

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			

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

<b>Interface)</b>	<b>Graphic</b>	<b>GLDC</b> <b>(Graphic LCD controller)</b>	-	1 channel
		<b>DRW2D</b> <b>(2D drawing engine)</b>	-	Yes
<b>Other</b>			CRC32, Data Operation Circuit, Port Output Enable 3, Event Link Controller, Temperature Sensor	
<b>Package</b>			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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