



Feature	Benefit
Industry leading 0.13 micron manufacturing process	Enables Cool Processing by minimizing power consumption and heat generation while maximizing total system cost efficiency
PadLock Data Encryption Shield	First x86 processor on the market to feature built-in Hardware Random Number Generator
Highly efficient CoolStream architecture	World's smallest x86 processor die size of 52mm ²
Ultra low power consumption	Industry leading typical power consumption of a mere 11.25 watts
Ultra low heat	Low heat, so less active cooling is required. Ideal for quiet and silent PC designs
Clock speeds of 1GHz and beyond	Superior digital media and productivity application performance
16 Pipeline Stages	Faster CPU speed and efficiency
StepAhead Advanced Branch Prediction	Looks ahead and gathers the data needs to optimally run applications
Efficiency enhanced 64KB Full-Speed Exclusive L2 cache with 16-way associativity	Improved memory and streaming performance
SSE Instructions	Enhanced 3D and multimedia performance
Full Speed FPU	Additional processing power for 3D graphics, multimedia, and streaming functions
Full x86 Operating System & software application compatibility	Leverages the richest and most cost-effective software development platforms, including Microsoft® Windows® and Linux
EBGA/Socket 370 package	Affordable, low power and small footprint platform

Sales Information

Contact one of these offices for information on VIA C3™ processors

VIA Headquarters

VIA Technologies, Inc.
533 Chung Cheng Road 8F
Hsin Tien, Taipei
Taiwan
Tel: 886 2 2218 5452
Fax: 886 2 2218 5453
mkt@via.com.tw

USA

VIA Technologies, Inc.
940 Mission Court, Fremont,
CA 94539, USA
Tel: 1-510-683-3300
Fax: 1-510-687-4654
mkt@via.com.tw

China

VIA Technologies, Inc.
6F, Dascom Tower, 9 Shangdi
East Road, Haidian District,
Beijing, 100085
Tel: 86-10-6296 3088
Fax: 86-10-6297 2929
mkt@via.com.tw

Europe

VIA Technologies GmbH
Mottmann Strasse 12.
53842 Troisdorf-Oberlar
Germany
Tel: 49 2241 397780
Fax: 49 2241 3977819
support@viac3.de
sales@viac3.de

Continuing in the traditions of Cool Processing, the new VIA C3 processor based on the Nehemiah core boasts even lower levels of power consumption combined with higher digital media performance and the first ever on-die hardware Random Number Generator (RNG). Its low power consumption means that it does not require a noisy and expensive CPU cooler allowing greater freedom in system design, reduced overall system costs and lower total cost of ownership. Based on the industry standard Socket 370 architecture, the new VIA C3 is available in either EBGA (Enhanced Ball Grid Array) or CPGA (Ceramic Pin Grid Array-Socket 370) packages.

The hardware RNG of the VIA PadLock Data Encryption Engine is particularly important for embedded systems, as it does not rely on less random seed data such as keystroke timing or mouse events typically used to seed software-based RNGs (called pseudorandom number generators). Integrating the RNG directly onto the die of the microprocessor makes it much more difficult for an attacker to probe or

influence, providing greater assurance to end-users.

The new VIA C3 is based on the highly efficient CoolStream architecture that is specifically designed to minimize power consumption and optimize heat dissipation - while reducing overall system noise. Offering a typical design power of just over 10W and a maximum design power of 15W at 1GHz, the new VIA C3 requires minimal cooling enabling a new wave of stylish, quiet-running, small form factor system designs helping to create a healthier and more stress-free working and living environment.

When coupled with the VIA Apollo CLE266 chipset, the VIA C3 delivers performance increases of up to 20% over the current version of the VIA C3 processor in mainstream productivity applications and up to 73% for 3D graphics applications. With its highly efficient design, the new VIA C3 also runs up to 40% faster clock-for-clock than the Intel® Pentium®4 Celeron processor making it the most efficient native x86 processor available today.



Cool Processing!