

EPSON 8-bit MCU S1C88104/112 SPEC

Model	S1C88104	S1C88112
Supply Voltage	Normal mode: 2.4 ~ 5.5V (Max. 4.2 MHz) Low power mode: 1.8 ~ 3.5V (Max. 50 kHz) High speed mode: 3.5 ~ 5.5V (Max. 8.2 MHz)	
Core CPU	S1C88 (MODEL3) CMOS 8-bit core CPU	
OSC1 Oscillation circuit	Crystal oscillation circuit/CR oscillation circuit/external clock input 32.768 kHz (Typ.)	
OSC3 Oscillation circuit	Crystal oscillation circuit/ceramic oscillation circuit/CR oscillation circuit/external clock input 4.2 MHz/3V, 8.2MHz/5V	
Instruction set	608 types (Usable for multiplication and division instructions)	
Min. Instruction execution time	0.48µsec/ 4.2MHz (2 clock)	
Internal ROM capacity	12K byte	4K byte
Internal RAM capacity	256 byte	
Bus line	Address bus: 19 bits (Also usable as a general output port when not used as a bus) Data bus: 8 bits (Also usable as a general I/O port when not used as a bus) CE signal: 4 bits WR signal: 1 bit RD signal: 1 bit (Also usable as a general output port when not used as a bus)	
Input port	10 bits ----- (2 bits can be set for event counter external clock input and bus request signal input terminal)	
Output port	9 bits ----- (4 bits can be set for buzzer output, FOUT, TOUT and bus acknowledge signal output terminal)	
I/O port	8 bits (4 bits each can be set for serial interface input/output and analog comparator input)	
Serial interface	1 port (8-bit clock synchronous system or asynchronous system)	
Timer	Programmable timer (8 bits): 2ch. (1ch. can be set as an event counter or 2 ch. as a 16 bits programmable timer for 1ch.) Clock timer (8 bits): 1ch. Stopwatch timer (8 bits): 1ch.	
Sound generator	Envelope function, equipped with volume control	
Watchdog timer	Built-in	
Analog comparator	2ch. built-in	
SVD circuit	Can detect up to 16 different voltage levels	
Interrupt	External interrupt: Input interrupt 2 systems (3 types) Internal interrupt: Timer interrupt 3 systems (9 types) Serial interface interrupt 1 system (3 types)	
Current consum-ption (Typ.)	SLEEP	300 nA (Typ./normal mode)
	HALT (32.768kHz)	2µA (Typ./normal mode)
	In operation (32.768kHz)	14µA (Typ./normal mode)
	In operation (4.2MHz)	2 mA (Typ./normal mode)
Package	QFP14-80pin/ QFP 15-100pin (plastic) or chip	

* The number of bits cited for output ports and I/O ports does not include those shared with the bus.