



IDT WinChip™ Processor Brief

The IDT WinChip™ is the first microprocessor from Centaur Technology Inc., a subsidiary of Integrated Device Technology, Inc. (IDT). Using a unique design approach, the IDT WinChip delivers competitive performance, lower cost and lower power dissipation than offerings from other x86 microprocessor suppliers. This combination of features is expected to shift the price/performance paradigm in the personal computer industry and will allow computer manufacturers to deliver higher value to the end customer. IDT WinChip is targeted at the sub-\$1,000 desktop and sub-\$2,000 notebook product categories. The IDT WinChip includes MMX™-compatible instructions and is offered in processor speeds of 180MHz and 200MHz, with faster speeds to come.

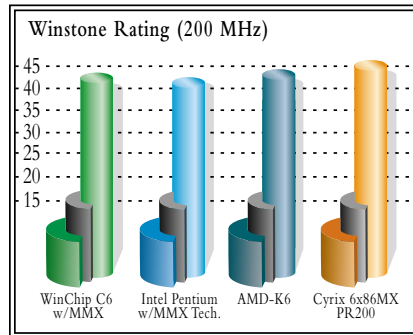
Architecture

The IDT WinChip uses a unique design concept which goes back to the principles of RISC (Reduced Instruction Set Computing) architecture. This unique design approach focuses on optimizing the microprocessor for highly used simple instructions and improving the overall clock frequency. Memory performance is further improved by using large on-chip caches and sophisticated cache and translation look-aside buffer (TLB) algorithms to reduce bus utilization. In addition, the IDT WinChip processor is highly optimized for small physical size, which results in lower manufacturing costs as well as lower power consumption.

Performance

The IDT WinChip offers competitive performance to Pentium® with MMX Technology, AMD-K6™, and Cyrix 6x86MX™ microprocessors running Windows® 95 business applications.

Winstone 97 Business Performance (200MHz)



IDT WinChip offers "the performance of high-end Pentium parts, including MMX compatibility." -Linley Gwennap, Editor-in-Chief, Microprocessor Report

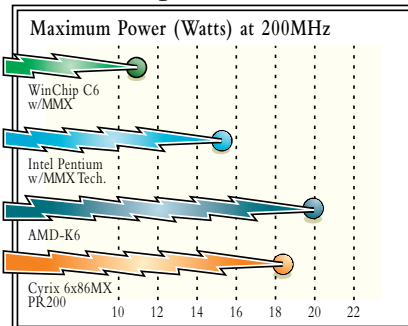
System Specifications

- Holco Shuttle 565 Motherboard (Socket 7)
- Intel 450 TX Chipset
- Award BIOS 4.5x
- 512KB Level 1 Cache
- 32MB EDO DRAM 60ns
- Diamond 3D 2000 Graphics (S3 Virge) with 2MB EDO DRAM driver 4.03.003211
- Western Digital Caviar 1.6GB IDE hard disk

Power Dissipation

IDT WinChip power dissipation is much lower than other Socket 7 compatible processors with MMX Technology, making it suitable for mobile systems and the rapidly growing sub-\$1,000 PC product category.

Power Dissipation (Watts)



IDT WinChip...fits easily into the thermal envelope of most notebook PCs while offering performance similar to that of Intel's best notebook chips." -Linley Gwennap

It is important to note that the IDT WinChip power dissipation advantage is achieved while operating at 3.3 or 3.52 volts where other microprocessors require dual-voltage operation. Thus, the IDT WinChip is expected to offer even lower power dissipation in the future with dual-voltage support.

Compatibility

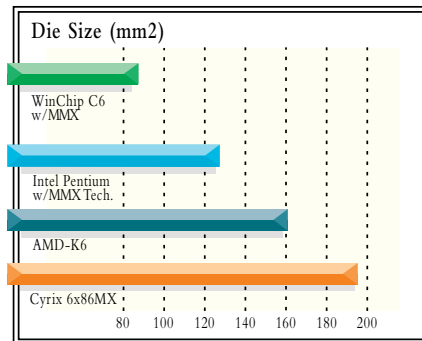
Centaur Technology has extensively tested the IDT WinChip processor with x86 operating systems such as DOS, Windows 3.1, Windows 95, Windows NT™, OS/2™, Linux, and a large number of software applications. In addition, many third-party motherboards, and chipsets from ALI, VIA, SIS, and Intel, have been tested to ensure compatibility. BIOS support is also available from Award, AMI, Phoenix, and SystemSoft. IDT WinChip third-party verification includes Microsoft® Certified Compatibility with Windows 95 and XXCAL Platinum Certification.

The IDT WinChip is a plug-compatible processor to Pentium with MMX Technology and is offered in a Socket 7-compliant 296-pin ceramic pin grid array (CPGA) package. IDT WinChip leverages the established and low-cost Socket 7 compatible motherboard infrastructure.

The IDT WinChip processor is a 5.4-million-transistor device manufactured using IDT's 0.35-micron, 4-layer metal CMOS technology.

Manufacturing

Die Size (mm²)



IDT WinChip "measures just 88mm²...much smaller than any other Pentium- or P6-class x86 chip." -Linley Gwennap

At only 88mm² in size, the IDT WinChip processor is between 50 and 60 percent smaller than comparable Socket 7 compatible processors with MMX Technology. The combination of small die size coupled with a simplified CMOS process allows IDT to manufacture the WinChip processor very efficiently and at a low cost.

The IDT WinChip is manufactured at IDT's state-of-the-art facilities in Hillsboro, Oregon and San Jose, California. IDT will continue to drive its manufacturing and process technology with new microprocessor designs from Centaur Technology, delivering value to buyers of mainstream PC desktop and mobile computers.

Features and Benefits

Summary

Features

Superior Price/Performance versus Pentium, AMD-K6, and Cyrix 6x86MX processors

Lower Power Dissipation (Better than Pentium, AMD-K6 and Cyrix 6x86MX)

Compatible with Socket 7 infrastructure: motherboards, chipsets and BIOS

Benefits

Higher margin for resellers.

Supports added features such as more memory, larger hard disk, better graphics, faster modem, etc.

Or, a lower system price for end customer.

Simpler mobile system design (lower cost system).

Suitable for small-form-factor desktop and mobile systems.

Leverages established industry infrastructure.

Lower cost systems with competitive performance.

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