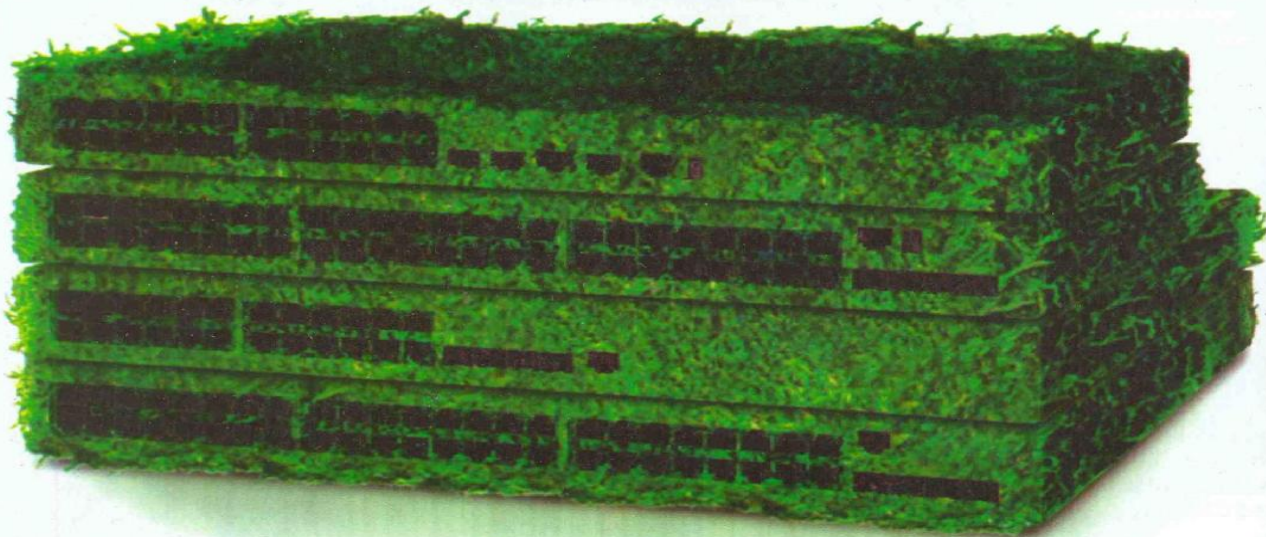


# Switch to Green



**Green switch helps operators to save power up to 60%, thus improving energy consumption and money savings**

**T**he telecommunications industry is one of the biggest consumers of electricity, and people expect the telecom network to be available 24x7. Hence, telecom operators have to invest in secondary power to ensure high availability of telecom infrastructure. But power can soon become a limited resource for operators, and that's why they are actively looking at green networking products and solutions.

In a challenging economic environment, customers are looking at an increased value for their

investments by choosing efficient products and solutions that reduce power consumption, cooling requirements, and occupy a smaller footprint in data centers. Operators in particular recognize the benefits of investing in green technology and are increasingly turning to vendors who offer simple, scalable and highly efficient equipments.

Green networking is a growing trend that is impacting all segments of the network. So, the demand for green switch is also

growing. Green Ethernet switch has a dual advantage for telecom operators. It reduces power consumption when there is regular supply and lasts longer when on back up or auxiliary power compared to a normal switch.

The increase in data oriented services like IPTV and mobile backhaul is driving more servers and switching equipments into these buildings. Green switch helps operators to save power up to 60%, thus being efficient for energy consumption and money savings.



**“For the last one year D-Link has removed normal switches from its portfolio and carries green switches only”**

—Jayesh Kotak, VP, product marketing, D-Link India



**“Green switches do not necessarily cost more than other switches because they typically are using the latest components”**

—Jitendra Gupta, country manager, India and SAARC, Extreme Networks



**“We definitely see an increase in the demand for green switches in the coming years”**

—Sanjay Kharade, VP, enterprise solutions, Cisco, India and SAARC

**Green Ethernet switches feature a fan-less design that provides quieter environment and less heat dissipation, offering energy and cost saving properties with operational performance remaining unchanged, making it an ideal solution for growing businesses and operators**

### Green=Profit

Taking into consideration the significant opex and capex savings offered by green technology as well as the increasingly stringent regulations on energy consumption, there is definitely a huge potential for the growth of efficient networking equipment.

Green switching technology offers small businesses practical and simple ways to save costs and cut carbon emissions. Subhashini Prabhakar, chief technology manager, Dax Networks says, “Telecom operators can take advantage of these switches to further reduce their IT costs and take steps towards improving their green IT credentials by asking users to turn off their PCs when they are not being used, and by reducing unnecessary cabling in the

office premises. These power saving solutions represent a worthwhile and cost-effective investment for businesses, specifically those within the small and medium segments of the market.”

Reduced consumption by each switch not only lowers the overall network energy costs over the life of deployment and reduces the amount of power (that has to be brought into a data center or central office, mitigating the cost of adding additional power feeds to data centers) but also lowers the amount of heat produced. Thus it reduces the cost of ventilation and cooling of data centers.

Green Ethernet integrates in-

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### Growth Drivers

- It is environment friendly
- Efficient business process
- Reduces warehouse floor space
- Reduces packaging material
- Eliminates unnecessary accessory
- Reduces handling in shipping and receiving
- Green goal and environmental responsibilities of companies
- Demand for energy efficient networking products
- Customer expectation and competitive scenario

novative power savings feature that automatically detect links and adjust power accordingly. These switches feature a fan-less design that provides quieter environment and less heat dissipation, offering energy and cost saving properties with operational performance remaining unchanged, making it an ideal solution for growing businesses and operators.

Commenting on the same, Sanjay Jotshi, director, enterprise & channels, India & SAARC, Juniper Networks says, “All customers, including operators, look for equipment that reduces capex and opex,



**“Power saving solutions represent a worthwhile and cost effective investment for businesses, especially those within the small and medium segments of the market”**

—Subhashini Prabhakar, chief technology manager, Dax Networks

**“All customers, including operators, look for equipment that reduces capex and opex, while continuing to be highly secure, scalable, and efficient. Not only are they looking at reducing the carbon footprint, but also the commercial advantages that green equipment offers”**

—Sanjay Jotshi, director, enterprise & channels, India & SAARC, Juniper Networks



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while continuing to be highly secure, scalable, and efficient. Not only are they looking at fulfilling corporate mandates to reduce the carbon footprint, but also the commercial advantages that green equipments offer.”

**Price: Comparative**

Two years ago when these products were introduced in the market, there was close to 15% price difference. But large global adoption and economies of scale have managed to bridge the price gap. Now, green switches are very cost-effective.

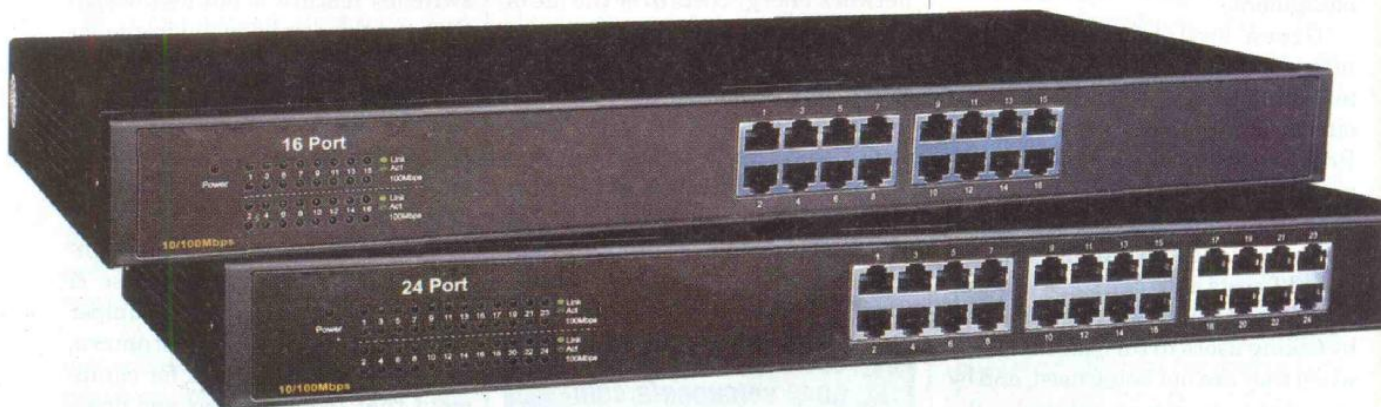
Talking about the price aspect, Jitendra Gupta, country manager, India and SAARC, Extreme Networks says, “Green switches do not necessarily cost more than other switches because they are typically using the latest components which means they draw less power and provide more capacity for the same cost as older components.”

But the cost of migrating existing customers and services from old infrastructure to green infrastructure is a big issue.

“We realize that price and cost could be a hurdle in the adoption of green switches. Currently, there is no price difference in the unmanaged and web managed switches,” says Jayesh Kotak, VP, product marketing, D-Link India.

**New Offerings**

Looking at the increased demand for green switches almost all companies in this space are planning to launch



new products in 2010 to enhance their green portfolio. Dax Networks is planning to release dedicated POE modules with dedicated power supplies.

Green switch usually features fan-less designs. But there are certain cases like the data centers where the temperature maintained is cool due to some mission critical servers. In such a scenario, Dax Networks has designed switches offering flexible fan speed so that they can be configured according to the environment. The company is planning to introduce managed green switches shortly.

### Recycling Initiatives

Green Ethernet initiative, has been developing products that meet restriction of Hazardous substances standards (RoHS). The RoHS directive inhibits companies from using specific hazardous material during the manufacture of networking products.

Almost all companies in the switch segment have recycling

programs in place. DAX product design is such that the technology upgrade can be done through software without any change in the physical hardware to support additional features. This increases the usability of the product. To ensure this the company also offers a standard three year warranty for all its active products, twenty year warranty for passive components. It also offers buy back schemes for some of its old products where they are then directed to e-waste management centers.

Cisco is running a lot of recycling programs for green switches. For Cisco re-manufacturing is a big business. Talking about the benefits of recycling Sanjay Kharade, VP, enterprise solutions, India & SAARC, Cisco says, "Re-manufactured units may be redeployed as field replacement units to support warranty claims or resale. Cisco capital remarketing re-manufactures and sells more than 2,800 different individual types of products in technology areas including switching."

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### Tangible Benefits of Green Switches

- **Device efficiency:** An efficient device will make the most of energy required
- **Device preservation:** Internal designs that deliver more consistent operating temperatures and leverage longer lasting components enable greater longevity of the device internals
- **Network efficiency:** Power originating from a switch based power supply running at say 92% efficiency beats power delivered through a plug-in power block running at 75% efficiency or lower of non energy star compliant. While these may sound like small savings for each device, multiply these savings by the number of devices that could be powered over the network and result in substantial savings Resource management: Networking capabilities that allow full utilization, optimum location, and physical consolidation of server and storage resources can drive significant savings in the data center
- **Process innovation:** A network that does not deliver a fully productive and satisfactory end user experience will come up short in serving the organization's need to successfully execute in today's virtual working environment. Reduced travel, office space, energy demands, and execution times all result from a network that foster sustainable business practices. Extending the possibilities to other networked business functions and processes can further heighten the green effect of the network

As part of its commitment towards green computing, D-Link spends a significant amount of resources and time pursuing green computing initiatives. All D-Link green devices are designed to help conserve energy, protect the environment from harmful substances, and reduce waste by using recyclable packaging. The company is committed to recycling, embracing the European Union's Waste Electrical and Electronic Equipment (WEEE) initiatives.

Juniper Networks is very active on the recycling front. The company strives to deliver solutions that have an extended lifecycle to divert hardware from landfills and reduces overall waste. In addition to adhering to the strict standards for reuse, recycling, and reclamation of information technology solutions, Juniper helps customers 'future-proof' their network to the extent possible and extend the life of their infrastructure.

Juniper's advantage is delivered via its Junos operating system and modular architecture. The singular OS across the portfolio enables Juniper to deliver new offerings to the market that are compatible with its previous high performance networking infrastructure, maximizing the utility of infrastructure and enabling customers to deploy new solutions with minimal architectural changes or disruption. Combined with the modular architecture, Juniper is also able to deliver solutions that allow for the reuse of existing hardware.

Today, across the globe people are demanding more environment friendly products that enables high performance computing while satisfying ecological concerns. With increased awareness of global warming and the need to be more environment friendly, the industry will see a robust demand for green switches in the coming two to three years.

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