

RENESAS RA8 SERIES AND RA8M1 GROUP INTRODUCTION

RENESAS ELECTRONICS CORPORATION
DATE: OCTOBER 2023
VERSION: 1.0



INTRODUCING RENESAS 32-BIT RA FAMILY

HIGH-PERFORMANCE, ADVANCED SECURITY, BROAD CONNECTIVITY AND WIDE DEVICE LINE-UP



MCU Solutions & Open Ecosystem

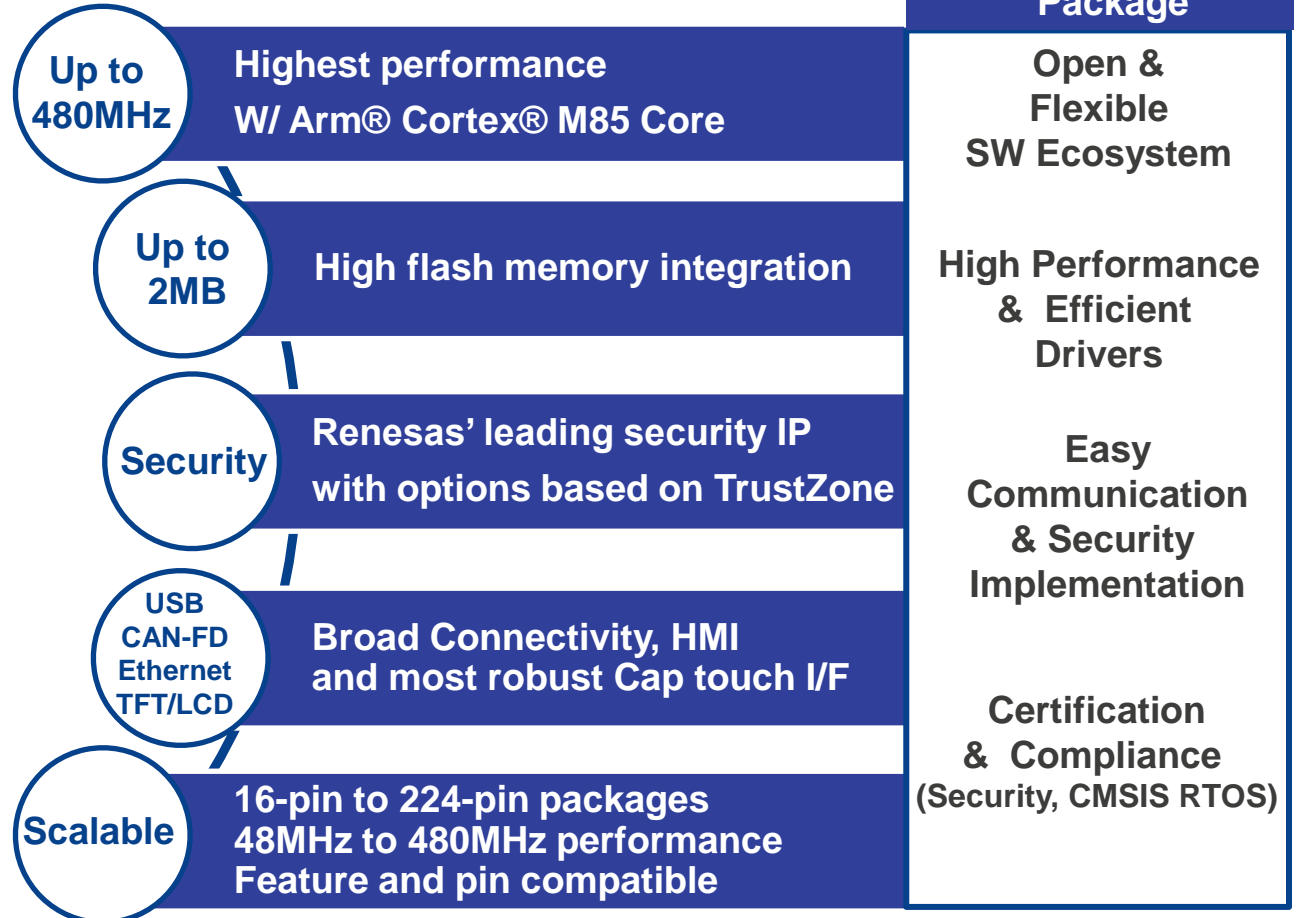
Arm® Cortex® M4, M33, M23 & M85 Cores

Efficient FSP Software, HAL drivers

Enhanced Security & Trustzone Technology

HMI/Graphics

Robust Capacitive Touch



TARGET MARKETS AND APPLICATIONS

Industrial Automation



- High Performance
- Large SRAM w/ECC
- Long product life & Industrial quality grade
- Tj 125°C support
- Functional safety support

Security



- TrustZone support
- Integrated Renesas Security IP
- Immutable storage & Secure Boot
- Key isolation and management
- True Random Number Generator (TRNG)

Connectivity



- Large On-chip SRAM suitable for stacks
- USB/Ethernet/CAN-FD
- Large number of serial Interfaces
- xSPI compliant Octal SPI I/f with XIP & Decryption-on-the-fly

Building Automation



- Large On-Chip Flash/SRAM memory
- Wide connectivity options: CAN-FD /USB/Ethernet
- Rich analog features
- Small packages

Metering



- Scalable lineup
- Tj 125°C support
- Long product life
- Industrial quality grade
- Advanced security on-chip

Home Appliance



- High performance w/ AI/ML acceleration
- Tj 125°C support
- Extensive family lineup
- Motor control solutions

INTRODUCING THE RENESAS HIGH PERFORMANCE RA8 SERIES

INDUSTRY'S FIRST MCUs BASED ON THE NEW ARM® CORTEX® -M85 CORE



Highest Performance for Compute Intensive Applications and AI/ML

- Powerful **Arm® Cortex® -M85** core with AI/ML capability
- **6.39 CoreMark/MHz** Demonstrated Performance



Advanced security for truly secure IoT

- **Hardware Root-of-Trust** and Secure Boot
- Advanced cryptography for secure element functionality
- **TrustZone** for isolation and system partitioning



Lower overall system power consumption

- Multiple low power modes & features
- 1.68-3.6V operating voltage



Lower costs and simplified design

- Embedded flash for lower BOM costs
- High integration with best-in-class peripherals



Ease of Development with comprehensive Software and Tools

- Flexible software package with RTOS
- Open architecture supports legacy code
- Robust partner ecosystem



INDUSTRY'S FIRST MCU WITH NEW ARM® CORTEX® -M85 CORE!

The new RA8 MCUs ...

Bridge the gap between MCUs and MPUs

Enable compute-intensive applications with the lower power consumption and ease of use of an MCU



First MCU with Arm® Cortex® -M85 Core Delivering
6.39 CoreMarks/MHz

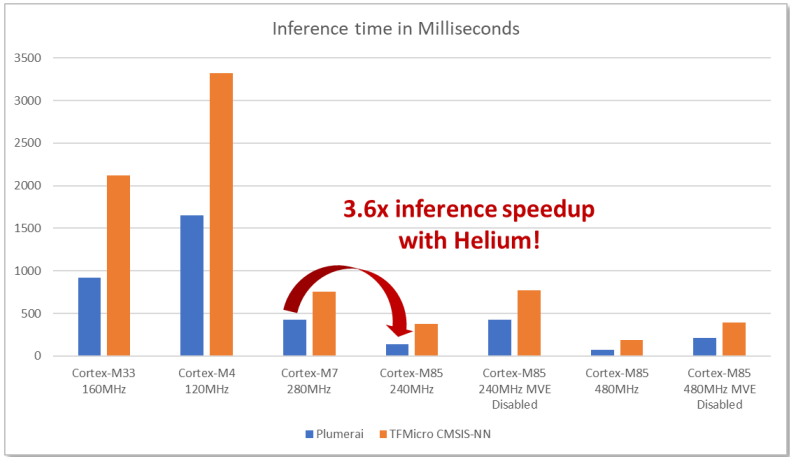
Latest Arm v8.1-M Architecture with **Helium** accelerates
DSP & AI/ML tasks

Unprecedented **4X** DSP/ML & **30%** Higher Scalar
Performance over Cortex-M7

Advanced security with TrustZone and PACBTI



	Cortex-M7	Cortex-M85
Architecture	Arm v7-M	Arm v8.1-M
TrustZone	Not supported	Supported
Helium (MVE)	Not supported	Supported
HW floating point	Scalar DP/SP	Scalar HP/SP/DP Vector HP/SP
MACs per cycle	1 32bit x 32bit	2 32bit x 32bit 4 16bit x 16bit 8 8bit x 8bit
CoreMark/MHz	5.29	6.39



Demonstrated Performance Uplift with Helium

RA PORTFOLIO UPDATE



Series Groups

RA8 Over 240MHz		RA8M1 480MHz Cortex-M85, ~2MB Flash, USBHS/FS, Ethernet, RSIP-E51A		Wide line-up ▪ 4 Series ▪ 22 Groups ▪ 287 Devices	
	RA6M3 120MHz Cortex-M4, ~2MB Flash Ethernet, USBHS, CAN, Graphics, JPEG, TFT LCD, SCE7	RA6M5 200MHz Cortex-M33, ~2MB Flash TrustZone, Ethernet, USBFS+ USBHS, CAN-FD, Octa SPI, SCE9	RA6E2 200MHz Cortex-M33, ~256kB Flash TrustZone, USBFS, CAN FD, I3C		RA6T3 200MHz Cortex-M33, 256KB Flash PWM, PGA, CMP, TFU, CAN FD, USBFS
	RA6M2 120MHz Cortex-M4, ~1MB Flash Ethernet, USBFS, CAN, SCE7	RA6M4 200MHz Cortex-M33, ~1MB Flash TrustZone, Ethernet, USBFS, CAN, Octa SPI, SCE9	RA6E1 200MHz Cortex-M33, ~1MB Flash TrustZone, Ethernet, USBFS, CAN		RA6T2 240MHz Cortex-M33, 512KB Flash PWM, PGA, Motor Accelerator, CAN-FD, SCE5
RA6 Up to 240MHz	RA6M1 120MHz Cortex-M4, 512KB Flash USBFS, CAN, SCE7				RA6T1 120MHz Cortex-M4, ~ 512KB Flash PWM, PGA, CMP, SCE7
		RA4M3 100MHz Cortex-M33, ~1MB Flash TrustZone, USBFS, CAN, SCE9	RA4E2 100MHz Cortex-M33, 128KB Flash TrustZone, USBFS, CAN FD, I3C		RA4W1 48MHz Cortex-M4, 512kB Flash, Bluetooth, USBFS, CAN, Segment LCD, CTSU Touch Sensing
	RA4M1 48MHz Cortex-M4, 256KB Flash USBFS, CAN, Seg. LCD, CTSU Touch Sensing, 14bit SAR ADC, SCE5	RA4M2 100MHz Cortex-M33, ~512KB Flash TrustZone, USBFS, CAN, SCE9	RA4E1 100MHz Cortex-M33, ~512KB Flash TrustZone, USBFS, CAN	RA4T1 100MHz Cortex-M33, ~256kB Flash, PWM, PGA, CMP, TFU, CAN FD	
RA4 Up to 100MHz					
		RA2L1 48MHz Cortex-M23, ~256KB Flash CAN, CTSU Touch Sensing	RA2E2 48MHz Cortex-M23, ~64KB Flash I3C, WLCSP, 125degC	RA2A1 48MHz Cortex-M23, 256KB Flash USBFS, CAN, CTSU Touch Sensing, 24bit SD-ADC, 16bit SAR ADC	
			RA2E1 48MHz Cortex-M23, ~128KB Flash CTSU Touch Sensing, WLCSP		
RA2 Up to 60MHz					
	Mainstream Line /Low Power		Entry Line	Rich Analog	Wireless
					Motor Control



WHAT DOES THE RA8M1 BRING?

Industry's First MCU with new Cortex®-M85 Core

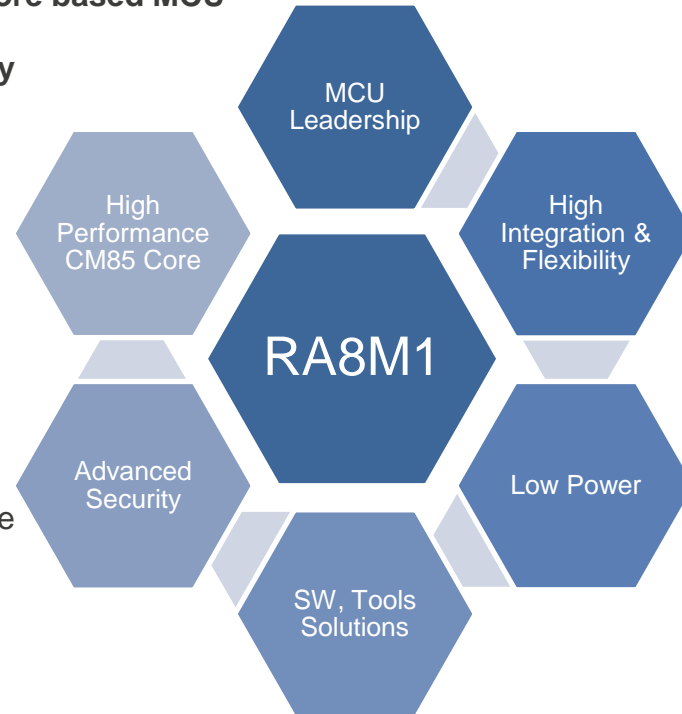
- Lead partner with Arm and **first to market with Cortex®-M85 core based MCU**

Highest Performance

- **Powerful Cortex®-M85 core with AI/ML capability**
- **New Arm v8.1 architecture with Helium** for DSP/ML acceleration and TrustZone
- Higher performance and more energy-efficient than Cortex-M7 core

Advanced security

- **Immutable storage for hardware Root-of-Trust**
- **Advanced cryptography (RSIP-E51A)** with industry leading, NIST compliant algorithms
- Secure firmware programming, Secure debug, Secure factory programming
- **TrustZone** for isolation and system partitioning
- Secure interface to external flash (**OctaISPI w/ Decryption-on-the-fly**)



Comprehensive Software and Tools

- **Flexible software package with RTOS** for faster development
- **Open architecture** supports legacy code and strong ecosystem
- Excellent industry standard tools **optimized for Helium**
- Advanced solutions for motor control, cloud connectivity & AI

High level of integration/Flexibility

- **Embedded flash** for high performance, lower power, security and lower BOM cost
- **Multiple memory configurations** possible for diverse use cases
- **Best-in-class peripherals** for connectivity, analog, timing and safety

Low power consumption

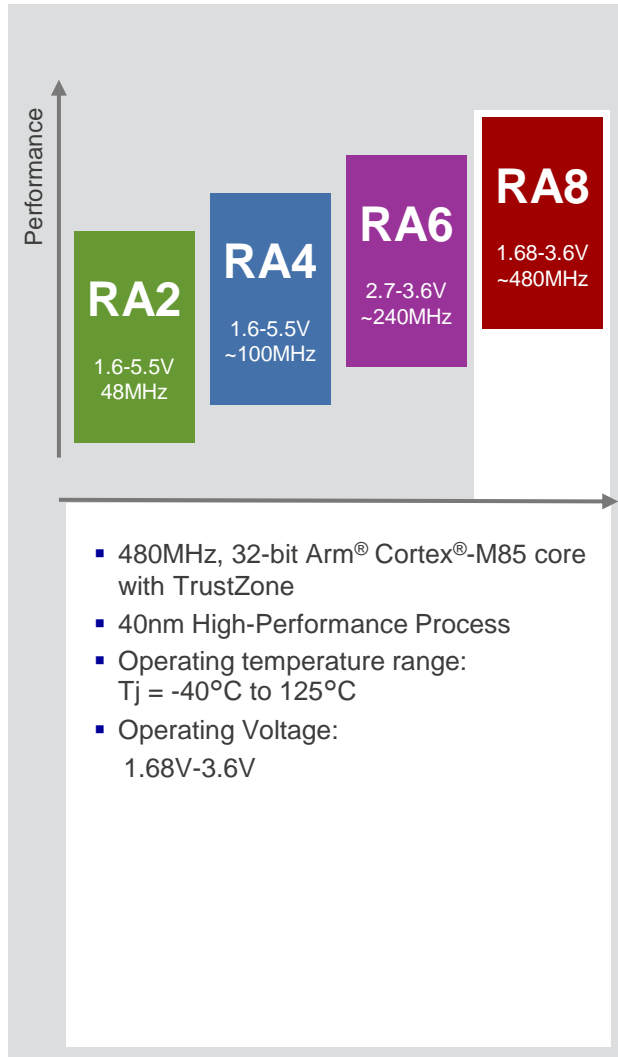
- **Several low power modes/features** to lower power consumption while providing high performance
- **Vcc/Vcc2 domains** enables connection to 1.8V components
- **1.68-3.6V and lower voltage operation**
- 40nm process for low active and standby current

RA8M1 GROUP FEATURES OVERVIEW

Performance	<ul style="list-style-type: none"> ▪ Unprecedented performance of 6.39 CM/MHz with the Arm Cortex-M85 based on the Arm v8.1-M architecture, w/ superscalar 7-stage pipeline ▪ Helium, IEEE754-compliant Arm®v8.1-M M-profile Vector Extension for acceleration of DSP and ML tasks provides 4x AI/ML acceleration ▪ 30% scalar performance and 4x the AI/ML performance uplift as compared to the Cortex-M7 core
Advanced Security	<ul style="list-style-type: none"> ▪ Advanced Renesas Security IP RSIP-E51A for leading-edge cryptographic accelerators; TrustZone and PACBTI with the new CM85 core ▪ Strong hardware root of trust with first stage bootloader in immutable storage providing a true Secure Boot; Octal SPI with DOTF ▪ Secure debug, secure factory programming, secure FW updates, DLM support; Tamper and DPA/SPA side channel attack protection
Rich Peripheral Set	<ul style="list-style-type: none"> ▪ Rich peripheral set including connectivity (Ethernet, USBHS/FS, CAN-FD, xSPI compliant Octal SPI, SPI, I3C/I2C, SDHI, SSI) and Analog (ADC w/ S&H, DAC, Comparators) features ▪ PWM timers including ultra-low power timer (ULPT) and functional safety features enable industrial and motor control applications ▪ 16bit Camera interface provides low-cost option for price sensitive applications such as fingerprint scanners, surveillance cameras etc.
Multiple memory options/ interfaces	<ul style="list-style-type: none"> ▪ Large 2MB/1MB embedded flash and 1MB SRAM (384KB user SRAM w/ ECC, 128KB I/D TCM w/ ECC, 512KB with parity), 32KB I/D Caches ▪ Multiple memory interfaces provide flexibility – xSPI compliant Octal SPI with XIP & DOTF for secure interface to external memory and 32bit SDRAM/External memory bus
Low Power Features	<ul style="list-style-type: none"> ▪ Multiple low power modes, low active mode currents, low-speed active modes and fast wake-up time lower overall system power ▪ Low power features such as CPU sleep states, multiple power domains, power and clock gating, DCDC converter, state retention ▪ Wide voltage range of 1.68-3.6V; Vcc/Vcc2 domain structure enables connection to 1.8V external components and lower power, while rest of the MCU operates at 3.3V
Comprehensive SW & Tools	<ul style="list-style-type: none"> ▪ Flexible Software Package (FSP) with RTOS provides comprehensive and highly flexible software solution and enables AI/ML, cloud connectivity, graphics and motor control solutions ▪ Industry standard Development Tools fully optimized for Cortex-M85 and Helium; Evaluation Kits for ease of development and debug

RENESAS RA8M1 GROUP

ARM® CORTEX®-M85 CORE @ 480MHZ WITH 2MB/1MB FLASH, 1MB SRAM



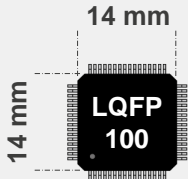
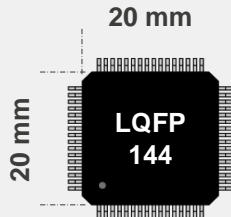
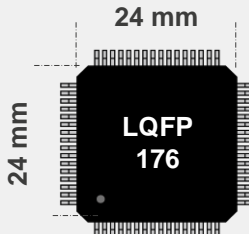
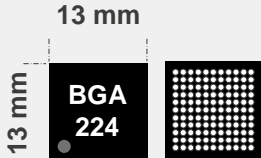
RA8M1

480MHz Arm® Cortex®-M85 Core, Armv8.1-M Architecture w/ Helium

FPU | ARM MPU | NVIC | JTAG | SWD | ETM | Boundary Scan

Memory <ul style="list-style-type: none"> Flash (2MB/1MB) Data Flash 12KB & Flash Cache SRAM (1MB) <ul style="list-style-type: none"> - With ECC (384KB) - With parity (512KB) - TCM w/ ECC (128KB) I/D Caches (32KB) Standby SRAM (1KB) 	Analog <ul style="list-style-type: none"> 12-bit ADC (2unit, 25ch, Unit0 w/ 3ch-S/H) 12-bit DAC (2ch) High-speed Comparator (2ch) Temperature Sensor 	Timers <ul style="list-style-type: none"> 32-bit GPT (8ch) 16-bit GPT (6ch) 32-bit ULPT (2ch) 16-bit AGT (2ch) WDT RTC 	HMI <ul style="list-style-type: none"> CEU Camera Interface
Communication <ul style="list-style-type: none"> Ethernet MAC w/ DMA (x1) CAN-FD (x2) USB2.0 HS (x1) USB2.0 FS (x1) SDHI (x2) I2C (x2), I3C (x1) SPI (x2) SCI (x6) SSI (x2) Octal SPI (x1, XIP&DOTF) External Memory Bus 	System <ul style="list-style-type: none"> DMA (8ch) DTC Clock Generation On-chip Oscillator DC-DC Converter Low Power Modes ELC Interrupt Controller VBAT 	Safety <ul style="list-style-type: none"> Memory Protection Unit SRAM Parity Check ECC in SRAM POE Clock Frequency Accuracy Measurement CRC Calculator IWDT Data Operation Circuit Flash Area Protection ADC Self Test 	Security <ul style="list-style-type: none"> AES (128/192/256) RSA 4K, ECC TRNG SHA-2 (224/256/384/512) Secure Debug First Stage Boot Loader ROM (Immutable storage) TrustZone CMAC/HMAC/GMAC DPA/SPA Side Ch. Protection
Package <ul style="list-style-type: none"> LQFP 100, 144, 176 BGA 224 			

RA8M1 GROUP PACKAGE LINEUP

Flash/ SRAM	2MB Flash 1MB SRAM	R7FA8M1AHECFP	R7FA8M1AHECFB	R7FA8M1AHECFC	R7FA8M1AHECBD
	1MB Flash 1MB SRAM	R7FA8M1AFECFP	R7FA8M1AFECFB	R7FA8M1AFECFC	R7FA8M1AFECBD
Package		LQFP 100	LQFP 144	LQFP 176	BGA 224
Operating Frequency		360 MHz	400 MHz		480 MHz
Package type		LQFP			BGA
Package view		 <p>14 mm 14 mm LQFP 100 0.5 mm pitch</p>	 <p>20 mm 20 mm LQFP 144 0.5 mm pitch</p>	 <p>24 mm 24 mm LQFP 176 0.5 mm pitch</p>	 <p>13 mm 13 mm BGA 224 0.8 mm pitch</p>

RA8M1 TARGET APPLICATIONS

Industrial Applications

PLC
Factory
Automation
Motor Control
Power Inverters
Robotics



Consumer Products

Smart
Appliances
Security
cameras
Robotic Vacuum
Cleaners
Exercise
equipment



Smart Home and Building Automation

HVAC
Mid-end
Thermostats
Lighting Control
Home
Hubs/Gateways



Office Automation

Barcode
Scanners
Fingerprint
scanners
QR Code
readers



Healthcare

Infusion pumps
CPAP Machines
Respirators
Hospital beds



The RA8M1 Group is a general purpose MCUs and find application across broad markets

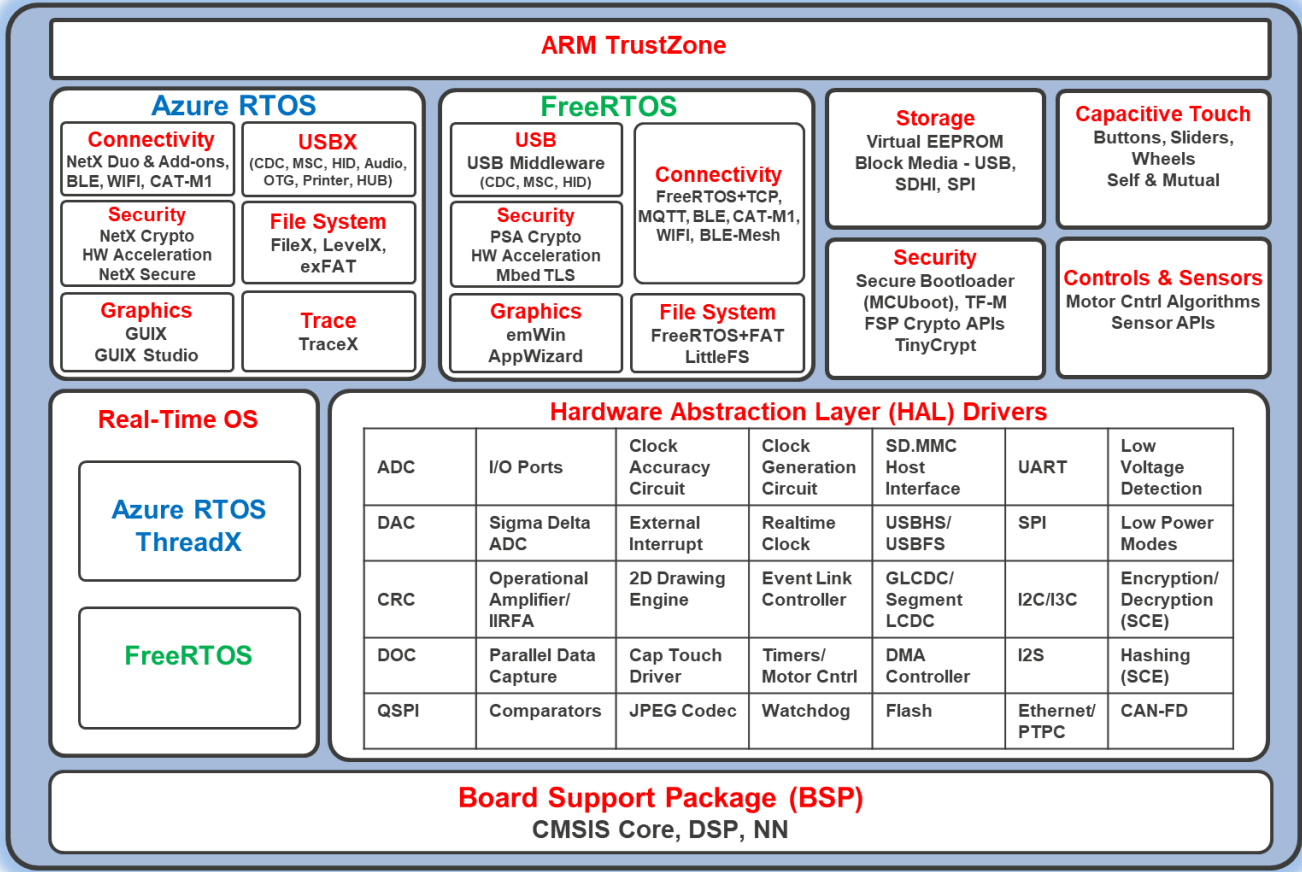
RA8M1 ENABLEMENT



FLEXIBLE SOFTWARE PACKAGE (FSP)

MIDDLEWARE AND DEVICE DRIVERS TO REDUCE TIME TO PRODUCTIZATION

Production Ready Peripheral Drivers	<ul style="list-style-type: none"> HAL APIs to access all MCU peripherals ARM TrustZone Enabled Intuitive configurator and code generator Unit and system tested Static and dynamic analysis with industry standard tools
Uses RTOS 	<ul style="list-style-type: none"> Azure RTOS and FreeRTOS integrated with Flexible Software Package Tool configurable RTOS resources (Threads, mutexes, etc...) Bare metal support included
With Connectivity	<ul style="list-style-type: none"> Includes Azure RTOS NetX Duo & add-ons, FreeRTOS TCP/IP stack, Secure Sockets, Cellular (CAT-M1), Wi-Fi & BLE/Mesh Includes MQTT and TLS Supports connectivity with all major Cloud Platform USB middleware for CDC, MSC, HID, Audio and OTG
And Security	<ul style="list-style-type: none"> Cryptographic APIs based on Arm Mbed PSA, NetX Crypto and FSP Crypto APIs Crypto hardware acceleration supported PSA Level 2 and CAVP Certified Secure debugging



EXPANSIVE 3RD PARTY SOLUTIONS PORTFOLIO



ARTIFICIAL INTEL



TOOLS & UX

NEW

Solution page released

Under preparation



CONNECTIVITY & CLOUD



SECURITY & SAFETY

COMMUNITY OF 100+ PARTNERS

SECURITY & SAFETY

KUDELSKI THINGS

HCC

SECURE THINGZ

Cypherbridge

ECO LUX

ORYX EMBEDDED

NEC

SMARTAXIOM

CollaboGate

eps

Veridify Security

Ubiqutious AI

wolfSSL

Ubiqutious AI

SEGGER

PX5 [RTOS]

ILC

Advanced Media, Inc.

KDDI

NEWTECH INTEL SOL

Cyberon

SEGGER

LVGL

EDGE IMPULSE

RT-Thread

ARTIFICIAL INTEL

AZIP

SYNTIANT

AVNET

Qeexo

EDGE IMPULSE

DEEP INSIGHT

Stream ANALYZE

ignitarium

新光商事

Shinko Shoji Co., Ltd.

AI Sing

Micro.ai

Plumerai

SensiML

CRANK SOFTWARE

AREX

Nps

株式会社大原エヌデーエス

CEVA

CapExt

FDI

HGI

Pachira

Qt

文暉科技

Algorithm Specialist

TMC

TOSHIBA

AIFA

Intelloid

TOOLS & UX

SMH technologies

GaleComm

AlphaProject

Hohuto Electronic

RTOS

GRAPE SYSTEMS

アイフォーコム

IFORCOM

Flash Support Group

CapExt

MIKRO

MINATO

SEGGER

arm KEIL

HCC

Ubiquitous AI

KMC

TAKAOKA TOKO CO., LTD.

PHYTEC

SECURE THINGZ

ASIS

perceptio

DTS INSIGHT

eForce

Ubiquitous AI

reLoc

Ubiquitous AI

GT&T

NTX Embedded

SWISYS

CS Lab

MBS

TMG TE

utthunga

TATA ELXSI

JEM

ORSTAR

SERIOUS

WITTENSTEIN

port

L&T Technology Services

CONNECTIVITY & CLOUD

Alibaba Cloud

arm PELION

Proassist

LiOS Things

ABUF 艾拉比

clarinox

HCC

HOLD

騰訊大科技

Microsoft Azure

nabto

Pantronics

twilio

TencentOS Tiny

HUAWEI

silex technology

ALTOBEAM

aws

Micro.ai

RT-Thread

MathWorks

Commotech

Comtek Lab

EPROSIMA

ORSTAR

SERIOUS

WITTENSTEIN

port

L&T Technology Services



SENSING & CONTROL



APPLN SPECIFIC/ EMERG

RA FAMILY DEVELOPMENT ENVIRONMENT

EASY TO USE AND FLEXIBLE

On-Chip Debug

- Renesas E2 & E2 Lite



- Segger J-Link



IDE

- Renesas e²studio



- Keil MDK



- IAR Embedded Workbench



Compiler

- GNU



- Arm Compiler V6



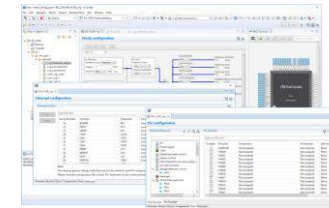
- IAR ARM Compiler



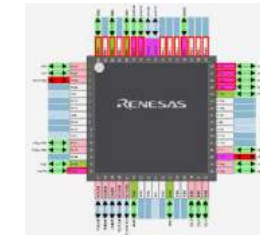
- Arm LLVM

Support Tools

- FSP driver selection and configuration



- Intelligent pin mapping



- Flash programmer

- PG-FP6
- RFP
- A wide choice of 3rd party solution



Kits and Boards

- Evaluation Kits

- | | |
|-------------------|-------------|
| ■ EK-RA2A1 | ■ EK-RA4E2 |
| ■ EK-RA2L1 | ■ EK-RA6M1 |
| ■ EK-RA2E1 | ■ EK-RA6M2 |
| ■ EK-RA2E2 | ■ EK-RA6M3 |
| ■ EK-RA4W1 | ■ EK-RA6M3G |
| ■ EK-RA4M1 | ■ EK-RA6M4 |
| ■ EK-RA4M2 | ■ EK-RA6M5 |
| ■ EK-RA4M3 | ■ EK-RA6E2 |
| ■ EK-RA8M1 | |

- Fast Prototyping Boards

- | | |
|-------------|-------------|
| ■ FPB-RA2E1 | ■ FPB-RA6E1 |
| ■ FPB-RA2E2 | ■ FPB-RA4E2 |
| ■ FPB-RA4E1 | ■ FPB-RA6E2 |

- Solution Kits

- | | |
|--------------|--------------|
| ■ RSSK-RA6M2 | ■ RSSK-RA2L1 |
| ■ RSSK-RA6T1 | ■ MCK-RA6T2 |
| ■ MCK-RA4T1 | ■ MCK-RA6T3 |

EK-RA8M1

EVALUATION KIT FOR RA8M1 MCU GROUP

Key Features

Special Feature Access

- Ethernet
- USB High Speed Host & Device
- 64 MB External Octa-SPI Flash
- CAN FD PHY

MCU Native Pin Access

- R7FA8M1AHECBD MCU
- 480 MHz, Arm® Cortex®-M85 core
- 2 MB Code Flash, 1 MB SRAM
- 224 pins, BGA package
- Native pin access through male pin headers
- MCU & USB current measurement
- DC/DC mode configuration

Ecosystem & System Control Access

- USB Full Speed Host & Device
- 5 V input through USB (Debug, FS) or external power supply
- Debug on-board (Segger J-Link®)
- Debug in (ETM, SWD & JTAG)
- Debug out (SWD)
- 3 User LEDs & 2 User buttons
- 2 SeeedGrove® system (I2C & analog)
- 2 Digilent Pmod™ (SPI & UART)
- Arduino™ (Uno R3)
- MikroElektronika™ mikroBUS
- SparkFun® Qwiic® (I2C)
- MCU boot configuration jumper



renesas.com/ra/ek-ra8m1

(User manual, quick start guide, development tools, schematics, design files & example projects)

RTK7EKA8M1S00001BE

(Orderable part number)

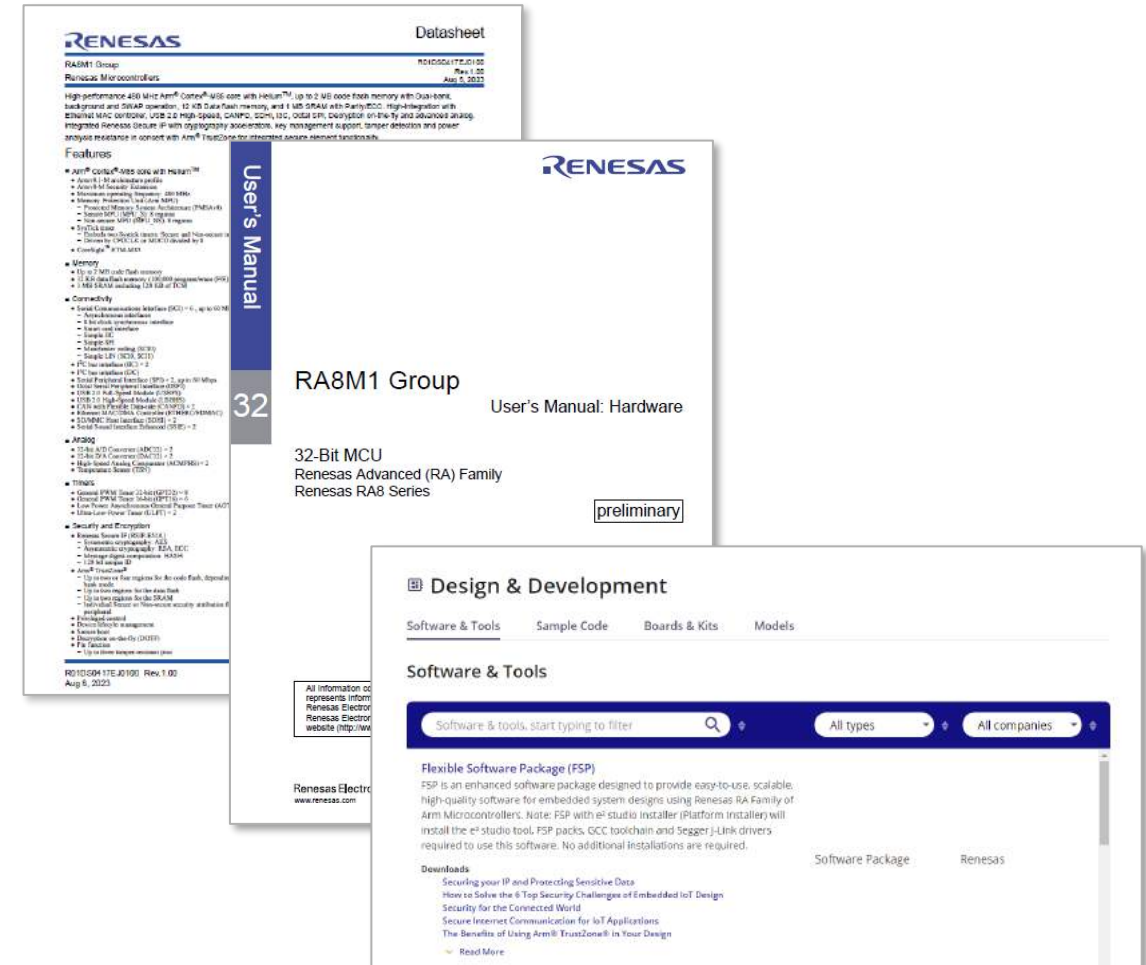


RA8M1 COLLATERAL

Please visit: renesas.com/ra8m1

Product Documentation

- RA8M1 Group Flyer
- RA8M1 Hardware User Manual v1.x
- RA8M1 Datasheet v1.x
- EK-RA8M1 Quick Start Guide
- EK-RA8M1 User Manual
- FSP v5.0 GA Release
- FSP User Manual
- Development Tools w/ CM85 support
- RA8M1 Application Notes
- RA8M1 Example Projects



RA8M1 PART NUMBER LIST

Orderable Part Number	Flash	RAM	Data Flash	Operation Temperature Tj (°C)	Package		Package dimensions (mm x mm)	Pin Pitch (mm)	Description
R7FA8M1AFECFP	1MB	1MB	12KB	-40 - 125	LQFP	100	14x14	0.5	MCU RA8M1 ARM CM851M/1M LQFP100
R7FA8M1AFECFB	1MB	1MB	12KB	-40 - 125	LQFP	144	20x20	0.5	MCU RA8M1 ARM CM85 1M/1M LQFP144
R7FA8M1AFECFC	1MB	1MB	12KB	-40 - 125	LQFP	176	24x24	0.5	MCU RA8M1 ARM CM85 1M/1M LQFP176
R7FA8M1AFECBD	1MB	1MB	12KB	-40 - 125	BGA	224	13x13	0.8	MCU RA8M1 ARM CM85 1M/1M BGA224
R7FA8M1AHECFP	2MB	1MB	12KB	-40 - 125	LQFP	100	14x14	0.5	MCU RA8M1 ARM CM85 2M/1M LQFP100
R7FA8M1AHECFB	2MB	1MB	12KB	-40 - 125	LQFP	144	20x20	0.5	MCU RA8M1 ARM CM85 2M/1M LQFP144
R7FA8M1AHECFC	2MB	1MB	12KB	-40 - 125	LQFP	176	24x24	0.5	MCU RA8M1 ARM CM85 2M/1M LQFP176
R7FA8M1AHECBD	2MB	1MB	12KB	-40 - 125	BGA	224	13x13	0.8	MCU RA8M1 ARM CM85 2M/1M BGA224

Part number	Title	Description
RTK7EKA8M1S00001BE	EK-RA8M1	Evaluation Kit for RA8M1 MCU Group

SUMMARY: RA8 SERIES & RA8M1 KEY MESSAGES

- **RA8: Industry's first 32-bit MCUs based on the new Arm® Cortex®-M85 core** demonstrated at Embedded World 2022/2023
- **RA8M1 Group MCUs: Highly integrated, high performance MCUs** lower costs and simplify designs
- **Bridge the gap between MCUs and MPUs** and enable compute-intensive applications with the lower power consumption and ease of use of an MCU
- **Enable significant step up in performance**
 - >6.3 CoreMark/MHz
 - 30% uplift in scalar performance and 4x ML performance compared to CM7
 - 20% vector performance uplift compared to the CM55
 - Helium enables advanced DSP/ML capabilities for compute intensive applications
 - Brings TrustZone to highest performance M-class cores
- **Comprehensive solution** with FSP, development tools and evaluation kits



<https://www.renesas.com/ra>

