RENESAS

Separate Sheet

Product Specifications of the RX65N and RX651 Groups of Microcontrollers

Group name	RX65N		RX651	
Pin count	144, 145 pins	100 pins	144, 145 pins	100 pins
Parts name	R5F565NxyDFB R5F565NxyDLK	R5F565NxyDFP R5F565NxyDLJ	R5F5651xyDFB R5F5651xyDLK	R5F5651xyDFP R5F5651xyDLJ
Flash memory	512 KB (x=4), 768 KB (x=7), 1024 KB (x=9)			
RAM	256 KB			
Power supply voltage	2.7 V - 3.6 V			
Operating frequency	Up to 120 MHz			
Operating Temperature	-40°C to +85°C (-40°C to 105°C parts planned)			
CPU Core	32 bit RXv2 CPU			
Floating point unit	Single precision floating point unit (Support add/subtract/compare/multiply/divide and other instructions)			
I/O port	In/Out: 111 In: 1	In/Out: 78 In: 1	In/Out: 111 In: 1	In/Out: 78 In: 1
Data Transfer function	• DMA controller 8 ch • data transfer controller • EXDMA controller 2 ch			
Timer function	• 16-bit timer pulse unit 6 ch • multi-function timer pulse unit 9 ch • port output enable • programmable pulse generator • 8-bit timer 4 ch • 16-bit compare match timer 4 ch • 32-bit compare match timer 2 ch • real time clock • watch dog timer • independent watch dog timer			
Communication function	• Ethernet controller 1 ch • DMA controller for Ethernet controller 1 ch		-	
	• USB2.0 FS Host/Function module 1 ch			
	• Serial	• Serial	• Serial	• Serial

		Communication interface 11 ch	Communication interface 9 ch	Communication interface 11 ch	Communication interface 9 ch
	● serial communication interface with 16 byte FIFO buffer 2 ch ● I²C bus interface 2 ch ● serial peripheral interface 3 ch ● CAN module 2 ch ● quad serial peripheral interface 1 ch ● SD host interface 1 ch (Yes: y=B or F, No: y=A or E) ● SD slave interface 1 ch (Yes: y=B or F, No: y=A or E) ● MMC host interface 1 ch ● CMOS camera interface (parallel data capture unit) 1 ch				
Analogue function	● 12-bit A/D Convertor 8 ch				
	● 12-bit A/D Convertor 21 ch	● 12-bit A/D Convertor 14 ch	● 12-bit A/D Convertor 21 ch	● 12-bit A/D Convertor 14 ch
	● 12-bit D/A Convertor 2 ch	● 12-bit D/A Convertor 1 ch	● 12-bit D/A Convertor 2 ch	● 12-bit D/A Convertor 1 ch
	● Temperature Sensor				
Security Yes (y=E or F) No (y=A or B)	● AES ● TRNG				
Other	● CRC calculator ● data operation circuit ● clock frequency accuracy measurement circuit ● event link controller				
Package	144-pin LFQFP 0.5mm pitch 145-pin TFLGA 0.5mm pitch	100-pin LFQFP 0.5mm pitch 100-pin TFLGA 0.65mm pitch	144-pin LFQFP 0.5mm pitch 145-pin TFLGA 0.5mm pitch	100-pin LFQFP 0.5mm pitch 100-pin TFLGA 0.65mm pitch

###

(Remarks) All registered trademarks or trademarks are the property of their respective owners.