EZ LIST

AVNET Reach Further™

RENESAS BIG IDEAS FOR EVERY SPACE

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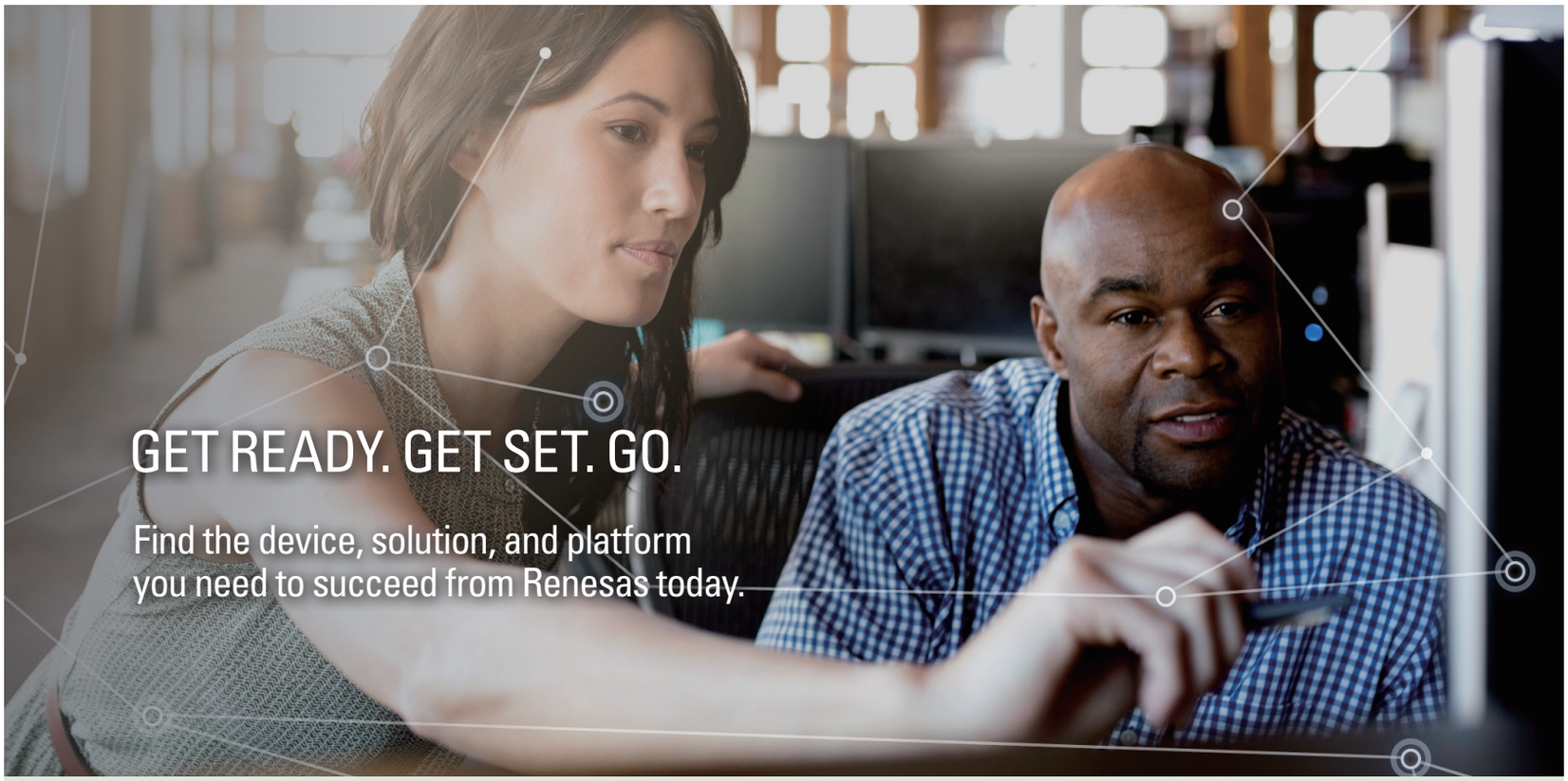

Check out our complete line of microcontrollers (MCUs) and microprocessors (MPUs) for consumer, industrial and building automation, healthcare, automotive design, and more.

RZ MPU Family

- Arm® Cortex®-A7, A9, A15, and R4-based devices—ideal for high-resolution human-machine interfaces (HMI), embedded vision, and real-time Industrial Ethernet connectivity
- High-performance MPUs with up to 25,000 DMIPS. Supported with Linux, Android and QNX

RX MCU Family

- Family of 32-bit MCUs built around the high-performance RX CPU Core, with built-in FPU and advanced DSP capabilities
- Extensive portfolio of on-chip mixed-signal peripherals and industry-leading embedded, fast Flash memory
- Excellent power efficiency with low operating and standby power consumption

RL78 MCU Family

- Comprehensive lineup of 16-bit MCUs with high CPU performance and superb on-chip functions
- 10- to 128-pin and 1 to 512 KB achieve industry-leading low power consumption
- Built-in high-speed on-chip oscillator, temperature sensor, and interface ports for multiple power supplies

Renesas Synergy™ Platform

- Highly integrated Arm® Cortex®-M0+ and M4 microcontrollers with software, tools, development kits, and ready-made solutions
- Easy-to-browse solutions gallery to extend Synergy capabilities
- Robust Express Logic ThreadX® RTOS and middleware running on industrial-grade MCUs with highly configurable peripherals

RENESAS SYNERGY™ MCUs

This matrix represents a selection of microcontrollers and development tools recommended for new designs. For a complete list of available MCUs, please visit our website at **renesassynergy.com**.

RENESAS synergy™

MCU Group	Part Number	CPU	Suggested Resale (10 K pcs)	Max. Freq (MHz)	Code Flash (KB)	Data Flash (KB)	RAM (KB)	Pin Count	I/O Ports	Package Type	Operating Voltage Range (V)	Operating Temperature Range (degC)	External Bus	Timer/PWM (ch)					Timer (ch)				Analog									Communication										HMI			Security and Encryption	Suggested Kits
														GPT32E	GPT32EH	GPT32	GPT16H	GPT16	AGT	WDT	IWDT	RTC	DMA/DTC	ADC 14-bit (ch)	ADC 12-bit (ch)	DAC 12-bit	DAC 8-bit	ACMPHS	ACMPLP	PGA	OPAMP	Ethernet	USBHS	USBFS	CAN	SCI	SPI	I2C	SSI	QSPI	SDHI	IrDA	Segment LCD	Graphic LCD	Capacitive Touch (ch)		
S124	R7FS124762A01CLM#AC1	M0+	$1.54	32	64	4	16	36	25	LGA	1.6 - 5.5	-40 to 85	No	0	0	1	0	6	2	1	1	1	0	11	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	13	128-bit Unique ID TRNG AES(128/256)	DK-S124 AE-CAP1
	R7FS124763A01CFL#AA1		$1.60					48	35	LQFP		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	14	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	23		
	R7FS124763A01CFM#AA1		$1.68					64	51	LQFP		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	18	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	31		
	R7FS124772A01CLM#AC1		$1.70		128			36	25	LGA		-40 to 85	No	0	0	1	0	4	2	1	1	1	0	11	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	13		
	R7FS124773A01CFL#AA1		$1.76					48	35	LQFP		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	14	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	23		
	R7FS124773A01CFM#AA1		$1.84					64	51	LQFP		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	18	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	31		
	R7FS124773A01CNB#AC1		$1.84					64	51	QFN		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	18	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	31		
	R7FS124773A01CNE#AC1		$1.76					48	35	QFN		-40 to 105	No	0	0	1	0	6	2	1	1	1	0	14	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	23		
	R7FS124773A01CNF#AC1		$1.72					40	29	QFN		-40 to 105	No	0	0	1	0	4	2	1	1	1	0	12	0	1	0	0	2	0	0	No	No	Yes	1	3	2	2	0	0	0	0	No	No	17		
S128	R7FS128782A01CLM#AC1	M0+	$2.04	32	256	4	24	36	28	LGA	1.6 - 5.5	-40 to 85	No	0	0	1	3	1	2	1	1	1	0	13	0	0	3	3	2	0	3	No	No	Yes	1	3	2	1	0	0	0	0	No	No	12		DK-S128
	R7FS128783A01CFJ#AA1		$2.00					32	24	LQFP		-40 to 105	No	0	0	1	2	1	2	1	1	1	0	10	0	0	3	3	2	0	2	No	No	Yes	1	3	1	1	0	0	0	0	No	No	9		
	R7FS128783A01CFL#AA1		$2.10					48	37	LQFP		-40 to 105	No	0	0	1	3	3	2	1	1	1	0	15	0	0	3	3	2	0	3	No	No	Yes	1	3	2	2	0	0	0	0	No	No	21		
	R7FS128783A01CFM#AA1		$2.19					64	53	LQFP		-40 to 105	No	0	0	1	3	3	2	1	1	1	0	21	0	0	3	3	2	0	4	No	No	Yes	1	3	2	2	0	0	0	0	No	No	28		
	R7FS128783A01CNE#AC1		$2.10					48	37	QFN		-40 to 105	No	0	0	1	3	3	2	1	1	1	0	15	0	0	3	3	2	0	3	No	No	Yes	1	3	2	2	0	0	0	0	No	No	21		
	R7FS128783A01CNG#AC1		$2.00					32	24	QFN		-40 to 105	No	0	0	1	2	1	2	1	1	1	0	10	0	0	3	3	2	0	2	No	No	Yes	1	3	1	1	0	0	0	0	No	No	9		
S3A6	R7FS3A6782A01CLJ#AC0	M4	$3.02	48	256	8	32	100	84	LGA	1.6 - 5.5	-40 to 85	No	0	0	2	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	4	2	2	1	0	0	0	Yes	No	27	128-bit Unique ID TRNG AES(128/256) GHASH	TB-S3A6
	R7FS3A6783A01CFL#AA0		$2.73					48	36	LQFP		-40 to 105	No	0	0	2	0	4	0	1	1	1	4	14	0	1	2	0	2	0	1	No	No	Yes	1	4	2	2	0	0	0	0	No	No	15		
	R7FS3A6783A01CFM#AA0		$2.82					64	52	LQFP		-40 to 105	No	0	0	2	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	4	2	2	0	0	0	0	Yes	No	24		
	R7FS3A6783A01CFP#AA0		$3.02					100	84	LQFP		-40 to 105	No	0	0	2	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	4	2	2	1	0	0	0	Yes	No	27		
	R7FS3A6783A01CNB#AC0		$2.82					64	52	QFN		-40 to 105	No	0	0	2	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	4	2	2	0	0	0	0	Yes	No	24		
	R7FS3A6783A01CNE#AC0		$2.73					48	36	QFN		-40 to 105	No	0	0	2	0	4	0	1	1	1	4	14	0	1	2	0	2	0	1	No	No	Yes	1	4	2	2	0	0	0	0	No	No	15		
	R7FS3A6783A01CNF#AC0		$2.69					40	28	QFN		-40 to 105	No	0	0	2	0	2	0	1	1	1	4	11	0	1	2	0	1	0	0	No	No	Yes	1	4	1	2	0	0	0	0	No	No	10		
S3A3	R7FS3A37A2A01CBJ#AC0	M4	$4.54	48	512	8	96	121	104	BGA	1.6 - 5.5	-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	26	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		TB-S3A3
	R7FS3A37A2A01CLJ#AC0		$4.14					100	84	LGA		-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	6	2	2	1	1	1	0	Yes	No	27		
	R7FS3A37A2A01CLK#AC0		$4.64					145	126	LGA		-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	28	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		
	R7FS3A37A3A01CFB#AA0		$4.64					144	126	LQFP		-40 to 105	Yes	0	0	4	0	6	2	1	1	1	4	28	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		
	R7FS3A37A3A01CFM#AA0		$3.93					64	52	LQFP		-40 to 105	No	0	0	4	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	6	2	2	0	0	0	0	Yes	No	24		
	R7FS3A37A3A01CFP#AA0		$4.14					100	84	LQFP		-40 to 105	Yes	0	0	4	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	6	2	2	1	1	1	0	Yes	No	27		
	R7FS3A37A3A01CNB#AC0		$3.93					64	52	QFN		-40 to 105	No	0	0	4	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	6	2	2	0	0	0	0	Yes	No	24		
S3A1	R7FS3A17C2A01CBJ#AC0	M4	$6.17	48	1024	8	192	121	104	BGA	1.6 - 5.5	-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	26	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		TB-S3A1
	R7FS3A17C2A01CLJ#AC0		$5.81					100	84	LGA		-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	6	2	2	1	1	1	0	Yes	No	27		
	R7FS3A17C2A01CLK#AC0		$6.26					145	126	LGA		-40 to 85	Yes	0	0	4	0	6	2	1	1	1	4	28	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		
	R7FS3A17C3A01CFB#AA0		$6.26					144	126	LQFP		-40 to 105	Yes	0	0	4	0	6	2	1	1	1	4	28	0	1	2	0	2	0	4	No	No	Yes	1	6	2	3	1	1	1	0	Yes	No	27		
	R7FS3A17C3A01CFM#AA0		$5.60					64	52	LQFP		-40 to 105	No	0	0	4	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	6	2	2	0	0	0	0	Yes	No	24		
	R7FS3A17C3A01CFP#AA0		$5.81					100	84	LQFP		-40 to 105	Yes	0	0	4	0	6	2	1	1	1	4	25	0	1	2	0	2	0	4	No	No	Yes	1	6	2	2	1	1	1	0	Yes	No	27		
	R7FS3A17C3A01CNB#AC0		$5.60					64	52	QFN		-40 to 105	No	0	0	4	0	6	2	1	1	1	4	18	0	1	2	0	2	0	3	No	No	Yes	1	6	2	2	0	0	0	0	Yes	No	24		
S3A7	R7FS3A77C2A01CBJ#AC1	M4	$6.17	48	1024	16	192	121	102	BGA	1.6 - 5.5	-40 to 85	Yes	0	0	10	0	0	2	1	1	1	4	26	0	2	0	2	2	0	4	No	No	Yes	1	6	2	3	2	1	1	1	Yes	No	31		DK-S3A7 AE-CAP1
	R7FS3A77C2A01CLJ#AC1		$5.81					100	82	LGA		-40 to 85	Yes	0	0	10	0	0	2	1	1	1	4	25	0	2	0	2	2	0	4	No	No	Yes	1	6	2	2	2	1	1	1	Yes	No	26		
	R7FS3A77C2A01CLK#AC1		$6.26					145	124	LGA		-40 to 85	Yes	0	0	10	0	0	2	1	1	1	4	28	0	2	0	2	2	0	4	No	No	Yes	1	6	2	3	2	1	1	1	Yes	No	31		
	R7FS3A77C3A01CFB#AA1		$6.26					144	124	LQFP		-40 to 105	Yes	0	0	10	0	0	2	1	1	1	4	28	0	2	0	2	2	0	4	No	No	Yes	1	6	2	3	2	1	1	1	Yes	No	31		
	R7FS3A77C3A01CFM#AA1		$5.60					64	50	LQFP		-40 to 105	No	0	0	9	0	0	2	1	1	1	4	18	0	2	0	2	2	0	3	No	No	Yes	1	6	2	2	1	0	0	1	No	No	14		
	R7FS3A77C3A01CFP#AA1		$5.81					100	82	LQFP		-40 to 105	Yes	0	0	10	0	0	2	1	1	1	4	25	0	2	0	2	2	0	4	No	No	Yes	1	6	2	2	2	1	1	1	Yes	No	26		
	R7FS3A77C3A01CNB#AC1		$5.60					64	50	QFN		-40 to 105	No	0	0	9	0	0	2	1	1	1	4	18	0	2	0	2	2	0	3	No	No	Yes	1	6	2	2	1	0	0	1	No	No	14		

Compiler & Software at:
synergygallery.renesas.com

GPT16	General PWM 16-bit Timer
GPT32	General PWM 32-bit Timer
GPT32E	General PWM 32-bit Timer Enhanced
GPTEH	General PWM 32-bit Timer Enhanced, High Resolution
AGT	Asynchronous General Purpose Timer
WDT	Watchdog Timer
IWDT	Independent Watchdog Timer
RTC	Real-Time Clock
PGA	Programmable Gain Amplifier
ACMPHS	High-Speed Analog Comparator
ACMPLP	Low-Power Analog Comparator
TSN	Temperature Sensor
OPAMP	Operational Amplifier
USBFS	USB2.0 Full Speed
USBHS	USB2.0 High Speed

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														GPT32E	GPT32EH	GPT32	GPT16H	GPT16	AGT	WDT	IWDT	RTC	DMA/DTC	ADC 14-bit (ch)	ADC 12-bit (ch)	DAC 12-bit	DAC 8-bit	ACMPHS	ACMPLP	PGA	OPAMP	Ethernet	USBHS	USBFS	CAN	SCI	SPI	I2C	SSI	QSPI	SDHI	IrDA	Segment LCD	Graphic LCD	Capacitive Touch (ch)		
S5D5	R7FS5D57A2A01CLK#AC0	M4	$6.50	120	512	32	384	145	110	LGA	2.7 - 3.6	-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	0	0	Yes	No	Yes	2	10	2	3	1	1	2	1	No	No	18	128-bit Unique ID TRNG AES(128/192/256) 3DES/ARC4 ECC/RSA/DSA RSA/DSA SHA1/SHA224/ SHA256 GHASH	TB-S5D5
	R7FS5D57A3A01CFB#AA0		$6.50					144	110	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	0	0	Yes	No	Yes	2	10	2	3	1	1	2	1	No	No	18		
	R7FS5D57A3A01CFP#AA0		$6.04					100	76	LQFP		-40 to 105	Yes	4	4	5	0	0	2	1	1	1	8	0	19	2	0	6	0	0	0	Yes	No	Yes	2	10	2	2	1	1	2	1	No	No	12		
	R7FS5D57C2A01CLK#AC0		$6.84		1024			145	110	LGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	0	0	Yes	No	Yes	2	10	2	3	1	1	2	1	No	No	18		
	R7FS5D57C3A01CFB#AA0		$6.84					144	110	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	0	0	Yes	No	Yes	2	10	2	3	1	1	2	1	No	No	18		
	R7FS5D57C3A01CFP#AA0		$6.38					100	76	LQFP		-40 to 105	Yes	4	4	5	0	0	2	1	1	1	8	0	19	2	0	6	0	0	0	Yes	No	Yes	2	10	2	2	1	1	2	1	No	No	12		
S5D9	R7FS5D97C2A01CBG#AC0	M4	$8.67	120	1024	64	640	176	133	BGA	2.7 - 3.6	-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	24	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	13	128-bit Unique ID TRNG AES(128/192/256) 3DES/ARC4 ECC/RSA/DSA RSA/DSA SHA1/SHA224/ SHA256 GHASH	PK-S5D9 AE-CLOUD2
	R7FS5D97C2A01CLK#AC0		$8.16					145	110	LGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS5D97C3A01CFB#AA0		$8.16					144	110	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS5D97C3A01CFC#AA0		$8.49					176	133	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	24	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	13		
	R7FS5D97C3A01CFP#AA0		$7.70					100	76	LQFP		-40 to 105	Yes	4	4	5	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	2	1	1	2	1	No	Yes	12		
	R7FS5D97E2A01CBG#AC0		$9.17					176	133	BGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	24	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	13		
	R7FS5D97E2A01CLK#AC0		$8.66		2048			145	110	LGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS5D97E3A01CFB#AA0		$8.66					144	110	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	22	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS5D97E3A01CFC#AA0		$8.99					176	133	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	24	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	13		
	R7FS5D97E3A01CFP#AA0		$8.20					100	76	LQFP		-40 to 105	Yes	4	4	5	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	2	1	1	2	1	No	Yes	12		
S7G2	R7FS7G27G2A01CBD#AC0	M4	$11.86	240	3072	64	640	224	172	BGA	2.7 - 3.6	-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	25	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	18	128-bit Unique ID TRNG AES(128/192/256) 3DES/ARC4 ECC/RSA/DSA RSA/DSA SHA1/SHA224/ SHA256 GHASH	DK-S7G2 SK-S7G2 PE-HMI1
	R7FS7G27G2A01CBG#AC0		$11.34					176	126	BGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	21	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	12		
	R7FS7G27G2A01CLK#AC0		$10.82					145	104	LGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS7G27G3A01CFB#AA0		$10.82					144	104	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS7G27G3A01CFC#AA0		$11.17					176	126	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	21	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	12		
	R7FS7G27G3A01CFP#AA0		$10.36					100	70	LQFP		-40 to 105	Yes	3	4	5	0	0	2	1	1	1	8	0	16	2	0	6	0	6	0	Yes	No	Yes	2	10	2	2	1	0	2	1	No	Yes	12		
	R7FS7G27H2A01CBD#AC0		$12.55		4096			224	172	BGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	25	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS7G27H2A01CBG#AC0		$12.03					176	126	BGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	21	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	12		
	R7FS7G27H2A01CLK#AC0		$11.51					145	104	LGA		-40 to 85	Yes	4	4	6	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS7G27H3A01CFB#AA0		$11.51					144	104	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	19	2	0	6	0	6	0	Yes	No	Yes	2	10	2	3	2	1	2	1	No	Yes	18		
	R7FS7G27H3A01CFC#AA0		$11.86					176	126	LQFP		-40 to 105	Yes	4	4	6	0	0	2	1	1	1	8	0	21	2	0	6	0	6	0	Yes	Yes	Yes	2	10	2	3	2	1	2	1	No	Yes	12		

Compiler & Software at:
synergygallery.renesas.com

GPT16	General PWM 16-bit Timer
GPT32	General PWM 32-bit Timer
GPT32E	General PWM 32-bit Timer Enhanced
GPTEH	General PWM 32-bit Timer Enhanced, High Resolution
AGT	Asynchronous General Purpose Timer
WDT	Watchdog Timer
IWDT	Independent Watchdog Timer
RTC	Real-Time Clock
PGA	Programmable Gain Amplifier
ACMPHS	High-Speed Analog Comparator
ACMPLP	Low-Power Analog Comparator
TSN	Temperature Sensor
OPAMP	Operational Amplifier
USBFS	USB2.0 Full Speed
USBHS	USB2.0 High Speed

RENESAS SYNERGY™ KITS

Synergy Kit Name	Part Number	Suggested Resale	Applicable Synergy MCU Group(s)
DK-S7G2 Development Kit	YSDKS7G2S30	$79.00	S7G2
DK-S3A7 Development Kit	YSDKS3A7E20	$290.00	S3A7
DK-S124 Development Kit	YSDKS124S20	$175.00	S124
DK-S128 Development Kit	YSDKS128E10	$175.00	S128
SK-S7G2 Starter Kit	YSSKS7G2E30	$400.00	S7G2
PK-S5D9 Promotion Kit	YSPKS5D9E10	$79.00	S5D9
TB-S5D5 Target Board	YSTBS5D5E10	$35.00	S5D5
TB-S3A6 Target Board	YSTBS3A6E10	$35.00	S3A6
TB-S3A3 Target Board	YSTBS3A3E10	$35.00	S3A3
TB-S3A1 Target Board	YSTBS3A3E10	$35.00	S3A1

Synergy Kit Name	Part Number	Suggested Resale	Applicable Synergy MCU Group(s)
AE-CAP1 Application Example	YSAECAP1S11	$575.00	S124, S3A7
AE-CLOUD2 Application Example	YSAECLOUD2	$199.00	S5D9
PE-HMI1 Product Example	YSPEHMI1S20	$665.00	S7G2
Synergy Wi-Fi Kit	YSAEWIFI-1	$49.00	S5D5, S5D9, S7G2
J-Link LITE for Synergy	YSJLINKLITE	$59.00	All

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8/16-BIT MCUs

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Family	Series	Group	Orderable Part Number	Suggested Resale (10K pcs)	ROM Size (KB)	RAM (KB)	Data Flash (KB)	Vcc min	Vcc max	Max Freq (MHz)	Package	Body Dimension (mm)	Other Pin Counts	On-chip Oscillator	32 kHz Sub Clock	Power On Reset	Low Voltage Detect	8-bit Timers (ch)	16-bit Timers (ch)	Watchdog Timers	Real-Time Clock	Motor Control PWM Timer	PWM Output	A/D 10-bit	A/D 12-bit	D/A 8-bit	UARTs	CSI (SPI Compatible)	I²C	LIN	4 Common LCD (# Segments)	8 Common LCD (# Segments)	GPIO	Suggested Starter Kit	Suggested Demonstration Kit	On-chip Debug Emulator	Compiler Package
RL78	RL78/G1x	RL78/G10	R5F10Y16ASP#V0	$0.29	2	0.25	-	2.0	5.5	20	10LSSOP	3.6x4.4	10, 16	Y	-	Y	-	2	2	1	-	-	1	4	-	-	1	1	1	-	-	-	8	Contact Marketing	–	R0E000010KCE00 ($150)	EWRL78 (IAR) (contact IAR) e2studio + KPIT GNURL78 (Free) e2studio + CC-RL
		RL78/G11	R5F1054AASP#30	$0.64	16	1.5	2	1.8	5.5	24	16LSSOP	4.4x5.0	10, 16, 20, 24, 25	Y	-	Y	Y	4	5	1	-	-	5	8	-	2	2	2	2	-	-	-	13	–	YRPBRL78G11 ($50)		
		RL78/G12	R5F1026AASP#V5	$0.62	16	1.5	2	1.8	5.5	24	20LSSOP	4.4x6.5	20, 24, 30	Y	-	Y	Y	4	4	1	-	-	3	11	-	-	1	2	3	-	-	-	18	Contact Marketing	–		
			R5F1027AANA#U5	$0.75	16	1.5	2	1.8	5.5	24	24WQFN	4x4		Y	-	Y	Y	4	4	1	-	-	3	11	-	-	1	2	3	-	-	-	22				
			R5F102AAASP#V0	$0.67	16	2	2	1.8	5.5	24	30SSOP	6.1x9.85		Y	-	Y	Y	4	8	1	-	-	7	8	-	-	3	3	4	-	-	-	26				
		RL78/G13	R5F1006AASP#V0	$0.73	16	2	4	1.6	5.5	32	20SSOP	6.1x6.65	20, 24, 25, 30, 32, 36, 40, 44, 48, 52, 64, 80, 100, 128	Y	-	Y	Y	4	8	1	-	-	2	6	-	-	2	2	2	-	-	-	16	YR0K50100LS000BE ($257)	–		
			R5F1006EASP#V0	$0.94	64	4	4	1.6	5.5	32	20SSOP	6.1x6.65		Y	-	Y	Y	4	8	1	-	-	2	6	-	-	2	2	2	-	-	-	16				
			R5F1007EANA#U0	$1.28	64	4	4	1.6	5.5	32	24WQFN	4x4		Y	-	Y	Y	4	8	1	-	-	3	6	-	-	2	2	3	-	-	-	20				
			R5F1008EALA#U0	$1.37	64	4	4	1.6	5.5	32	25FLGA	3x3		Y	-	Y	Y	4	8	1	-	-	3	6	-	-	2	2	3	-	-	-	21				
			R5F100AGASP#V0	$1.29	128	12	8	1.6	5.5	32	30SSOP	6.1x9.85		Y	-	Y	Y	4	8	1	-	-	7	8	-	-	3	3	4	1	-	-	26				
			R5F100BGANA#U0	$1.66	128	12	8	1.6	5.5	32	32WQFN	5x5		Y	-	Y	Y	4	8	1	-	-	7	8	-	-	3	3	4	1	-	-	28				
			R5F100EHANA#U0	$1.88	192	16	8	1.6	5.5	32	40HWQFN	6x6		Y	Y	Y	Y	4	8	1	Y	-	7	9	-	-	3	4	5	1	-	-	36				
			R5F100FAAFP#V0	$0.87	16	2	4	1.6	5.5	32	44LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	-	7	10	-	-	3	4	5	1	-	-	40				
			R5F100FLAFP#V0	$2.54	512	32	8	1.6	5.5	32	44LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	-	7	10	-	-	3	4	5	1	-	-	40				
			R5F100GGAFB#V0	$1.38	128	12	8	1.6	5.5	32	48LQFP	7x7		Y	Y	Y	Y	4	8	1	Y	-	7	10	-	-	3	5	6	1	-	-	44				
			R5F100GLAFB#V0	$2.54	512	32	8	1.6	5.5	32	48LQFP	7x7		Y	Y	Y	Y	4	8	1	Y	-	7	10	-	-	3	5	6	1	-	-	44				
			R5F100LGAFB#V0	$1.46	128	12	8	1.6	5.5	32	64LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	-	7	12	-	-	3	6	7	1	-	-	58				
			R5F100LLAFB#V0	$2.62	512	32	8	1.6	5.5	32	64LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	-	7	12	-	-	3	6	7	1	-	-	58				
			R5F100MLAFB#V0	$2.82	512	32	8	1.6	5.5	32	80LQFP	12x12		Y	Y	Y	Y	8	12	1	Y	-	10	17	-	-	4	8	9	1	-	-	74				
			R5F100PLAFB#V0	$3.02	512	32	8	1.6	5.5	32	100LQFP	14x14		Y	Y	Y	Y	8	12	1	Y	-	10	20	-	-	4	8	9	1	-	-	92				
		RL78/G14	R5F104AEASP#V0	$1.01	64	5.5	4	1.6	5.5	32	30SSOP	6.1x9.85	30, 32, 36, 40, 44, 48, 52, 64, 80, 100	Y	-	Y	Y	4	8	1	Y	Y	10	8	-	-	3	3	4	1	-	-	26	YR0K50104PS000BE ($203)	–		
			R5F104AGASP#V0	$1.31	128	16	8	1.6	5.5	32	30SSOP	6.1x9.85		Y	-	Y	Y	4	8	1	Y	Y	10	8	-	1	3	3	4	1	-	-	26				
			R5F104BEAFP#V0	$1.03	64	5.5	4	1.6	5.5	32	32LQFP	7x7		Y	-	Y	Y	4	8	1	Y	Y	10	8	-	-	3	3	4	1	-	-	28				
			R5F104FGAFP#V0	$1.40	128	16	8	1.6	5.5	32	44LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	Y	10	10	-	2	3	4	5	1	-	-	40				
			R5F104FJAFP#V0	$1.80	256	24	8	1.6	5.5	32	44LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	Y	10	10	-	2	3	4	5	1	-	-	40				
			R5F104GGAFB#V0	$1.40	128	16	8	1.6	5.5	32	48LQFP	7x7		Y	Y	Y	Y	4	8	1	Y	Y	10	10	-	2	3	5	6	1	-	-	44				
			R5F104GJAFB#V0	$1.80	256	24	8	1.6	5.5	32	48LQFP	7x7		Y	Y	Y	Y	4	8	1	Y	Y	10	10	-	2	3	5	6	1	-	-	44				
			R5F104JGAFA#V0	$1.45	128	16	8	1.6	5.5	32	52LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	Y	10	12	-	2	3	5	6	1	-	-	48				
			R5F104JJAFA#V0	$1.85	256	24	8	1.6	5.5	32	52LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	Y	10	12	-	2	3	5	6	1	-	-	48				
			R5F104LJAFB#V0	$1.88	256	24	8	1.6	5.5	32	64LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	Y	10	12	-	2	3	6	7	1	-	-	58				
			R5F104MJAFB#V0	$2.08	256	24	8	1.6	5.5	32	80LQFP	12x12		Y	Y	Y	Y	8	12	1	Y	Y	13	17	-	2	4	8	9	1	-	-	74				
			R5F104PJAFB#V0	$2.28	256	24	8	1.6	5.5	32	100LQFP	14x14		Y	Y	Y	Y	8	12	1	Y	Y	13	20	-	2	4	8	9	1	-	-	92				
			R5F104PKAFB#30	$2.66	384	32	8	1.6	5.5	32	100LQFP	14x14		Y	Y	Y	Y	8	12	1	Y	Y	13	20	-	2	4	8	10	1	-	-	92				
			R5F104PLAFB#30	$3.04	512	48	8	1.6	5.5	32	100LQFP	14x14		Y	Y	Y	Y	8	12	1	Y	Y	13	20	-	2	4	8	10	1	-	-	92				
		RL78/G1F	R5F11BBCAFP#30	$0.99	32	5.5	4	1.6	5.5	32	32LQFP	7x7	24, 32, 36, 48, 64	Y	-	Y	Y	4	9	1	Y	Y	9	13	-	2	3	1	4	1	-	-	28	Contact Marketing	–		
			R5F11BGCAFB#30	$1.06	32	5.5	4	1.6	5.5	32	48LQFP	7x7		Y	Y	Y	Y	4	9	1	Y	Y	9	17	-	2	3	1	6	1	-	-	44				
			R5F11BLEAFB#30	$1.28	32	5.5	4	1.6	5.5	32	64LQFP	10x10		Y	Y	Y	Y	4	9	1	Y	Y	9	17	-	2	3	1	7	1	-	-	58				
	RL78/L1x	RL78/L12	R5F10RGCAFB#V0	$0.94	32	1.5	2	1.6	5.5	24	48LQFP	7x7	32, 44, 48, 52, 64	Y	Y	Y	Y	4	8	1	Y	-	6	9	-	-	1	2	1	1	104	176	33	YR0K5010RLS000BE ($210)	YRPBRL78L12		
			R5F10RLCAFB#V0	$1.02	32	1.5	2	1.6	5.5	24	64LQFP	10x10		Y	Y	Y	Y	4	8	1	Y	-	7	10	-	-	1	2	1	1	156	280	47				
		RL78/L13	R5F10WLEAFB#30	$1.18	64	4	4	1.6	5.5	24	64LQFP	10x10	64,80	Y	Y	Y	Y	-	8	1	Y	-	7	9	-	-	3	2	1	1	144	256	49	YR0K5010WMS000BE ($210)	–		
			R5F10WMGAFB#30	$1.68	128	8	4	1.6	5.5	24	80LQFP	12x12		Y	Y	Y	Y	-	8	1	Y	-	7	12	-	-	4	2	1	1	204	376	65				
		RL78/L1C	R5F110PJAFB#30	$2.90	256	16	8	1.6	3.6	24	100LQFP	14x14	80, 85, 100	Y	Y	Y	Y	-	8	1	Y	-	7	-	11	2	4	4	1	1	224	416	77	YR0K50110PS000BE ($385)	–		
	RL78/G1x	RL78/G1D	R5F11AGJANB	$2.30	256	20	8	1.6	3.6	32	48WQFN	6x6	48	Y	Y	Y	Y	4	8	1	Y	-	7	8	-	-	2	2	2	-	-	-	32	RTK0EN0001D01001BZ ($236)	–		

32-BIT MCUs

This matrix represents a selection of microcontrollers and development tools recommended for new designs.
For a complete list of available MCUs, please visit our website at **renesas.com**.

Family	Series	Group	Orderable Part Number	Suggested Resale (10 K pcs)	ROM Size (KB)	RAM (KB)	Data Flash (KB)	Vcc min	Vcc max	max Freq (MHz)	Package	Body Dimension (mm)	Pin pitch (mm)	Other Pin Counts	On-chip Oscillator	32 kHz Sub Clock	Power-On Reset	Low-voltage Detect	8-bit timers	16-bit Timers	32-bit Timers	Watchdog Timers	Real-Time Clock	Motor Control P WM Timer	A/D 10-bit	A/D 12-bit	D/A 8-bit	D/A 10-bit	D/A 12-bit	UARTs	SSU (SPI Compatible)	I²C	CAN	LIN	USB 2.0 Function	USB 2.0 Host	10/100 Ethernet	LCD Segments	Capacitive Touch (CTSU)	GPIO	Suggested Starter Kit	Suggested Demonstration Kit	On-chip Debug Emulator	Compiler Packages
RX	RX100	RX130	R5F51308ADFP#30	$2.56	512	48	8	1.8	5.5	32	100LQFP	14x14	0.5	48, 64, 80	Y	Y	Y	Y	4	9	-	1	Y	Y	-	24	2	-	-	7	8	8	-	1	-	-	-	-	Y	88	YRTK5005130S-00000BE ($258)	RTK0EG0003S-02001BJ ($224)	R0E000010KCE00 ($150)	Your Choice: YRX-E2STUDIO-1U ($1200) e2studio + KPIT GNURX (Free) EWRX (IAR) (Contact IAR)
			R5F51307ADFN#30	$2.27	384	48	8	1.8	5.5	32	80LQFP	12x12	0.5	48, 64, 100	Y	Y	Y	Y	4	9	-	1	Y	Y	-	17	2	-	-	3	4	4	-	1	-	-	-	-	Y	68				
			R5F51306ADFM#30	$1.90	256	32	8	1.8	5.5	32	64LQFP	10x10	0.5	48, 80, 100	Y	Y	Y	Y	4	9	-	1	Y	Y	-	14	2	-	-	3	4	4	-	1	-	-	-	-	Y	52				
			R5F51305ADFL#30	$1.53	128	16	8	1.8	5.5	32	48LQFP	7x7	0.5	64, 80	Y	-	Y	Y	4	9	-	1	-	Y	-	10	-	-	-	3	4	4	-	1	-	-	-	-	Y	38				
			R5F51303ADNE#U0	$1.39	64	10	8	1.8	5.5	32	48HWQFN	7x7	0.5	-	Y	-	Y	Y	4	9	-	1	-	Y	-	10	-	-	-	3	4	4	-	1	-	-	-	-	Y	38				
		RX113	R5F51138ADFP#3A	$2.73	512	64	8	1.8	3.6	32	100LQFP	14x14	0.5	64	Y	Y	Y	Y	4	10	-	1	Y	Y	-	17	-	-	2	8	9	9	-	-	1	1	-	40x4	Y	82	YR0K505113S000BE ($375)	–		
			R5F51137ADLJ#2A	$2.83	384	64	8	1.8	3.6	32	100TFLGA	7x7	0.65	-	Y	Y	Y	Y	4	10	-	1	Y	Y	-	17	-	-	2	8	9	9	-	-	1	1	-	40x4	Y	82				
			R5F51136ADFP#3A	$2.01	256	64	8	1.8	3.6	32	100LQFP	14x14	0.5	64	Y	Y	Y	Y	4	10	-	1	Y	Y	-	17	-	-	2	8	9	9	-	-	1	1	-	40x4	Y	82				
			R5F51135ADFM#3A	$1.59	128	32	8	1.8	3.6	32	64LQFP	10x10	0.5	100	Y	Y	Y	Y	4	10	-	1	Y	Y	-	11	-	-	2	6	7	7	-	-	1	1	-	20x4	Y	48				
		RX111	R5F51118ADFM#3A	$2.51	512	64	8	1.8	3.6	32	64LQFP	10x10	0.5	48	Y	Y	Y	Y	-	8	-	1	Y	Y	-	14	2	-	-	3	4	4	-	-	1	1	-	-	-	46	YR0K505111S000BE ($265)	YWIRELESS-RX111 ($49)		
			R5F51117ADFK#3A	$2.23	384	64	8	1.8	3.6	32	64LQFP	14x14	0.8	-	Y	Y	Y	Y	-	8	-	1	Y	Y	-	14	2	-	-	3	4	4	-	-	1	1	-	-	-	46				
			R5F51116ADLF#UA	$1.81	256	64	8	1.8	3.6	32	64WFLGA	5x5	0.5	36	Y	Y	Y	Y	-	8	-	1	Y	Y	-	14	2	-	-	3	4	4	-	-	1	1	-	-	-	46				
			R5F51115ADFL#3A	$1.31	128	16	8	1.8	3.6	32	48LQFP	7x7	0.5	64	Y	Y	Y	Y	-	8	-	1	Y	Y	-	10	-	-	-	3	4	4	-	-	1	1	-	-	-	30				
			R5F51114ADNE#UA	$1.45	96	16	8	1.8	3.6	32	48HWQFN	7x7	0.5	40	Y	Y	Y	Y	-	8	-	1	Y	Y	-	10	-	-	-	3	4	4	-	-	1	1	-	-	-	30				
			R5F51113ADLM#UA	$1.16	64	10	8	1.8	3.6	32	36WFLGA	4x4	0.5	64	Y	Y	Y	Y	-	8	-	1	Y	Y	-	7	-	-	-	3	4	4	-	-	1	1	-	-	-	20				
	RX200	RX231	R5F52318BDFP#30	$3.60	512	64	8	1.8	5.5	54	100LQFP	14x14	0.5	48, 64	Y	Y	Y	Y	4	17	-	2	Y	Y	-	24	-	-	2	7	8	8	1	-	1	1	-	-	-	80	YR0K505231S000BE ($260)	YWIRELESS-RX231 ($59) Available from AMAZON.COM ONLY		
			R5F52318BDLA#20	$3.60	512	64	8	1.8	5.5	54	100TFLGA	5.5x5.5	0.5	-	Y	Y	Y	Y	4	17	-	2	Y	Y	-	24	-	-	2	7	8	8	1	-	1	1	-	-	-	80				
			R5F52317BDFM#30	$3.10	384	64	8	1.8	5.5	54	64LQFP	10x10	0.5	48, 100	Y	Y	Y	Y	4	17	-	2	Y	Y	-	12	-	-	2	6	7	7	1	-	1	1	-	-	-	44				
			R5F52316ADND#U0	$2.45	256	32	8	1.8	5.5	54	64HWQFN	9x9	0.5	48	Y	Y	Y	Y	4	17	-	2	Y	Y	-	12	-	-	2	6	7	7	1	-	1	1	-	-	-	44				
			R5F52315ADFL#30	$2.05	128	32	8	1.8	5.5	54	48LQFP	7x7	0.5	64, 100	Y	-	Y	Y	4	17	-	2	-	Y	-	8	-	-	-	5	6	6	1	-	1	1	-	-	-	31				
		RX24T	R5F524TEADFP#31	$3.45	512	32	8	2.7	5.5	80	100LQFP	14x14	0.5	-	Y	-	Y	Y	8	17	-	1	-	Y	-	22	1	-	-	3	4	4	1	-	-	-	-	-	-	78	Contact Marketing	Contact Marketing		
			R5F524TAADFN#31	$2.55	256	16	8	2.7	5.5	80	80LQFP	12x12	0.5	64, 100	Y	-	Y	Y	8	13	-	1	-	-	-	17	1	-	-	3	4	4	-	-	-	-	-	-	-	58				
			R5F524T8ADFM#31	$2.24	128	16	8	2.7	5.5	80	64LQFP	10x10	0.5	80, 100	Y	-	Y	Y	8	13	-	1	-	-	-	12	1	-	-	3	4	4	-	-	-	-	-	-	-	46				
		RX23T	R5F523T5ADFD#30	$1.37	128	12	-	2.7	5.5	40	52LQFP	10x10	0.65	-	Y	-	Y	Y	4	10	-	1	-	Y	-	10	-	-	-	2	3	3	-	-	-	-	-	-	-	39				
			R5F523T3ADFL#30	$1.25	64	12	-	2.7	5.5	40	48LQFP	7x7	0.5	64	Y	-	Y	Y	4	10	-	1	-	Y	-	10	-	-	-	2	3	3	-	-	-	-	-	-	-	35				
	RX600	RX65N	R5F565NEHDLC#20	$7.82	2048	640	32	2.7	3.6	120	177TFLGA	8x8	0.5	100, 145	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	Y	-	-	136	YRTK50565N2S-00000BE ($540)	YWIRELESS-RX65N ($59) Available from AMAZON.COM ONLY RTK5RX65N2C-00000BR ($59)		
			R5F565NEHDFC#30	$7.82	2048	640	32	2.7	3.6	120	176LQFP	24x24	0.5	100, 144	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	Y	-	-	137				
			R5F565NCHDBG#20	$7.67	1536	640	32	2.7	3.6	120	176LFBGA	13x13	0.8	-	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	Y	-	-	136				
			R5F565N9FDLK#20	$5.95	1024	256	-	2.7	3.6	120	145TFLGA	7x7	0.5	100, 177	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	Y	-	-	112				
			R5F565N7FDFB#30	$5.80	768	256	-	2.7	3.6	120	144LQFP	20x20	0.5	100, 176	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	Y	-	-	112				
			R5F565N4FDFP#30	$5.25	512	256	-	2.7	3.6	120	100LQFP	14x14	0.5	144, 176	Y	Y	Y	Y	4	16	3	2	1	Y	-	22	-	-	1	11	14	14	2	Y	Y	Y	Y	-	-	79				
		RX651	R5F5651EHDLC#20	$7.32	2048	640	32	2.7	3.6	120	177TFLGA	8x8	0.5	100, 145	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	-	-	-	136				
			R5F5651EHDFC#30	$7.32	2048	640	32	2.7	3.6	120	176LQFP	24x24	0.5	100, 144	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	-	-	-	136				
			R5F5651CHDBG#20	$7.17	1536	640	32	2.7	3.6	120	176LFBGA	13x13	0.8	-	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	-	-	-	136				
			R5F56519FDLK#20	$5.45	1024	256	-	2.7	3.6	120	145TFLGA	7x7	0.5	100, 177	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	-	-	-	112				
			R5F56517FDFB#30	$5.30	768	256	-	2.7	3.6	120	144LQFP	20x20	0.5	100, 176	Y	Y	Y	Y	4	16	3	2	1	Y	-	29	-	-	2	13	16	16	2	Y	Y	Y	-	-	-	112				
			R5F56514FDLJ#20	$4.75	512	256	-	2.7	3.6	120	100TFLGA	7x7	0.65	145, 177	Y	Y	Y	Y	4	16	3	2	1	Y	-	22	-	-	1	11	14	14	2	Y	Y	Y	-	-	-	79				
		RX64M	R5F564MLHDLC#21	$9.53	4096	552	64	2.7	3.6	120	177TFLGA	8x8	0.5	100, 145	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	14	16	3	-	1	1	Y	-	-	130	YR0K50564MS000BE ($694)	–		
			R5F564MLHDFC#V1	$9.53	4096	552	64	2.7	3.6	120	176LQFP	24x24	0.5	100, 144	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	14	16	3	-	1	1	Y	-	-	128				
			R5F564MJHDBG#21	$9.08	3072	552	64	2.7	3.6	120	176LFBGA	13x13	0.8	-	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	14	16	3	-	1	1	Y	-	-	130				
			R5F564MGHDLK#21	$8.33	2560	552	64	2.7	3.6	120	145TFLGA	7x7	0.5	100, 177	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	14	16	3	-	1	1	Y	-	-	112				
			R5F564MFHDFP#V1	$7.63	2048	552	64	2.7	3.6	120	100LQFP	14x14	0.5	144, 176	Y	Y	Y	Y	4	22	3	2	Y	Y	-	22	-	-	1	9	10	12	2	-	1	1	Y	-	-	78				
	RX700	RX71M	R5F571MLHDLC#20	$12.89	4096	552	64	2.7	3.6	240	177TFLGA	8x8	0.5	100, 145	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	15	16	3	-	1	1	Y	-	-	128	YR0K50571MS000BE ($540)	–		
			R5F571MLHDFC#V0	$12.89	4096	552	64	2.7	3.6	240	176LQFP	24x24	0.5	100, 144	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	15	16	3	-	1	1	Y	-	-	128				
			R5F571MJHDBG#20	$12.33	3072	552	64	2.7	3.6	240	176LFBGA	13x13	0.8	-	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	15	16	3	-	1	1	Y	-	-	128				
			R5F571MGHDLK#20	$11.39	2560	552	64	2.7	3.6	240	145TFLGA	7x7	0.5	100, 177	Y	Y	Y	Y	4	22	3	2	Y	Y	-	29	-	-	2	13	15	16	3	-	1	1	Y	-	-	112				
			R5F571MFHDFP#V0	$10.51	2048	552	64	2.7	3.6	240	100LQFP	14x14	0.5	144, 176	Y	Y	Y	Y	4	22	3	2	Y	Y	-	22	-	-	1	9	11	12	2	-	1	1	Y	-	-	78				

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github.com/renesas-rz/rskrza1_bsp
- Linux BSP for RZ/A1 RSK

elinux.org/RZ-G
- Quick-start instructions on using RZ/G1E and RZ/G1M Starter Kits
- Building Linux images from Yocto for RZ/G1E and RZ/G1M Starter Kits

github.com/renesas-rz/meta-renesas
- Yocto recipes to build basic Linux BSP for RZ/G1

github.com/renesas-rz/meta-rzg-demos
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RZ FAMILY 32-BIT MPUs

Series	Group	Orderable Part Number	Suggested Resale (10 Kpcs)	ROM Size (KB)	RAM (KB)	Data Flash (KB)	Vcc min	Vcc max	Max Freq (MHz)	Package	Body Dimension (mm)	Other Pin Counts	On-chip Oscillator	32 kHz Sub Clock	Power On Reset	16-bit Timers	32-bit Timers	Watchdog Timers	Real-Time Clock	Motor Control PWM Timer	A/D 12-bit	UART	SPI	I²C	CAN	LIN	USB Ports	USB Endpoints	10/100 Ethernet	GPIO	Suggested Starter Kit	On-chip Debug Emulator	Compiler Packages
RZ/A	RZ/A1LC	R7S721034VCBG#AC0	$5.40	0	2048	0(1)	3.0	3.6	400	176LFBGA	8x8	176	-	Y	Y	5	2	2	Y	Y	9	12	3	4	2	0	2	16	Y	100	YR0K77210S011BE ($1020)	Your Choice: I-Jet (Contact IAR) J-Link-ARM (Contact SEGGER)	Your Choice: EWARM (Contact IAR) DS-5 (Contact ARM)
	RZ/A1L	R7S721020VCFP#AA1	$8.23	0	3072	0(1)	3.0	3.6	400	176LQFP	24x24	176, 208	-	Y	Y	5	2	1	Y	Y	8	12	3	4	2	2	2	16	Y	100			
		R7S721020VCBG#AC1	$8.23	0	3072	0(1)	3.0	3.6	400	176LFBGA	8x8		-	Y	Y	5	2	2	Y	Y	9	12	3	4	2	2	2	16	Y	100			
		R7S721021VCFP#AA1	$9.52	0	3072	0(1)	3.0	3.6	400	208LQFP	28x28		-	Y	Y	5	2	1	Y	Y	8	12	3	4	2	2	2	16	Y	122			
	RZ/A1LU	R7S721030VCFP#AA0	$9.14	0	3072	0(1)	3.0	3.6	400	176LQFP	24x24		-	Y	Y	5	2	1	Y	Y	8	12	3	4	2	2	2	16	Y	100			
		R7S721030VCBG#AC0	$9.14	0	3072	0(1)	3.0	3.6	400	176LFBGA	8x8		-	Y	Y	5	2	2	Y	Y	9	12	3	4	2	2	2	16	Y	100			
		R7S721031VCFP#AA0	$10.47	0	3072	0(1)	3.0	3.6	400	208LQFP	28x28		-	Y	Y	5	2	1	Y	Y	8	12	3	4	2	2	2	16	Y	122			
	RZ/A1M	R7S721010VCFP#AA0	$14.17	0	5120	0(1)	3.0	3.6	400	256LQFP	28x28	256, 324	-	Y	Y	5	2	1	Y	Y	8	17	5	4	5	2	2	16	Y	139			
		R7S721010VCBG#AC0	$14.17	0	5120	0(1)	3.0	3.6	400	256LFBGA	11x11		-	Y	Y	5	2	2	Y	Y	9	17	5	4	5	2	2	16	Y	139			
		R7S721011VCBG#AC0	$14.83	0	5120	0(1)	3.0	3.6	400	324BGA	19x19		-	Y	Y	5	2	1	Y	Y	8	17	5	4	5	2	2	16	Y	171			
	RZ/A1H	R7S721000VCFP#AA0	$17.98	0	10240	0(1)	3.0	3.6	400	256LQFP	28x28		-	Y	Y	5	2	1	Y	Y	8	17	5	4	5	2	2	16	Y	139			
		R7S721000VCBG#AC0	$17.98	0	10240	0(1)	3.0	3.6	400	256LFBGA	11x11		-	Y	Y	5	2	2	Y	Y	9	17	5	4	5	2	2	16	Y	139			
		R7S721001VCBG#AC0	$18.90	0	10240	0(1)	3.0	3.6	400	324BGA	19x19		-	Y	Y	5	2	1	Y	Y	8	17	5	4	5	2	2	16	Y	171			
RZ/T	RZ/T1	R7S910001CFP#AA0	$10.00	0	544	0	3.0	3.6	450	176LQFP	20x20	176, 320	Y	-	Y	24	1	2	-	Y	8	9	1	2	2	-	1	10	Y	97	RTK7910018S00000BE ($652)		
		R7S910018CBG#AC0	$25.25	0	1566	0	3.0	3.6	600	320BGA	17x17		Y	-	Y	24	1	2	-	Y	24	9	1	2	2	-	1	10	Y	209			
		R7S910028CBG#AC0	$24.50	0	1566	0	3.0	3.6	600	320BGA	17x17		Y	-	Y	24	1	2	-	Y	24	9	1	2	2	-	1	10	Y	209			
RZ/G	RZ/G1C	R8A77470HA02BG#U0	$15.62	0	332	0(1)	3.0	3.6	1000	501BGA	21x21	501, 831	-	-	Y	4	12	1	-	Y	-	1	18	8	2	-	2	15	Y	208	YR8A77450S000BE (G1E) ($299 YR8A77430S000BE (G1M) ($399)		EWARM (Contact IAR)
	RZ/G1E	R8A77450HA02BG#UA	$19.56	0	332	0(1)	3.0	3.6	1000	501BGA	21x21		-	-	Y	4	12	1	-	Y	-	1	18	8	2	-	2	15	Y	208			
	RZ/G1N	R8A77440HA02BG#UA	$34.47	0	332	0(1)	3.0	3.6	1500	831BGA	27x27		-	-	Y	4	12	1	-	Y	-	1	18	9	2	-	2	15	Y	244			
	RZ/G1M	R8A77430HA02BG#UA	$51.85	0	332	0(1)	3.0	3.6	1500	831BGA	27x27		-	-	Y	4	12	1	-	Y	-	1	18	9	2	-	2	15	Y	244			
	RZ/G1H	R8A77420HA02BG#UA	$54.29	0	332	0(1)	3.0	3.6	1500	831BGA	27x27		-	-	Y	4	12	1	-	Y	-	1	18	9	2	-	2	15	Y	244			

This matrix represents a selection of microprocessors and development tools recommended for new designs. For a complete list of available MPUs, please visit our website at **renesas.com**.

Notes: 1. Contains Cache

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