



# Intel® Pentium® 4 Processor in the 478-Pin Package at 1.40 GHz, 1.50 GHz, 1.60 GHz, 1.70 GHz, 1.80 GHz, 1.90 GHz, and 2GHz

## Datasheet

### Product Features

- Available at 1.40, 1.50, 1.60, 1.70, 1.80, 1.90 and 2 GHz
- Binary compatible with applications running on previous members of the Intel microprocessor line
- Intel® NetBurst™ microarchitecture
- System bus frequency at 400 MHz
- Rapid Execution Engine: Arithmetic Logic Units (ALUs) run at twice the processor core frequency
- Hyper Pipelined Technology
- Advance Dynamic Execution
  - Very deep out-of-order execution
  - Enhanced branch prediction
- Level 1 Execution Trace Cache stores 12K micro-ops and removes decoder latency from main execution loops
- 8 KB Level 1 data cache
- 256 KB Advanced Transfer Cache (on-die, full speed Level 2 (L2) cache) with 8-way associativity and Error Correcting Code (ECC)
- 144 Streaming SIMD Extensions 2 (SSE2) instructions
- Enhanced floating point and multimedia unit for enhanced video, audio, encryption, and 3D performance
- Power Management capabilities
  - System Management mode
  - Multiple low-power states
- Optimized for 32-bit applications running on advanced 32-bit operating systems
- 8-way cache associativity provides improved cache hit rate on load/store operations.

The Intel® Pentium® 4 processor is designed for high-performance desktops and entry level workstations. It is binary compatible with previous Intel Architecture processors. The Pentium 4 processor provides great performance for applications running on advanced operating systems such as Microsoft Windows\* 98, Windows\* Me, Windows\* 2000, Windows\* XP, and UNIX. This is achieved by the Intel® NetBurst™ microarchitecture which brings a new level of performance for system buyers. The Pentium 4 processor extends the power of the Pentium III processor with performance headroom for advanced audio and video internet capabilities. Systems based on Pentium 4 processors also include the latest features to simplify system management and lower the total cost of ownership for large and small business environments. The Pentium 4 processor offers great performance for today's and tomorrow's applications.

