



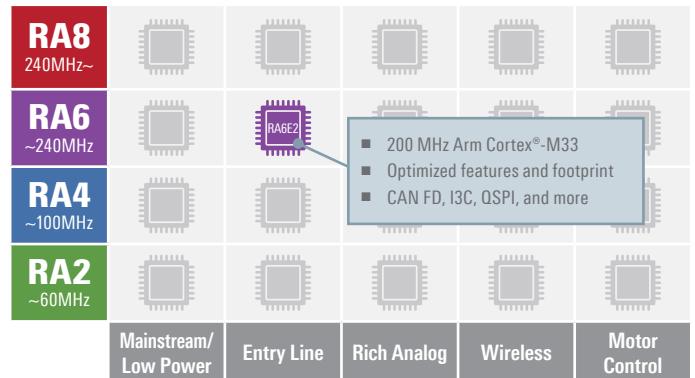
32-BIT MCU FAMILY

RENESAS RA6E2 GROUP

Entry-Line 200MHz Arm® Cortex®-M33 General Purpose Microcontroller

The RA6E2 entry-line microcontroller is based on the 200 MHz Arm® Cortex®-M33 core with TrustZone.

RA6E2 MCUs offer 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.



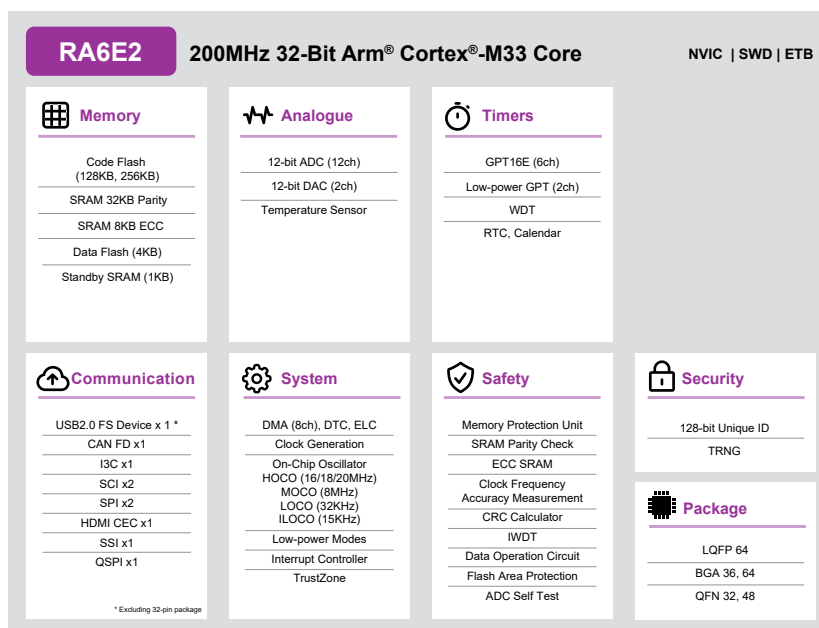
Target Applications

- General purpose
- Sensor applications (Medical, Industrial, Wearable)
- Communication/Network module
- Home appliances
- Fingerprint reader module
- Home entertainment (Voice command/recognition)

Key Features

- 200MHz Arm Cortex-M33 with TrustZone
- 128KB - 256KB Flash memory and 40KB SRAM
- 4KB Data Flash to store data as in EEPROM
- 1KB Standby SRAM
- Scalable from 32-pin to 64-pin packages
- USB 2.0 Full Speed
- CAN FD, I3C
- HDMI CEC, SSI
- Quad SPI
- 12-bit A/D Converter
- 12-bit D/A Converter
- General PWM Timer

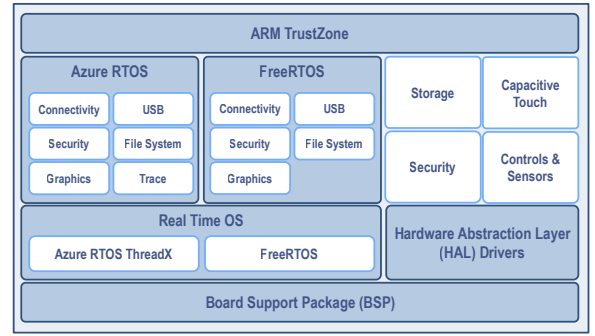
Block Diagram



RENESAS RA6E2 GROUP

Software Package

The Renesas Flexible Software Package (FSP) is designed to provide easy-to-use, scalable, high-quality software for embedded system designs using the Renesas RA family. The FSP is based on an open software ecosystem of production-ready drivers, supporting Azure® RTOS, FreeRTOS™ or bare-metal programming. It also includes a selection of other middleware stacks, providing great flexibility for migrating your code from older systems or developing new applications from scratch.



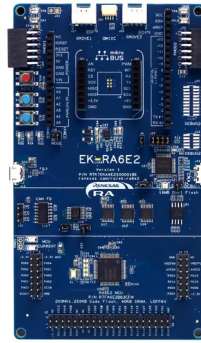
Tools and Support

The e² studio IDE provides support with intuitive configurators and intelligent code generation to make programming and debugging easier and faster.

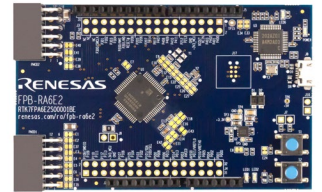
IDE	Renesas e ² studio	Keil MDK	IAR EWARM
Compiler	<ul style="list-style-type: none"> GCC Arm Compiler IAR Arm Compiler 	<ul style="list-style-type: none"> Arm Compiler 	<ul style="list-style-type: none"> IAR Arm Compiler
Debug Probe	<ul style="list-style-type: none"> Renesas E2/E2 Lite SEGGER J-Link 	<ul style="list-style-type: none"> SEGGER J-Link Keil ULINK 	<ul style="list-style-type: none"> IAR I-Jet SEGGER J-Link
Production Programmer	<ul style="list-style-type: none"> Renesas PG-FP6 	<ul style="list-style-type: none"> SEGGER J-Flash 	<ul style="list-style-type: none"> Partner solutions

Evaluation Kit

- Evaluation Kit for RA6E2 MCU Group EK-RA6E2 enables users to evaluate the features of RA6E2 MCU group by utilizing rich on-board features along with popular ecosystem expansion connectors.
- Order the kit and download documentation, design package, development tools and software at: renesas.com/ek-ra6e2
- Orderable part number: **RTK7EKA6E2S00001BE**



- Fast Prototyping Board for RA6E2 MCU Group FPB-RA6E2 enables users a fast prototype development using Arduino Uno and Pmod™ interfaces included standard and through-hole access to all pins of RA6E2.
- Order the kit and download documentation, design package and development tools at: renesas.com/fpb-ra6e2
- Orderable part number: **RTK7FPA6E2S00001BE**



Ordering References

Flash (RAM) DataFlash	256KB (40KB) 4KB	R7FA6E2BB3CNH	R7FA6E2BB2CBC	R7FA6E2BB3CBC	R7FA6E2BB3CNE	R7FA6E2BB3CFM	R7FA6E2BB2CBB	R7FA6E2BB3CBB
	128KB (40KB) 4KB	R7FA6E2B93CNH	R7FA6E2B92CBC	R7FA6E2B93CBC	R7FA6E2B93CNE	R7FA6E2B93CFM	R7FA6E2B92CBB	R7FA6E2B93CBB
Pin Count	32pin	36pin	36pin	48pin	64pin	64pin	64pin	64pin
Package	QFN	BGA	BGA	QFN	LQFP	BGA	BGA	BGA
Size (body)	5x5mm	4x4mm	4x4mm	7x7mm	10x10mm	5x5mm	5x5mm	5x5mm
Pitch	0.5mm	0.5mm	0.5mm	0.5mm	0.5mm	0.5mm	0.5mm	0.5mm
Operating Temperature	-40 to +105°C	-40 to +85°C	-40 to +105°C	-40 to +105°C	-40 to +105°C	-40 to +105°C	-40 to +85°C	-40 to +105°C

For more details, please visit: renesas.com/ra6e2



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www.renesas.com/contact/

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