



**WINNER**



## **2004 R&D 100 Awards Winner**

### **10-Gigabit Ethernet Adapter: Speed Really Changes Everything**

Have you ever tried to download a high-resolution graphic, movie, or video game from the Internet? Such downloads can take hours, and if you're lucky, your computer will not lock up, and the download will come through successfully. Now imagine that by installing a simple adapter into your computer, you could transfer information up to 148,000 times faster than a high-speed modem connection and up to 23,000 times faster than a DSL connection. This "super-adapter's" plug-and-play installation, reliability, and unprecedented speed will revolutionize how computers and the Internet positively impact our lives.

#### **Applications**

- Entertainment markets, e.g., video editing and animation, video- and music-on-demand, video games, and file-sharing applications like iTunes, Kazaa, Napster, and Gnutella
- Worldwide modeling and simulation markets, e.g., global weather and wildfire predictions, contagious disease communicability, galaxy formations and supernova explosions, financial market forecasting, and human genome sequencing
- Data acquisition and data mining markets, e.g., military intelligence and reconnaissance, basic-science research (fusion, bioinformatics, aerospace), and data warehousing
- Medical applications, e.g., interactive distance education (for patients and medical personnel), expedited patient care, and enhanced diagnostic imaging