

# ESPON S1C6F416 SPEC

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OSC1 oscillation circuit .....	32.768 kHz (Typ.) crystal or 60 kHz (Typ.) CR oscillation circuit
OSC3 oscillation circuit .....	3.58 MHz (Typ.) ceramic or 2 MHz (Typ.) CR oscillation circuit
Instruction set .....	Basic instruction: 47 types (411 instructions with all) Addressing mode: 8 types
Instruction execution time .....	During operation at 32.768 kHz: 61 $\mu$ sec 122 $\mu$ sec 183 $\mu$ sec During operation at 60 kHz: 33 $\mu$ sec 67 $\mu$ sec 100 $\mu$ sec During operation at 2 MHz: 1 $\mu$ sec 2 $\mu$ sec 3 $\mu$ sec During operation at 3.58 MHz: 0.56 $\mu$ sec 1.12 $\mu$ sec 1.68 $\mu$ sec
PROM capacity .....	Code PROM: 16,384 words $\times$ 13 bits Data PROM: 4,096 words $\times$ 4 bits
RAM capacity.....	Data memory: 1,024 words $\times$ 4 bits Display memory: 1,020 bits (240 words $\times$ 4 bits + 60 $\times$ 1 bit)
Input port.....	4 bits (with pull-up resistors)
Output port.....	4 bits (It is possible to switch the 2 bits to special outputs; It can be selected with software )
I/O port .....	4 bits with Schmitt trigger input (Built-in pull-up resistors may be disabled. It is possible to switch to serial I/F inputs/outputs)
Serial interface .....	1 port (8-bit clock synchronous or asynchronous system; It can be selected with software)
LCD driver.....	60 segments $\times$ 8, 9, 16 or 17 commons; It can be selected with software
Time base counter .....	2 systems (Clock timer, stopwatch timer)
Programmable timer .....	8 bits $\times$ 2 ch. or 16 bits $\times$ 1 ch., with event counter function
Watchdog timer.....	Built-in
Supply voltage detection (SVD) circuit...	2 values, programmable (2.70 V, 2.80 V)
External interrupt .....	Input port interrupt: 4 systems
Internal interrupt .....	Clock timer interrupt: 4 systems Stopwatch timer interrupt: 2 systems Programmable timer interrupt: 2 systems Serial interface interrupt: 3 systems
Power supply voltage.....	2.7 V to 3.6 V
Operating temperature range .....	-20°C to 70°C
Current consumption (Typ.) .....	Low-power operation: During SLEEP 1.2 $\mu$ A (Typ.) During HALT (32 kHz cryctal oscillation)/ 3.6 V (LCD OFF) 3.0 $\mu$ A (Typ.)/3.6 V (LCD ON) 10.0 $\mu$ A (Typ.) During operation (32 kHz cryctal oscillation)/3.6 V (LCD OFF) 90 $\mu$ A (Typ.) During HALT (60 kHz CR oscillation)/3.6 V (LCD OFF) 8.0 $\mu$ A (Typ.)/3.6 V (LCD ON) 20.0 $\mu$ A (Typ.) During operation (60 kHz CR oscillation)/ 3.6 V (LCD OFF) 180 $\mu$ A (Typ.) High-speed operation: During operation (2 MHz CR oscillation)/3.6 V (LCD OFF) 800 $\mu$ A (Typ.) During operation (3.58 MHz ceramic oscillation)/3.6 V (LCD OFF) 1 mA (Typ.)
Package .....	TQFP15-128pin (plastic) or chip