	2	2	0	0	0	0	0	0	0	0	No	Bluetooth 5.0	Yes	No	No	No	No	No	11	Yes	128-bit Unique ID; TRNG; AES(128/256); GHASH	EK-RA4W1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1
0	3	0	1	0	0	(0 / 0)	(0 / 0)	0	1	2	2	0	1	0	0	0	0	0	0	0	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; Arm TrustZone	MCK-RA4T1

RA Family Selection Guide

Series	Group	Part Number	CPU	Max. Freq (MHz)	Code Flash (KB)	Data Flash (KB)	SRAM (KB)	Package Type	Pin Count	Package Code	Package dimension (mm)	Package pitch	I/O Ports	Operating Voltage Range (V)	Operating Temperature Range	External Memory Bus (bit)	Floating Point Unit	DMA/ DTC	External Interrupt Pins	32-bit ULPT (ch)	32-bit High Res Timer (ch)	32-bit Enhanced Timer (ch)	32-bit Timer (ch)	16-bit High Res Timer (ch)	16-bit Enhanced Timer (ch)	16-bit Timer (ch)	8-bit Timer (ch)	AGT	WDT	RTC	24-bit Sigma-Delta A/D Converter (ch)	16-bit A/D Converter (ch)	14-bit A/D Converter (ch)	12-bit A/D Converter (ch)	10-bit A/D Converter (ch)	12-bit D/A Converter (ch)	10-bit D/A Converter (ch)	8-bit D/A Converter (ch)	High-Speed Analog Comparator (ch)
RA6	RA6M1	R7FA6M1AD3CFP	Arm Cortex-M4	120	512	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	14	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
		R7FA6M1AD3CLJ	Arm Cortex-M4	120	512	8	256	LGA	100	PTLG0100JA-A	7 x 7 x 1.05	0.65	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	14	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
		R7FA6M1AD2CLJ	Arm Cortex-M4	120	512	8	256	LGA	100	PTLG0100JA-A	7 x 7 x 1.05	0.65	76	2.7 to 3.6	Ta=-40 to 85	8	Single	8/1	14	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
		R7FA6M1AD3CFM	Arm Cortex-M4	120	512	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	40	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	3	4	0	0	0	0	2	2	Yes	0	0	0	8	0	2	0	0	6
		R7FA6M1AD3CNB	Arm Cortex-M4	120	512	8	256	QFN	64	PWQN0064LB-A	8 x 8 x 0.8	0.4	40	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	3	4	0	0	0	0	2	2	Yes	0	0	0	8	0	2	0	0	6
	RA6M2	R7FA6M2AF3CLK	Arm Cortex-M4	120	1024	32	384	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AF2CLK	Arm Cortex-M4	120	1024	32	384	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AF3CFB	Arm Cortex-M4	120	1024	32	384	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AF3CFP	Arm Cortex-M4	120	1024	32	384	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
		R7FA6M2AD3CLK	Arm Cortex-M4	120	512	32	384	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AD2CLK	Arm Cortex-M4	120	512	32	384	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AD3CFB	Arm Cortex-M4	120	512	32	384	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M2AD3CFP	Arm Cortex-M4	120	512	32	384	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
	RA6M3	R7FA6M3AH3CBG	Arm Cortex-M4	120	2048	64	640	BGA	176	PLBG0176GE-A	13 x 13 x 1.4	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AH2CBG	Arm Cortex-M4	120	2048	64	640	BGA	176	PLBG0176GE-A	13 x 13 x 1.4	0.8	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AH3CFC	Arm Cortex-M4	120	2048	64	640	LQFP	176	PLQP0176KB-A	24 x 24 x 1.7	0.5	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AH3CLK	Arm Cortex-M4	120	2048	64	640	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AH2CLK	Arm Cortex-M4	120	2048	64	640	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AH3CFB	Arm Cortex-M4	120	2048	64	640	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AH3CFP	Arm Cortex-M4	120	2048	64	640	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
		R7FA6M3AF3CBG	Arm Cortex-M4	120	1024	64	640	BGA	176	PLBG0176GE-A	13 x 13 x 1.4	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AF2CBG	Arm Cortex-M4	120	1024	64	640	BGA	176	PLBG0176GE-A	13 x 13 x 1.4	0.8	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AF3CFC	Arm Cortex-M4	120	1024	64	640	LQFP	176	PLQP0176KB-A	24 x 24 x 1.7	0.5	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	22	0	2	0	0	6
		R7FA6M3AF3CLK	Arm Cortex-M4	120	1024	64	640	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AF2CLK	Arm Cortex-M4	120	1024	64	640	LGA	145	PTLG0145KA-A	7 x 7 x 1.05	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AF3CFB	Arm Cortex-M4	120	1024	64	640	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	4	4	6	0	0	0	0	2	2	Yes	0	0	0	20	0	2	0	0	6
		R7FA6M3AF3CFP	Arm Cortex-M4	120	1024	64	640	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	4	4	5	0	0	0	0	2	2	Yes	0	0	0	17	0	2	0	0	6
	RA6M4	R7FA6M5AG3CFB	Arm Cortex-M33	200	1536	8	512	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AF3CBM	Arm Cortex-M33	200	1024	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AF2CBM	Arm Cortex-M33	200	1024	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AF3CFB	Arm Cortex-M33	200	1024	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AF3CFP	Arm Cortex-M33	200	1024	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M4AF3CBQ	Arm Cortex-M33	200	1024	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AF2CBQ	Arm Cortex-M33	200	1024	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AF3CFM	Arm Cortex-M33	200	1024	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AE3CBM	Arm Cortex-M33	200	768	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AE2CBM	Arm Cortex-M33	200	768	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AE3CFB	Arm Cortex-M33	200	768	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AE3CFP	Arm Cortex-M33	200	768	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M4AE3CBQ	Arm Cortex-M33	200	768	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AE2CBQ	Arm Cortex-M33	200	768	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AE3CFM	Arm Cortex-M33	200	768	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AD3CBM	Arm Cortex-M33	200	512	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AD2CBM	Arm Cortex-M33	200	512	8	256	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AD3CFB	Arm Cortex-M33	200	512	8	256	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	19	0	2	0	0	0
		R7FA6M4AD3CFP	Arm Cortex-M33	200	512	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M4AD3CBQ	Arm Cortex-M33	200	512	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AD2CBQ	Arm Cortex-M33	200	512	8	256	BGA	64	PLBG0064JC-A	6 x 6 x 1.38	0.65	46	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6M4AD3CFM	Arm Cortex-M33	200	512	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	8	0	2	0	0	0
	RA6M5	R7FA6M5AH2CBG	Arm Cortex-M33	200	2048	8	512	BGA	176	PLBG0176GF-A	13 x 13 x 1.4	0.5	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BH2CBG	Arm Cortex-M33	200	2048	8	512	BGA	176	PLBG0176GF-A	13 x 13 x 1.4	0.5	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5AH3CFC	Arm Cortex-M33	200	2048	8	512	LQFP	176	PLQP0176KB-C	24 x 24 x 1.7	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BH3CFC	Arm Cortex-M33	200	2048	8	512	LQFP	176	PLQP0176KB-C	24 x 24 x 1.7	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BH3CBM	Arm Cortex-M33	200	2048	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AH3CBM	Arm Cortex-M33	200	2048	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AH2CBM	Arm Cortex-M33	200	2048	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BH2CBM	Arm Cortex-M33	200	2048	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AH3CFB	Arm Cortex-M33	200	2048	8	512	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BH3CFB	Arm Cortex-M33	200	2048	8	512	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AH3CFP	Arm Cortex-M33	200	2048	8	512	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M5BH3CFP	Arm Cortex-M33	200	2048	8	512	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M5AG2CBG	Arm Cortex-M33	200	1536	8	512	BGA	176	PLBG0176GF-A	13 x 13 x 1.4	0.5	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BG2CBG	Arm Cortex-M33	200	1536	8	512	BGA	176	PLBG0176GF-A	13 x 13 x 1.4	0.5	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5AG3CFC	Arm Cortex-M33	200	1536	8	512	LQFP	176	PLQP0176KB-C	24 x 24 x 1.7	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BG3CFC	Arm Cortex-M33	200	1536	8	512	LQFP	176	PLQP0176KB-C	24 x 24 x 1.7	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BG3CBM	Arm Cortex-M33	200	1536	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AG3CBM	Arm Cortex-M33	200	1536	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AG2CBM	Arm Cortex-M33	200	1536	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BG2CBM	Arm Cortex-M33	200	1536	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BG3CFB	Arm Cortex-M33	200	1536	8	512	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5AG3CFP	Arm Cortex-M33	200	1536	8	512	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M5BG3CFP	Arm Cortex-M33	200	1536	8	512	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
		R7FA6M5BF2CBG	Arm Cortex-M33	200	1024	8	512	BGA	176	PLBG0176GF-A	13 x 13 x 1.4	0.5	133	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BF3CFC	Arm Cortex-M33	200	1024	8	512	LQFP	176	PLQP0176KB-C	24 x 24 x 1.7	0.8	133	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	26	0	2	0	0	0
		R7FA6M5BF3CBM	Arm Cortex-M33	200	1024	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BF2CBM	Arm Cortex-M33	200	1024	8	512	BGA	144	PLBG0144KB-A	7 x 7 x 1.29	0.5	110	2.7 to 3.6	Ta=-40 to 85	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BF3CFB	Arm Cortex-M33	200	1024	8	512	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	110	2.7 to 3.6	Ta=-40 to 105	16/8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	22	0	2	0	0	0
		R7FA6M5BF3CFP	Arm Cortex-M33	200	1024	8	512	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	8	Single	8/1	16	0	0	0	4	0	0	6	0	6	2	Yes	0	0	0	17	0	2	0	0	0
	RA6E1	R7FA6E10F2CFP	Arm Cortex-M33	200	1024	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	4	0	6	2	Yes	0	0	0	11	0	1	0	0	0
		R7FA6E10F2CFM	Arm Cortex-M33	200	1024	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	4	0	6	2	Yes	0	0	0	7	0	1	0	0	0
		R7FA6E10F2CNE	Arm Cortex-M33	200	1024	8	256	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	28	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	1	0	0	3	0	6	2	Yes	0	0	0	5	0	1	0	0	0
		R7FA6E10D2CFP	Arm Cortex-M33	200	512	8	256	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	4	0	6	2	Yes	0	0	0	11	0	1	0	0	0
		R7FA6E10D2CFM	Arm Cortex-M33	200	512	8	256	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	42	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	2	0	0	4	0	6	2	Yes	0	0	0	7	0	1	0	0	0
		R7FA6E10D2CNE	Arm Cortex-M33	200	512	8	256	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	28	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	16	0	0	0	1	0	0	3	0	6	2	Yes	0	0	0	5	0	1	0	0	0
	RA6E2	R7FA6E2BB3CBB	Arm Cortex-M33	200	256	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	12	0	2	0	0	0
		R7FA6E2BB2CBB	Arm Cortex-M33	200	256	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	0	0	2	0	0	0
		R7FA6E2BB3CFM	Arm Cortex-M33	200	256	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	12	0	2	0	0	0
		R7FA6E2BB3CNE	Arm Cortex-M33	200	256	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6E2BB3CBC	Arm Cortex-M33	200	256	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	5	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA6E2BB2CBC	Arm Cortex-M33	200	256	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	5	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA6E2BB3CNH	Arm Cortex-M33	200	256	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	5	0	1	0	0	0
		R7FA6E2B93CBB	Arm Cortex-M33	200	128	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	12	0	2	0	0	0
		R7FA6E2B92CBB	Arm Cortex-M33	200	128	4	40	BGA	64	PLBG0064KB-A	5 x 5 x 1.29	0.5	45	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	0	0	2	0	0	0
		R7FA6E2B93CFM	Arm Cortex-M33	200	128	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	12	0	2	0	0	0
		R7FA6E2B93CNE	Arm Cortex-M33	200	128	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	Yes	0	0	0	8	0	2	0	0	0
		R7FA6E2B93CBC	Arm Cortex-M33	200	128	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	5	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA6E2B92CBC	Arm Cortex-M33	200	128	4	40	BGA	36	PLBG0036KA-A	4 x 4 x 1.29	0.5	20	2.7 to 3.6	Ta=-40 to 85	No	Single	8/1	15	0	0	0	0	0	5	0	0	2	2	Yes	0	0	0	4	0	1	0	0	0
		R7FA6E2B93CNH	Arm Cortex-M33	200	128	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	4	0	0	2	2	Yes	0	0	0	5	0	1	0	0	0
	RA6T1	R7FA6T1AB3CFP	Arm Cortex-M4	120	512	8	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	4	5	0	0	0	0	2	2	No	0	0	0	17	0	2	0	0	6
		R7FA6T1AD3CFP	Arm Cortex-M4	120	512	8	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	76	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	4	5	0	0	0	0	2	2	No	0	0	0	17	0	2	0	0	6
		R7FA6T1AB3CFM	Arm Cortex-M4	120	256	8	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	40	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	3	4	0	0	0	0	2	2	No	0	0	0	8	0	2	0	0	6
		R7FA6T1AD3CFM	Arm Cortex-M4	120	256	8	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	40	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	14	0	4	3	4	0	0	0	0	2	2	No	0	0	0	8	0	2	0	0	6
	RA6T2	R7FA6T2AD3CFP	Arm Cortex-M33	240	512	16	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	84	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	29	0	4	0	0	4
		R7FA6T2BD3CFP	Arm Cortex-M33	240	512	16	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	84	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	29	0	4	0	0	4
		R7FA6T2AD3CFM	Arm Cortex-M33	240	512	16	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2BD3CFM	Arm Cortex-M33	240	512	16	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2AD3CNB	Arm Cortex-M33	240	512	16	64	QFN	64	PWQN0064LA-A	8 x 8 x 0.8	0.4	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2BD3CNB	Arm Cortex-M33	240	512	16	64	QFN	64	PWQN0064LA-A	8 x 8 x 0.8	0.4	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2AD3CFL	Arm Cortex-M33	240	512	16	64	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2BD3CFL	Arm Cortex-M33	240	512	16	64	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2AD3CNE	Arm Cortex-M33	240	512	16	64	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2BD3CNE	Arm Cortex-M33	240	512	16	64	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2AB3CFP	Arm Cortex-M33	240	256	16	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	84	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	29	0	4	0	0	4
		R7FA6T2BB3CFP	Arm Cortex-M33	240	256	16	64	LQFP	100	PLQP0100KB-B	14 x 14 x 1.7	0.5	84	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	29	0	4	0	0	4
		R7FA6T2AB3CFM	Arm Cortex-M33	240	256	16	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2BB3CFM	Arm Cortex-M33	240	256	16	64	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2AB3CNB	Arm Cortex-M33	240	256	16	64	QFN	64	PWQN0064LA-A	8 x 8 x 0.8	0.4	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2BB3CNB	Arm Cortex-M33	240	256	16	64	QFN	64	PWQN0064LA-A	8 x 8 x 0.8	0.4	51	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	18	0	4	0	0	4
		R7FA6T2AB3CFL	Arm Cortex-M33	240	256	16	64	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2BB3CFL	Arm Cortex-M33	240	256	16	64	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2AB3CNE	Arm Cortex-M33	240	256	16	64	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
		R7FA6T2BB3CNE	Arm Cortex-M33	240	256	16	64	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	35	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	16	0	4	6	0	0	0	0	0	2	2	No	0	0	0	10	0	2	0	0	3
	RA6T3	R7FA6T3BB3CFM	Arm Cortex-M33	200	256	4	40	LQFP	64	PLQP0064KB-C	10 x 10 x 1.7	0.5	45	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	No	0	0	0	12	0	2	0	0	3
		R7FA6T3BB3CFL	Arm Cortex-M33	200	256	4	40	LQFP	48	PLQP0048KB-B	7 x 7 x 1.7	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA6T3BB3CNE	Arm Cortex-M33	200	256	4	40	QFN	48	PWQN0048KC-A	7 x 7 x 0.8	0.5	29	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	6	0	0	2	2	No	0	0	0	8	0	2	0	0	3
		R7FA6T3BB3CFJ	Arm Cortex-M33	200	256	4	40	LQFP	32	PLQP0032GB-A	7 x 7 x 1.7	0.8	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3
		R7FA6T3BB3CNH	Arm Cortex-M33	200	256	4	40	QFN	32	PWQN0032KE-A	5 x 5 x 0.8	0.5	16	2.7 to 3.6	Ta=-40 to 105	No	Single	8/1	15	0	0	0	0	0	4	0	0	2	2	No	0	0	0	5	0	1	0	0	3

Low-Power Analog Comparator (ch)	PGA (ch)	OPAMP (ch)	Temp. Sensor (ch)	Ethernet (ch)	EtherCat (ch)	USBFS (host ch/ device ch)	USBHS (host ch/ device ch)	CAN (ch)	CAN-FD (ch)	SCI (ch)	SPI (ch)	I²C (ch)	I²C (ch)	IICA	UART	LIN (ch)	SSI (ch)	QSPI (ch)	OSPI (ch)	SDHI (ch)	IrDA	Wireless	Segment LCD	Graphics LCD controller	MIPI Interfaces (DSI/CSI)	Camera I/F (Parallel)	JPEG codec	2D drawing engine	Capacitive Touch (ch)	ECC SRAM	Security & Encryption	Suggested Kits
0	6	0	1	0	0	(1/1)	(0/0)	2	0	7	2	2	0	0	0	0	1	1	0	2	Yes	No	No	No	No	No	No	No	12	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA; SHA224/SHA256; GHASH	EK-RA6M1

RA Family Selection Guide

Series	Group	Part Number	CPU	Max. Freq (MHz)	Code Flash (KB)	Data Flash (KB)	SRAM (KB)	Package Type	Pin Count	Package Code	Package dimension (mm)	Package pitch	I/O Ports	Operating Voltage Range (V)	Operating Temperature Range	External Memory Bus (bit)	Floating Point Unit	DMA/ DTC	External Interrupt Pins	32-bit ULPT (ch)	32-bit High Res Timer (ch)	32-bit Enhanced Timer (ch)	32-bit Timer (ch)	16-bit High Res Timer (ch)	16-bit Enhanced Timer (ch)	16-bit Timer (ch)	8-bit Timer (ch)	AGT	WDT	RTC	24-bit Sigma-Delta A/D Converter (ch)	16-bit A/D Converter (ch)	14-bit A/D Converter (ch)	12-bit A/D Converter (ch)	10-bit A/D Converter (ch)	12-bit D/A Converter (ch)	10-bit D/A Converter (ch)	8-bit D/A Converter (ch)	High-Speed Analog Comparator (ch)
RA8	RA8M1	R7FA8M1AHECBD	Arm Cortex-M85	480	2048	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8M1AFECBD	Arm Cortex-M85	480	1024	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8M1AHECFC	Arm Cortex-M85	400	2048	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
		R7FA8M1AHECFB	Arm Cortex-M85	400	2048	12	1024	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	106	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	18	0	2	0	0	2
		R7FA8M1AFECFC	Arm Cortex-M85	400	1024	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
		R7FA8M1AFECFB	Arm Cortex-M85	400	1024	12	1024	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	106	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	18	0	2	0	0	2
		R7FA8M1AHECFP	Arm Cortex-M85	360	2048	12	1024	LQFP	100	PLQP0100KP-A	14 x 14 x 1.4	0.5	70	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	10	0	2	0	0	2
		R7FA8M1AFECFP	Arm Cortex-M85	360	1024	12	1024	LQFP	100	PLQP0100KP-A	14 x 14 x 1.4	0.5	70	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	10	0	2	0	0	2
	RA8D1	R7FA8D1AHECBD	Arm Cortex-M85	480	2048	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	165	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8D1BHECBD	Arm Cortex-M85	480	2048	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8D1AFECBD	Arm Cortex-M85	480	1024	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	165	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8D1BFECBD	Arm Cortex-M85	480	1024	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	25	0	2	0	0	2
		R7FA8D1AHECFC	Arm Cortex-M85	400	2048	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	119	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
		R7FA8D1BHECFC	Arm Cortex-M85	400	2048	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
		R7FA8D1AFECFC	Arm Cortex-M85	400	1024	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	119	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
		R7FA8D1BFECFC	Arm Cortex-M85	400	1024	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	Yes	0	0	0	24	0	2	0	0	2
	RA8T1	R7FA8T1AHECBD	Arm Cortex-M85	480	2048	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	21	0	2	0	0	2
		R7FA8T1AFECBD	Arm Cortex-M85	480	1024	12	1024	BGA	224	PLBG0224GD-A	13 x 13 x 1.47	0.8	174	1.68 to 3.6	Tj=-40 to 125	32/16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	21	0	2	0	0	2
		R7FA8T1AHECFC	Arm Cortex-M85	400	2048	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	20	0	2	0	0	2
		R7FA8T1AHECFB	Arm Cortex-M85	400	2048	12	1024	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	106	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	16	0	2	0	0	2
		R7FA8T1AFECFC	Arm Cortex-M85	400	1024	12	1024	LQFP	176	PLQP0176KJ-A	24 x 24 x 1.4	0.5	128	1.68 to 3.6	Tj=-40 to 125	16/8	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	20	0	2	0	0	2
		R7FA8T1AFECFB	Arm Cortex-M85	400	1024	12	1024	LQFP	144	PLQP0144KA-B	20 x 20 x 1.4	0.5	106	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	16	0	2	0	0	2
		R7FA8T1AHECFP	Arm Cortex-M85	360	2048	12	1024	LQFP	100	PLQP0100KP-A	14 x 14 x 1.4	0.5	70	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	11	0	2	0	0	2
		R7FA8T1AFECFP	Arm Cortex-M85	360	1024	12	1024	LQFP	100	PLQP0100KP-A	14 x 14 x 1.4	0.5	70	1.68 to 3.6	Tj=-40 to 125	No	Double/ Single/ Half	8/1	16	2	0	0	8	0	0	6	0	2	2	No	0	0	0	11	0	2	0	0	2

	Low-Power Analog Comparator (ch)	PGA (ch)	OPAMP (ch)	Temp. Sensor (ch)	Ethernet (ch)	EtherCat (ch)	USBFS (host ch/ device ch)	USBHS (host ch/ device ch)	CAN (ch)	CAN-FD (ch)	SCI (ch)	SPI (ch)	I^2C (ch)	I^3C (ch)	IICA	UARTA	LIN (ch)	SSI (ch)	QSPI (ch)	OSPI (ch)	SDHI (ch)	IrDA	Wireless	Segment LCD	Graphics LCD controller	MIPI Interfaces (DSI/CSI)	Camera I/F (Parallel)	JPEG codec	2D drawing engine	Capacitive Touch (ch)	ECC SRAM	Security & Encryption	Suggested Kits
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	16-bit	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	16-bit	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	16-bit	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	16-bit	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	1	0	1	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	1	0	1	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8M1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	No	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	DSI-2	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	No	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	DSI-2	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	No	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	DSI-2	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	No	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(1/1)	0	2	6	2	2	1	0	0	0	2	0	1	2	No	No	No	RGB888	DSI-2	16-bit	No	Yes	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	EK-RA8D1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1
	0	0	0	1	1	0	(1/1)	(0/0)	0	2	6	2	2	1	0	0	0	0	0	0	2	No	No	No	No	No	No	No	No	0	Yes	128-bit Unique ID; TRNG; AES(128/192/256); ECC/RSA(4K); SHA224/SHA256/SHA384/SHA512; DOTF; FSBL; HMAC/GMAC/CMAC; DLM; SPA/DPA Protection; Tamper Detection; Arm TrustZone	MCK-RA8T1

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