



PRELIMINARY

## 28F800BV/CE 8-Mbit (512Kx16, 1024Kx8) SmartVoltage Boot Block Flash Memory Family

*SmartDie™ Product Specification*

- Intel SmartVoltage Technology
  - 5 V or 12 V Program/Erase
  - 2.7 V, 3.3 V, or 5 V Read Operation
  - Program Time Reduced 60% at 12 V  $V_{PP}$
- Very High-Performance Read
  - 5 V: 70/120 ns Max. Access Time  
30/40 ns Max. Output Enable Time
  - 3 V: 120/150 ns Max. Access Time  
65 ns Max. Output Enable Time
  - 2.7 V: 120 ns Max. Access Time  
65 ns Max. Output Enable Time
- Low Power Consumption
  - Max 60 mA Read Current at 5 V
  - Max 30 mA Read Current at 2.7-3.6 V
- x8/x16-Selectable Input/Output Bus
  - 28F800 for High Performance 16- or 32-bit CPUs
- Optimized Array Blocking Architecture
  - One 16-Kbyte Protected Boot Block
  - Two 8-Kbyte Parameter Blocks
  - One 96-Kbyte Main Block
  - Seven 128-Kbyte Main Blocks
  - Top or Bottom Boot Locations
- Absolute Hardware-Protection for Boot Block
- Software EEPROM Emulation with Parameter Block
- Extended Cycling Capability
  - 100,000 Block Erase Cycles
- Automated Byte Write and Block Erase
  - Industry-Standard Command User Interface
  - Status Registers
  - Erase Suspend Capability
- SRAM-Compatible Write Interface
- Automatic Power Saving Feature
  - 1 mA Typical  $I_{CC}$  Active Current in Static Operation
- Reset/Deep Power-Down Mode
  - 0.20  $\mu$ A  $I_{CC}$  Typical
  - Provides Reset for Boot Operations
- Hardware Data Protection Feature
  - Erase/Write Lockout during Power Transitions
- ETOX™ IV Nonvolatile Flash Technology
- Intel SmartDie™ Product
  - Full AC/DC Testing at Die Level
  - 0°C to +80°C (Junction) Temperature Range

**NOTICE:** This document contains preliminary information on new products in production. It is valid for the devices indicated in "DEVICE NOMENCLATURE" on page 7. This specification is subject to change without notice. Verify with your local Intel sales office that you have the latest product specification before finalizing a design.

**REFERENCE INFORMATION:** The information in this document is provided as a supplement to the standard package datasheet on a specific product. Please refer to the standard package datasheet (order number 290539) for product information and specifications not found in this document.

**This complete document is available from Intel's World Wide Website  
and/or U.S. Literature Center:**

**World Wide Website:** <http://www.intel.com>

**U.S. Literature Center :** 800-548-4725

in other geographies, please contact your local sales office