

March 1, 2011

Product Specifications of the RX210 Group of Microcontrollers

Group		RX210			
Product number		R5F52108 ADXX*1	R5F52107 ADXX*1	R5F52106 ADXX*1	R5F52105 ADXX*1
Embedded memory	Flash memory	512 KB	384 KB	256 KB	128 KB
	E2 data flash	8 KB			
	RAM	64 KB		32 KB	20 KB
CPU core		RX CPU <ul style="list-style-type: none"> • General-purpose register: 32-bit x 16 • Multiplier: 32-bit multiplier • Divider: Available • Multiplier-accumulator: Available (2 kinds of multipliers: memory to memory, register to register)			
Power consumption		<ul style="list-style-type: none"> • at normal operation: 17.3 mA @ 50 MHz/3.3 V, • at RTC operation in standby mode: 1.3 μA, without RTC in standby mode: 0.3 μA 			
Floating-point operation		Not available			
Max. operation frequency / power-supply voltage		50 MHz/2.7 V to 5.5 V, 32 MHz/1.8 V to 2.7 V, 20 MHz/1.62 V to 1.8 V			
Clock	Main	1 to 20 MHz: Embedded PLL (8- / 10- / 12- / 16- / 20- / 24- / 25 times)			
	Sub	32.768 KHz			
	Built-in clock	Low-speed OCO: 125 KHz, high-speed OCO: 50 MHz			

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Built-in peripheral functions	<ul style="list-style-type: none"> • External bus: 100-pin [available], 80-/ 64-pin [not available] • DMAC: 4 channels • Data transfer controller • Multi-function timer pulse unit 2: 6 channels • Port output enable 2 • Programmable pulse generator: max. 32-bit output • 8-bit timer: 4 channels • Compare match timer: 4 channels • Real-time clock • Watchdog timer • Separate watchdog timer • Serial communication interface (SC1c): 100-pin [6 channels], 80-/64-pin [5 channels] • Serial communication interface (SC1d) • I²C bus interface: 1 channel • 12-bit A/D converter: 100-pin [16 channels], 80-/64-pin [12 channels] • 10-bit D/A converter: 2 channels • Temperature sensor • CRC calculator • Comparator A • Comparator B • Low voltage detection circuit (LVD) • Event link controller (ELC) • Clock frequency accuracy measurement circuit (CAC) • Data operation circuit (DOC)
Operation temperature range	-40 deg C to +85 deg C
Package	<ul style="list-style-type: none"> • LQFP100 (FP: 0.5 mm pitch), (FG: 0.65 mm pitch) • LQFP80 (FN: 0.5 mm pitch), (FF: 0.65 mm pitch) • LQFP64 (FM: 0.5 mm pitch), (FK: 0.8 mm pitch)

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	<ul style="list-style-type: none"><li data-bbox="609 389 935 470">• LGA100 (LJ: 0.65 mm pitch)

Note 1: XX differs depending on the type of package. Please refer to the catalog for details.