



Technical Brief

SLI-Ready Memory with
Enhanced Performance Profiles
One-Click Hassle-Free Memory
Performance Boost

May 2006
TB-0529-001_v01

One-Click Hassle-Free Memory Performance Boost with SLI-Ready Memory

Gamers and PC enthusiasts are endlessly searching for opportunities to improve the performance of their PCs. Optimizing system performance is a function of the major components used—graphics processing unit (GPU) add-in cards, CPU, chipset, and memory. It is also a function of tuning and overclocking the various PC components. Overclocking, however, has disadvantages such as system instability and inconsistent performance measurements from one system to another.

SLI-Ready memory with Enhanced Performance Profiles (EPP) is a new approach that simplifies overclocking and ensures memory and platform compatibility. The NVIDIA nForce 590 SLI core logic is the first NVIDIA® platform that supports the new EPP functionality. Memory DIMMs which receive the SLI-Ready certification are required to support EPP technology to ensure the memories can be automatically detected and their full potential realized with the NVIDIA nForce® 590 SLI® chipset.

The SLI-Ready certification process ensures the memory modules have passed a comprehensive set of tests and meet the minimum requirements for delivering our customers the outstanding experience they expect from SLI systems.

SLI-Ready Memory with EPP at a Glance

System memory modules (DIMMs) are built using an electrically-erasable programmable read-only memory (EEPROM) that can hold up to 256 Bytes of data. The EEPROM is used to store Serial Presence Detect (SPD) information defined by JEDEC which include manufacturer part number, manufacturer name, some timing parameters, serial number, etc. Only a portion of the EEPROM is defined by the JEDEC SPD specification. Bytes 99 to 256 can be used arbitrarily or left unused by memory manufacturers.

EPP technology was defined to utilize the extra space in the EEPROM to store memory configuration settings that are sufficient to optimize and maximize the performance of a memory module. Bytes 99 to 127 are used to store this additional information so that DIMMs with EPP are fully compatible with non-EPP enabled system BIOS.

Benefits

No longer will consumers need to possess knowledge of the overclocking process to be able to tap into the hidden performance unique to each DIMM.

SLI-Ready memory with NVIDIA's EPP enabled platform provides:

For the PC Novice:

- ❑ One-click hassle-free memory performance boost.
- ❑ Wide compatibility and support of EPP by NVIDIA nForce 590 SLI ODMs and high-performance memory manufacturers. Gamers and enthusiasts are able to easily take advantage of EPP on the new nForce platform.

For the PC Enthusiast:

- ❑ Established memory overclocking baseline for overclockers who wish to push memory performance to the limit.
- ❑ Exposure of advanced memory settings which are normally not apparent or even understood by many enthusiasts along with recommended and tested values.

Conclusion

Enhanced Performance Profiles is a newly introduced memory technology that was developed by NVIDIA in conjunction with leading enthusiast memory DIMM suppliers. Wide support and adoption of EPP is starting to become evident from various ODMs as well. NVIDIA and its DIMM supplier partners devised the new technology to make it very easy for gamers and PC enthusiasts to elevate their gaming experience with SLI-Ready memories on NVIDIA nForce platforms. This is especially useful to those who are not experienced overclockers and provides them with a hassle-free solution to realize a new level of performance.

For a detailed EPP specification, go to:

http://www.nvidia.com/content/epp/epp_specifications.pdf

SLI-Ready DIMMs are the next logical step for the industry. The enthusiast community has for years found ways to extract the unique performance of each device. The SPD functionality JEDEC delivered brought a baseline level of performance and stability to the PC memory market. The enthusiast community has helped to extend this baseline into a performance oriented feature that makes the NVIDIA nForce 590 SLI platform truly the unique choice for PC enthusiasts looking for the ultimate gaming experience.



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