

Allied Telesis and the Environment

As a major industry developer and manufacturer of networking equipment, Allied Telesis is committed to providing customers with products designed and built to the highest quality standards, while minimizing the impact to the environment during both product manufacture and product operation.

This White Paper outlines our attitude towards environmental responsibility. It explains the Allied Telesis corporate environmental policy, and summarizes our efforts towards energy reduction.



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Allied Telesis Environmental Policy

Our philosophy

Allied Telesis recognizes the importance of protecting the global environment and promoting conservation of biodiversity. We creatively utilize technology for sustainable social progress and for protecting the environment. Allied Telesis is committed to passing down a healthy global environment to the next generation.

Our policy

Allied Telesis takes a proactive approach to:

- continual improvement of the local and global environment
- prevention of pollution
- environment-focused management to fulfill corporate social responsibilities

To achieve these objectives:

- Allied Telesis top management has established and provides the resources for an Environmental Management System (EMS).
- We offer products designed to conserve energy; manufactured to save resources.
- We seek to reduce the risks to human health and the health of the environment from the use of hazardous chemical substances.
- We strive to reduce our impact on the environment through reduction, reuse and recycling of waste materials (we practice 3R).
- We comply with all applicable environmental regulatory requirements, industry specific self-regulation and stakeholder requirements.



Energy Reduction

Energy Efficient Ethernet (EEE)

Ethernet is the technology that drives most networks – from your corporate LAN to the backbone of the Internet. It is a technology that is mature, highly reliable, and enormously popular. As such, considerable effort is being devoted to the optimization of this technology.

Over the preceding decades, the effort that has been put into the throughput, flexibility and cost of Ethernet has transformed the way that businesses use data, and has brought remarkable communication options into the lives of vast numbers of people throughout the world.

More recently, attention has also turned to the impact that Ethernet devices are having on the world's energy consumption. Reducing the energy consumption of these devices achieves valuable reductions in the environmental impact, and running costs, of data networks. Energy consumption reduction also has flow-on effects – less heat is generated, which results in less energy being consumed for environmental conditioning.

When something becomes as prevalent as Ethernet has, the benefits of any incremental improvement are substantial. If serious attention is devoted to optimizing an aspect of a technology, significant gains can quickly be made. This has certainly been the case with Ethernet energy-use optimization.

The IEEE group working on Ethernet energy efficiency have identified that a sizable amount of power was being used unnecessarily to keep the transmit circuitry of Ethernet interfaces

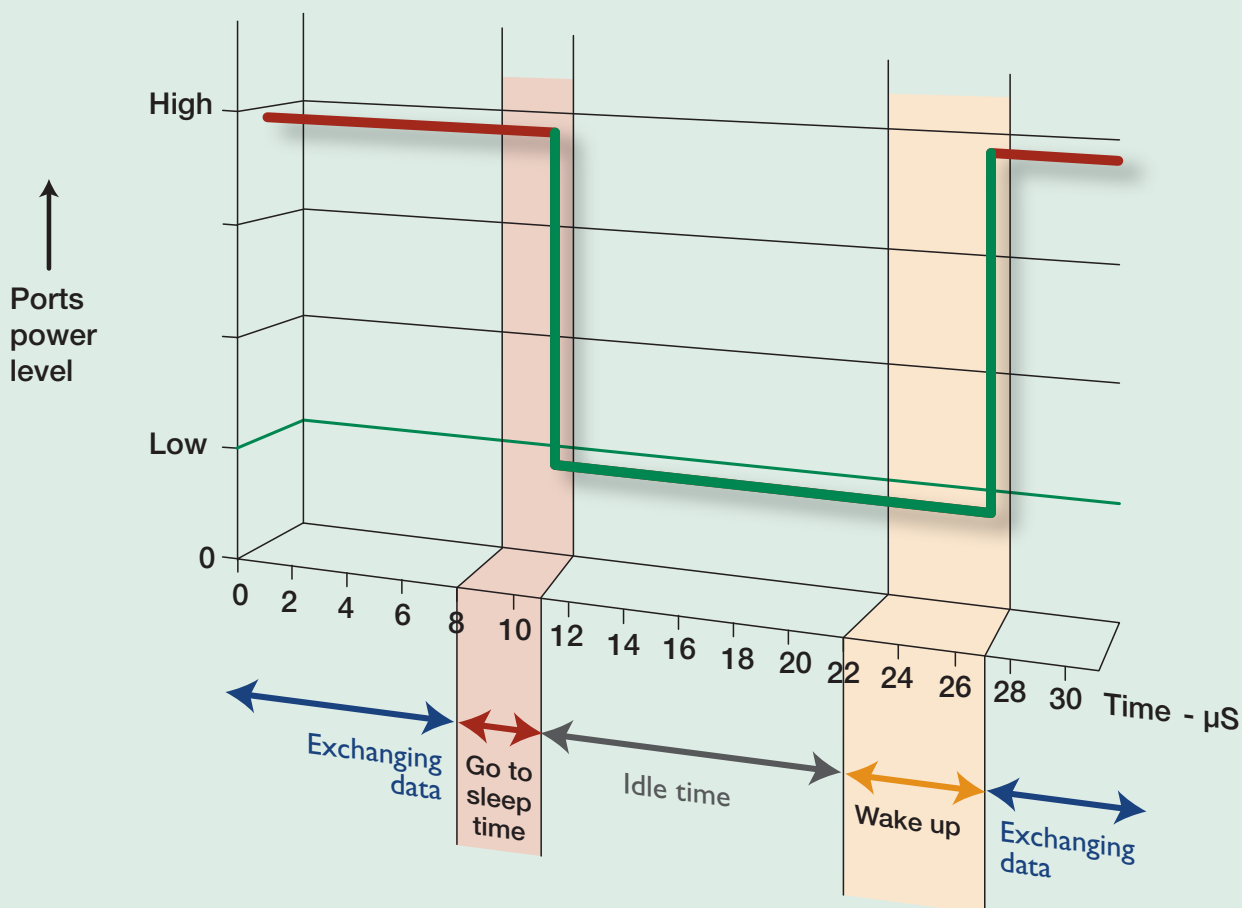
active even when they had no data to transmit. The majority of Ethernet links, especially at the edge of a network, have utilizations of less than 10%. The network interfaces in PCs and other connected devices are not constantly communicating with the network, but spend much of their time quiet, so their transmit circuitry is idle for around 90% of the time.

The IEEE group devised a mechanism for saving power by enabling the transmit circuitry to go into low-power mode when idle, and to rapidly return to a fully active mode when required. This mechanism has been ratified as a standard that is commonly referred to as Energy Efficient Ethernet (EEE).

Implementing EEE achieves real, tangible reductions in power consumption – savings of well over 50% of the energy used by Ethernet ports. In addition, equipment lifetimes are increased, as less power dissipation means slower heat-induced deterioration of components.

EEE has considerable benefits for the planet and for consumers, and Allied Telesis have embraced it. Wherever possible, Ethernet interfaces in Allied Telesis equipment are now being developed as EEE-compliant interfaces.

Transitioning to an EEE-compliant network infrastructure is simple. Allied Telesis EEE-capable Ethernet ports are fully backward compatible with pre-EEE ports, so EEE-capable equipment from Allied Telesis can be progressively introduced without network interoperability issues.



A compelling feature of EEE is its ability to take advantage of even very brief idle periods. An EEE port will move to low-power mode within just a few micro-seconds of no data. On a 10Gigabit port, the port can be down to low power in about 3 micro-seconds after sending a packet. So, power is not saved just in the long idle periods, but in all the thousands of brief idle periods that occur even when a workstation is active.

This propensity for ports to transition to low-power at every little opportunity would be annoying if the power-up time was lengthy, as that would add latency to data communication. However, EEE also has a rapid power-up time. So, EEE grabs the opportunity to save power in those brief idle moments without adding significant delay to data delivery.

Reduced operational power consumption

Using the latest technology and a range of power-saving techniques, Allied Telesis has reduced power consumption by up to 50% over a wide range of its network devices. Reducing power consumption has a direct environmental benefit.

Further energy savings can be made when our products are installed in air conditioned environments such as server rooms. Using less power not only lowers power utility bills, it also allows the equipment to run cooler, thus increasing reliability.

Eco-friendly

Eco-friendly is the brand name used by Allied Telesis to signify our low power range of networking products. Eco-friendly products will eventually encompass our entire product portfolio, as we continue to introduce new, lower power technology to meet customer demand.



Reducing power on network ports

The latest switching silicon can detect the length of cables connected to a port. Using “measure and minimize” technology, Allied Telesis can ensure that maximum power is only injected into cables with the longest lengths, while reducing the power injected into short cable lengths. Advanced products can also ensure that selected ports are disabled overnight or at weekends, further reducing power consumption.

Reducing indicator activity

All networking devices feature a varying array of power-consuming indicator devices, typically LEDs, to aid in installation and diagnostics. On the latest Allied Telesis products, these LEDs can be disabled when not required, saving up to a further 2% of operating power.

Power supply efficiency

The overall power consumption of a network device is ultimately dictated by the efficiency of the power supply. A power supply delivering only 50% efficiency draws twice the actual required power, with half the power wasted in the form of heat. Allied Telesis is now using ultra-efficient power supplies, delivering conversion efficiencies of more than 80%, which produce less heat and reduce power consumption by up to 30%. Allied Telesis is now rating power supplies, informing the user of their efficiency.



Manufacturing and Distribution

Manufacturing

Allied Telesis prides itself on using state-of-the-art manufacturing equipment. While quality and efficiency are key parameters, we are also focused on reducing the potential damage to the environment caused during the manufacturing process.

ISO 9001 Standard

All Allied Telesis manufacturing facilities conform to ISO 9001 standards, allowing production volumes to scale easily without sacrificing product quality. Efficient production techniques, coupled with stringent design parameters, ensure that we maintain our position as one of the highest quality networking producers in the industry.

ISO 14001 Standard

Allied Telesis has long been a responsible manufacturer, aiming to minimize environmental damage. All Allied Telesis facilities adhere to the strict ISO 14001 standard for environment management of its production processes.

Allied Telesis manufacturing facilities also ensure minimal impact on the environment by using the latest technology and processes. The use of lead-free solder significantly reduces the amount of toxic chemicals, while the use of the 'no-clean' production process has reduced the amount of solvent cleaner used by more than 10,000 gallons per year. All water used in Allied Telesis manufacturing processes is also recycled.

Logistics

The majority of Allied Telesis network products are manufactured in Asia. Transporting these products across the world to the consumer markets could therefore have significant impact on the environment. Wherever possible, Allied Telesis attempts to use bulk sea transportation, as this has significantly less environmental impact when compared to air freight.



Environmental Policy Compliance

Restrictions on Hazardous Substances (RoHS) Compliance

Allied Telesis, Inc. declares that the homogeneous content of the materials and components used in products bearing the CE Mark conforms to the requirements established by the European Union RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) Directive, 2011/65/EU. Maximum Concentration Values of lead (Pb), mercury (Hg), hexavalent chromium (Cr+6), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) shall be no more than 1000 ppm and cadmium (Cd) shall be no more than 100 ppm. Allied Telesis ensures RoHS conformance by requiring Declarations of Conformity and Full Materials Declarations from all suppliers; by monitoring incoming materials and by maintaining strict manufacturing process controls.

REACH Policy

As a manufacturer of Articles that do not release chemical substances into the environment, Allied Telesis is committed to ensuring that there are no SVHCs (Substances of Very High Concern) above allowable threshold (1000 ppm) used in our products. We have procedures and processes in place to ensure continued conformity with REACH regulations.

WEEE Policy

Allied Telesis distributors and channel partners share a common commitment to recycle waste electronic equipment and safely dispose of what cannot be recycled, in accordance with the WEEE directive.

Conflict Minerals Policy

Allied Telesis is committed to social and environmental responsibility and expects the same commitment from its supply chain. This includes compliance with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which requires U.S. publicly-traded companies to trace the origins of tin, tantalum, tungsten and gold (3TG) used in their products. The intended purpose of which is to prevent the use of (3TG) mined in the Democratic Republic of Congo (DRC) and adjoining countries in order to eliminate these "conflict minerals" as a source of funding for the ongoing conflict. Allied Telesis has a dedicated team, working with its suppliers to reasonably assure that the 3TG in Allied Telesis products are "conflict free."





About Allied Telesis, Inc.

Founded in 1987, and with offices worldwide, Allied Telesis is a leading provider of networking infrastructure and flexible, interoperable network solutions. The Company provides reliable video, voice and data network solutions to clients in multiple markets including government, healthcare, defense, education, retail, hospitality, and network service providers.

Allied Telesis is committed to innovating the way in which services and applications are delivered and managed, resulting in increased value and lower operating costs.

Visit us online at alliedtelesis.com



the **solution** : the **network**

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