

Performance Comparison of Upgraded Access Switches

Article Overview

Upgraded access switches like Cisco Catalyst 9300L and UniFi ECS series offer high throughput, advanced PoE support, and robust Layer 3 features, with differences in port density, power efficiency, and scalability.

Cisco Catalyst 9300L Series

Models Compared: C9300L-48P-4G-A (48-port Gigabit PoE+) vs. C9300L-24P-4X-E (24-port Gigabit PoE++) Performance:

- o Forwarding Rate: 48-port model achieves 158Mpps vs. 132Mpps for the 24-port model, making it better for high-traffic environments like large meeting rooms or warehouses .
 - o Memory & Storage: 48-port has 4GB DDR4 RAM + 16GB eMMC flash; 24-port has 2GB RAM + 8GB flash, allowing the 48-port to handle advanced features and maintain longer log retention .
 - o Power Consumption: 48-port consumes ~65W under full load; 24-port ~45W, with smart power adjustment to optimize energy use .
 - o PoE Support: 48-port supports PoE+ (30W) for standard devices; 24-port supports PoE++ (90W) for high-power devices like 4K cameras .
 - o Layer 3 Features: 48-port supports IPv6 routing natively; 24-port requires additional licensing .
- Use Case: Ideal for high-density enterprise environments requiring scalability, advanced routing, and robust PoE support.

UniFi ECS Series

Performance & Features:

- o Port Speeds: 1/2.5/10G downlinks, with 10/25/100G uplinks for backbone connectivity .
- o Redundancy: Multi-Chassis Link Aggregation (MC-LAG) for seamless failover and load balancing .
- o Layer 3 Routing: Hardware-accelerated inter-VLAN routing, often replacing external routers .
- o PoE & Management: Centralized VLAN, PoE, and link aggregation management; color-coded LEDs simplify troubleshooting .
- o Use Case: Suitable for enterprise campuses, AV over IP deployments, and high-performance Wi-Fi 7 networks requiring low latency and high throughput .

Key Comparison Points

Feature	Cisco Catalyst 9300L	UniFi ECS Series
Port Density	24-48	Gigabit 24-48
Uplink Speeds	1/2.5/10G	1/2.5/10G
PoE Support	PoE+ for APs and devices	PoE for APs and devices
Forwarding Rate	Up to 158Mpps	High throughput, hardware-accelerated
Layer 3 routing	Full IPv4/IPv6 routing	Inter-VLAN routing
Redundancy	StackWise-1TMC-LAG failover	Management Cisco DNA Center, IOS-XE UniFi



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centralized controllerPower EfficiencySmart power adjustmentSeamless failover, low-latency operation

Summary

Cisco Catalyst 9300L excels in high-density, enterprise-grade environments with advanced Layer 3 routing, PoE flexibility, and mature SDN integration. UniFi ECS switches provide versatile, high-speed connectivity with simplified management, ideal for campus networks and AV deployments. Choice depends on network scale, device power requirements, and management preferences, with Cisco favoring large enterprise deployments and UniFi offering cost-effective, high-performance campus solutions .

All my charts for comparing Ubiquiti's models of UniFi Gateways, Consoles, Wireless Access Points, and Switches.

There are so many kinds of switches in the market, which one should we buy? For most companies, they only need to

Learn the benefits of upgrading from Catalyst 3560, 3750, and 3850 access switches to the Cisco C9350 Series

Let's compare the market leaders in access switch technology, Cisco Catalyst and Arista, to find out their features, limitations, and

Why upgrade to the Cisco Catalyst 9400 Series Switches? Simple, Secure, Ready Digital disruption is changing how

Discover the top managed network switches of 2026. Find the best overall, value, beginner-friendly options, and more

Compare Cisco switches side by side in a features comparison chart to find the right Enterprise LAN or Data Center Switch for your

Distribution layer All of that increased Access bandwidth and scale can be supported by the existing Catalyst 9500

There are different types of enterprise switches that perform various roles in these layer-based or hierarchical ethernet networks.

Explore the competitive comparison chart of Cisco network switches highlighting innovations that offer more

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capabilities for your

The best network switch will be a necessity for anyone looking to add more wired connections and gain greater

Ready to Upgrade Your Network Switches? Let's Compare Cisco's Best When it comes to core switching in large environments, the

What is an access switch? Learn the features and applications, and know how to select the right access switch for

Today, we compare two compact models from Cisco's Catalyst 9300L series: the C9300L-48P-4X-A (A-series) and

Agile Switch or Access Switch? Learn the key differences. Agile is a simple managed

Compare N9000 Models The following tables compare hardware capabilities of Cisco N9000 Series

Web: <https://www.kremgroup.co.za>

