

RA Family of Arm[®] Cortex[®]-M based MCUs



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The flexible Renesas Advanced (RA) 32-bit microcontrollers (MCUs) are industry-leading 32-bit MCUs with the Arm[®] Cortex[®]-M33, -M23 and -M4 processor cores and PSA certification. RA delivers key advantages

compared to competitive Arm Cortex-M MCUs by providing stronger embedded security, superior CoreMark[®] performance and ultra-low power operation. PSA certification provides customers the confidence and assurance to quickly deploy secure IoT endpoint and edge devices, and smart factory equipment for Industry 4.0.



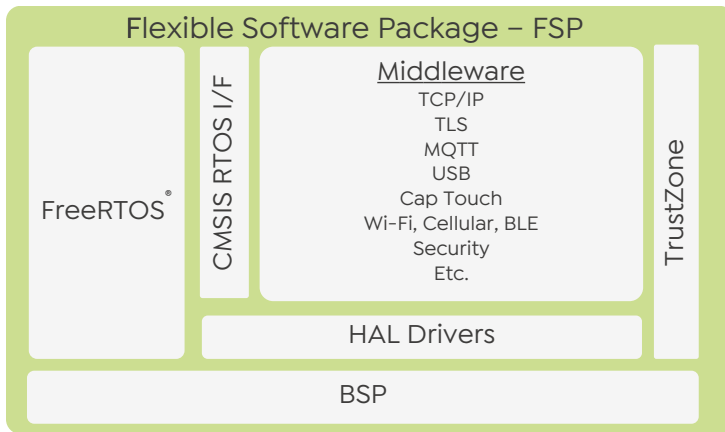
Renesas RA Family Series Line-up

Series	Performance Range	Series Indicators	Memory Ranges	ASSP Extensions
RA8	More than 200MHz	Highest Performance, HMI, Connectivity, Security, Analog	Highest memory integration: 2MB Flash, 1MB SRAM	HMI Analog
RA6	Up to 200MHz	Advanced performance, connectivity, Security and scalable	High Memory integration: 2MB Flash, 640kB SRAM	Motor/Inv. Control HMI
RA4	Up to 100MHz	Excellent power high performance mix paired with Security	Medium memory integration: up to 1MB Flash, 128 kB SRAM	Sensor Analog
RA2	Upt to 60MHz	Low Power	Small memory integration: 512 kB Flash, 64kB SRAM	Rich Analog Wireless

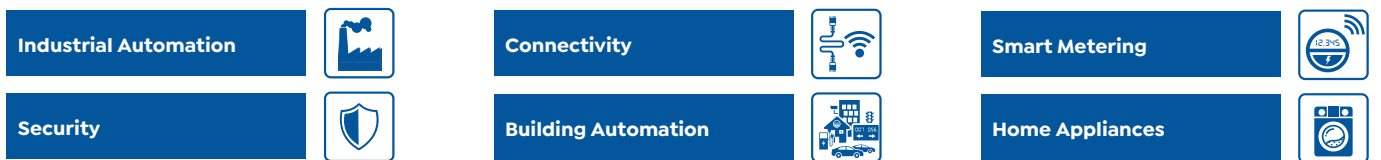
Renesas RA Family product group line-up

Renesas RA6 Series	RA6M5	200MHz, Arm [®] Cortex [®] -M33 USB, CAN FD, HDMI CEC, Ethernet, Capacitive Touch, QSPI, OctaSPI, TrustZone, Security	2MB Flash, 512kB RAM, 100-176pin
	RA6M4	200MHz, Arm [®] Cortex [®] -M33 USB, CAN, Ethernet, TFT, Capacitive Touch, QSPI, OctaSPI, TrustZone, Security	1MB Flash, 256kB RAM, 64-144pin
	RA6T1	120MHz, Arm [®] Cortex [®] -M4 USB, CAN, ADC with S/H, Timer, PGA, High Speed Comparators	512kB Flash, 64kB RAM, 64-100pin
Renesas RA4 Series	RA6M3	120MHz, Arm [®] Cortex [®] -M4 USB, CAN, Ethernet, TFT, Capacitive Touch, Security	2MB Flash, 640kB RAM, 100-176pin
	RA6M2	120MHz, Arm [®] Cortex [®] -M4 USB, CAN, Ethernet, Capacitive Touch, Security	1MB Flash, 384kB RAM, 100-145pin
	RA6M1	120MHz, Arm [®] Cortex [®] -M4 USB, CAN, Capacitive Touch, Security	512kB Flash, 256kB RAM, 64-100pin
	RA4M3	100MHz, Arm [®] Cortex [®] -M33 USB, CAN, Advanced Security with Trust Zone	1MB Flash, 128kB RAM, 64-144pin
Renesas RA2 Series	RA4M2	100MHz, Arm [®] Cortex [®] -M33 USB, CAN, Advanced Security with Trust Zone	512kB Flash, 128kB RAM, 48-100pin
	RA4M1	48MHz, Arm [®] Cortex [®] -M4 USB, CAN, LCD Controller, Capacitive Touch, Security	256kB Flash, 32kB RAM, 40-100pin
	RA4W1	48MHz, Arm [®] Cortex [®] -M4 Bluetooth 5.0, USB, CAN, LCD Controller, Capacitive Touch, Security	512kB Flash, 96kB RAM, 56pin QFN
	RA2L1	48MHz, Arm [®] Cortex [®] -M23 CAN, 32ch Cap Touch, Security	256kB Flash, 32kB RAM, 48-100pin
	RA2A1	48MHz, Arm [®] Cortex [®] -M23 USB, CAN, 24bit Sigma Delta ADC, 16bit ADC, Security	256kB Flash, 32kB RAM, 32-64pin
	RA2E1	48MHz, Arm [®] Cortex [®] -M23 Cap Touch, Security	128kB Flash, 8kB RAM, 25-64pin
	NEW	RA2E1	48MHz, Arm [®] Cortex [®] -M23 Cap Touch, Security

Flexible Software Package – FSP



Renesas RA Market Segments



Renesas RA Family Development Environment and Partner Ecosystem



On-Chip Debug	IDE	Compiler	Support Tools	Kits and Boards
<ul style="list-style-type: none"> Renesas E2 & E2 Lite Segger J-Link 	<ul style="list-style-type: none"> Renesas e²studio Keil MDK IAR Embedded Workbench 	<ul style="list-style-type: none"> GNU Arm Compiler V6 IAR ARM Compiler 	<ul style="list-style-type: none"> FSP driver selection and configuration Intelligent pin mapping 	<ul style="list-style-type: none"> Evaluation Kits <ul style="list-style-type: none"> EK-RA2A1 EK-RA2L1 EK-RA2E1 EK-RA4M1 EK-RA4W1 EK-RA4M2 EK-RA4M3 EK-RA6M1 EK-RA6M2 EK-RA6M3 EK-RA6M3G EK-RA6M4 EK-RA6M5 Solution Kits <ul style="list-style-type: none"> RSSK-RA6M2 RSSK-RA6T1 RSSK-RA2L1

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