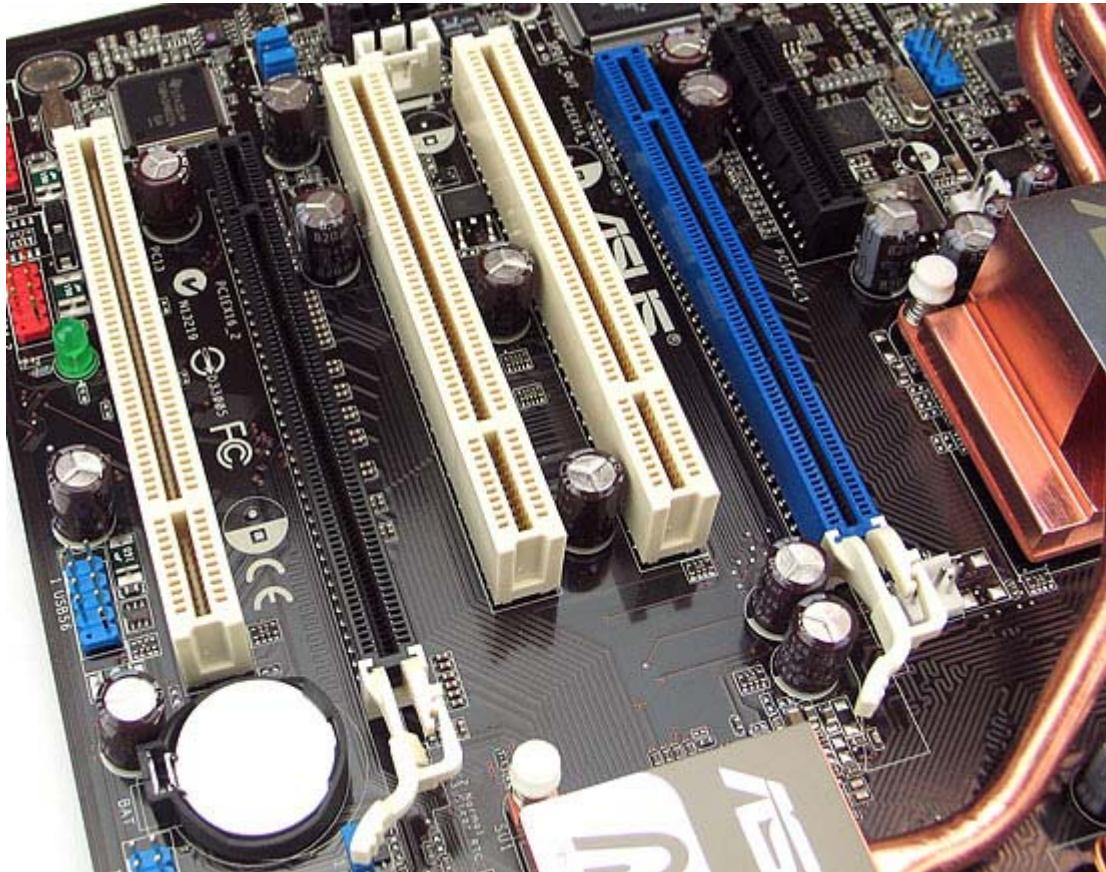# ASUS A8N32-SLI Deluxe Motherboard

Features

True Dual X16 SLI: *The ultimate enthusiast platform*

The A8N32-SLI Deluxe provides dual PCI Express x16 slots running at full speed for unrestricted performance from today's PCI Express graphics cards (compare that with the narrow bandwidth x8 platform). Gamers can easily enjoy faster graphics performance and higher video quality today, and be ready for the increasingly demanding tasks of tomorrow.

Other major features and characteristics:
 * 8-Phase Power Design
 * Cooler and quieter system
 * Longer component lifespan
 ** More stable and reliable under heavy-loading and overclocking*
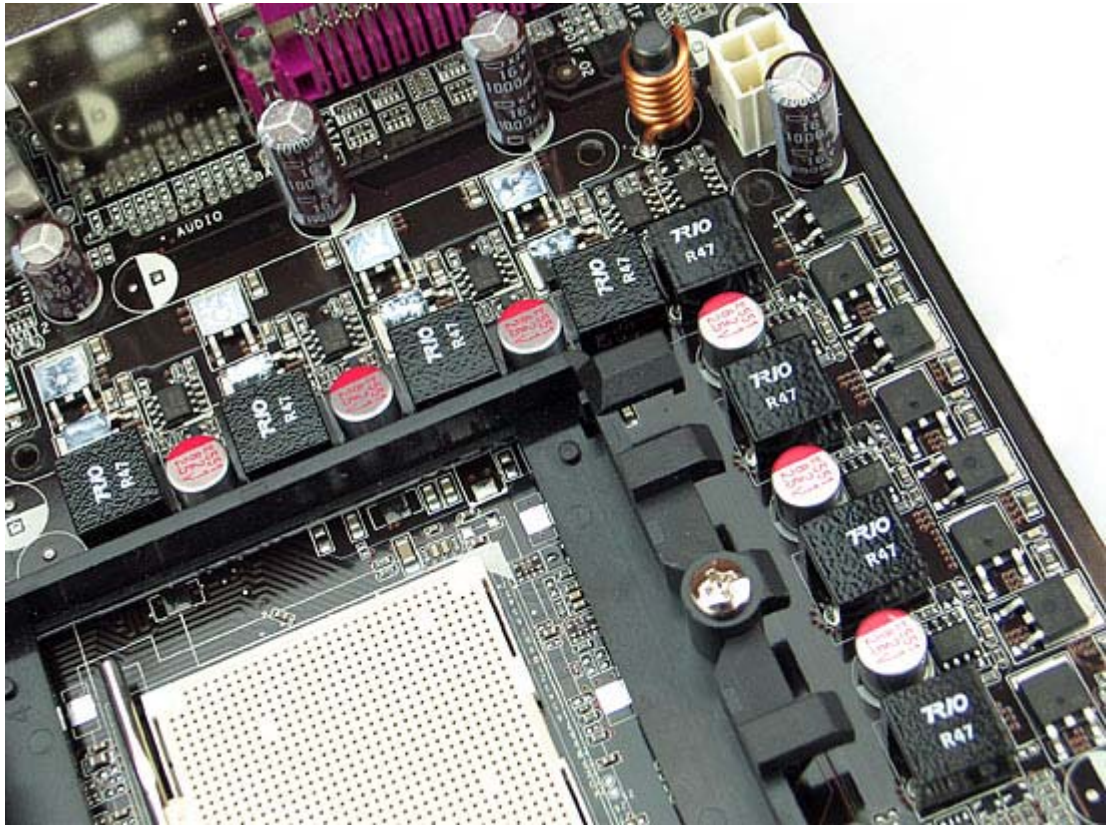
The ASUS 8-Phase Power Design enables highly efficient operation by generating less heat than other conventional power solutions (at least 15°C (36°F) down in terms). It reduces input ripple current and output ripple voltage, thereby keeping the CPU and power module from suffering under high power stress. It has the advantages of quick transient response and stability, which are especially beneficial when the CPU requires more current immediately under heavy loading or overclocking.

Fanless Design - Heat Pipe & Stack Cool 2
 * *Very quiet cooling*
 * *Zero failures*
 * *Excellent heat dissipation*

The Heat Pipe design effectively transfers the heat generated by the chipsets to the heatsink near the rear IO ports, where it is carried away by airflow generated by the CPU fan.
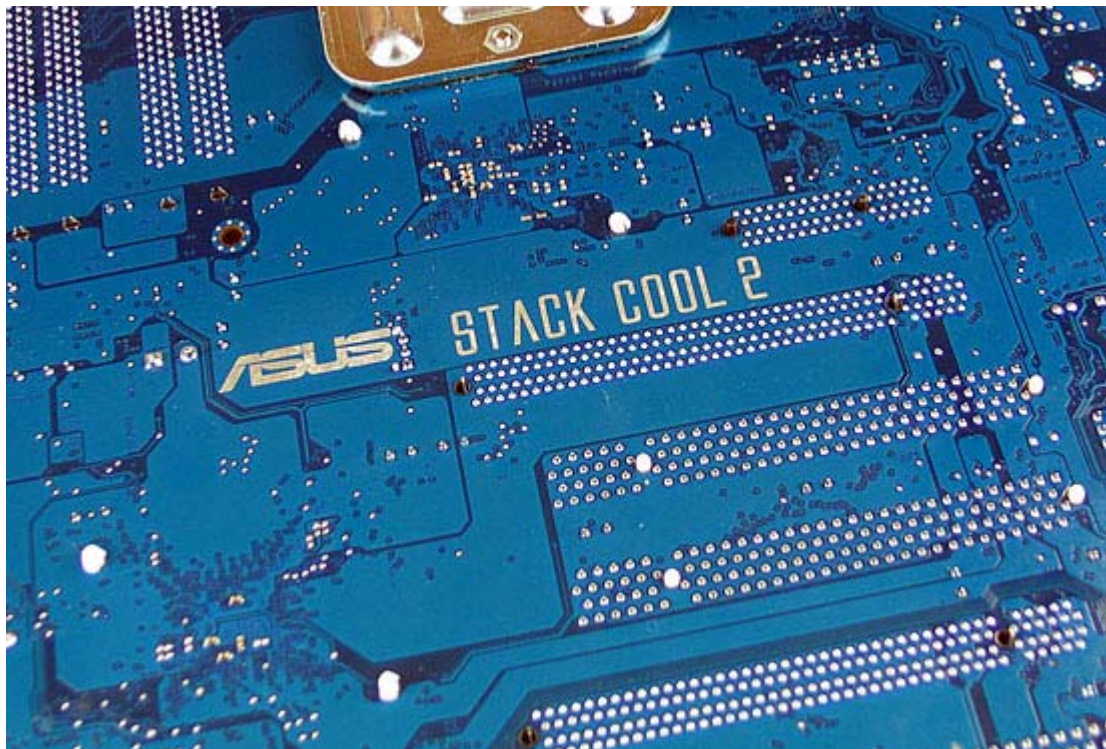

ASUS STACK COOL 2 effectively transfers heat generated by the critical components to the other side of the specially designed PCB (printed circuit board).
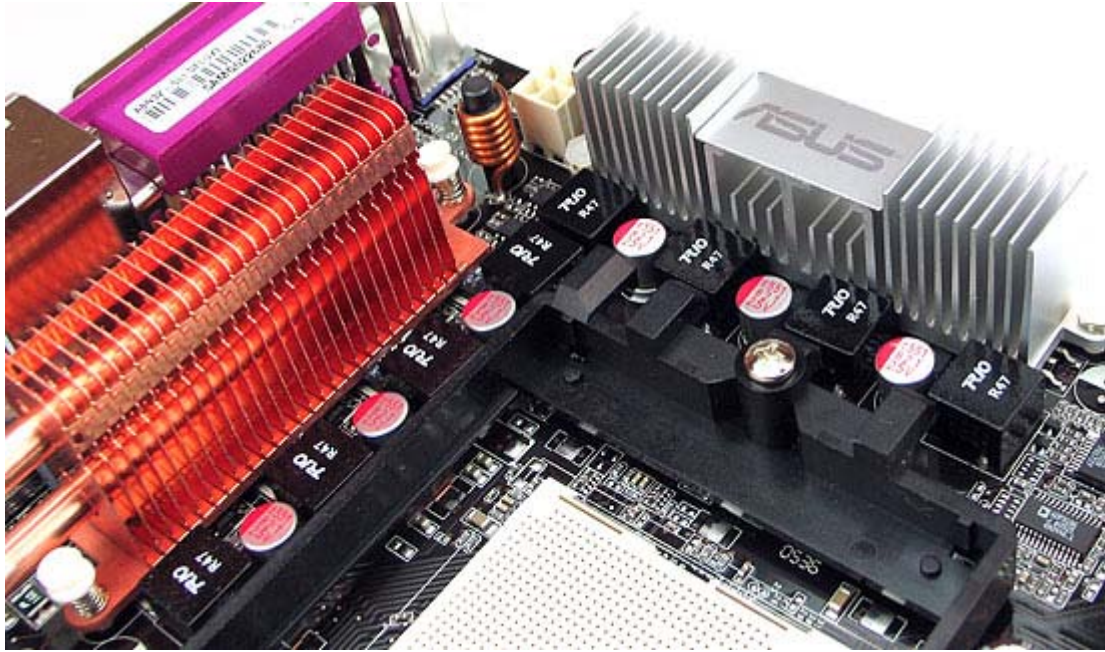
The purpose of the innovative fanless designs is to decrease the number of fans and therefore reduce system noise. Furthermore, the fanless design is less susceptible to service life limitations when compared to traditional fans. To guarantee excellent thermal performance, ASUS adopts copper heatpipes and copper heat pads for the chipsets. These fanless designs are the most reliable fanless thermal solutions to date.

Optional Fan *(for Water-Cooling or Passive-Cooling only) maximizes performance and minimizes noise*
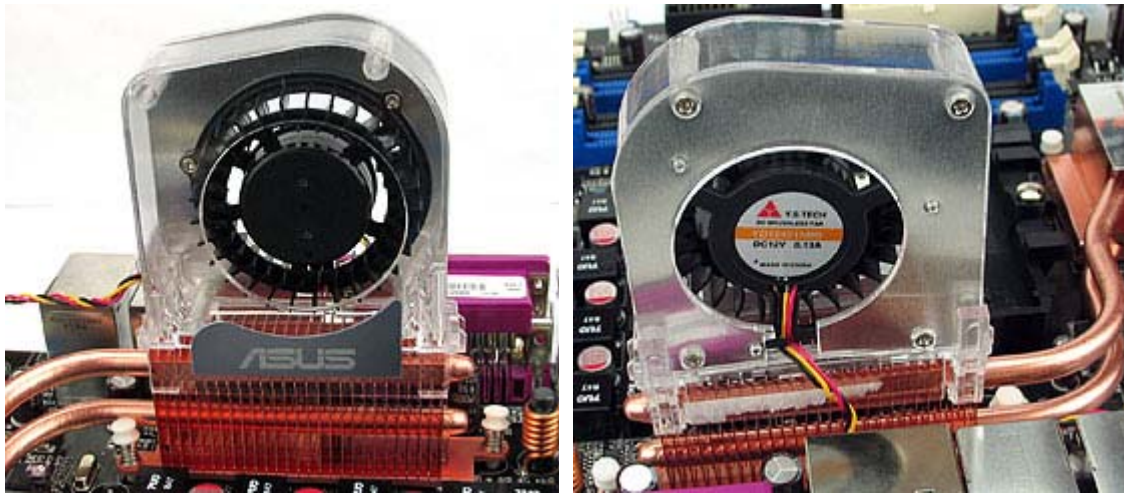
The optional fan is specifically designed to provide sufficient airflow over the CPU power modules and chipset area when water-cooling or passive-cooling is utilized, ensuring effective heat dissipation for the entire system.

BIOS & Software

The A8N32-SLI Deluxe has an easy accessible BIOS setup interface, which is a very good ASUS tradition.
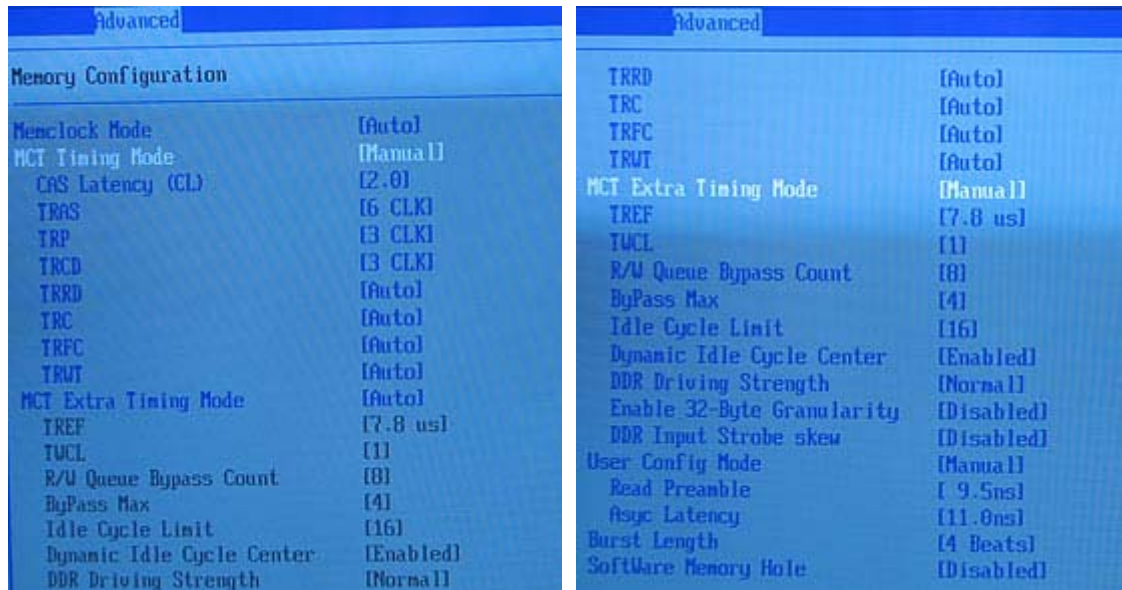
Memory timing adjustments for this motherboard is extraordinarily broad, especially for a common production board from ASUS. That's good news for the enthusiasts and in no way bad for the normal user who can leave all options on "Auto".
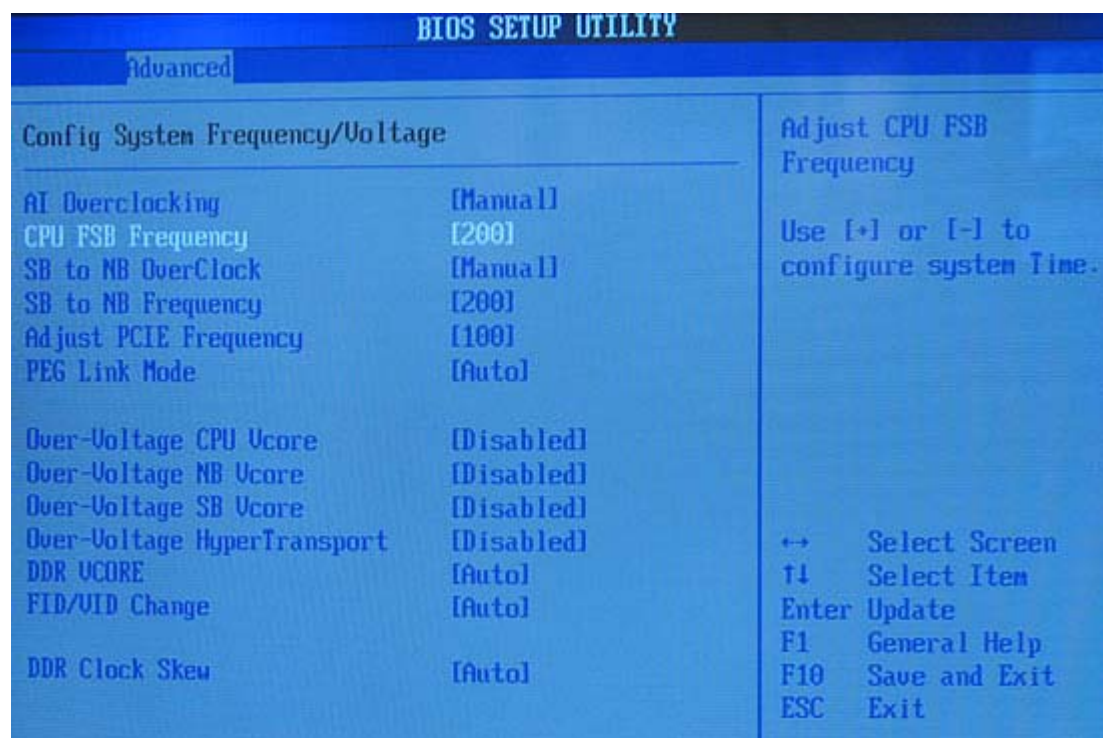
Major options and adjustable range for overclocking:

Options	Values
CPU FSB Frequency	200 to 400MHz in 1MHz increments
PCIe Frequency	100 to 200MHz in 1MHz increments
Over-Voltage CPU Vcore	+0.2V
Over-Voltage NB Vcore	+0.1V

Over-Voltage SB Vcore	+0.1V
Over-Voltage HyperTransport	+0.1V
DDR VCORE	2.60V to 3.20V in 0.05V increments
CPU Multiplier	Depending on CPU, 0.5x increments
CPU Voltage	Up to 1.5625V in 0.0125V increments

The Ai Booster utility makes overclocking a much easier task for users operating under Windows. Most overclocking-related options can be found here, as in the BIOS settings.

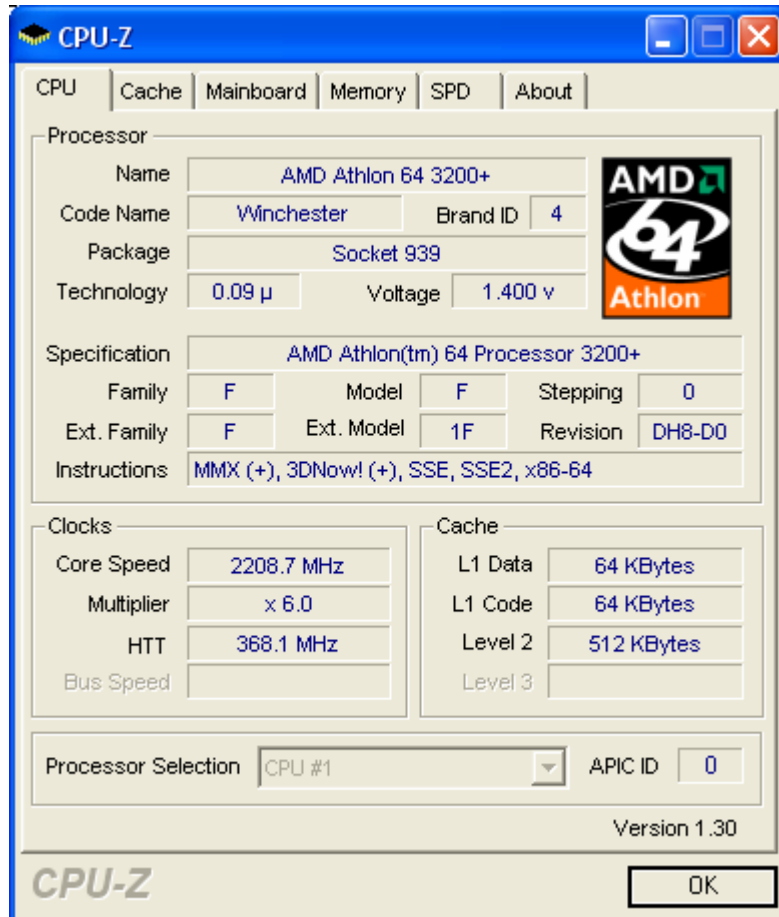

PC Probe II is simply a system monitoring software. This piece of software displays real-time voltages, temperatures and fan speeds on screen, and alerts user if these values exceed the threshold set in its config menu.

Overclocking

Thanks to its 8-phase power design, the A8N32-SLI Deluxe provides even better overclocking abilities than its predecessors, e.g. the A8N-SLI Deluxe/Premium.

CPU-Z

CPU | Cache | Mainboard | Memory | SPD | About

Processor
Name — AMD Athlon 64 3200+
Code Name — Winchester Brand ID — 4
Package — Socket 939
Technology — 0.09 µ Voltage — 1.400 v

Specification — AMD Athlon(tm) 64 Processor 3200+
Family — F Model — F Stepping — 0
Ext. Family — F Ext. Model — 1F Revision — DH8-D0
Instructions — MMX (+), 3DNow! (+), SSE, SSE2, x86-64

Clocks
Core Speed — 2208.7 MHz
Multiplier — x 6.0
HTT — 368.1 MHz
Bus Speed —

Cache
L1 Data — 64 KBytes
L1 Code — 64 KBytes
Level 2 — 512 KBytes
Level 3 —

Processor Selection — CPU #1 APIC ID — 0

Version 1.30

CPU-Z OK

To reach the potential highest CPU clock we must lower the CPU multiplier. Our results are an exciting final result of 368MHz. Of course, memory clock and timing settings both have great impact on the system's overclocking performance, so 368MHz is just a reference result.

CPU-Z

CPU | Cache | Mainboard | Memory | SPD | About

Processor
Name   AMD Athlon 64 3200+
Code Name   Winchester   Brand ID   4
Package   Socket 939
Technology 0.09 µ   Voltage   1.400 v

Specification   AMD Athlon(tm) 64 Processor 3200+
Family   F   Model   F   Stepping   0
Ext. Family   F   Ext. Model   1F   Revision   DH8-D0
Instructions   MMX (+), 3DNow! (+), SSE, SSE2, x86-64

Clocks
Core Speed   2628.3 MHz
Multiplier   x 9.0
HTT   292.0 MHz
Bus Speed

Cache
L1 Data   64 KBytes
L1 Code   64 KBytes
Level 2   512 KBytes
Level 3

Processor Selection   CPU #1   APIC ID   0

Version 1.30

CPU-Z   OK

Our D0 revision Athlon 64 3200+ processor is about average when it comes to overclocking - it usually tops out at around 2600MHz on most motherboards (voltage increase required). This ASUS model did an excellent job bringing it up to 2628MHz (with 0.2V CPU overvoltage enabled). It looks like the unique power design of this mobo really makes sense.

Final Words

The ASUS A8N32-SLI Deluxe absolutely is a great top-end motherboard for high-end K8 platform users. With dual x16 PCI Express graphics card slots running at full speed, graphics cards operating in SLI mode will not suffer from bandwidth restrictions anymore; and that's just what enthusiast gamers want. The excellent overclocking ability also makes this mobo a decent choice for overclockers.

Even if you are a normal user, the 8-phase power design and fanless thermal solution will allow you to build a system that is rock steady and quiet. And that's worth paying for.