

January 22, 2015

Main Specifications of the RL78/I1D Group of Microcontrollers

Group name		RL78/I1D				
Pin count		20-pin	24-pin	30-pin	32-pin	48-pin
Device name		R5F1176	R5F1177	R5F117A	R5F117B	R5F117G
Code flash memory (KB)		8K/16K		8K/16K/ 32K	16K/32K	
Data flash memory (KB)		2K				
RAM (KB)		0.7K/2K		0.7K/2K/3K	2K/3K	
Clock	Main system clock	External high-speed clock: 1-20 MHz High-speed on-chip oscillator clock: 24/16/12/8/6/4/3/2/1 MHz Middle-speed on-chip oscillator clock: 4/2/1 MHz				
	Subsystem clock	Low-speed on-chip oscillator clock: 15 kHz		External low-speed clock: 32.768 kHz Low-speed on-chip oscillator clock: 15 kHz		
CPU		RL78 CPU core (16-bit CISC CPU) General-purpose register: 8 bits×32 registers Multiplication and multiplication-and-accumulation Instructions are supported				
I/O port		14	18	24	26	42
Serial Interfaces	CSI	1 ch	2 ch	1 ch	2 ch	
	UART	1 ch				
	Simple IIC	1 ch	2 ch	1 ch	2 ch	
Timers	16-bit timer	4 ch				
	12-bit interval timer	1 ch				

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	8/16-bit interval timer	4 ch (8-bit) / 2 ch (16-bit)				
8/12-bit resolution A/D converter		6 ch		12 ch		17 ch
DTC		16 sources	20 sources	19 sources	20 sources	23 sources
ELC	Event input	13 ch	17 ch	16 ch	17 ch	20 ch
	Event trigger output	5 ch		7 ch		
Operational amplifier		2 ch		4 ch		
Comparator		2 ch				
On-chip debugging function		Supported (enables tracing)				
Other peripheral functions		Clock output, buzzer output, real-time clock (RTC), watchdog timer (WDC), low voltage detection circuit (LVD), power-on reset (POR), safety function, reference voltage, temperature sensor				
Power supply voltage		1.6 to 3.6 V				
Operating ambient temperature		-40 to +105°C				

(Remarks)

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