TRENDnet®

Case Study

TRENDnet Green Initiatives

Our Commitment

TRENDnet is committed to creating environmentally sound networking hardware solutions and promoting policies and practices that respect the natural environment. This means not only creating more energy efficient products, using recycled packaging content and reducing heavy metals from our networking hardware products, but also promoting an internal culture of environmental awareness and everyday green practices.

Green Technology

Environmental responsibility is a prominent concern for TRENDnet. Economic expansion, technological advances and population growth are all contributing factors to the worldwide increase in energy consumption and to our global carbon footprint. According to the U.S. Government's Energy Information Administration, worldwide energy consumption is projected to increase by 50 percent from 2005 to 2030 with world net electricity consumption estimated to double from 17.3 trillion kilowatthours in 2005 to 33.3 trillion kilowatthours in 2030. A number of independent studies have linked increased power consumption to our overall negative impact on the environment.

TRENDnet is determined to help produce more energy efficient products that contribute to the reduction of our carbon footprint. With this goal in mind, TRENDnet created two unique first to market technologies, designed to greatly reduce everyday power consumption, with no effect on product performance.

GREENnet Technology

GREENnet is a switch-based technology. Switches, the backbone networking products that allow us to connect and communicate in this digital age, consume significant power as an aggregate. GREENnet technology is designed to reduce switch-based power consumption by up to 70% by providing electrical power on demand. Traditional switches operate at full power, 24-hours a day, regardless of switch loading. TRENDnet GREENnet switches and routers incorporate the following three primary features to reduce power consumption:

1. Link Down Detect

A TRENDnet GREENnet switch can detect if an Ethernet port is not in use. Power consumption for an unused port is then lowered by reducing the frequency for which the respective port status is confirmed. A port may not be in use either when no device is connected to the port or when the device that is connected to the port is powered down or in standby mode.

2. Cable Length Detect

Less power is required to send data over shorter cable lengths. A TRENDnet GREENnet switch automatically detects the length of the cable that connects the switch to the given networked device and adjusts the power supply accordingly. This technology functions automatically and requires no management.

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Smart Packaging

Every year millions of tons of waste are added to landfills around the globe. A significant portion of this waste can be attributed to consumer product packaging. At TRENDnet we have pride in designing smart packaging that protects a given product in the smallest possible package and that sources up to 80% recycled product packaging materials.

Energy Saving Tips

Listed are a few energy saving tips and tricks that can help reduce our carbon footprint.

1. Make your network "Green" by using TRENDNnet's GREENnet power saving switches and routers, or GREENwifi power saving wireless device technology.
2. There is a common misconception that screen savers reduce monitor electricity consumption—they do not. Automatic switching to sleep mode or manually turning monitors off is always the best energy saving strategy

GREENnet 10/100Mbps Switch Ports

- 1-20 meters (1 - 65 ft) = Reduced Power
- 21 + meters (66+ ft) = Full Power

GREENnet Gigabit Switch Ports

- 1-10 meters (1 - 32 ft) = Significantly Reduced Power
- 11-60 meters (32 - 197 ft) = Reduced Power
- 61 + meters (198+ ft) = Full Power

3. Standby Mode

A TRENDnet GREENnet switch reduces the amount of power consumed by operating in standby mode when it is not being used.
Visit www.trendnet.com to see a full list of GREENnet switches and routers.

GREENwifi Technology

Wireless technology has quickly become the norm in businesses and homes located across the globe. TRENDnet's GREENwifi device power saving technology reduces energy consumption by up to 50%. This first to market technology reduces the power consumption of wireless devices at every stage of the wireless information transfer process, resulting in significant power savings.

Stage 1: Unassociated

This is the stage when routers or adapters are active and turned on, yet they are not connected to another device such as a laptop or a router. GREENwifi technology reduces power consumption during the Unassociated stage by an average of 66%. Wireless home routers and adapters remain in the Unassociated mode for an average of 19 hours per day for light network users.

Stage 2: Associated

This is the stage in which routers or adapters are turned on and connected to another device such as a laptop, however they are not transmitting data. GREENwifi technology will detect this stage and reduce power consumption by an average of 53%, as compared to regular routers. The percentage of time in Associated mode varies greatly by user.

Stage 3: Downloading

GREENwifi reduces energy consumption by an average of 40% when your device is turned on, connected, and downloading content.

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Energy Saving Tips
(continued)

3. Ensure minimal lighting is left on during off-hours. You may consider installing light timers, photo cells or occupancy sensors.

4. Instruct employees to turn off computers or place them in standby mode before leaving.

5. Participate in company wide recycling programs for paper, plastics, batteries, print cartridges, neon lighting and food waste.

6. Reduce printing and paper consumption by using soft copy online manuals.

7. Provide employees with reusable coffee mugs rather than disposable paper or Styrofoam cups.

8. Encourage employees to carpool or use public transit.

9. Get involved—coordinate company participation in local "green" community activities.

10. Consider walking or riding your bike to weekend events.

Stage 4: Uploading

GREENwifi reduces energy consumption by an average of 26% when your device is turned on, connected, and uploading content.

Stage 5: Distance / Signal Strength

(This stage is applicable to routers only)
GREENwifi wireless routers detect the signal strength of connected adapters and modify output power accordingly. If multiple adapters are connected to a GREENwifi router, the router will manage output power to each adapter individually. Signal strength correlates strongly with distance from adapter to router. The stronger the signal the less power is required to communicate with the given device.

Environmental Regulations Compliance

TRENDnet is committed to reducing our environmental footprint. TRENDnet products meet or exceed global environmental regulations including RoHS, California Energy Commission Efficiency Program (CEC) and WEEE among others.

Restriction of Hazardous Substances Directive — RoHS

The RoHS directive is a European Union-based initiative that restricts the use of heavy metals and other toxic substances, such as lead and chromium, in electronic equipment. RoHS has had a significant and lasting impact on reducing toxins introduced into the environment. All TRENDnet products sold in Europe and other countries are RoHS compliant.

California Energy Commission — CEC

TRENDnet meets the California Energy Commission's (CEC) Energy Efficiency Program requirements by using external power adapters that meet the designated efficiency level during Active and No-Load modes of operation. Currently all TRENDnet North American adapters meet CEC efficiency standards.

Waste Electrical and Electronic Equipment — WEEE

Working alongside RoHS, the WEEE directive gives manufacturers the responsibility of recycling end-of-life electronic equipment. TRENDnet is an active participant in the WEEE program theat keeps harmful substances out of landfills in participating countries.

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