

S1C17 Family Products overview

Products	Display	Clock frequency			Supply current				Supply voltage [V]	Memory			I/O port	Timer							SIO					Form of delivery						
	LCD Driver segxcom	High-speed [Hz] (Max.)	Low-speed [Hz] (Max.)	Built-in oscillator [Hz] (Typ.)	Sleep [μA] (Typ.)	Halt [μA] (Typ.)	32kHz Operating [μA] (Typ.)	1MHz Operating [μA] (Typ.)		Flash ROM [Byte]	Mask ROM [Byte]	RAM [Byte]		8-bit timer	16-bit timer	16-bit PWM timer	Stopwatch	Watchdog timer	Clock	Real-time clock	UART	SPI	I ² C master	I ² C slave	Remote controller transmission and reception	RF converter	A/D converter	Multiplier/Divider	SVD *1	Package	Chip	
																																[Stand-alone Low Power] This 16-bit MCU has improved the throughput and the development environment while maintaining low power consumption just like It includes LCD driver, power circuit, clock function and various types of interfaces, and is suitable for watches, clocks, remote controllers, and healthcare devices.
S1C17100/600/700 series		[Stand-alone Low Power] This 16-bit MCU has improved the throughput and the development environment while maintaining low power consumption just like It includes LCD driver, power circuit, clock function and various types of interfaces, and is suitable for watches, clocks, remote controllers, and healthcare devices.											4/8-bit Epson MCU.																			
S1C17121	40 × 4 36 × 8	4.2M	32.768k	2.7M	0.15	0.9	7.0	250	1.8 to 3.6	–	32K	2K	36	3	3	1	○	○	○	–	2	1	○	○	○	2	8	○	○	TQFP14-100 VFBGA7H-144	○	
S1C17611	12 × 4 8 × 8	8.2M	32.768k	2.7M	TBD				1.8 to 3.6	32K _{*3}	–	2K	19	2	3	2	○	○	○	–	1	1	○	○	–	1	4	○	○	QFP12-48	○	
S1C17601	20 × 4 16 × 8	8.2M	32.768k	2.7M	0.6	2.0	12	340	1.8 to 3.6 _{*2}	32K _{*3}	–	2K	24	2	3	2	○	○	○	–	1	1	○	○	–	1	4	○	○	TQFP13-64 VFBGA8H-81	○	
S1C17621	40 × 4 36 × 8	8.2M	32.768k	2.7M	0.75	2.5	15	410	1.8 to 3.6 _{*2}	32K _{*3}	–	2K	36	3	3	1	○	○	○	–	2	1	○	○	○	2	8	○	○	TQFP14-100	○	
S1C17602	40 × 4 36 × 8	8.2M	32.768k	2.7M	0.75	2.5	15	410	1.8 to 3.6 _{*2}	64K _{*3}	–	4K	36	3	3	1	○	○	○	–	2	1	○	○	○	2	8	○	○	TQFP14-100 VFBGA7H-144	○	
S1C17622	56 × 4 52 × 8	8.2M	32.768k	2.7M	1.0	2.5	TBD		1.8 to 3.6 _{*2}	64K _{*3}	–	4k	40	3	3	1	○	○	○	–	2	1	○	○	○	2	8	○	○	TQFP15-128	○	
S1C17604	40 × 4 36 × 8	8.2M	32.768k	2.7M	1.0	2.5	TBD		1.8 to 3.6 _{*2}	128K _{*3}	–	8K	36	3	3	3	○	○	○	○	2	1	○	○	○	2	8	○	○	TQFP14-100	○	
S1C17624	56 × 4 52 × 8	8.2M	32.768k	2.7M	1.0	2.5	TBD		1.8 to 3.6 _{*2}	128K _{*3}	–	8K	40	3	3	3	○	○	○	○	2	1	○	○	○	2	8	○	○	TQFP15-128	○	
S1C17711	64 × 16 56 × 24	8.2M	32.768k	2.7M	1.0	2.7	TBD		1.8 to 3.6 _{*2}	64K _{*3}	–	4k	29	–	4	4	○	○	○	–	1	1	○	○	○	2	8	○	○	TQFP15-128 VFBGA10H-144	○	
S1C17704 (S1C17701 *5)	72 × 16 56 × 32	8.2M	32.768k	–	1.0	2.6	17 _{*6}	550 _{*7}	1.8 to 3.6 _{*2}	64K _{*3}	–	4K	28	2	3	1	○	○	○	○	1	1	○	–	○	–	–	–	○	TQFP24-144 VFBGA10H-144 VFBGA8H-161	○	
S1C17712	80 × 16 64 × 32	8.2M	32.768k	2.7M	1.0	2.5	16	450	1.8 to 3.6 _{*2}	128K _{*3}	–	8K	28	3	3	1	○	○	○	–	1	1	○	–	○	–	–	○	○	QFP21-176	○	
S1C17702	88 × 16 72 × 32	8.2M	32.768k	2.7M	1.0	2.5	16	450	1.8 to 3.6 _{*2}	128K _{*3}	–	12K	28	3	3	2	○	○	○	–	2	1	○	–	○	–	–	○	○	QFP21-176 VFBGA10H-180 VFBGA8H-181	○	
S1C17703	128 × 16/24 120 × 32	8.2M	32.768k	2.7M	1.0	2.5	TBD		1.8 to 3.6 _{*2}	256K _{*3}	–	12K	35	–	5	4	○	○	○	–	2	3	○	○	○	2	8	○	○	QFP21-216	○	
S1C17705	128 × 16/24/32 64 × 64	8.2M	32.768k	2.7M	1.2	2.7	18	550	1.8 to 3.6 _{*4}	512K _{*3}	–	12K	35	–	5	4	○	○	○	–	2	3	○	○	○	2	8	○	○	QFP23-240 VFBGA10H-240	○	
S1C17706	160 × 16/24/32 80 × 64	8.2M	32.768k	2.7M	TBD				1.8 to 3.6 _{*4}	1M _{*3}	–	12K	35	–	5	4	○	○	○	○	2	3	○	○	○	2	8	○	○	QFP22-256	○	
S1C17000 series		[Small package] The series products specialized for applications. Lineup of WCSP 48-pin packages (approx. 3-mm square) are suitable for portable gears having the Also, various types of serial interface (I/F) and A/D converters are available in sensor applications.											limited packaging area.																			
S1C17001	–	8.2M	32.768k	–	0.5	2.5	10	256	1.65 to 2.7 (Core) 1.65 to 3.6 (I/O)	–	32K	2K	28	2	3	1	○	○	○	–	1	1	○	–	○	–	–	–	–	○	QFP12-48 QFN7-48 WCSP-48	○
S1C17002	–	20M	32.768k	–	0.5	3.3	8.0	310	1.65 to 1.95 (Core) 1.65 to 3.6 (I/O)	–	128K	8K	34	8	2	1	–	○	–	○	1	1	○	○	○	–	4	○	–	TQFP12-64 WCSP-48	○	
S1C17003	–	20M	32.768k	–	1.0	3.3	8.0	350	1.65 to 1.95 (Core) 1.65 to 3.6 (I/O)	–	64K	4K	34	3	3	1	○	○	○	–	2	1	○	○	○	–	4	○	–	TQFP12-64 WCSP-48	○	

–: Under development

*1: SVD is an abbreviation for Supply Voltage Detector.

*2: During programming in flash memory: 2.7V to 3.6V

*3: This product uses SuperFlash® technology licensed from Silicon Storage Technology, Inc.

*4: During programming in flash memory: 2.5V to 3.6V

*5: Executes 1 instruction/1.5 clocks

*6: For S1C17701: 14μA

*7: For S1C17701: 420μA

S1C17 Family Products overview

Products	Display		Clock frequency			Supply current				Supply voltage [V]	Memory					Bus		I/O			Timer					SIO				Form of delivery		Remarks										
	LCD Controller		High-speed [Hz] (Max.)	Low-speed [Hz] (Typ.)	Built-in oscillator [Hz] (Typ.)	Sleep [A] (Typ.)	Halt [A] (Typ.)	Operating [A] (Typ.)	1MHz operating [A] (Typ.)		Flash ROM [Byte]	Mask ROM [Byte]	RAM [Byte]	VRAM [Byte]	Backup RAM [Byte]	Address bus	Data bus	Input port	I/O port	Support of multiple voltages *5	8-bit timer	16-bit timer	16-bit PWM timer	Stopwatch	Watchdog timer	Clock	Real-time clock	UART (rDA 1.0)	SPI	I ² C master	I ² C slave		Remote controller transmission and reception	A/D converter	DMA	Multiplier/MAC	Divider	USB	Package	Chip		
	with built-in VRAM [bpp]	with external VRAM [bpp]																																								
S1C17500 series	[High-performance] The 16-bit Microcontrollers allowing the 32-bit level sophisticated processing to perform. Suitable for a wide range of whiteware products and other home appliances due to the utilization of various types of built-in interfaces such as USB, UART, SPI, I ² C, I ² S, A/D converter, and remote controller transmission circuits, as well as the improved user interface using music, audio, touch switches, etc.																																									
S1C17501	-	-	48M	32.768k	-	4.0μ	20m (48MHz)	40m (48MHz)	-	3.0 to 3.6	96K *6 128K *6	-	4K	-	2K	23	8/16 *3	8	83	-	6	2	1	-	1	-	○ *2	1	2	1	-	○	8	-	○	-	FS2.0	TQFP14-100 *6 TQFP15-128 *6	-			
<u>S1C17502</u>	-	-	48M	32.768k	-		TBD		-	2.7 to 5.5	192K 256K	-	16K	-	16	23	8/16	16	TBD	○	6	4	3	-	1	-	○ *2	1	2	1	-	○	16	4	○	○	FS2.0	TQFP15-128 TQFP24-144 *7	-	Vf of LCD-DR only motor controllers		
S1C17503	-	-	33M	32.768k	-	5.0μ	15m (33MHz)	19m (33MHz)	-	2.7 to 5.5	128K	-	16K	-	16	23	8/16 *3	4	95	○	4	1	2	-	1	-	○ *2	1	2 *4		1	1	1	○	4	4	○	○	-	TQFP14-100 TQFP15-128 QFP5-128	-	Vf of LCD-DR only
<u>S1C17554</u>	-	-	24M	32.768k	-		TBD			1.65 to 1.95 (Core) 1.65 to 5.5 (I/O)	128K *9	-	16K	-	-	-	-	-	34	-	-	5	4	○	○	○	-	2	3	○	○	○	4	-	○	○	-	TQFP13-64 WCSP-48	-			
S1C17800 series	[High-performance] The 16-bit Microcontrollers allowing the 32-bit level sophisticated processing to perform. The device having the LCDC can display the 1-bpp maximum VGA monochrome images. Also suitable for controlling the operation panels of whiteware products and other various types of products due to the utilization of a wide array of built-in interfaces such as USB, various types of serial interfaces, and A/D converter, as well as the improved user interface using display, music, touch panel, etc.																																									
S1C17801	1 (120 X 120)	4 (QVGA) 1 (VGA)	48M	32.768k	-	4.0μ	20m (48MHz)	40m (48MHz)	-	3.0 to 3.6	128K	-	4K		2K *1	23	8/16	8	83	-	6	2	1	-	1	-	○ *2	1	2	1	-	○	8	-	○	-	FS2.0	TQFP15-128 PFBGA7U-144	-	Vf of LCD-DR only		
<u>S1C17802</u>	1 (QVGA)	4 (QVGA) 1 (VGA)	48M	32.768k	-		TBD		-	2.7 to 5.5	192K *7 256K *7	-	16K		16	23	8/16	16	TBD	○	6	4	3	-	1	-	○ *2	1	2	1	-	○	16	4	○	○	FS2.0	TQFP15-128 TQFP24-144 *7	-	Vf of LCD-DR only motor controllers		
S1C17803	1 (QVGA)	4 (QVGA) 1 (VGA)	33M	32.768k	-	5.0μ	15m (33MHz)	19m (33MHz)	-	2.7 to 5.5	128K	-	16K		16	23	8/16 *3	4	95	○	4	1	2	-	1	-	○ *2	1	2 *4		1	1	1	○	4	4	○	○	-	TQFP14-100 TQFP15-128 QFP5-128	-	Vf of LCD-DR only

 : Under development

*1: Also used as the RAM *2: Real-time clock (The battery backed up operation is supported.) *3: The TQFP14-100 has the 8-bit fixed data bus.

*6: TQFP14-100(Flash96KB), TQFP15-128(Flash128KB) *7: TQFP15-128(Flash192KB), TQFP24-144(Flash256KB) *8: Built-in a remote controller transmission and reception circuit

*4: Universal serial interface (Any of UART, SPI and I²C functions can be selected.)

*5: Coexistence of 5V and 3V (and other) different interface voltages is supported. *9: For evaluation, (typically) 100 rewritings are allowed. For mass production, data is written to ROM by Seiko Epson prior to shipment.