

Microchip PoE Powers Sustainability

Learn more about how Microchip's Power over Ethernet (PoE) offerings address sustainability concerns.



Microchip's Commitment to Sustainability and Innovation

Microchip is a leading provider of smart, connected and secure embedded control, processing and system solutions which serve more than 123,000 customers across the industrial, automotive, consumer, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. The Corporate Social Responsibility (CSR) program is designed to align the company values and sustainability objectives.

Sustainability considerations impact design for a broad and expanding array of technologies. Microchip offers hardware, software and development tools that empower people to create products that improve the sustainability of the global environment for humanity.

Microchip continues to make progress towards its sustainability commitment of zero greenhouse gas emissions by 2040. The focus on sustainability within the offerings have been applied to a wide array of applications. Among these are energy generation, storage and distribution. The Microchip Power over Ethernet (PoE) business unit has participated in this effort since it first introduced PoE.

Power over Ethernet

Power over Ethernet is the ability to provide both power and data over an Ethernet cable run of up to 100 meters. First introduced in 1997 by PowerDsine, today Microchip's Power over Ethernet business unit. Recognizing that power efficiency is important, PoE provides power only when requested. It also provides only the exact amount of power requested, and when no longer required, it stops delivering power.

While no power source is totally energy efficient, PoE's approach to delivering energy was a major step forward. Since that time, there has been a worldwide priority to make the delivery of energy more efficient.

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Energy Efficiency Standards

Governments all around the world have established energy efficiency standards to encourage manufacturers to produce more energy efficient devices. One of the most widely recognized programs is the Energy Star program in the United States administered by the Environmental Protection Agency. The program awards a logo to devices that meet their standards for energy efficiency that reduce consumption.

The program has been in place for more than 20 years and has improved those standards over the years. In October of 2023 they released their latest set of standards, Energy Star 7.

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The latest energy efficiency standards, as defined by the ENERGY STAR[®] program, reduce energy consumption by ensuring a minimal amount of energy is consumed when a power supply is in the “No Load” state—not delivering electricity. Microchip’s PoE midspans have already addressed this concern in the multiport units with the ability to turn off ports when not in use. For single-port units, Microchip is redesigning the units to comply with the latest ENERGY STAR standards. In February, a new line of indoor single-port 1 Gbps midspans designated the “Green Sustainable” or “GS” series will be introduced. Initially offering 15.4W, 30W and 60W units—and soon after a 90W unit—all based on 802.3af/at/bt standards, the PoE business unit contributes to Microchip’s sustainability efforts.

With plans to redesign all the single port units for all environments and data rates, these efforts will continue. In addition, designers are looking to incorporate unique ideas and features to surpass energy efficiency requirements of today and the future.