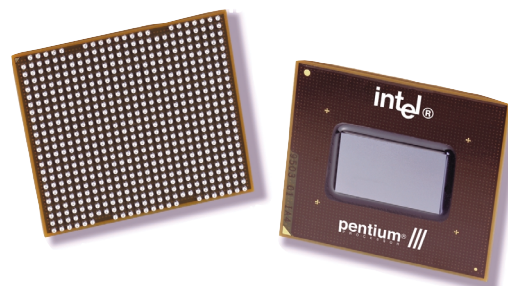




Intel® Pentium® III Processor – Low Power for Applied Computing

Product Highlights

- 700, 500 and 400 MHz processor speeds
- 100 MHz processor system bus
- Built on Intel's 0.18 micron process
- 256K Full speed "on-die" L2 cache operating at core frequency
- Surface mount package
 - High performance BGA (31 x 27 x 2.5mm), (BGA2)
 - 495 leads in area array
- Low Power
 - 16.1W TDP (max) 10.2 (typ) at 700 MHz*
 - 12.2W TDP (max) 7.9 (typ) at 500 MHz
 - 10.1W TDP (max) 6.5 (typ) at 400 MHz
 - Tcase: 0 to 100C
- Supported with the Intel® 815E, Intel® 440BX and Intel® 440MX chipsets
- MMX™ technology
- Supports Internet Streaming SIMD extensions
- Floating Point Unit (FPU)
- Dynamic Execution Micro-Architecture
- Core On-Die L1 Cache 4 Way Set Associative
 - 16 KB Instruction cache
 - 16 KB Write-back data cache
 - Programmable cacheable range
 - 32 byte line size
- On-Die L2 Cache with dedicated bus operating at core frequency
 - 8 Way set associative
 - 32 byte line size
 - Advanced Transfer Cache
 - Error Checking and Correcting (ECC) capable
 - Supports Intel's QuickStart technology



Product Overview

The Intel® Pentium® III processor – Low Power brings the performance of the Pentium III processor to thermally sensitive and space constrained applied computing applications. Available now in the small form factor BGA package at 700, 500, and 400 MHz with 256K on-die L2 cache, the Pentium III processor – Low Power operates at just 1.35 volts and less than 17 watts of power.

It incorporates leading edge microprocessor technologies, like Intel's 0.18 micron manufacturing process, Dual Independent Bus (DIB) architecture and Advanced Transfer Cache. These features make it ideal for many performance-hungry, thermally sensitive, and space constrained applied computing applications such as data communications, telecommunications, industrial automation and transaction terminals.

Product Description

This latest addition to the Embedded Intel Architecture low power family features a 100 MHz processor side bus, designed for a faster transfer of data, to yield an increase in performance. The Dual Independent Bus (DIB) architecture offers up to three times the bandwidth over a single bus architecture. It combines two independent processor side buses for simultaneous parallel access to data.

PENTIUM® III PROCESSORS - LOW POWER

PRODUCT NUMBER	CORE SPEED (MHz)	EXTERNAL BUS SPEED (MHz)	L2 CACHE	THERMAL DESIGN POWER (MAX)	VOLTAGE	T _{CASE}	PACKAGE
KC80526LY400256	400	100	256K	10.1 watts	1.35V	0-100C	495 BGA
KC80526LY500256	500	100	256K	12.2 watts	1.35V	0-100C	495 BGA
KC80526GY850256 [†]	700	100	256K	16.1 watts	1.35V	0-100C	495 BGA

[†] Intel Pentium III processor at 850/700 MHz with SpeedStep (1.6V/1.35V respectively)

Product Description (continued)

The Pentium III processor – Low Power also supports MMX™ technology and Internet Streaming SIMD extensions which enables a more visual experience for the end user and allows for new applications such as real-time video encoding and speech recognition. The 256K of on-die L2 cache coupled with Advanced Transfer Cache, offers leading edge low power processor performance. Dynamic execution of software instructions within the core processing unit optimizes the workload on the processor, increasing performance.

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