

Supermicro Keeps IT Green™

IT managers are increasingly seeking out suppliers whose offerings are not only high-performing and cost-effective but also energy-efficient. The primary driver for the adoption of Green IT is economic: to reduce skyrocketing data center operational costs. As energy costs continue to escalate, it is generally accepted that users will spend significantly more to power and cool their server hardware over its lifetime than they do to purchase it.

"Earth-friendly" Product Advantages

Supermicro leverages advanced technology and system design expertise to reduce the power consumption of our server, blade, workstation and storage systems. Over many years of experience, we have become an industry leader in power saving technology. In 2006, for example, our 1U Twin™ servers were introduced featuring two DP nodes in a 1U form factor with 89% power efficiency. In 2007 our SuperBlade® systems built on this technology achievement to develop 93% power efficiency. Leading the way to even greater results, our engineers continue to improve green technology as a primary product design objective.

Benefits

As a result of these efforts, the Total Cost of Ownership (TCO) of Supermicro's servers and computer systems is significantly reduced over time. Each of our 90%+ efficient systems, comparing to others equipped with traditional 70% to 80% efficiency power supplies, can save up to \$200 to \$500 per year depending on configuration and usage. Equivalently, the saving provides a reduction of more than half a metric ton of carbon dioxide emissions from the generation of fossil fuel electric power.

As an example, each node of our SuperBlade® can save up to 100 watts over a traditional discrete 1U rack-mount server. These savings add up quickly with a SuperBlade® chassis fully populated with 10 servers. By eliminating the overhead in 1U discrete servers and using high-efficiency (up to 93%) power supplies, the SuperBlade® can save customers between \$700 and \$1,000 per year in power - even more when reduced cooling costs are included. And the carbon dioxide emissions are reduced by more than 5.5 metric tons - the equivalent to planting 1.7 acres of trees.

Green Technology

- **Optimized System Architecture** created to take advantage of Supermicro's power saving technology to produce optimal cooling at all application levels
- **Motherboards Designed With Leading-Edge Technology and High-End Components** such as high-efficiency VRMs optimized to reduce energy consumption
- **High-Efficiency Power Supplies** designed to run at significantly higher efficiencies of up to 90%+, greatly reducing energy losses
- **Cooling Subsystems** including advanced technology heat sinks, pulse-width modulated fan speed controls, structured chassis airflow design, intelligent

temperature and power management, architected for the most effective cooling for all system components

Leadership and Commitment

As a leader in energy efficient computing, Supermicro is proud to support the [Climate Savers Computing Initiative \(CSCI\)](#) as a major member and the Chair of CSCI APEC Region. CSCI's goal is to promote development, deployment and adoption of smart technologies that can improve computer efficiencies, with a goal to achieve a 50% reduction in computer power consumption by 2010. Supermicro...a server technology leader keeping IT Green.



Keeping IT Green

COVER STORY

Supermicro's green computing initiative is the latest in a series that's kept Charles Liang and his team at the forefront of the fiercely competitive high-end server market.

Since Charles Liang founded Supermicro in 1985, the high-end server manufacturer has been known for its energy-efficient products. Today, having grown an average of 30% each year and after completing an IPO in March, the company is turning its attention toward one goal: green computing.

"Each of our high efficiency servers uses our customers up to 1400 per year in their data centers," said Liang, president and CEO. "Understandable proof of that statement, Liang is perhaps even more excited about the product's effect on climate change. "Compared with traditional power supplies, which are 70% to 80% efficient, each of our 90% efficient servers provide a reduction of more than half a ton of carbon dioxide per year," he said.

For example, Supermicro's SuperBlade server can save up to 100 watts over a traditional 1U rack-mount server. "These savings add up quickly when the SuperBlade shows a fully populated with 10 servers," said Liang. "By eliminating the overhead in U-rack servers and using high efficiency up to 90% power supplies, SuperBlade can save customers between \$200 and \$2,000 per year in power costs alone when you add an reduced cooling costs. At the same time, you're reducing carbon dioxide emissions by more than 100 metric tons...the equivalent of planting 17 acres of trees."

The type of achievement is actually just the start for the company, which is built on a tradition of innovation. In 1996, Supermicro was the first to bring to market one that had

www.americanbusinessmag.com SEPTEMBER 2007