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## The Next Leap in Computing Evolution is Here

Extreme power users and overclockers take note: Rectron unleashes Gigabyte's new X58 motherboard family

# GIGABYTE

## T E C H N O L O G Y

Rectron has launched Gigabyte's new X58 range of motherboards, which have been designed from the ground up to unleash the power of the world's fastest PC processors -- Intel's new next-generation Core i7 processors -- as well as the new Intel X58 Express chipset.

"Targeted at power users ranging from part-time gamers to extreme overclockers, Gigabyte's X58 series builds on a wide array of cutting-edge technologies such as Quick Path Interconnect (QPI), which replaces the Front Side Bus, as well as three channel DDR3, and three-way SLI or CrossfireX," says Tony Chiang-Lin, Rectron Component Business Manager.

"Particularly noteworthy is QPI's transfer rate of 25.6GB/Sec, double the bandwidth of the 1600MHz FSB, and which eliminates the communication bottleneck between the processor and chipset. The X58 range also features an integrated memory controller inside the processor die, which supports 192 bit three-channel DDR3 memory and is capable of delivering a 50 percent memory bandwidth enhancement and lower memory latency for incredibly fast memory access."

Additionally, the Gigabyte X58 Series features Intel Turbo Boost Technology, which can power down idle processor cores and dynamically reroute the power to the active cores for significant performance boosts, and at the same time, maintain greater energy efficiency.

### **Cool: extreme gamer excitement**

Chiang-Lin reports that gamers should be especially excited about the motherboards, since they provide three PCIe x16 Gen2.0 slots that support both ATI CrossFireX and three-way NVIDIA SLI, thereby enabling the most-powerful graphics configurations for extreme multi-GPU gaming, or multiple display support for up to six monitors.

"The Gigabyte X58 Series is yet another example of Gigabyte engineering at its best with its revolutionary Gigabyte Ultra Durable 3 design, featuring 57 grams of copper for both the power and ground layers -- which dramatically lowers system temperature by delivering a more efficient spreading of heat from critical areas of the motherboard such as the CPU power zone throughout the entire PCB," he adds.

"Gigabyte's Ultra Durable 3 also lowers the PCB impedance by 50 percent, which helps to reduce electrical waste and further lowers component temperatures. A 57 gram copper layer design also provides improved signal quality and lower EMI (electromagnetic interference), providing better system stability and allowing for greater margins for overclocking."

In addition to the "cool blue" new look and feel of the GIGABYTE X58 Series, the Gigabyte GA-EX58-EXTREME motherboard now features t  
"The Gigabyte GA-EX58-UD5 features specially designed chipset heat sinks and high performance copper heat pipe with sintered process to

### **Overclocking records**

"Breaking overclock records is what Gigabyte X58 Series motherboards are all about, with friendly overclocking features such as Precision OV (Hardware Overvoltage Control IC), Debug LED, onboard Power and back panel clear CMOS switches. Additionally, the Gigabyte X58 Series features comprehensive BIOS options for reaching higher limits with more detailed settings, including CPU frequency stepping, Over Voltage increments, memory multipliers and advanced memory timing controls, making it easier than ever to tweak the highest levels of extreme overclocking performance from systems."

### **Additional Gigabyte X58 Series Features**

#### **Green: Gigabyte Dynamic Energy Saver Advanced**

According to Chiang-Lin, Gigabyte's Dynamic Energy Saver (DES) has once again proven itself as the industry-leading energy saving technology with newly introduced Dynamic Energy Saver Advanced.

"Featuring improved algorithms that provide a more accurate power saving calculation, Gigabyte Dynamic Energy Saver Advanced provides better energy saving capabilities and enhanced system performance," he explained. "Gigabyte Dynamic Energy Saver Advanced is the world's only motherboard energy saving technology with hardware-based Dynamic 6-Gear Switching. With support for VRD 11.1, Gigabyte's DES Advanced allows the motherboard to switch to 1 Gear phase switching during idle, allowing for a dramatic increase in power savings."

#### **Advanced Multi-Phase VRM**

Gigabyte X58 Series motherboards are equipped with 2-Phase power for the North Bridge and memory, allowing users to reach higher memory frequencies and enjoy better performance. Compared with only one phase solutions, this ensures longer power component lifespan and higher overclockability due to cooler working temperatures and better efficiency.

#### **Visible Overvoltage Reminder**

4 sets of OV-Alert LEDs indicate the overvoltage level of the CPU, Memory, North Bridge and South Bridge to prevent component damage.

#### **Visible Overclocking Reminder**

OC-Alert LED indicates the level of CPU overclock from low to high.

#### **Visible Temperature Reminder**

Two sets of Temperature Alert LEDs indicate the current temperature level of the CPU and North Bridge

#### **DualBIOS -- Patented Dual Hardware BIOS Protection**

DualBIOS is a Gigabyte patented technology that automatically recovers BIOS data when main BIOS has crashed or failed. Featuring 2 physical BIOS ROMs integrated onboard, Gigabyte DualBIOS allows quick and seamless recovery from BIOS damage or failure due to viruses or improper BIOS updating.

#### **EasyTune6**

Gigabyte has completely redesigned EasyTune6 from the ground up to make it easier than ever to manage and monitor your hardware resources as well as tweak your system settings in order to achieve maximum system performance. Whether you are an overclocking enthusiast, or a computer novice, EasyTune6 provides the tools you need to quickly and effortlessly fine tune your system.

#### **Precision OV - Hardware Overvoltage Control ICs**

Gigabyte X58 Series motherboards also include Hardware Overvoltage Control ICs which provide more voltage control options than before for the CPU North Bridge and memory. The overvoltage controllers also provide hardware linear real-time voltage control, which means there is no delay compared to the GPIO controller in past implementations. In addition, Gigabyte's Hardware Overvoltage Controller ICs also allow for much finer voltage control, allowing power users to adjust voltage in as little increments as 20mV for better overclocking performance.

#### **Dolby Home Theater**

Gigabyte has also included the powerful Dolby Home Theater suite of audio technologies, which deliver a vivid surround sound listening experience for music, movies, and games, using two to eight speakers or any set of headphones. Designed to automatically deliver the best possible listening experience, Dolby Home Theater includes Dolby Pro Logic IIX for maximum surround sound expansion, Dolby Headphone and Sound Space Expander for a virtualized audio experience, and Natural Bass enhancement for the richest quality sound.

- Available this month at a recommended retail price starting from R 5999, the new Gigabyte X58 range features a standard three-year warranty, backed by Rectron's in-house repair centre as well as a Gigabyte-certified and trained technician.