

November 12, 2012

Product Specifications of the RX63T Group of MCUs

Item	Specification
Group name	RX63T
CPU core	RX CPU
	General registers: 32-bit × 16
	Multiplier: 32-bit multiplier
	Divider: Yes
	Multiply-accumulator: Yes (two types: memory-to-memory operations and register-to-register operations)
Maximum operating frequency	100 MHz
Power supply voltage	64-pin and under: 2.7 to 3.6 V
	100-pin and over: 2.7 to 3.6 V, 4.0 to 5.5 V
Floating-point operation unit	Single-precision floating-point operation unit (Supports add /subtract /compare /multiply /divide and other instructions)
Flash ROM (for program storage)	Max. 512 KB
Flash ROM (for data storage)	Max. 32 KB
RAM	Max. 48 KB
On-chip peripheral functions	DMA controller (DMACA) × 4 channels
	Data transfer controller (DTC) × 1 channel
	Multifunction pin controller (MPC) × 1 channel
	Multifunction timer pulse unit (MTU3) × 8 channels
	Port output enable (POE3)
	General PWM timer (GPT): 112-pin and over: 8 channels; 100-pin: 7 channels; 64-pin and under: 4 channels
	Compare match timer (CMT) × 4 channels

Item	Specification
Group name	RX63T
	Watchdog timer (WDT)
	Independent watchdog timer (IWDT)
	Serial communications interface (SC1c): 112-pin and over: 4 channels; 100-pin: 3 channels; 64-pin and under: 2 channels
	Serial communications interface (SC1d) × 1 channel
	I2C bus interface (R1IC): 120-pin and over: 2 channels; 112-pin and under: 1 channel
	Serial peripheral interface (RSPI): 100-pin and over: 2 channels; 64-pin and under: 1 channel
	A/D converter (12-bit) (S12ADB): 64-pin and over: 8 channels; 48-pin: 6 channels
	A/D converter (10-bit) (ADA): 144-pin: 20 channels; 120-pin and under: 12 channels
	D/A converter (10-bit) (DAa): 100-pin and over: 2 channels
	CAN module (CAN): 100-pin and over: 1 channel
	USB 2.0 function module (USBa): 120-pin and over: 1 channel
	Clock frequency accuracy measurement circuit (CAC)
	CRC calculator (CRC)
	Data operation circuit (DOC)
	Register write protection function
	Option setting memory area
	Power-on reset (POR) / Voltage detection circuit (LVD)
On-chip debugging function	Yes (with trace function)
Low power consumption modes	4 modes
	Sleep mode
	All-module clock stop mode
	Software standby mode
	Deep software standby mode

Item	Specification
Group name	RX63T
Packages	PLQP0048KB-A (48-pin LFQFP, 7 × 7 mm, 0.5 mm pitch)
	PLQP0064KB-A (64-pin LFQFP, 10 × 10 mm, 0.5 mm pitch)
	PLQP0100KB-A (100-pin LFQFP, 14 × 14 mm, 0.5 mm pitch)
	PLQP0112JA-A (112-pin LQFP, 20 × 20 mm, 0.65 mm pitch)
	PLQP0120KA-A (120-pin LFQFP, 16 × 16 mm, 0.5 mm pitch)
	PLQP0144KA-A (144-pin LFQFP, 20 × 20 mm, 0.5 mm pitch)