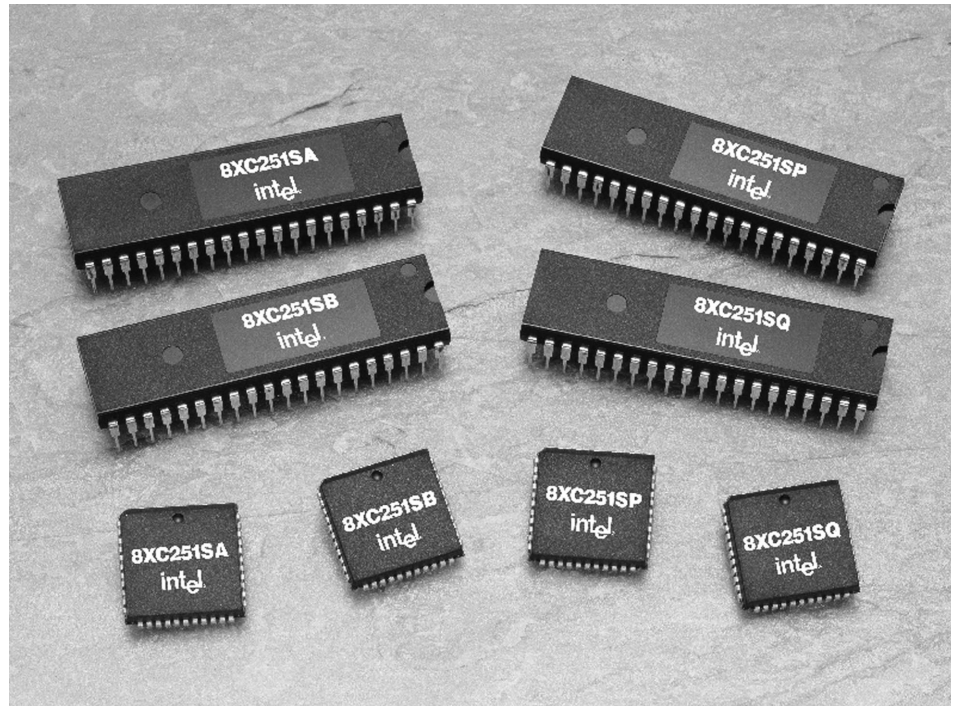# MCS® 251 Microcontroller

- MCS® 251 Architecture Core
- Binary Code and Pin Compatible With MCS® 51 Microcontroller
- 1K On-Chip Data RAM
- Programmable Counter Array (PCA) Supports
  - Real-Time Capture and Compare
  - High Speed Output
  - PWM
- Page Mode Configuration
- 0 or 1 Wait State Configuration For External Memory Access
- 5X to 15X Performance Increase Compared to MCS® 51 Microcontrollers at the Same Clock Speed
- Software Investment Protected
- Minimal Development Cost and Effort Required
- Quick Time to Market and Quick Time to Money

The Intel 8XC251SA/SB/SP/SQ is based on the new high performance MCS 251 microcontroller architecture. Being a member of the MCS 251 microcontroller family, the 8XC251SA/SB/SP/SQ has the same advanced register based CPU architecture and a pipelined instruction execution unit. It uses the powerful MCS 251 microcontroller instruction set, with many enhanced 8-, 16- and 32-bit instructions available. The new microcontroller is also specially designed to execute C code efficiently. Most importantly, the 8XC251SA/SB/SP/SQ is binary code and pin compatible with existing MCS 51 microcontroller applications.

The 8XC251SA/SB/SP/SQ features a rich combination of integrated peripherals that make it an even more powerful microcontroller. The Programmable Counter Array (PCA) provides the flexibility for applications that require real time compare/capture, high speed I/O and pulse width modulation capabilities. Also included is an enhanced serial port for multi-processor communications, a hardware watchdog timer, a program lock scheme for on-chip

program memory and two power saving modes: idle mode and powerdown mode.

The 8XC251SA/SB/SP/SQ has 1 Kbyte or 512 bytes on-chip data RAM and is available with 16 Kbytes or 8 Kbytes of on-chip OTPROM/EPROM (87C251SA/SB/SP/SQ), or ROM (83C251SA/SB/SP/SQ), or ROMless (80C251SB/SQ) options. The 8XC251SA/SB/SP/SQ operates from static standby to 16 MHz clock frequency and is available in 44-pin PLCC, 40-pin PDIP and 40-pin windowed Ceramic DIP package options.

PRODUCT FAMILY:
8xC251SA, 8xC251SB, 8xC251SP, 8xC251SQ

DEVELOPMENT PLATFORMS:
MCS 251 Microcontroller Evaluation Kit

ENVIRONMENT:
PC (Windows)

AVAILABILITY:
Now

CONTACT:
Local Intel Sales Office
WWW: http://www.intel.com

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