

Pentium® III Processors for Applied Computing

Pentium® III Processor with 512K Cache Product Highlights

- Available in 1.26 GHz for a 133 MHz processor side bus
- Validated with Intel® 815E Chipset and Chipsets from third-party-vendors
- Manufactured on state-of-the-art .13 μ process technology
- 512 KB Advanced transfer cache-on-die, full-speed Level 2 (L2) cache with Error Correcting Code (ECC)
- 16 KB instruction, 16 KB data non-blocking, Level 1 (L1) cache
- P6 Dynamic execution microarchitecture including multiple branch prediction, data flow analysis and speculative execution
- Streaming SIMD extensions, consisting of 70 new instructions that enable advanced imaging, 3D, streaming audio and video, and speech recognition
- Intel® MMX™ media enhancement technology
- Dual Independent Bus (DIB) architecture: separate dedicated external processor side bus and dedicated internal high-speed cache bus
- Memory is cacheable for 64 Gbytes of addressable memory space
- Both dual-processor (with third-party chipsets) and uni-processor capable
- Data integrity and reliability features such as Error Correcting Code, Fault Analysis and Recovery for both system and L2 cache buses
- Fully compatible with existing Intel® Architecture-based software
- Flip-Chip Pin Grid Array 2 (same as for FC-PGA with an Integrated Heat Spreader)
- Embedded life cycle support

Pentium® III Processor Product Highlights

- Available in 600, 700 and 850 MHz for a 100 MHz processor side bus
- Available in 733, 866 MHz, and 1 GHz for a 133 MHz processor side bus
- Validated with Intel® 840, 815, 815E, 810 and 440BX Chipsets



- Manufactured on .18 μ process technology
- 256 KB Advanced transfer cache-on-die, full-speed Level 2 (L2) cache with Error Correcting Code (ECC)
- 16 KB instruction, 16 KB data non-blocking, Level 1 (L1) cache
- P6 Dynamic execution microarchitecture including multiple branch prediction, data flow analysis and speculative execution
- Streaming SIMD extensions, consisting of 70 new instructions that enable advanced imaging, 3D, streaming audio and video, and speech recognition
- Intel MMX™ media enhancement technology
- Dual Independent Bus (DIB) architecture: separate dedicated external processor side bus and dedicated internal high-speed cache bus
- Memory is cacheable for 64 Gbytes of addressable memory space
- Both dual-processor (with the 840 Chipset only) and uni-processor capable
- Data integrity and reliability features such as Error Correcting Code, Fault Analysis and Recovery for both system and L2 cache buses
- Fully compatible with existing Intel® Architecture-based software
- Flip-Chip Pin Grid Array (PGA370) packaging
- Embedded life cycle support

Pentium III Processor Overview

The Pentium® III processor is ideal for high performance applied computing. It is the latest processing technology supporting high-end communications, transaction terminal, and industrial automation applications. While incorporating new features and improvements, the Pentium III processor remains software compatible with previous members of the Intel microprocessor family.

The Pentium III processor is validated with multiple chipsets for maximum flexibility and scalability. Combined with the Intel 840 chipset, the Pentium III processor provides high performance and bandwidth including dual processing and a second PCI bus. The

815, 815E, 810 and 440BX chipsets provide a scalable platform supporting a wide selection of Celeron® and Pentium III processors ranging from 66 to 133 MHz processor side bus speeds. The 440BX AGPset supports ECC for the highest data integrity and ISA for legacy I/O. The Intel 815, 815E and 810 chipsets utilize Intel Graphics Technology, an integrated graphics platform which provides more stability, higher quality graphics and a reduced OEM bill of materials cost.

PENTIUM® III PROCESSORS

| PRODUCT NUMBER | CORE SPEED (MHz) | EXTERNAL BUS SPEED (MHz) | L2 CACHE | THERMAL DESIGN POWER (MAX) | VOLTAGE | T _{JUNCTION} | PACKAGE |
|-----------------|------------------|--------------------------|----------|----------------------------|---------|-----------------------|-------------|
| RB80526PY600256 | 600 | 100 | 256K | 19.6 watts | 1.75V | 82C | 370 FC-PGA |
| RB80526PY700256 | 700 | 100 | 256K | 21.9 watts | 1.75V | 80C | 370 FC-PGA |
| RB80526PZ733256 | 733 | 133 | 256K | 22.8 watts | 1.75V | 80C | 370 FC-PGA |
| RB80526PY850256 | 850 | 100 | 256K | 25.7 watts | 1.75V | 80C | 370 FC-PGA |
| RB80526PZ866256 | 866 | 133 | 256K | 26.1 watts | 1.75V | 80C | 370 FC-PGA |
| RB80526PZ001256 | 1000 | 133 | 256K | 29.0 watts | 1.75V | 75C | 370 FC-PGA |
| RK80530KZ012512 | 1266 | 133 | 512K | 29.5 watts | 1.45V | 69C | 370 FC-PGA2 |

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