

Power over Ethernet (PoE)

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Power over Ethernet

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for additional power outlets or cable runs and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.

PoE technology is regulated in a standard called IEEE 802.3af and is designed in a way that does not degrade the network data communication performance or decrease the network reach. The power delivered over the LAN infrastructure is automatically activated when a compatible terminal is identified, and blocked to legacy devices that are not compatible. This feature allows users to freely and safely mix legacy and PoE-compatible devices, on their network.

The standard provides power up to 15.4W on the switch or midspan side, which translates to a maximum power consumption of 12.9W on the device – making it suitable for most applications including indoor cameras. Some manufacturers also offer non-standard proprietary products providing suitable power for these applications as well, but it should be noted that since these are non-standard products, no interoperability between different brands is possible.

The 802.3af standard also provides support for so-called power classification, which allows for a negotiation of power consumption between the PoE unit and the devices. This means an intelligent switch can reserve sufficient, and not superfluous, power for the device - with the possible result that the switch could enable more PoE outputs. Advanced Data & Network Solutions proudly recommends Cisco PoE switches.

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