

Separate Sheet

Product Specifications of the expanded RX65N/RX651 MCU lineup (maximum group specifications)

		Existing Devices Code Flash 1.0 MB or less		New PR Devices Code Flash 1.5 MB or more	
ITEM		RX65N	RX651	RX65N	RX651
CPU		RXv2			
Frequency		120 MHz			
Vcc		2.7 V - 3.6 V			
Memory	Code Flash	512 KB, 768 KB, 1 MB		1.5 MB, 2.0 MB	
	Dualbank function	-		Yes	
	BGO function	-		Yes	
	Data Flash	-		32 KB	
	SRAM	256 KB		640 KB (256 KB + 384 KB)	
DMA		DMAC x 8 channels, Data Transfer Controller (DTC), EXDMAC x 2 channels			
External Bus		8/16-bit separate/multiplex, SDRAM		8/16/32-bit separate/multiplex, SDRAM	
Timer	General Purpose Timer	Multi-Function Timer Unit (MTU3): 16-bit x 8 channels +3 2-bit x 1 channel			
		Timer Pulse Unit (TPU): 16-bit x 6 channels			
		Timer (TMR): 8-bit x 4 channels			
		Compare Match Timer: 16-bit(CMT) x 4 channels + 32-bit(CMTW) x 2 channels			
	RTC with Battery Backup Function	1 channel			
	Independent	1 channel / 1 channel			

	Watchdog Timer /Watchdog Timer					
Communication Interface	Serial Communications Interface/		11 channels / 2 channels			
	Serial Communications Interface with FIFO					
	I²C Bus Interface		2 channels	3 channels		
	Serial Peripheral Interface		3 channels			
	Quad Serial Peripheral Interface		1 channel			
	Ethernet, EDMAC		1 channel	-	1 channel	-
	USB2.0 Full speed		1 channel (host/function/OTG)			
	CAN		2 channels			
	SD Host Interface/		1 channel / 1 channel			
SD Slave Interface						
MMC Host Interface		1 channel				
Analog	A/D Converters		12-bit x 8 channels (with 3ch S&H) + 12-bit x 21 channels			
	D/A Converters		2-bit x 2 channels			
Security	AES		Yes	Yes (Built in Trusted Secure IP)		
	True Random Number Generator (TRNG)		Yes	Yes (Built in Trusted Secure IP)		
	<u>Trusted Secure IP</u>		-	Yes		
HMI (Human Machine)	CMOS Camera Interface	PDC (Parallel Data Capture)	1 channel			

Interface)	Graphic	GLDC (Graphic LCD controller)	-	1 channel
		DRW2D (2D drawing engine)	-	Yes
Other			CRC32, Data Operation Circuit, Port Output Enable 3, Event Link Controller, Temperature Sensor	
Package			100 LFQFP (0.5mm pitch, 14mm x 14mm) 144 LFQFP (0.5mm pitch, 20mm x 20mm) 100 TFLGA (0.65mm pitch, 7mm x 7mm) 145 TFLGA (0.5mm pitch, 7mm x 7mm)	
			-	176 LFQFP (0.5mm pitch, 24mm x 24mm) 176 LFBGA (0.8mm pitch, 13mm x 13mm) 177 TFLGA (0.5 mm pitch, 8mm x 8mm)

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