Purpose of this Utility

The Intel(R) Processor Frequency ID Utility was developed by Intel Corporation to enable customers to discern whether or not an Intel processor is being operated above its Intel rated frequency. It can also be used to identify the Intel processors installed in a system.

The Frequency ID tab in the utility provides information regarding the operating status of the selected processor.

The CPUID tab in the utility identifies the Intel processor(s) in the system.

The Intel Processor Frequency ID Utility is not intended to identify microprocessors manufactured by companies other than Intel Corporation. For additional help on the utility, click the Help Topics button in this Help window or click on a topic below:

How the Utility works

The Intel(R) Processor Frequency ID Utility runs a frequency determination algorithm (speed test) to determine at what internal speed the processor is running. The utility then examines internal data in the processor and makes a comparison between this data and the operating frequency it measured. The utility then informs the user of the overall system status as a result of this comparison.

Note: This test is only run by the Intel(R) Processor Frequency ID Utility on systems containing processors which support the Frequency ID functionality. (See Supported Processors lists in the Intended Use of the Intel(R) Processor Frequency ID Utility for Windows* section).

The CPUID feature of the utility identifies Intel processors by reading a precise instruction embedded in the processor. The utility translates this instruction, and uses it to display information about your processor.

Information Reported by the Utility

The Intel(R) Processor Frequency ID Utility reports information on the Intel processor being tested. The information reported by the Frequency ID tab includes the following:

- Intel processor name
- Expected microprocessor operating frequency
- Current microprocessor operating frequency
- Expected system bus operating frequency
- Current system bus operating frequency
- Which processor was tested (for dual/multiprocessor use in Windows NT* only)

Accompanying this information is a message informing the user of the operating frequency status. This message details whether or not the processor is operating at a frequency higher than Intel specifications for the tested processor.

In some cases the Frequency ID tab will provide an "Advisory" button. This button can be used to view advisory messages regarding the operating status of the tested processor.

Note: The above information is only reported by the Intel(R) Processor Frequency ID Utility when run on systems containing processor(s) which support the frequency identification feature. (See the supported processors list in the Intended Use of the Intel(R) Processor Frequency ID Utility for Windows section).*

The CPUID tab of the utility provides the following information to help identify your Intel microprocessor:

- Processor Brand Name
- Processor Type
- Processor Family
- Processor Model
- Processor Stepping
- Cache Information
- System Configuration
- Processor Features

Multiprocessor or Dual Processor support

Multiprocessor or dual processor support is only available in Windows NT*. The Intel(R) Processor Frequency ID Utility can determine the frequency of each processor in a multi-processor system (up to 32 processors). The multiprocessor menu and toolbar selections are disabled in operating systems other than Windows NT, and in single processor systems. The application also includes a checkmark on the multiprocessor menu to indicate which processor is currently being tested.

Note: The frequency identification functionality is not supported by all Intel processors. (See Supported Processors lists in the Intended Use of the Intel(R) Processor Frequency ID Utility for Windows section).*

The CPUID tab in the utility can read and identify each Intel processor in multiprocessor (2 or more processor) systems running Microsoft Windows NT*.

To switch between processors, select ‘‘Multiprocessor’’ from the menu bar and select the processor you wish to query (e.g. select Processor #2 to run the utility on Processor #2).

Note: If you are running Windows 95, you will only be able to query Processor #1, even if more are present.*
If you have a uniprocessor (1 processor) system, the utility will not display the option to switch processors.

*Other brands and names are the property of their respective owners.

Multilanguage Support

The Intel(R) Processor Frequency ID Utility for Windows* is available in the following languages from Intel's support web site at http://support.intel.com/support/processors/procid/:

English
French
Italian
German
Brazilian Portuguese
Spanish
Russian
Korean
Chinese (simplified)
Chinese (traditional)
Japanese

*Other brands and names are the property of their respective owners.

Intended Use of the Intel® Processor Frequency ID Utility for Windows*

The Intel(R) Processor Frequency ID Utility for Windows* is a tool provided by Intel Corporation to enable customers and end users to discern whether or not an Intel processor is being operated above its intended operating frequency, as designated by Intel Corporation. The CPUID features of the tool are intended for users to identify the Intel processor within a computer system.

The Intel Processor Frequency ID Utility for Windows frequency identification functionality is designed to operate on computer systems containing an Intel microprocessor found in the following list:

Frequency ID supported processors

- Intel Pentium(R) III processor
- Intel Pentium(R) III Xeon(TM) processor
- Mobile Intel Pentium(R) III processor

The CPUID feature of the Intel Processor Frequency ID Utility is designed to operate on computer systems containing an Intel processor found in the following list:

CPUID Supported Processors

- Intel Pentium(R) processor
- Intel Pentium(R) processor with MMX(TM) technology
- Intel Pentium(R) OverDrive(R) processor
- Intel Pentium(R) OverDrive(R) processor with MMX(TM) technology
- Intel Pentium(R) Pro processor
- Intel Pentium(R) II OverDrive(R) for Pentium(R) Pro processor
- Intel Pentium(R) II processor
- Intel Pentium(R) II Xeon(TM) processor
- Intel Celeron(R) processor
- Intel Pentium(R) III processor
- Intel Pentium(R) III Xeon(TM) processor
- Mobile Intel Pentium(R) processor
- Mobile Intel Pentium(R) II Processor
- Mobile Intel Pentium(R) III Processor
- Mobile Intel Celeron(R) processor

Effects of Power Management Features

Some power management features “throttle” or reduce the operating frequency of components within the PC. These types of power management features may result in very low tested frequency results. This does not mean that the processor is operating at degraded performance levels. Rather the enabled power management feature is optimizing the efficiency of the processor, either to save power or reduce heat within the system. For instructions on how to disable these power management features, please contact your PC system manufacturer.

Definitions

Intel Processor Name

Branded name assigned by Intel(R) Corporation to a specific processor, e.g. Pentium(R) III processor.

Family Message

This classification indicates the Intel microprocessor generation and brand. For example, Family 6 (sixth generation) Intel microprocessors today include Intel(R) Celeron(TM), Pentium(R) II, Pentium II Xeon(TM), Pentium III and Pentium III Xeon processors. Family 5 (fifth generation) includes the Pentium processor and the Pentium processor with MMX(TM) technology. This information can be useful for an end user if validating information from the ‘‘Quick Reference Guide’’ that is available for the specific family of your processor.

Type Message

‘‘Type’’ indicates whether the Intel microprocessor was designed for installation by a consumer (end user) or by a professional PC system integrator, service company, or manufacturer. A ‘‘1’’ in the dialog box would indicate the microprocessor tested was intended for installation by a consumer (e.g. upgrade such as an Intel Overdrive(R) processor). A ‘‘0’’ in the ‘‘type’’ box indicates that the microprocessor tested was intended for installation by a professional PC system integrator, service company or manufacturer. The processor type indicates whether the processor is a single processor, dual processor, or an Intel OverDrive(R) processor.

Model Message

The ‘‘model’’ number identifies to Intel the microprocessor’s manufacturing technology and design generation (e.g. Model 4). Model number is used along with family to determine which specific processor in a family of processors that your computer contains. This information is occasionally needed when communicating with Intel to identify the particular processor.

Stepping Message

The ‘‘stepping’’ number indicates design or manufacturing revision data for production Intel microprocessors (e.g. Stepping 4). Stepping is used to indicate a ‘‘revision’’. By using unique steppings, it facilitates change control and tracking. Stepping also allows an end user to identify more specifically which version of the processor their system contains. This classification data may be needed by Intel when trying to determine the microprocessor’s internal design or manufacturing characteristics.

Cache Information

Cache information reported by the CPUID tab may include level 2 cache size (if a level 2 cache is present and enabled) as well as level 1 data and instruction cache sizes.

System Configuration

The System configuration field of the CPUID tab provides information regarding the number of processors in the system (multiple processors will only be visible with Windows NT*). This field also displays which processor is currently being tested.

Processor Features

The Processor features field of the CPUID tab provides information regarding which Intel processor features are present in the tested processor, e.g. MMX(TM) Technology or Streaming SIMD Extensions.

Overclock

Operation of a processor above the manufacturers specified frequency (i.e. operating a processor at 400MHz, which Intel manufactured to run at 266MHz).

A processor being operated above its frequency specification (overclocked) may become unstable, or produce unpredictable or erroneous results. These conditions might not be readily apparent and the life of the processor may also be shortened. Intel Corporation does not warrant the performance of processors in such circumstances.

System Bus Overclocking

Operation of the system bus above the processors specified system bus frequency (i.e. operating the system bus at 133MHz with a processor intended for operation at 100MHz). This will typically force the processor to run at a frequency above its intended specifications. Refer to the overclock definition for more information.