

June 8, 2011

Product Specifications of the V850E2/Sx4-H Family

Family name:		V850E2/SG4-H		V850E2/SJ4-H		V850E2/SK4-H	
Part number:		μPD70F4013	μPD70F4014	μPD70F4015	μPD70F4016	μPD70F4017	μPD70F4018
Internal memory	Instruction flash	1 MB	1.5 MB	1 MB	1.5 MB	1.5 MB	2 MB
	Data flash	32 KB					
	CPU RAM	96 KB	128 KB	96 KB	128 KB	192 KB	
	HBUS-RAM	32 KB					
	Back-up RAM	32 KB					
External memory interface (MEMC)		SRAM I/F		SDRAM I/F, SRAM I/F		SDRAM I/F, SRAM I/F	
CPU	CPU system	V850E2M					
	FPU	Provided					
	CPU frequency	160 MHz (MAX.)					
DMA		16 channels					
Operating clock		Main oscillator with 3 PLLs, sub oscillator, low speed internal oscillator and high speed internal oscillator					
A/D converter		8 channels, 10-bit		16 channels, 10-bit		16 channels, 10-bit	
Timers	Timer array unit A,16-bit	1 unit × 16 channels					
	Timer array unit B,16-bit	—				1 unit × 16 channels	
	Timer array unit J,32-bit	1 unit × 4 channels					
	Real-time clock	1 unit					

	Window watchdog	2 channels	
	Operating system timer	1 channel	
	Encoder timer	–	2 channels
Network functions	CAN controller	1 channel (64 messages buffer)	2 channels (64 messages buffer)
	IEBus controller	1 channel	
	MediaLB	1 unit	
	Ethernet controller	–	1 unit
Serial interfaces	UART I/F with LIN master controller	4 channels	5 channels
	Synchronous I/F (CSI)	4 channels	5 channels
	I ² C bus I/F	4 channels	
	I ² S bus I/F	4 channels	6 channels
	Pulse code modulation	1 channel	2 channels
Other functions	Power-on-clear	Option	
	Clock monitors	3 channels	
	Data CRC	1 channel	
	Key return	–	8 channels
	On-chip debug	Provided	

Voltage supply	Internal supply	1.2 V		
	I/O supply	3.3 V		
Operating temperature		-40°C to +85°C or -40°C to +105°C		
Package		100-pin QFP	144-pin QFP	176-pin QFP

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