

SALES TRAINING WEBINAR

RA4E2 AND RA6E2 GROUP INTRODUCTION

JANUARY 2023, VERSION 1.00
IOT PRODUCT MARKETING DEPARTMENT 1
IOT PLATFORM BUSINESS DIVISION
IOT AND INFRASTRUCTURE BUSINESS UNIT



INTRODUCTION



RA FAMILY LINE-UP

2024~ 2025

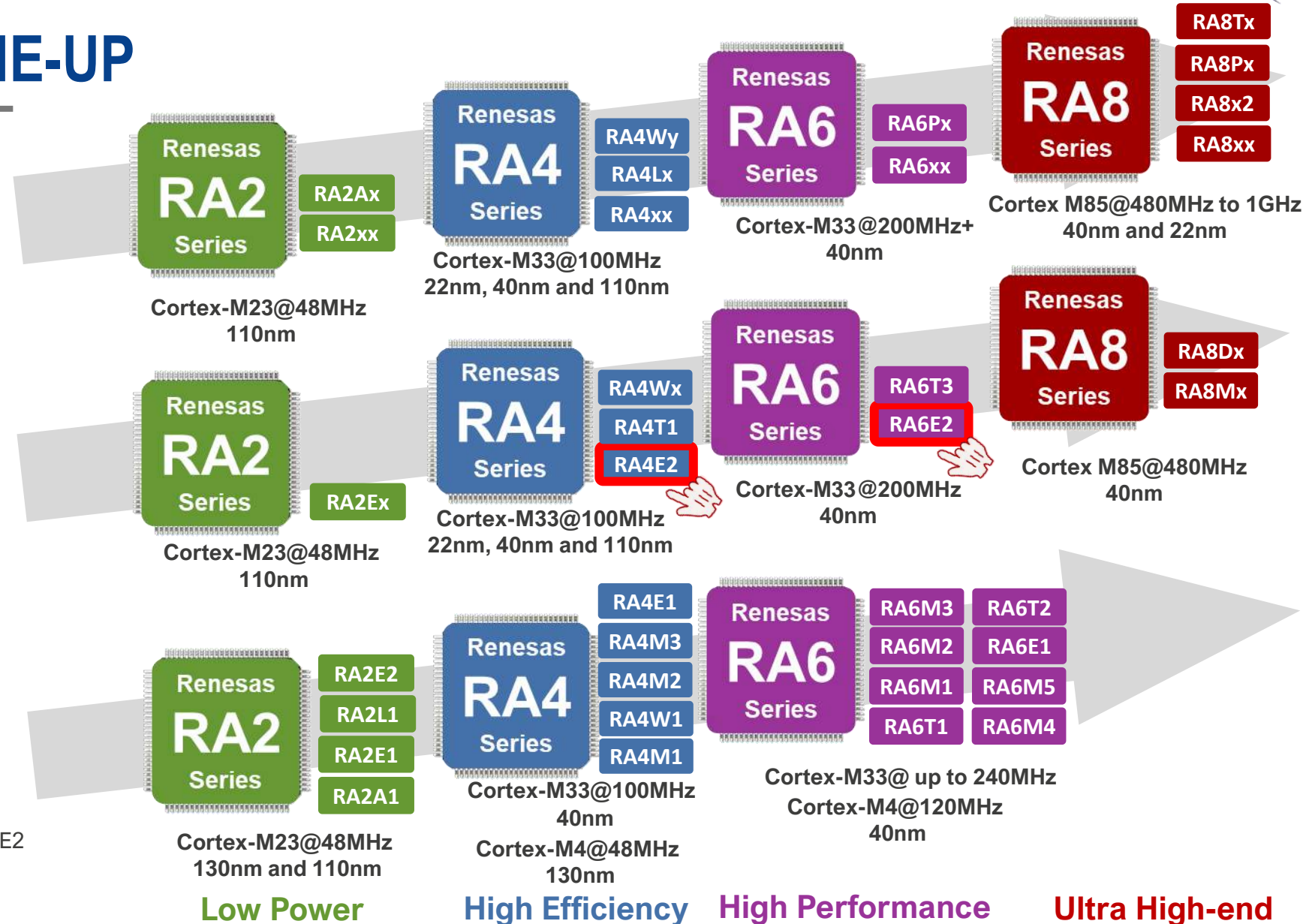
- 1GHz with Dual Core option
- High end motor control
- AI/ML
- UWB
- Low Power
- Rich Analog front end

2023

- High performance RA8Mx
- High performance Graphics RA8Dx
- Motor Control RA4T1, RA6T3
- Entry Line RA2Ex, RA4E2, RA6E2
- Bluetooth RA4Wx

2019~2022

- Enhanced Security RA6M4, RA6M5, RA4M2, RA4M3
- Bluetooth RA4W1
- Motor Control RA6T1, RA6T2
- TFT/HMI RA6M3
- Rich Analog front end RA2A1
- Entry Line RA6E1, RA4E1, RA2E1, RA2E2
- Low Power Enhanced Touch RA2L1



RECENT TRENDS IN THE MCU MARKET

- Increasing requests for higher performance CM33 core MCUs.
- Ecosystem requirements are expanding
- Demands for more optimized feature-set to address cost pressure in customers' system.
- New requirements for new peripherals functionality such as I3C, SSI and CAN-FD



RA4E2 AND RA6E2 GROUPS

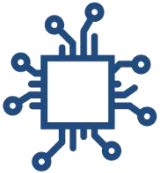
– EXPANSION OF THE ENTRY-LINE

- Unprecedented performance in a range of compact packages
- 100 and 200 MHz Arm® Cortex®-M33 core based on latest Armv8-M architecture
- More memory options, more package options, adding CAN FD and I3C



▪ Entry-Line Value Integration

- Value optimized feature integration for a wide temperature range of $T_a = -40/105^{\circ}\text{C}$
- Great performance and low active power consumption ratio



▪ Entry-Line Connectivity Integration

- USB 2.0 Full-Speed, serial communication, I3C, CAN FD, QSPI, and advanced analog



▪ Entry-Line Migration Path

- Easy migration to Mainstream-line and ASSP-products with FSP and HW scalability and compatibility

Flexible SW Package

*Open &
Flexible
SW Ecosystem*

*High Performance
& Efficient
Drivers*

*Easy
Communication
& **Software** Security
Implementation*

*Certification
& **Compliance**
(CMSIS RTOS)*

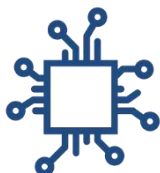
RA4E2 AND RA6E2 GROUPS

– WHAT DO THEY OFFER US

- The RA4E2 & RA6E2 offer us unique levels of performance in a range of compact packages, and :-



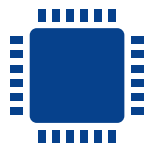
- The most cost-effective RA microcontrollers with the Cortex M33 CPU core



- The smallest Renesas Microcontrollers with a CAN-FD interface for general purpose & industrial applications



- The first RA microcontrollers with the Cortex M33 CPU core with the I3C interface, ideal for sensor applications



- The smallest footprint RA microcontrollers with a USB Full speed interface

RA4E2 & RA6E2

KEY POSITIONING AND FEATURES



RA4E2 – ENTRY-LINE

RA4 Series Entry-Line

- RA4E2: 100MHz Arm® Cortex®-M33, the **smallest Entry-Line product of the RA4 Series**
- **Compact, Optimized entry point into the RA family of Microcontrollers**
- Small package options, 4 x 4 mm 36 pin BGA or 5 x 5 mm 32 pin QFN
- Scalable package options from 32 to 64 pin package
- 128kB Flash with 40kB SRAM

Balanced low power consumption

- **Optimized mixture of high performance with 100 MHz Cortex-M33 Core in combination with low active power consumption.**
- Low active power consumption
 - 91 uA / MHz executing a while(1) from Flash @ 100MHz
 - 82 uA / MHz executing the CoreMark algorithm from Flash

Optimized feature integration

- **Attractive Entry-Line with value optimized feature and connectivity integration** with USB 2.0 Full-Speed Device, serial communication, CAN-FD, I3C, SSI, HDMI-CEC and wide temperature range,
- **System cost reduction: component cost, more available GPIOs, lower PCB cost** by e.g High-Speed On-Chip Oscillator with $\pm 0.25\%$ precision using FLL, DataFlash, Low-Voltage detection, Internal Reset Function

Easy Migration

- **Hardware and Software compatibility and scalability** from the Entry-Line to the Mainstream-line, to our ASSP-products and back
- **Easy to use Flexible Software Package (FSP)**, fast-start software for security and connectivity, and development tools from Renesas and the Arm partner ecosystem
- **Renesas market proven peripherals**

RA6E2 – ENTRY-LINE

RA6 Series Entry-Line

- RA6E3: 200MHz Arm® Cortex®-M33, the **smallest Entry-Line product of the RA6 Series**
- **Optimized entry point into the RA family of Microcontrollers**
- Small package options, 4 x 4 mm 36 pin BGA or 5 x 5 mm 32 pin QFN
- Scalable package options from 32 to 64 pin package
- 128kB – 256 kB Flash with 40kB SRAM

Highest performance

- **Unprecedented performance in the Entry-Line up to 200MHz in compact packages, the highest performance entry level product in the market.**
- **3.95CoreMark / MHz** using the ARM Clang Compiler 6.15 and executing the CoreMark Algorithm from Flash and RAM

Optimized feature integration

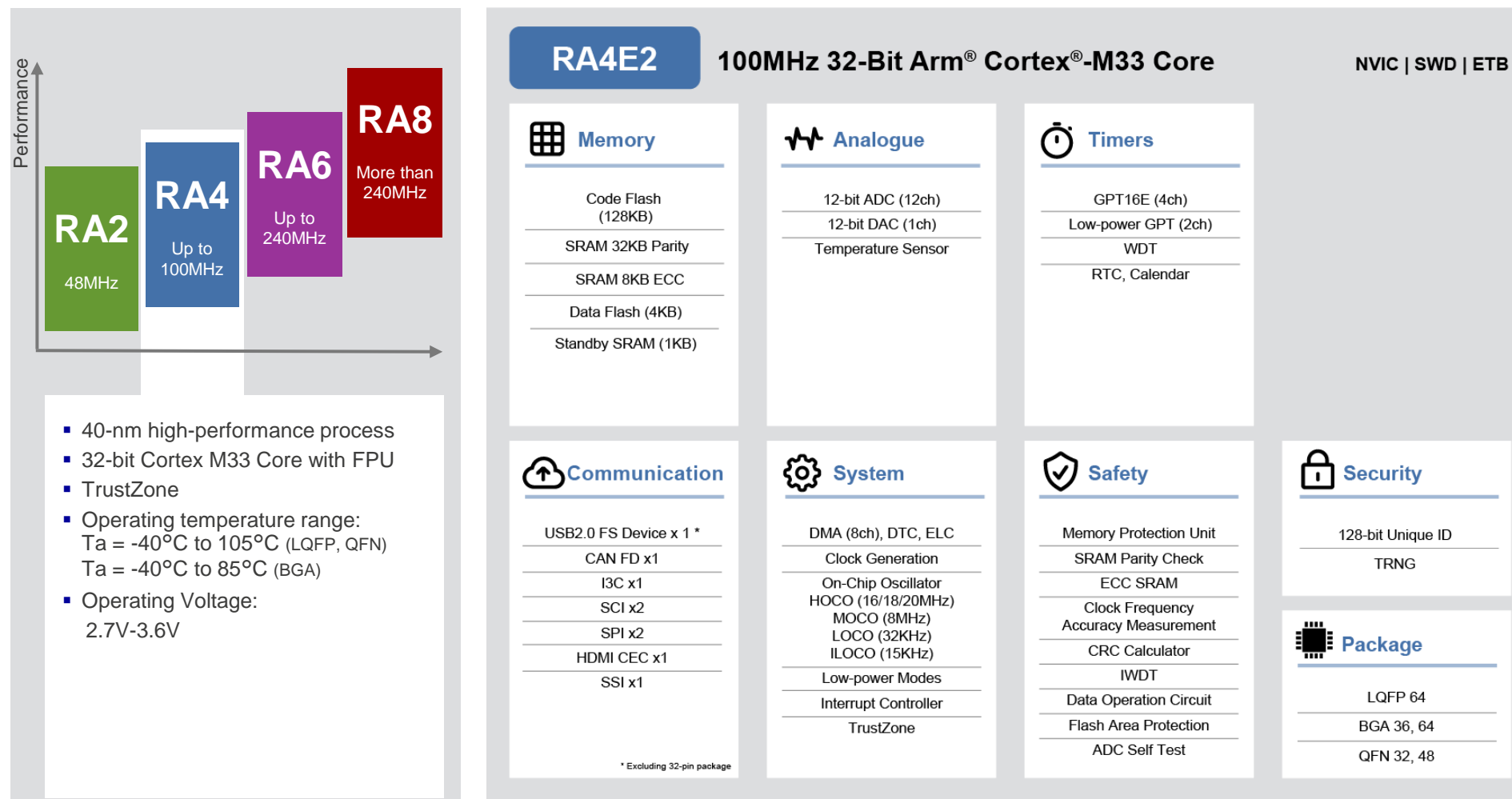
- **Attractive Entry-Line with value optimized feature and connectivity integration** with USB 2.0 Full-Speed Device, serial communication, CAN-FD, QSPI, I3C, SSI, HDMI-CEC and wide temperature range,
- **System cost reduction: component cost, more available GPIOs, lower PCB cost** by e.g High-Speed On-Chip Oscillator with $\pm 0.25\%$ precision using FLL, DataFlash, Low-Voltage detection, Internal Reset Function

Easy Migration

- **Hardware and Software compatibility and scalability** from the Entry-Line to the Mainstream-line, to our ASSP-products and back
- **Easy to use Flexible Software Package (FSP)**, fast-start software for security and connectivity, and development tools from Renesas and the Arm partner ecosystem
- **Renesas market proven peripherals**

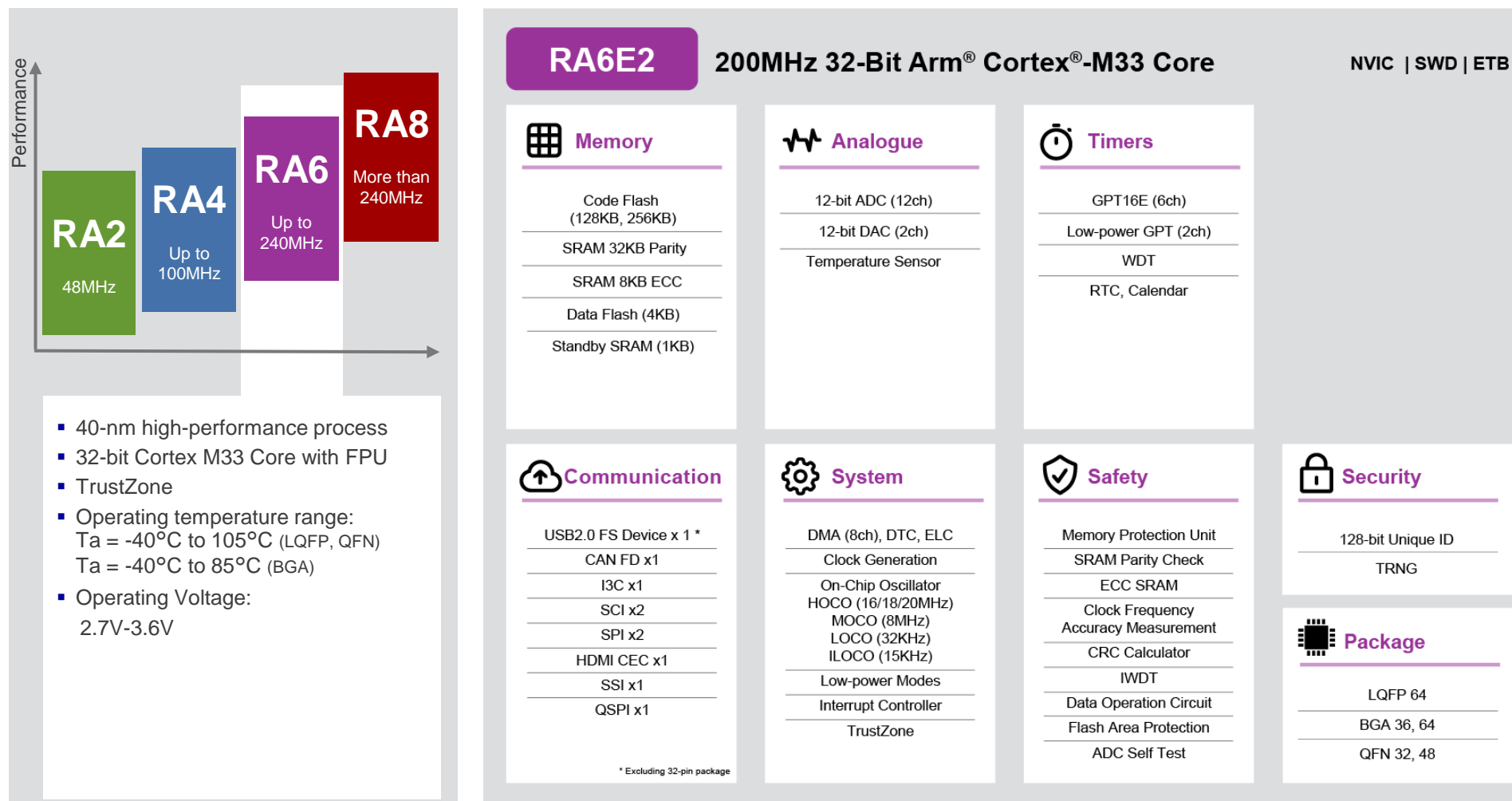
RENESAS RA4E2 GROUP

ARM CORTEX M33 - 128KB FLASH WITH 40KB RAM



RENESAS RA6E2 GROUP

ARM CORTEX M33 - 128KB TO 256KB FLASH WITH 40KB RAM



ENTRY GROUP PRODUCT LINEUP - OVERVIEW

FLASH / RAM Size	1MB / 256kB									RA6E1				RA6E1	RA6E1
	512kB / 256kB									RA6E1				RA6E1	RA6E1
	512kB / 128kB									RA4E1				RA4E1	
	256kB / 128kB									RA4E1				RA4E1	
	256kB / 40kB									RA6E2	RA6E2		RA6E2	RA6E2	
	128kB / 40kB									RA6E2	RA6E2		RA6E2	RA6E2	
										RA4E2	RA4E2		RA4E2	RA4E2	
	128kB / 16kB				RA2E1	RA2E1	RA2E1	RA2E1	RA2E1	RA2E1	RA2E1		RA2E1	RA2E1	
	64kB / 16kB				RA2E1	RA2E1	RA2E1	RA2E1	RA2E1	RA2E1	RA2E1		RA2E1	RA2E1	
	64kB / 8kB	RA2E2	RA2E2	RA2E2											
	32kB / 16kB				RA2E1	RA2E1	RA2E1	RA2E1	RA2E1	RA2E1					
	32kB / 8kB	RA2E2	RA2E2	RA2E2											
	16kB / 8kB	RA2E2	RA2E2	RA2E2											
Pin Count Package		16pin WL CSP	20pin QFN	24pin QFN	25pin WL BGA	32pin LQFP	32pin QFN	36pin LGA BGA	48pin LQFP	48pin QFN	64pin BGA	64pin BGA	64pin LQFP	64pin LQFP	100pin LQFP
Size in mm					3x3	7x7	5x5	4x4	7x7	7x7	4x4	5x5	14x14	10x10	14x14
Pitch in mm					0.4	0.8	0.5	0.5	0.5	0.5	0.4	0.5	0.8	0.5	0.5

RA6/RA4 ENTRY LINE COMPARISON

		RA6E1	RA6E2
Performance	CPU Core	Cortex-M33 w/TrustZone	Cortex-M33 w/TrustZone
	Operating frequency	200MHz	200MHz
	Operating voltage	2.7-3.6V	2.7-3.6V
Memory	Flash/SRAM size	1MB/256KB 512KB/256KB	256KB/40KB 128KB/40KB
Connectivity	Wired	SCI(6), SPI(2), I2C(2), QSPI(1), CAN(1), SSI(1), USBFS(1), SDHI(1), Ethernet(1)	SCI(2), SPI(2), I3C(1) , QSPI(1), CAN FD(1) , SSI(1), USBFS(1) HDMI CEC(1)
Security	Secure Crypt Engine	-	-
	other	Unique ID	TRNG , Unique ID
Analog	ADC	12-Bit ADC(11)	12-Bit ADC(12)
	DAC	12-Bit DAC(1)	12-Bit DAC(2)
	other	-	Temperature Sensor
Timer	PWM timer	32-Bit timer x2 16-Bit timer x4 16-Bit low power timer x6	16-Bit timer x6 32-Bit low power timer x2
Package		100/64 LQFP 48 QFN	64 LQFP 48/ 32 QFN 64/36 BGA

		RA4E1	RA4E2
Performance	CPU Core	Cortex-M33 w/TrustZone	Cortex-M33 w/TrustZone
	Operating frequency	100MHz	100MHz
	Operating voltage	2.7-3.6V	2.7-3.6V
Memory	Flash/SRAM size	512KB/128KB 256KB/128KB	128KB/40KB
Connectivity	Wired	SCI(4), SPI(1), I2C(1), QSPI(1), CAN(1), USBFS(1)	SCI(2), SPI(2), I3C(1) , CAN FD(1) , SSI(1), USBFS(1) HDMI CEC(1)
Security	Secure Crypt Engine	-	-
	other	Unique ID	TRNG , Unique ID
Analog	ADC	12-Bit ADC(9)	12-Bit ADC(12)
	DAC	12-Bit DAC(1)	12-Bit DAC(1)
	other	-	Temperature Sensor
Timer	PWM timer	32-Bit timer x2 16-Bit timer x2 16-Bit low power timer x5	16-Bit timer x4 32-Bit low power timer x2
Package		64 LQFP 48 QFN	64 LQFP 48/ 32 QFN 64/36 BGA

VALUE EXTENSION FROM RA4E1/RA6E1 TO RA4E2/RA6E2

	RA4E2 RA6E2	RA4E1 (using RA4M2 Die) RA6E1 (using RA6M4 Die)
SRAM with ECC	○ (8KB)	- (Parity)
SWD boot mode	○ (+SCI/USB boot)	- (SCI/USB boot)
I3C	○	- (I2C)
CAN FD	○	- (CAN)
HDMI CEC	○	-
Temperature sensor	○	-
TRNG	○	-
AGT	32bit	16bit

Value
Extension!

GPIO comparison

	64pin	48pin	36pin	32pin
RA4E2 / RA6E2	50	34	24	21
RA4E1	44	30	- (no lineup)	-
RA6E1	42	28	-	-



Increased number of GPIOs by reducing power supply pins and improving pin-multiplexing

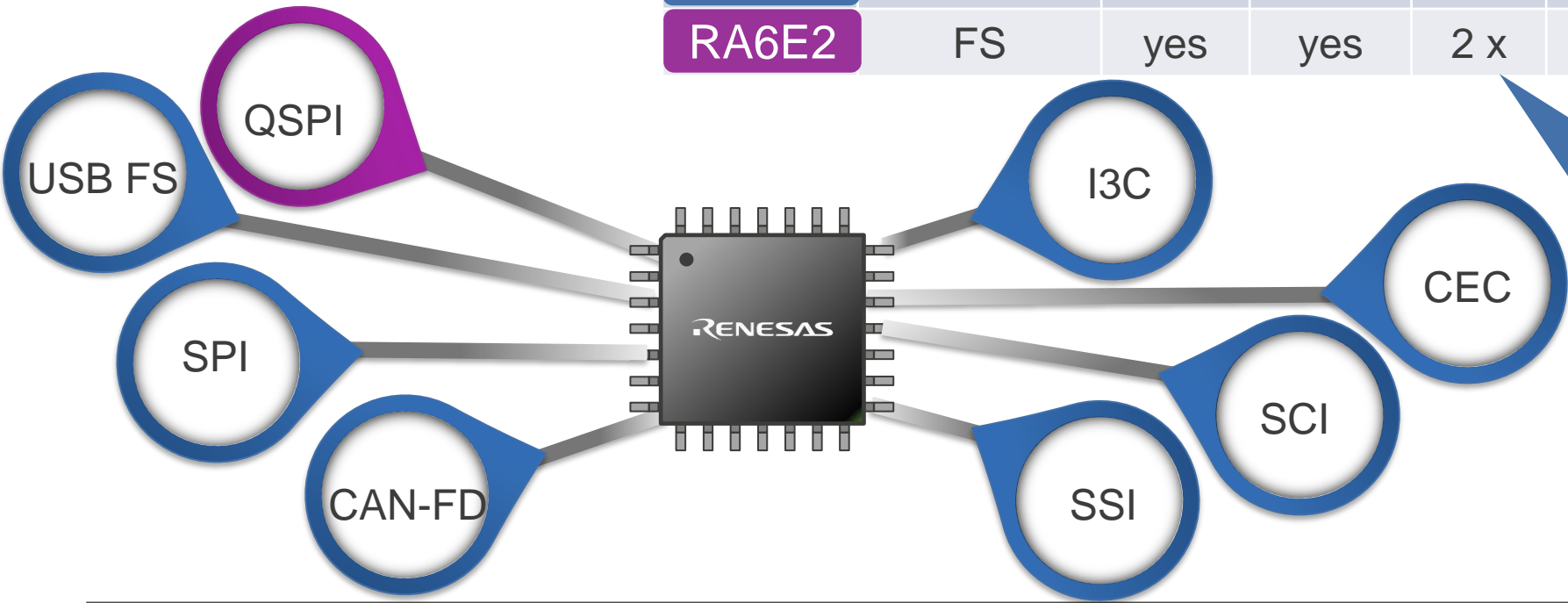
ENDLESS COMMUNICATION OPTIONS - DETAILS

RA4E2 AND RA6E2 GROUP WITH CORTEX-M33

- **Rich connectivity** with multiple serial communication interfaces, all in compact packages



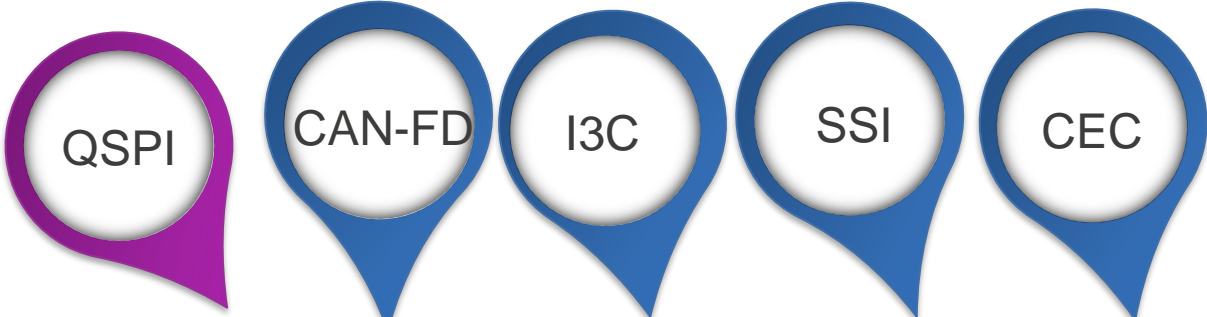
	USB 2.0	Quad SPI	CAN FD	SCI	I3C	SPI	Serial Sound	HDMI CEC
RA4E2	FS	-	yes	2 x	yes	2 x	yes	yes
RA6E2	FS	yes	yes	2 x	yes	2 x	yes	yes



- Asynchronous interfaces
- 8-bit clock synchronous
- Smart card interface
- Simple IIC
- Simple SPI
- Manchester coding

ENDLESS COMMUNICATION OPTIONS - DETAILS

RA4E2 AND RA6E2 GROUP WITH CORTEX-M33



- **Rich connectivity** with multiple serial communication interfaces, all in compact packages
- Even the smallest packages have rich communications functionality

Pin Count	Package	USB 2.0	Quad SPI*	CAN FD	SCI	I3C	SPI	Serial Sound	HDMI CEC
64	LQFP BGA	FS	Yes	Yes	2	Yes	2	Yes	Yes
48	QFN	FS	Yes	Yes	2	Yes	2	Yes	Yes
36	BGA	FS	Yes	Yes	2	Yes	2	Yes	Yes
32	QFN	-	Yes	Yes	2	Yes	2	Yes	Yes

*Note: Quad SPI is available on **RA6E2** only

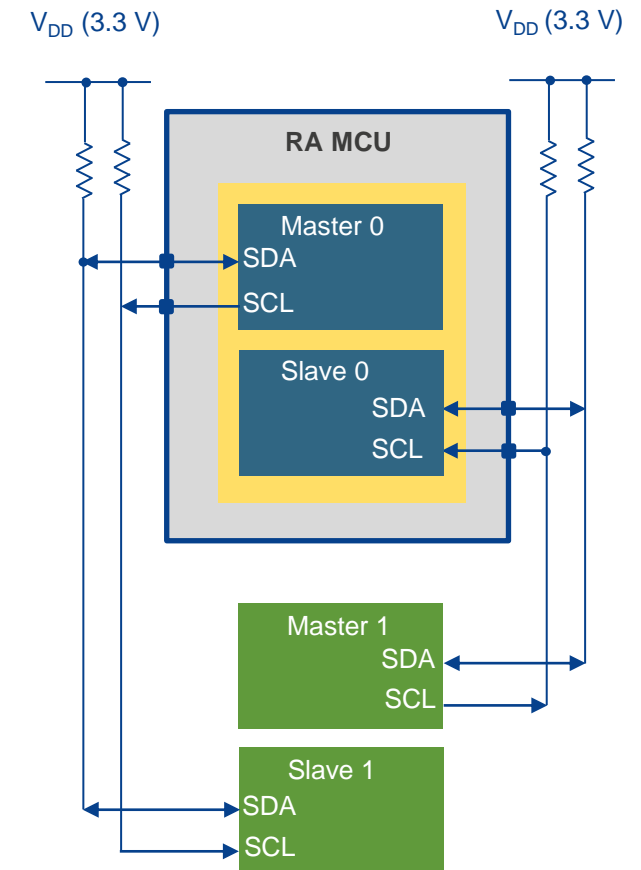
I3C BUS INTERFACE

(IIIC)

- I3C Multi-master, serial, single-ended bus supporting up to 4.6 Mbps, and supports some backward compatibility with the [I2C](#) bus
- The I3C standard was a collaborative effort between various companies under the Mobile Industry Processor Interface Alliance ([MIPI Alliance](#)) developed to provide high speed sensor interfaces in mobile devices and other applications

I3C applications

- Motion sensors
- Gyroscopes
- Audio systems
- Voice recognition systems
- DDR DIMM modules (LED control for gaming PC's)
- Legacy I2C applications
 - memory interfaces



I3C operation using RA MCUs

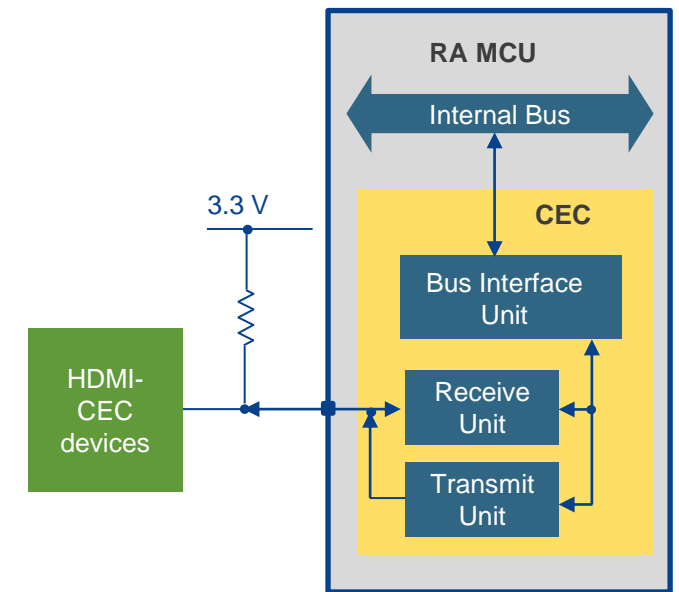
HDMI CEC

(CEC)

- **Consumer Electronics Control (CEC)** is a standard of HDMI designed to control HDMI connected devices
- The CEC bus is a **one-wire**, party line that can connect up to ten AV devices through standard HDMI cabling.

HDMI-CEC applications

- Home entertainment systems
- Video & audio systems
- Home automation systems
- Remote control systems
- Professional studio equipment
- Gaming systems



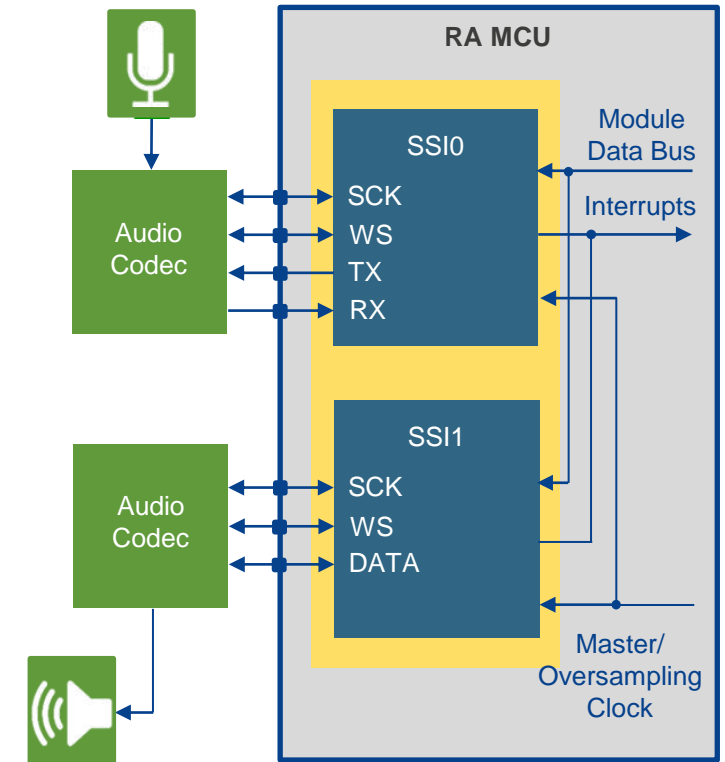
Simplified implementation of CEC

SERIAL SOUND INTERFACE (SSI)

- The SSI provides a Serial interface to transfer PCM/audio data to external devices at speeds up to 50 MHz.

SSI applications

- Audio systems
 - Connection to audio codecs
- Smart speakers
- Remote access systems
- Secure digital voice comms
- Voice recognition systems
- Gaming systems



SSI operation using RA MCUs

TYPICAL APPLICATIONS

WHERE THE RA4 & RA6 ENTRY LEVEL GROUPS ARE A PERFECT FIT!

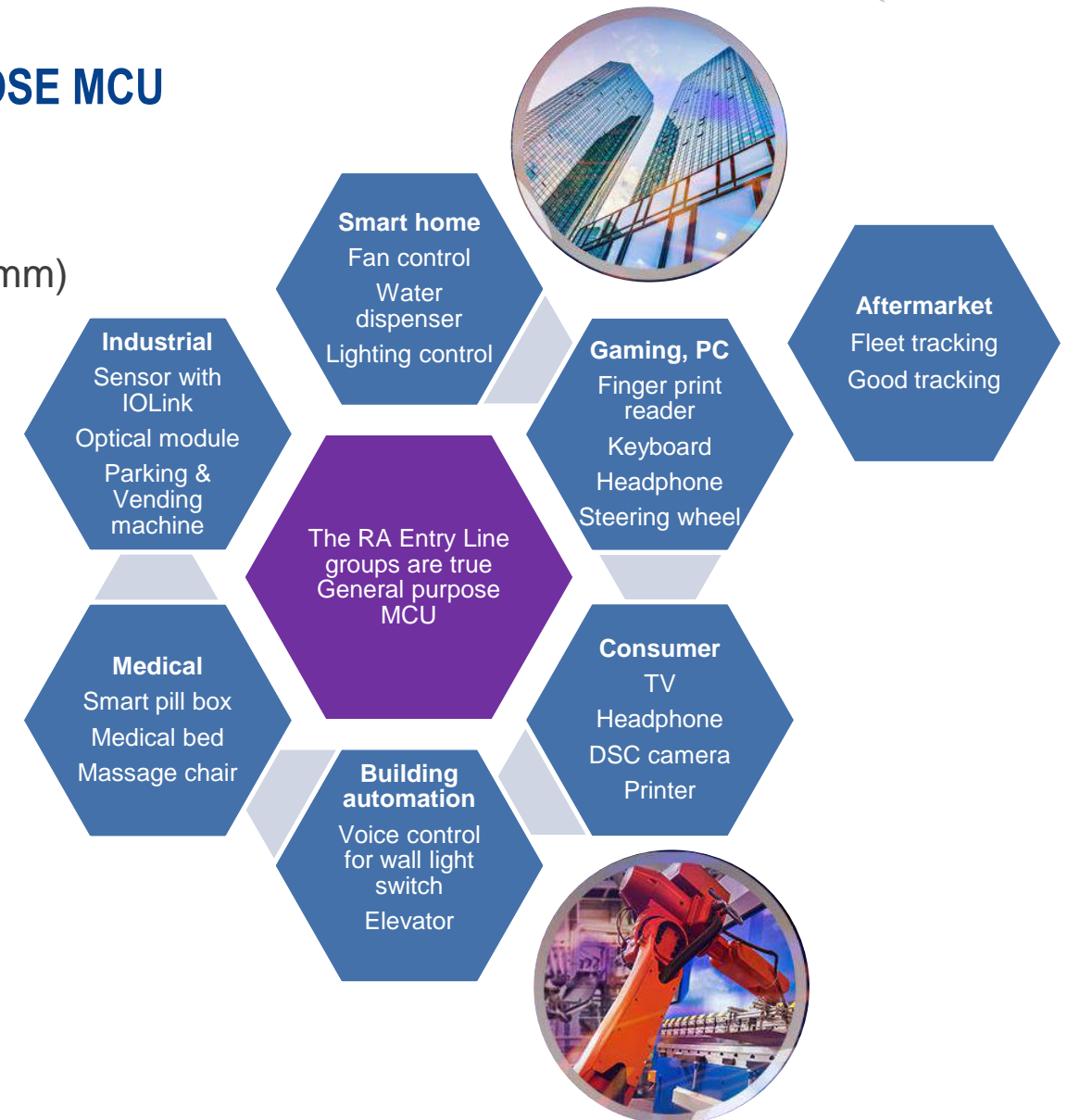


TARGET APPLICATION

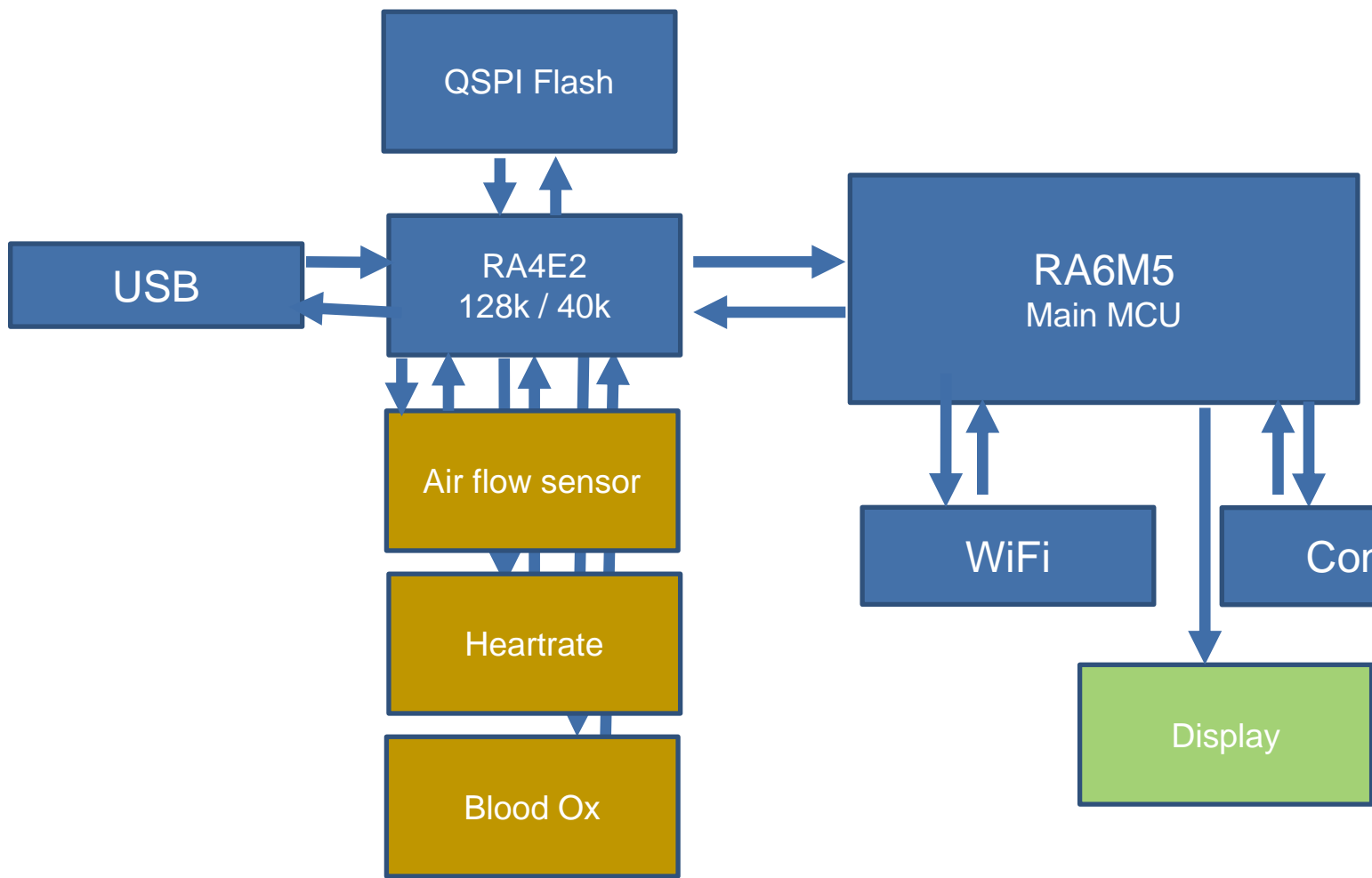
RA CORTEX-M33 ENTRY LINE IS A TRUE GENERAL PURPOSE MCU

Perfect Entry into the RA Family of Microcontroller:

- Compact package and high performance (36pin BGA 4mm x 4mm)
 - Medical sensor
 - Optical, communication, network module
 - Industrial sensor with 3 serial communication interfaces for IO-Link Network module
 - Fingerprint reader module
- Home Appliance
- Home entertainment (housekeeping MCU with HDMI-CEC)
- Voice command with SSI interface for <5 commands
- Industrial sensor hub with CAN FD for flow, humidity, temperature, etc.
- Gaming, headset control, simple steering wheel, etc
- AND MANY MORE...

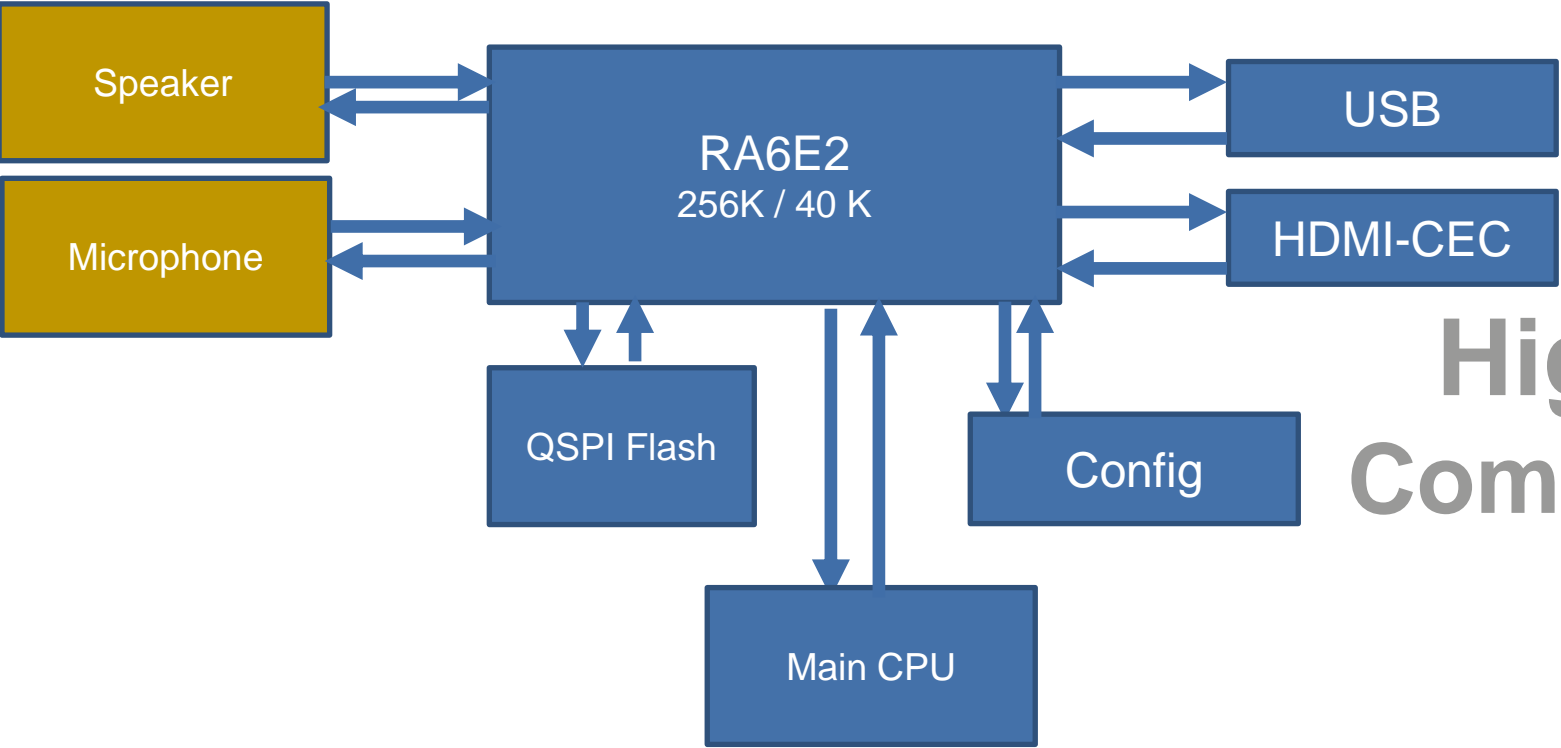


RA4E2 SIMPLIFIED MEDICAL USE CASE



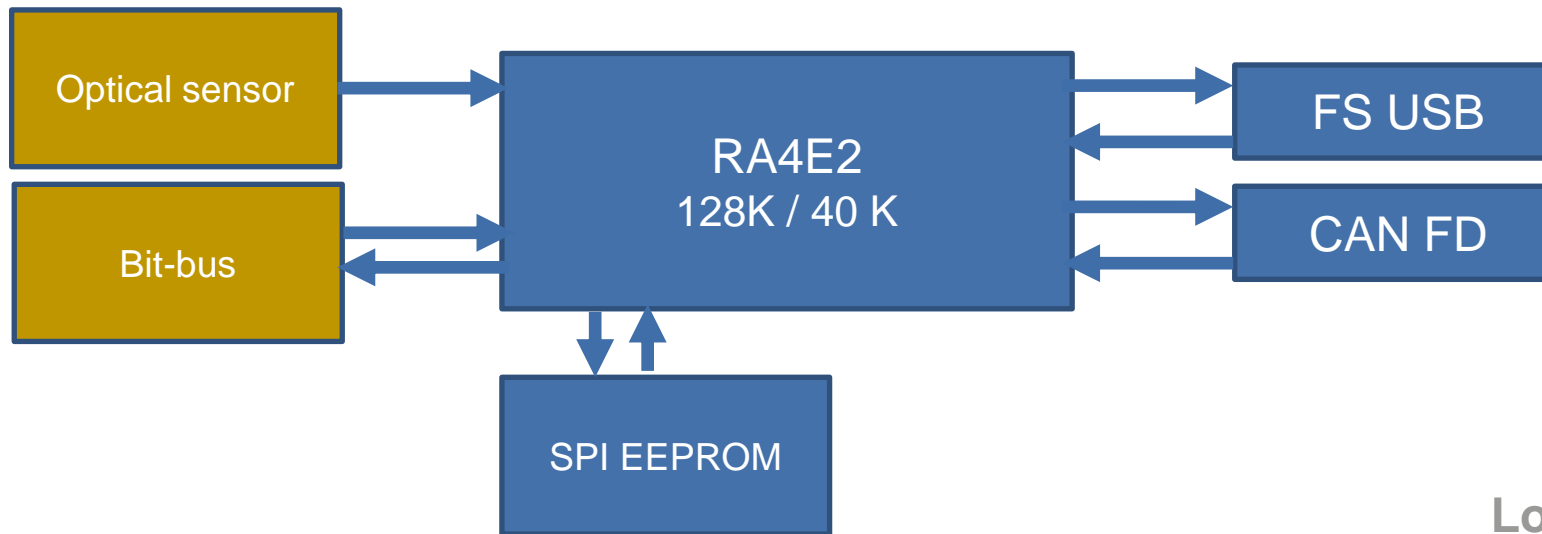
High I²C Performance
 4x4mm BGA Package
 QSPI USB

RA6E2 SIMPLIFIED APPLIANCE SYSTEM / VOICE CONTROL



I3S
 High Performance
 Compact Package
 QFN

RA4E2 SIMPLIFIED INDUSTRIAL PROTOCOL CONVERTOR



High CAN FD Performance
5x5mm Package
Large SRAM
USB-FS
QFN
I²C

Low Power active mode 82 μ A

RA4E2 & RA6E2 DEVELOPMENT SUPPORT

HELP YOU CUSTOMERS GET STARTED WITH THE RA4E2 & RA6E2



RA FAMILY DEVELOPMENT ENVIRONMENT

EASY TO USE AND AS FLEXIBLE AS POSSIBLE

On-Chip Debug

- Renesas E2 & E2 Lite



- Segger J-Link



IDE

- Renesas e²studio



- Keil MDK



- IAR Embedded Workbench



Compiler

- GNU



- Arm Compiler V6

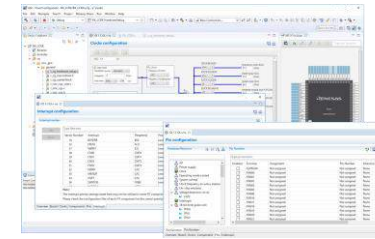


- IAR ARM Compiler

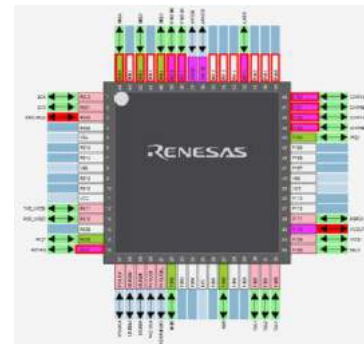


Support Tools

- FSP driver selection and configuration



- Intelligent pin mapping



Kits and Boards

- Evaluation Kits



FPB-RA6E2



FPB-RA4E2



EK-RA6E2



EK-RA4E2

EK-RA4E2 & EK-RA6E2

EVALUATION KITS FOR THE RA4E2 & RA6E2 MCU GROUPS

Key Features

Special Feature Access

- 32 MB External Quad-SPI Flash*
(* EVK RA6E2 only)
- CAN FD PHY

RA4E2 EVK

- 100 MHz, Arm Cortex®-M33 core
- 128 KB Code Flash, 40 KB SRAM

RA6E2 EVK

- 200 MHz, Arm Cortex®-M33 core
- 256 KB Code Flash, 40 KB SRAM

EVK common specification

- 64 pins, LQFP package
- Native pin access through headers
- MCU & USB current measurement

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-ra4e2

renesas.com/ra/ek-ra6e2

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

RTK7EKA4E2S00001BE

RTK7EKA6E2S00001BE

(Orderable part numbers)



FPB-RA4E2 & FPB-RA6E2

FAST PROTOTYPING BOARD FOR RA4E2 & RA6E2 MCU GROUPS

Key Features

FPB-RA4E2

- 100 MHz, Arm Cortex®-M33 core
- 128 KB Code Flash, 40 KB SRAM

FPB-RA6E2

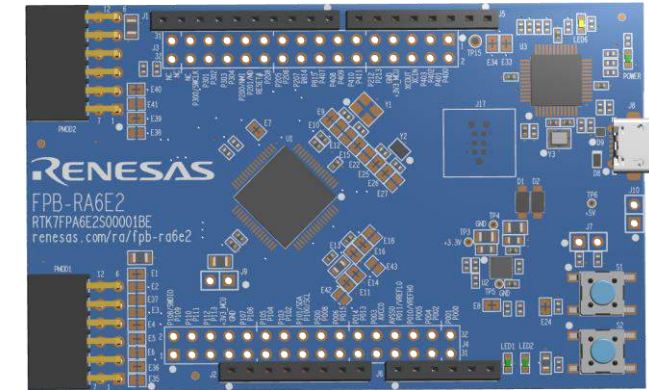
- 200 MHz, Arm Cortex®-M33 core
- 256 KB Code Flash, 40 KB SRAM

EVK common specification

- 64 pins, LQFP package
- Native pin access through headers
- MCU current measurement points

Ecosystem & System Control Access

- 5 V input through USB (Debug) or external power supply
- Debug on-board (Segger J-Link®)
- 2 User LEDs & 1 User button
- 2 Digilent Pmod™ (SPI & UART)
- Arduino™ (Uno R3)
- MCU boot configuration jumper



renesas.com/ra/fpb-ra4e2

renesas.com/ra/fpb-ra6e2

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

RTK7FPA4E2S00001BE

RTK7FPA6E2S00001BE

(Orderable part numbers)

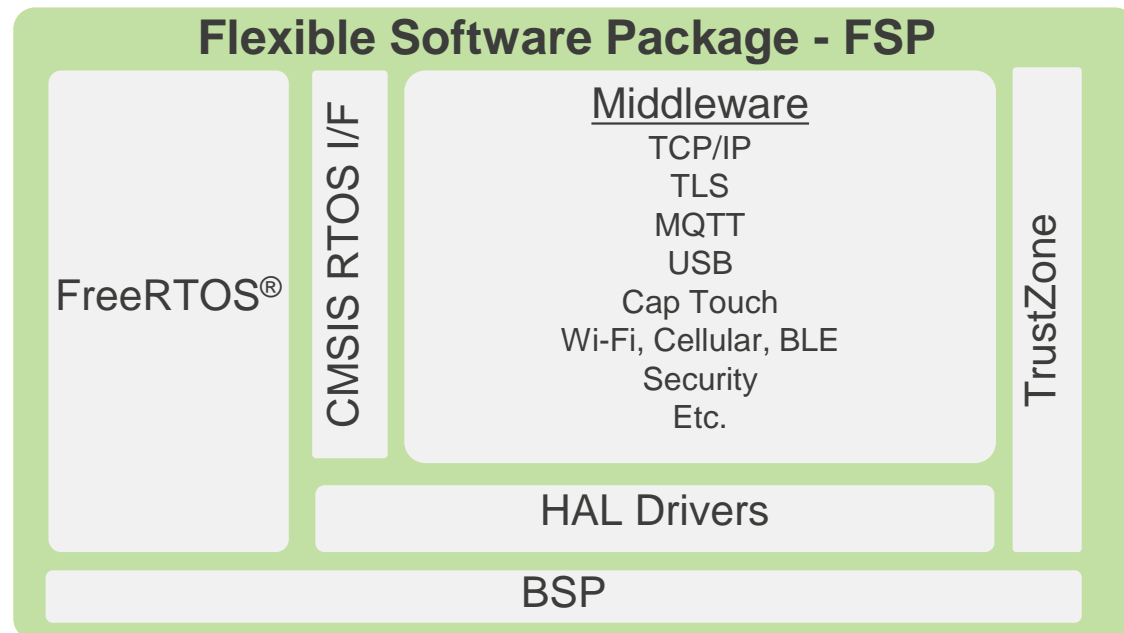


FLEXIBLE SOFTWARE PACKAGE - FSP

SUPPORTED BY FULL ARM ECOSYSTEM

- RA Hardware abstraction layer (HAL) with portable APIs
- High performance / highly efficient HAL drivers
- **Intuitive pin selection, clock tree, FSP HAL driver and stack configuration tools**

- Middleware to ease implementation of communications & security, CMSIS RTOS compliant
- Open software ecosystem, Flexible use of legacy code
- Collaboration with Third Parties



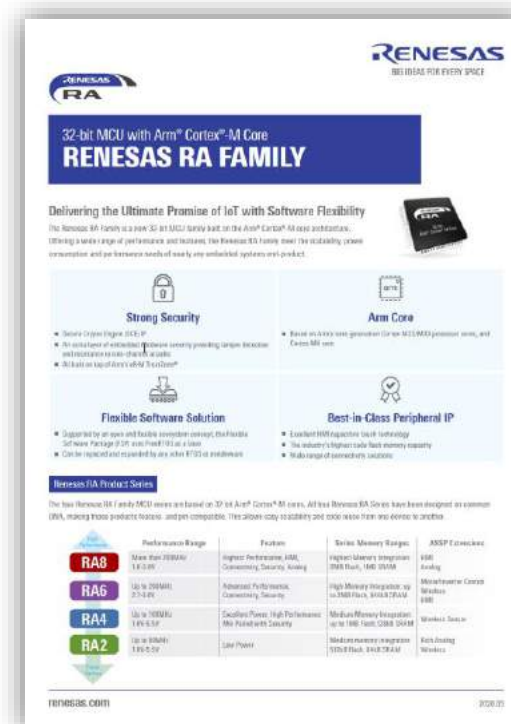
MARKETING MATERIAL

WHAT AND WHERE?



- Presentation material
- Group Flyer (every product)

- RA family brochure (r01pf0182ej0200-ra.pdf)



INTRODUCTION VIDEO

renesas.com

- We have a 60 Second Overview available for all new RA groups
- E.g. RA6M4 60 Second Overview Video: <https://www.renesas.com/support/videos/ra6m4-mcu-intro.html>



Added on 2020-10-08

Introducing the RA6M4 MCU group with superior performance and advanced security for IoT applications.

Related Resources



SELECTION GUIDE

Renesas RA6M4 Group of 32-bit MCUs with Arm® Cortex®-M Core

Related Information

- RA6M4 Group MCUs
- EK-RA6M3 Evaluation Kit for RA6M3 MCU Group
- RA Cortex-M MCUs
- Flexible Software Package (FSP)

PRESENTATION MATERIAL

SEISMIC
selection

Campaign page for every RA group including

- Group Teaser / success stories / target apps
- Introduction presentation
- Flyer



Top level page

- RA4 and RA6 with CM33 sales intro – version with Audio
- RA overview with all available options and Block Diagrams
- RA Xpert



FAQ AND BLOG

renesas.com

Renesas.com -> About -> Technical Support

Renesas.com -> About -> News Releases -> Blog

KNOWLEDGE BASE

 LOG IN

RA Family and FSP

- RZ Family
- RE Family
- RL78 Family
- RX Family
- Renesas Synergy
- Other MCUs & MPUs
- Software and Tools
- SoC / System LSI
- Application
- Bluetooth Low Energy
- Amplifiers & Buffers
- Audio & Video
- Mixed signal
- Data Converters
- Other Analog
- IDT Clocks & Timing
- Timing & Digital ICs
- Switches/MUXs /Crosspoints
- Interface
- Industrial Network
- Optoelectronics

RA Family and FSP

RA2L1

- External Memory interface
- Arm® Cortex® M23 CPU
- Safety Functions
- BOM cost saving
- Capacitive Touch Sensing Unit 2
- Capacitive Touch Solution
- Lower system power consumption

RA4W1

- RA4W1 Supports Bluetooth® 5.0 Low Energy Features
- How to Get More Information About RA4W1 Group MCUs
- RA4W1 Radio Low Certification
- Features of RA4W1
- RA4W1 Group Target Application

RA4 & RA6 with Cortex-M33 core

- USB needs a clock of 48MHz, but the maximum system clock is 100/200MHz.
- Firmware update
- TrustZone
- BOM cost saving
- Secure Element Functionality?
- OctaSPI Interface
- Combination of High Performance and Low Power.

RA6T1

- Motor Evaluation Environment
- Motor control
- Peripheral Functions
- Peripheral Functions
- Peripheral Functions
- Safety Standard IEC60730

RA/FSP Software

- Creating an RA Project with IAR compiler in e2 studio
- Creating an RA Project with ARM Compiler 6 in e2 studio
- Saving Flash Memory Contents in e2 studio with FSP
- Measure Time Interval Between Debug Events in e2 studio
- Where can I Find Examples of emWin Applications?
- ARM Compiler Migration Issue with FSP 1.2.0

Blog Posts

Product Category

- All -

Application Category

- All -

Meet the New RA6M4 MCU Group: Smaller, Better, Faster IoT Products with RA Family Microcontrollers

Stefan Ingenhaag introduces the new RA6M4 group of 200 MHz, 32-bit MCUs with a state-of-the-art Arm® Cortex®-M33 Core and explains how they help achieve smaller, better and faster IoT products.

By Stefan Ingenhaag, Senior Staff Engineer -- 2020-10

IEC61508 Functional Safety Solution, who will you rely on?

Makiko Seki, a Marketing Specialist in Industrial Automation Functional Safety for more than 5 years sharing her experiences on

Press Room

- News
- Videos
- Press Contacts
- Investors
- Blogs

About Renesas

- Company Overview
- Executive Team
- Investors
- Careers

MCU SELECTOR

DON'T FORGET OUR APP

O2 WiFiCall

15:09

43%

Search

RENESESAS

MCU GUIDE

Find the right MCU

17+ Years Old

Utilities

Renesas Electronic

What's New

Version History

Version 1.4.0

1mo ago

New features:

- New Renesas RX and RL78 MCU groups have been added

more

Preview

RENESESAS

BIG IDEAS FOR EVERY SPACE

MCU GUIDE

Choose Your Para

Today

Games

Apps

Arcade

Search

App Store

15:09

43%

RENESESAS

BIG IDEAS FOR EVERY SPACE

MCU GUIDE

Parametric Search

Development Board Search

Part Number Search

Community

RENESESAS

BIG IDEAS FOR EVERY SPACE

Part Name	Group	Budgetary Price (10K p
R7FA4M3AF3CFB#A0	RA4M3	4.22\$
R7FA4M3AF3CFP#A0	RA4M3	3.82\$
R7FA4M3AF3CFM#A0	RA4M3	3.5\$
R7FA4M3AE3CFB#A0	RA4M3	4.07\$
R7FA4M3AE3CFP#A0	RA4M3	3.67\$
R7FA4M3AE3CFM#A0	RA4M3	3.35\$

Apple - iOS

Renesas MCU Guide on the App Store (apple.com)

Google - Android

Renesas MCU Guide on the Play Store (google.com)

Now Supports RX & RL78

RENESESAS

BIG IDEAS FOR EVERY SPACE

- Industrial automation (photoelectric sensor, fiber sensor, temperature sensor)
- Process automation (pressure sensor, flow control meter, single phase meter)
- Building automation/home appliance (smoke detector)
- Healthcare (pulse oximeters, body composition measurement)
- General purpose

Download Datasheet

APK download - Android

Renesas MCU Guide App Rev1.4.0 (APK)

© 2023 Renesas Electronics Corporation. All rights reserved.

RENESESAS CONFIDENTIAL

Page 35

RENESESAS

LEARN MORE ABOUT THE RENESAS RA FAMILY

- About Renesas RA Family: www.renesas.com/RA



Introducing the Renesas RA Family of 32-Bit Microcontrollers

The Renesas RA Family of 32-bit MCUs is designed to help device developers create the next generation of secure IoT devices.



Evaluation Kits for Renesas Advanced (RA) Microcontrollers

Introduction to the evaluation kits for the Renesas Advanced (RA) Microcontrollers.



EK-RA6M3 Kit for Renesas Advanced (RA) Microcontrollers

Kickstart IoT and embedded systems development using Renesas EK-RA6M3, Evaluation Kit for RA6M3 MCU Group.



Security in the Connected World

Learn how Renesas can help you navigate the daunting world of security and assist you with designing security in from the start to avoid costly mistakes and redesigns.

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

