



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Analog Peripherals

12-Bit ADC, 5 V input signal; up to 6 external inputs

- ± 1 LSB INL; guaranteed monotonic
- Programmable throughput up to 200 ksps
- Data-dependent windowed interrupt generator
- Programmable gain maximizes input signal span

Built-in Temperature Sensor (± 3 °C)

One Comparator

Internal Voltage Reference

Precision V_{DD} Monitor/Brown-out Detector

On-Chip Debug

- On-chip debug circuitry facilitates full speed, non-intrusive in-system debug (no emulator required)
- Provides breakpoints, single stepping, watch-points
- Inspect/modify memory, registers, and stack
- Superior performance to emulation systems using ICE-chips, target pods, and sockets

Supply Voltage: 2.7 to 5.25 V

- Typical operating current: 7 mA at 25 MHz at 5.0 V
- Multiple power saving sleep and shutdown modes

Temperature Range: -40 to +125 °C

High-Speed 8051 μ C Core

- Pipelined instruction architecture; executes 70% of instructions in 1 or 2 system clocks
- Up to 25 MIPS throughput with 25 MHz system clock
- Expanded interrupt handler

Memory

- 2 kB Flash; in-system programmable; flexible security features
- 256 bytes data RAM

LIN 2.0

- Master or slave operation using dedicated hardware (not software implementation with UART)

Digital Peripherals

- Up to six digital I/O; all are 5 V push-pull
- Programmable 16-bit counter array with three capture/compare modules
- Three general-purpose 16-bit counter/timers
- Dedicated watchdog timer; bidirectional reset
- Real-time clock mode using timer 3 or PCA

Clock Sources

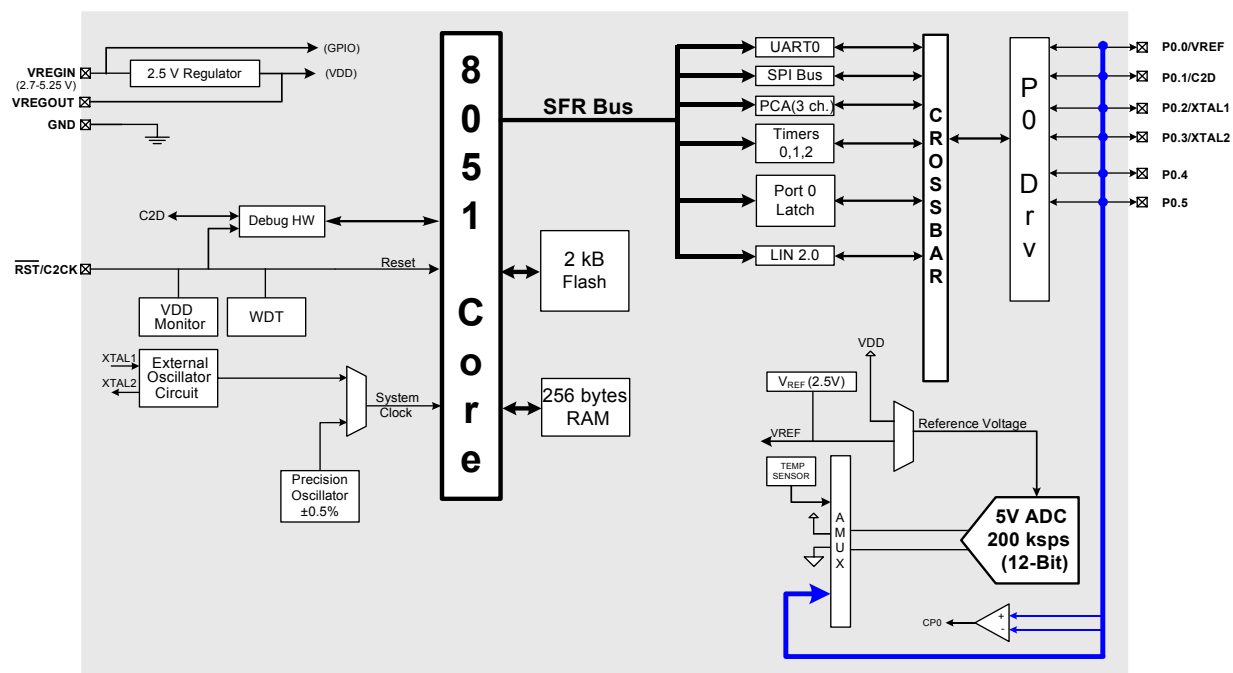
- High-precision internal programmable oscillator up to 25 MHz
- External oscillator: Crystal, RC, C, or Clock

Package

- 10-Pin QFN (3x3 mm)

Ordering Part Number

- C8051F526-IM

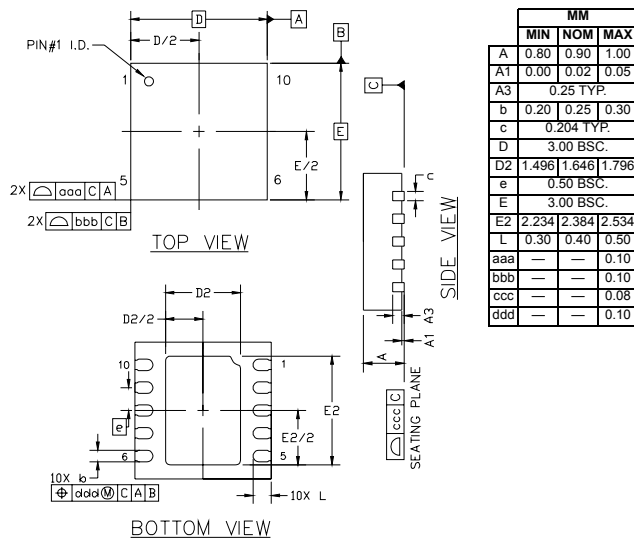


Selected Electrical Specifications

($T_A = -40$ to $+125$ °C, $V_{REGIN} = 2.7$ V unless otherwise specified)

Parameter	Conditions	Min	Typ	Max	Units
Global Characteristics					
Supply Voltage (V_{REGIN})		2.7	—	5.25	V
Supply Current (CPU active) $V_{REGIN} = 2.7$ – 5.0 V	Clock = 25 MHz	—	7	—	mA
	Clock = 1 MHz	—	0.8	—	mA
	Clock = 32 kHz; V_{DD} monitor enabled	—	33	—	μA
Supply Current (shutdown)	Oscillator not running; V_{DD} monitor disabled	—	0.2	—	μA
Clock Frequency Range		dc	—	25	MHz
A/D Converter					
Resolution		12			bits
Integral Nonlinearity		—	—	±1	LSB
Differential Nonlinearity	Guaranteed monotonic	—	—	±1	LSB
Signal-to-Noise Plus Distortion		—	68	—	dB
Throughput Rate		—	—	200	ksps
Input Voltage Range		0	—	V_{REF}	V
Flash					
Endurance		40K	150K	—	E/W cycles
Erase Cycle Time		10	12	14	ms
Write Cycle Time		40	50	60	μs

Package Information



C8051F530DK Development Kit

