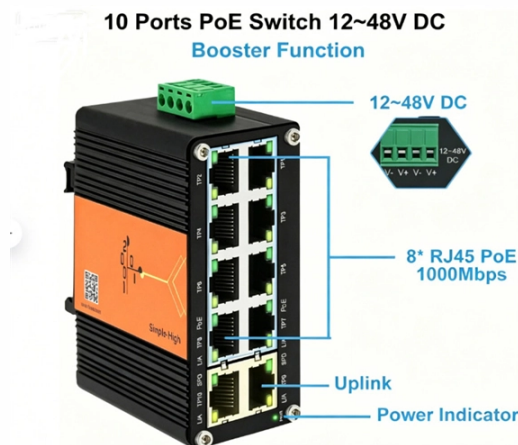


What is the maximum distance for a PoE switch



Article Overview

The standard maximum distance for a PoE switch to deliver both power and data is 100 meters (328 feet).

Standard PoE Distance

PoE (Power over Ethernet) technology follows the IEEE 802.3af, 802.3at, and 802.3bt standards, which define a maximum Ethernet cable run of 100 meters between the Power Sourcing Equipment (PSE), such as a PoE switch, and the Powered Device (PD) like IP cameras or access points. This limit applies to all PoE versions, including:

- IEEE 802.3af (PoE): Up to 15.4W per port, 100-meter limit.
- IEEE 802.3at (PoE+): Up to 30W per port, 100-meter limit.
- IEEE 802.3bt (PoE++/Type 3 & 4): Up to 60-100W per port, 100-meter limit. The 100-meter limit is dictated by Ethernet's physical layer specifications, not the power level, meaning higher wattage does not extend the standard distance.

Real-World Considerations

While the theoretical maximum is 100 meters, practical distances can be shorter due to:

- Cable quality: High-quality Cat6 or Cat6a cables with thicker conductors (23 AWG) reduce resistance and voltage drop, maintaining power delivery over longer runs. L...

Article Content

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LAN to LAN (Switch to Switch) Max ethernet length 1 gig (1000tx)

It's worth noting that the 328 feet (100 meter) max distance is the standard distance limit set by IEEE 802.3ab. If you are using a switch that supports POE (Power over Ethernet) it should be

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PoE Distance Limit: Enhance Power Connection

The switch itself does not determine the maximum distance by default. Rather, any individual Ethernet cable run from a PoE switch port out to a powered device has an absolute 100

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Choosing the Best Network Switches to Extend PoE Distance in 2024

The network switches that can extend PoE distance beyond the limitation of 100 meters are PoE media converters, PoE switches, and PoE extenders.

Feb 13, 2026

PoE Distance Limit: Comparing Ethernet Switch Range-Blog-GZCOM

PoE technology adheres to the same 100-meter (328 feet) distance limitation as standard Ethernet for both data and power delivery. This means that a PoE switch can reliably supply power to

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What is the transmission distance of PoE?

1. Enable PoE Extend mode Some PoE switches in the market provide PoE Extend mode or CCTV mode which allows maximum 250 meters (or 820ft) PoE transmission. The trade off

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Power Supply Standards for POE Switches. Why is the

(Read Understanding PoE Standards and Wattage for additional information.) Why is the Power Supply Distance Limited to 100 Meters? The fact

Mar 15, 2026

What is the max distance of POE++ for powering devices?

How PoE++ Works Over Distance: Endspan and Midspan Solutions: In a typical PoE++ setup, the power sourcing equipment (PSE), such as a PoE++ switch or PoE injector, sends both

Sep 08, 2025

How far can I place my outdoor Access Point with POE?

The maximum current output of a PoE injector or switch is typically 350mA, 550mA, or 1A, and the amount of current required by the device being powered is specified by the manufacturer.

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Is there a length limit to PoE cable runs?

The maximum distance you can power a device will vary depending on the access point and the voltage it requires, as well as the voltage provided by the power supply and the quality of the

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What Category of Ethernet Cable Should You Use for

What Category of Ethernet Cable Should You Use for PoE, and What Is the Maximum Length? After our recent blog on PoE standards, many readers

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What is the transmission distance of PoE?

The standard PoE transmission distance is typically 100 meters. The built-in PoE Extend mode in PoE switch can extend PoE transmission to max. 250 meters with reduced bandwidth of

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How to Extend PoE Distance: Unlock the Maximum Reach for

The distance that PoE can reach depends on various factors, including cable quality, power requirements of the devices, and the PoE standard being used. The most common PoE

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Understanding PoE Switch Power Supply Limits: Why Is the Maximum ...

Major manufacturers like Huawei have advanced PoE switches (e.g., Huawei S5700 & S6700 series) that comply with IEEE standards while offering enhanced power management. However, ...

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How to get the long distance Power over Ethernet

The PoE provides the solution to transmit the power and network communicating over single Ethernet cable. It saves the installation cost. However the PoE has limited of 100 meters which has relative to

Nov 18, 2025

PoE switch and CAT6 cable distance limitations ?

We know that CAT6 cable has limitations of 100 meters (330+ feet) distance. After that distance you might experience weak signal. Wondering if that

May 03, 2026

PoE Max Distance Explained: How Long Can PoE Cable Really Be?

The fundamental PoE max distance remains 100 meters (328 feet) for standard installations, dictated by Ethernet protocol limitations rather than power delivery constraints.

May 26, 2026

PoE Max Distance: What You Need to Know

The standard PoE maximum distance is 100 meters (328 feet), as defined by IEEE standards such as 802.3af, 802.3at, and 802.3bt. While this limit applies universally across PoE

May 24, 2026

PoE calculator for Power over Ethernet

It will calculate and display the max cable distance, and is easier to use than a basic voltage drop tool. Our Calculator will give a warning if the link is too long

Dec 31, 2025

Long Range PoE+ Solutions

Edimax provides the solutions to overcome the PoE distance limitation with the following solutions: 1) Long Range PoE+ Switch Series: Simply clicks on the DIP

Apr 14, 2026

PoE Switch Transmission Distance 150m or 250m

PoE switches are with 150m and 250m transmission distance version available, Maximize their function to have a good network.

Jun 15, 2026

PoE Switch Distance Limit: How Far Can Power over Ethernet Go?

What Is the Maximum PoE Switch Distance Limit In PoE (Power over Ethernet) technology, the Ethernet link between the Power Sourcing Equipment (PSE) and the Powered

Nov 01, 2025

PoE Distance Limit Explained: What It Means for Your Networked

Adding a PoE switch or powered network device between the source and endpoint effectively resets the 100-meter limit. This approach is widely used in office buildings and large

Jan 24, 2026

Long Distance PoE Switches: Enhancing Your Network Range

Explore the benefits and applications of long-distance PoE switches for extending network range without sacrificing performance. Learn about installation tips, cost efficiency.

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PoE Standards and the PoE Switch Distance Limit

What Is the Maximum PoE Switch Distance Limit In PoE (Power over Ethernet) technology, the Ethernet link between the Power Sourcing Equipment (PSE) and the Powered Device (PD) has a clearly

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POE and POE+ max distance

1- if i need to deliver POE/POE+ for a device (without Data only power) for about 300m cable length, is it applicable ? 2- which AMG 22 cables is more suitable UTP or STP ?

Aug 07, 2025

PoE Distance Limit Explained: What It Means for Your Networked

PoE Distance Limits for Different Device Applications Although PoE standards define a uniform maximum distance, real-world PoE performance varies significantly depending on the device

May 27, 2026

What is the maximum distance for power and data when using PoE?

What is the maximum distance for power and data when using PoE? 100 m (328 ft) is the maximum distance between the Ethernet source and the Ethernet client. Note that this isn't identical with the

Contact Us

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