

May 26, 2011

Product Specifications of the RL78/I1A MCUs

Group		RL78/I1A				
Pin count		20-pin	30-pin		32-pin	38-pin
Name		R5F 1076C	R5F 107AC	R5F 107AE	R5F 107BC	R5F 107DE
Code flash memory		32 KB	32 KB	64 KB	32 KB	64 KB
Data flash memory		4 KB				
RAM		2 KB	2 KB	4 KB	2 KB	4 KB
Clock		<ul style="list-style-type: none"> External clock 1 to 20 MHz Internal high-speed oscillation clock 32/24/16/12/8/4/1 MHz Internal low-speed oscillation clock 15 KHz Subsystem clock 32.768 KHz *38-pin products only 				
I/O		16	26	28	34	
Timer		2 output × 2 ch	2 output × 3 ch			
	16-bit timer KB (For lighting and PFC)	<ul style="list-style-type: none"> High resolution PWM (MAX. 64 MHz) Dithering function average resolution 0.97 ns (Timer KB clock at 64 MHz) Interleave PFC control function Forced output stop function Smooth start function 				
	16-bit timer KC (For PWM dimming)	<ul style="list-style-type: none"> 1 ch (for gate control of timer KB outputs) 				
	16-bit timer TAU (For base timer)	<ul style="list-style-type: none"> 8 ch 				
	Interval timer	<ul style="list-style-type: none"> 1 ch 				
Watchdog timer	<ul style="list-style-type: none"> 1 ch 					

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	Real-time clock	<ul style="list-style-type: none"> 1 ch *The subsystem clock can be selected as the operating clock only for 38-pin products 			
Serial I/F	UART (supporting DALI communication)	2 ch	3 ch	2 ch	3 ch (Note 1)
	CSI	-			1 ch
	I ² C	1 ch			
10-bit resolution A/D converter		6 ch	11 ch	9 ch	11 ch
Programmable gain amplifier		1 ch			
Input (Note 2)		4 ch	6 ch	5 ch	6 ch
Comparator		4 ch	6 ch	5 ch	6 ch
		<ul style="list-style-type: none"> Window comparator function Reference voltage: 256 resolution based on VDD/AVREFP and VSS/AVREFM or external reference voltage input pin (CMPCOM) 			
External interrupt sources		7	10	11	
DMA controller		2 ch			
MUL/calculation		<ul style="list-style-type: none"> 16-bit × 16-bit + 32-bit (2 clock) 			
Other		<ul style="list-style-type: none"> Safety, temperature sensor, low-voltage detection circuit (LVD), power-on-reset (POR) 			
Power supply voltage		2.7 V to 5.5 V			
Operating ambient temperature		-40 to +125°C			

Note 1) Max channels, for example, 2 ch when using CSI.

Note 2) The input pins alternatively used with analog input pin (ANI pin).