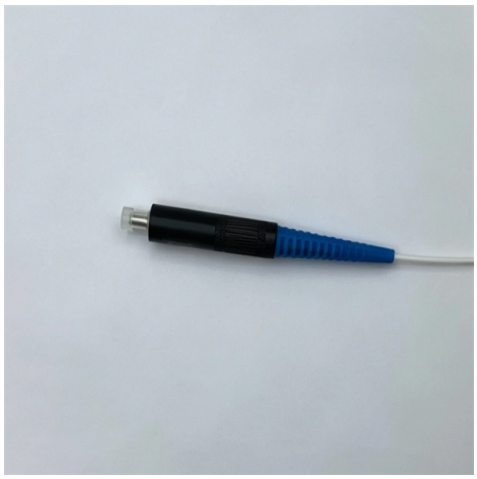
How many ports should an aggregation switch have



Overview

Port Aggregation FAQs All UniFi Switches support aggregation, except USW-Flex, USW-Flex-Mini and USW-Ultra. Port aggregation is not supported on most UniFi.

Key Takeaways

The number of ports on an aggregation switch depends on the number of access switches it connects to, the uplink requirements to the core, and whether port aggregation is used for redundancy and higher bandwidth.

Determining Port Count

Downlink Ports to Access Switches The aggregation switch must have enough ports to connect to all access switches in the network. For example, if you have 10 access switches, the aggregation switch should have at least 10 downlink ports, preferably with some spare ports for future expansion or redundancy. Uplink Ports to Core Switches Aggregation switches typically connect to the core layer using high-speed uplinks.

The number of uplink ports depends on the desired bandwidth and redundancy. For instance, if each uplink is 40Gbps and you want two redundant uplinks, you need at least two uplink ports. Port Aggregation Considerations Port aggregation allows multiple physical ports to be combined into a single logical link for higher bandwidth and redundancy.

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Static aggregation supports up to 8 ports per group, while dynamic aggregation (LACP) can support up to 12 ports, with 8 active and 4 backup. This means you can combine multiple ports to form high-capacity uplinks or inter-switch links. Scalability and Future Growth It is recommended to select an aggregation switch with extra ports beyond current needs to accommodate network growth, additional access switches, or higher bandwidth requirements in the future.

Practical ExampleMedium-sized network: 12 access switches with 1Gbps downlinks and 10Gbps uplinks to the core. You would need at least 12 downlink ports and 2–4 uplink ports, possibly aggregated for redundancy. Large enterprise network: 24 access switches with 10Gbps downlinks and 40Gbps uplinks.

You might choose an aggregation switch with 24 SFP+ ports for downlinks and 4 QSFP+ ports for uplinks, using LACP to combine multiple uplinks for higher throughput.

Summary

The exact number of ports depends on: Number of access switches to connectDesired uplink bandwidth and redundancyUse of port aggregation (static or LACP)Future scalability needs By planning for both current and future requirements, you ensure the aggregation switch can handle traffic efficiently and provide redundancy without overloading any single link.

Article Content

Port Aggregation FAQs

All UniFi Switches support aggregation, except USW-Flex, USW-Flex-Mini and USW-Ultra. Port aggregation is not supported on most UniFi Gateways; it is only supported on the EFG, UXG

Aggregation Switch

An Aggregation or "Top-of-Rack" switch is designed to connect everything in a rack at high speeds, then have an even bigger pipe out to the rest of the network. The Pro Aggregation does this with it''s

What Is an Aggregation Switch and How to Choose?

When selecting an aggregation switch, you need to consider the uplink port type and number of the network access switches, as well as the downlink port type of the core switch.

How to Aggregate Ports on UniFi Switch

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Aggregating ports on a UniFi switch combines multiple physical links into a single logical link, increasing bandwidth and providing redundancy. Follow these steps to create and assign

UniFi link aggregation: the ultimate guide | UniHosted

Link aggregation, also called port trunking, is the process of combining multiple Ethernet connections into one logical link. It provides higher bandwidth, increased reliability, and load balancing. The idea

Aggregation layer | FortiSwitch 7.6.0 | Fortinet Document Library

The most appropriate FortiSwitch unit to form the aggregation layer comprises many 10/25/40 gigabit Ethernet ports to address the access layer and a few 100-GbE ports towards the core layer.

Network Switch Calculator

Choosing the right switch involves balancing port count, speed, PoE capability, and management features. This calculator helps you determine exactly how many ports you need before you shop.

Chapter18:Link Aggregation Configuration

The speed of all physical ports should be same during aggregation process, that is, if there is one physical port that has been aggregated successfully, then the speed of the second

Link aggregation

In most implementations, all the ports used in an aggregation consist of the same physical type, such as all copper ports (10/100/1000BASE-T), all multi-mode fiber ports, or all single-mode fiber ports.

Enterprise Switching Trends 2026: Transitioning from

Conclusion The 2026 enterprise switching trend isn''t about replacing everything with faster ports. It''s about a balanced, role-based plan: keep 1G where it fits, use

PoE Switch Buying Guide for Business Networks in 2026 | Technivision

Learn how to choose the right PoE switch for business networks in 2026 with guidance on ports, power budget, uplinks, and security.

400G vs 800G Ethernet in 2026: Data Center Trends

In 2026, the real shift in data center switching isn''t simply moving from 400G to 800G-it''s moving from "buying faster ports" to designing a fabric that stays

Port Aggregation Configurations

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Port aggregation is useful for implementing load balancing and provides a redundant link backup. To allow port aggregation, the basic configuration on all the ports must be consistent. The following list

Everything You Need to Know About Aggregation Switch

Port Density: Aggregation switches should have adequate port density to accommodate high-traffic volumes from different access switches. Bandwidth:

Link Aggregation: What is it, and How Does it Work?

Link aggregation is a way of bundling a bunch of individual (Ethernet) links together so they act as a single logical link. A fundamental for effective

Understanding Ethernet Port Aggregation: Benefits,

Switches and Port Linking: The use of compatible switches with support for port linking or trunking is essential when implementing Ethernet port

What Is an Aggregation Switch and How to Choose?

An aggregation switch is a network device that consolidates traffic from multiple access switches, wireless access points, or other edge devices and forwards it to core switches or routers.

What is Port Aggregation?

Port aggregation provides cost-effective scaling, redundancy, load balancing, and much more. Generally, you use LACP (Link Aggregation Control

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