

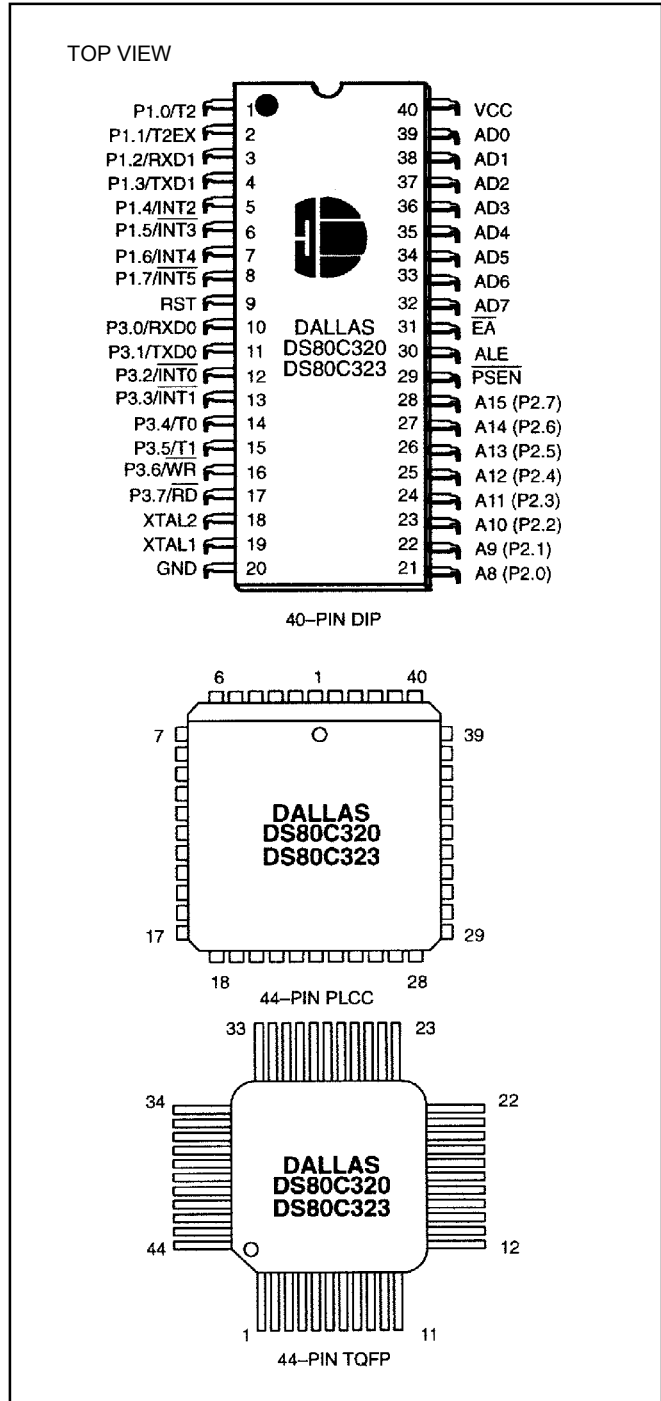
## FEATURES

- **80C32-Compatible**
  - 8051 Pin and Instruction Set Compatible
  - Four 8-Bit I/O Ports
  - Three 16-Bit Timer/Counters
  - 256 Bytes Scratchpad RAM
  - Addresses 64kB ROM and 64kB RAM
- **High-Speed Architecture**
  - 4 Clocks/Machine Cycle (8032 = 12)
  - DC to 33MHz (DS80C320)
  - DC to 18MHz (DS80C323)
  - Single-Cycle Instruction in 121ns
  - Uses Less Power for Equivalent Work
  - Dual Data Pointer
  - Optional Variable Length MOVX to Access Fast/Slow RAM/Peripherals
- **High-Integration Controller Includes:**
  - Power-Fail Reset
  - Programmable Watchdog Timer
  - Early Warning Power-Fail Interrupt
- **Two Full-Duplex Hardware Serial Ports**
- **13 Total Interrupt Sources with Six External**
- **Available in 40-Pin DIP, 44-Pin PLCC, and 44-Pin TQFP**

The *High-Speed Microcontroller User's Guide* must be used in conjunction with this data sheet. **Download it at:** [www.maxim-ic.com/microcontrollers](http://www.maxim-ic.com/microcontrollers).

Data sheets contain pin descriptions, feature overviews, and electrical specifications, whereas the user's guide contains detailed information about device features and operation.

## PIN CONFIGURATIONS



**Note:** Some revisions of this device may incorporate deviations from published specifications known as errata. Multiple revisions of any device may be simultaneously available through various sales channels. For information about device errata, click here: [www.maxim-ic.com/errata](http://www.maxim-ic.com/errata).