Microchip Power over Ethernet (PoE) Powers IP Cameras

Microchip provides PoE solutions to power IP cameras while addressing your business challenges and constraints.

Power over Ethernet (PoE) Technology

PoE eliminates the need for electric power infrastructure, enabling quick and easy installation of Ethernet-based Powered Devices (PDs). The innovative technology allows PDs to receive power in parallel to data over the existing Ethernet infrastructure without having to make any modifications. By bringing together myriad benefits such as reliability of power supply along with power savings, ease of deployment, flexibility to relocate PDs, safe power and enhanced security driven by forced power shutdown during non-business hours, PoE has gained immense popularity across industries.

IP (Internet Protocol) Security and PoE

IP cameras are critical in video surveillance systems across businesses and smart buildings/homes worldwide. Deploying surveillance networks often proves to be a challenging affair due to restricted number of power outlets, installations in remote/hard-to-reach locations and environmental constraints. Real-time monitoring and troubleshooting surveillance networks can also result in substantial costs and overhead.

Additionally, modern physical security systems must process large amounts of data and transform it into information that can help us identify and prevent threats. Energy efficiency is another critical consideration. As security systems cover both indoor and outdoor environments, network durability and reliability becomes a key concern.

PoE technology is widely adopted in physical security applications since it’s ubiquitous on network surveillance cameras. Ease of installation and flexibility makes PoE the preferred technology to power IP cameras. Microchip provides PoE infrastructure including PoE midspans/injectors and switches to reliably power IP cameras in surveillance systems while addressing the key challenges and constraints.

Microchip Power over Ethernet (PoE) Powers IP Cameras

PoE Solutions Ideal for Powering IP Cameras

Microchip PoE midspan/injectors and switches provide a simple and easy way to reliably power physical security applications in indoor, outdoor and industrial environments, addressing all your unique business requirements.

Years ago, cameras operated on low voltage; now, high performance cameras with features demand more power. You can leverage a wide selection of IEEE 802.3af/at/bt-compliant PoE solutions from Microchip, addressing power requirements of up to 95W—adequately sufficient for high-end Pan-Tilt-Zoom (PTZ) cameras.

When installing multiple IP cameras throughout large buildings/homes, big arenas or cities, it is much more efficient to use a multiport PoE midspan or switch. Microchip offers the broadest portfolio of multiport midspans in the market today. Our 4-, 6-, 12- and 24-port PoE solutions enable rapid deployment of a large number of IP cameras at reduced costs. You can check our "**When One Port Is Not Enough**" blog post to know more about when to use multiport midspans.

Scaling through innovation, Microchip PoE midspans and switches are thoughtfully designed to meet unique requirements of IP camera deployments in outdoor and industrial environments under extreme climatic conditions. Our ruggedized PoE solutions are purpose-built in compact metal enclosures to help you improve the longevity of your IT infrastructure. Our "**When Indoor Is Not Enough**" blog post brings to you the unique advantages of Microchip outdoor PoE portfolio.

You can also daisy chain PoE devices using PoE power forwarding. Daisy-chaining Ethernet devices is a means to extend the Ethernet run over 100m. PoE power forwarding adds power over the extended run. Microchip has PoE integrated circuits to add power forwarding to an Ethernet PD along with a PoE extender accessory to easily extend an existing network. As an example, consider a PoE powered wireless access point (AP) that consumes 40W of power. The IEEE 802.3bt specifies up to 71W available to a PD attached to a 90W PoE port. In this case, 71W is available to the AP and approximately 30W is available to forward to another PD, such as an IP camera. The camera at the far end of the Ethernet cable will have at least 11W of power available. You can read in detail in this post about what we offer for **PoE power forwarding**.

Microchip Power over Ethernet (PoE) Powers IP Cameras

Easy plug-and-play installation of Microchip PoE midspans and switches is key in reducing the time and effort to deploy network surveillance systems in remote places. Our multiport midspans and switches also offer centralized power management, including control and remote power cycling of IP cameras and central power backup.

The Outdoor PoE Switch

The **Microchip PDS-204GCO** is a next-generation IEEE® 802.3bt-compliant outdoor PoE switch that allows security network cameras and many other Internet of Things (IoT) devices to receive power and data over standard Ethernet cables, leaving the network infrastructure completely unaltered.

Its advanced cybersecurity features to protect applications against threats at all network levels. With two small form-factor pluggable (SFP) ports of 1 Gbps or 2.5 Gbps for redundancy, the switch offers high network availability and daisy chaining capability to economically extend the network reach. The product's compliance with IP67, built-in surge protection and corrosion resistance meet the highest outdoor environment standards.