Cisco Catalyst 9300 Series Switches

Contents

Built for security, IoT, mobility, and cloud

The Cisco® Catalyst® 9300 Series switches are Cisco's lead stackable enterprise switching platform built for security, IoT, mobility, and cloud. They are the next generation of the industry's most widely deployed switching platform. Catalyst 9300 Series switches form the foundational building block for Software-Defined Access (SD-Access), Cisco's lead enterprise architecture. At up to 480 Gbps, they are the industry's highest-density stacking bandwidth solution with the most flexible uplink architecture. The Catalyst 9300 Series is the first optimized platform for high-density Wi-Fi 6 and 802.11ac Wave2. It sets new maximums for network scale. These switches are also ready for the future, with an x86 CPU architecture and more memory, enabling them to host containers and run third-party applications and scripts natively within the switch.

The Catalyst 9300 Series is designed for Cisco StackWise® technology, providing flexible deployment with support for nonstop forwarding with Stateful Switchover (NSF/SSO), for the most resilient architecture in a stackable (sub-50-ms) solution. The highly resilient and efficient power architecture features Cisco StackPower®, which delivers high-density Power over Ethernet Plus (PoE+), 60W Cisco Universal Power over Ethernet (Cisco UPOE) and 90W Cisco UPOE®+ ports. The switches are based on the Cisco Unified Access™ Data Plane 2.0 (UADP) 2.0 architecture which not only protects your investment but also allows a larger scale and higher throughput. A modern operating system, Cisco IOS® XE with programmability offers advanced security capabilities and Internet of Things (IoT) convergence.

The Foundation of Software-Defined access

Advanced persistent security threats. The exponential growth of Internet of Things (IoT) devices. Mobility everywhere. Cloud adoption. All of these require a network fabric that integrates advanced hardware and software innovations to automate, secure, and simplify customer networks. The goal of this network fabric is to enable customer revenue growth by accelerating the rollout of business services.

The Cisco Digital Network Architecture (Cisco DNA) with Software-Defined Access (SD-Access) is the network fabric that powers business. It is an open and extensible, software-driven architecture that accelerates and simplifies your enterprise network operations. The programmable architecture frees your IT staff from time-consuming, repetitive network configuration tasks so they can focus instead on innovation that positively transforms your business. SD-Access enables policy-based automation from edge to cloud with foundational capabilities. These include:

- Simplified device deployment
- Unified management of wired and wireless networks
- Network virtualization and segmentation
- Group-based policies
- Context-based analytics

Cisco DNA software

Cisco DNA Software offers a valuable and flexible way to buy software for the access, WAN, and data center domains. At each stage in the product lifecycle, Cisco DNA Software helps make buying, managing, and upgrading your network and infrastructure software easier. Cisco DNA Software provides:

- Flexible licensing models to smoothly distribute customers' software spending over time
- Investment protection for software purchases through software services–enabled license portability
- Access to updates, upgrades, and new technology from Cisco through Cisco® Software Support Services (SWSS)
- Lower cost of entry with the new Cisco DNA Subscription for Switching model

Cisco DNA lets you manage your entire switching structure as a single, converged component. With one management system and one policy for wired and wireless networks, it offers an efficient way to provide more secure access.

Product overview: Features

Product highlights

- Highest wireless scale for Wi-Fi 6 and 802.11ac Wave 2 access points supported on a single switch with select models
- Cisco UADP 2.0 Application-Specific Integrated Circuit (ASIC) with programmable pipeline and microengine capabilities, along with template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality of Service (QoS) entries
- x86 CPU complex with 8-GB memory, and 16 GB of flash and external USB 3.0 SSD pluggable storage slot (delivering 120GB of storage with an option SSD drive) to host containers
- USB 2.0 slot to load system images and set configurations
- Up to 480 Gbps of local stackable switching bandwidth
- Deeper buffer and higher scale model options for rich multi-media content delivery applications
- Flexible and dense uplink offerings with 1G, Multigigabit, 10G, 25G, and 40G in the form of fixed or modular uplinks
- Easy transition from 10G to 25G with dual-rate optics
- Flexible downlink options with 1G Copper and Fiber as well as Multigigabit links
- Leading PoE capabilities with up to 384 ports of PoE per stack, PoE+, and high density IEEE 802.3bt - 60W UPOE, and 90W Cisco UPOE®+
- Intelligent Power Management with Cisco StackPower technology, providing power stacking among members for power redundancy
- Line-rate, hardware-based Flexible NetFlow (FNF), delivering flow collection of up to 64,000 flows
- IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks
- Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration

- Support for both static and dynamic NAT and Port Address Translation (PAT)
- IEEE 802.1ba AV Bridging (AVB) built in to provide a better audio and video experience through improved time synchronization and QoS
- Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy making it suitable for distribution and synchronization of time and frequency over network
- Cisco IOS XE, a modern operating system for the enterprise with support for model-driven programmability including NETCONF, RESTCONF, YANG, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks
- **SD-Access:** Cisco Catalyst 9300 Series switches form the foundational building block for SD-Access, Cisco's lead enterprise architecture:
  - Policy-based automation from edge to cloud
  - Simplified segmentation and micro-segmentation, with predictable performance and scalability
  - Automation through Cisco DNA Center
  - Policy handled through the Cisco Identity Services Engine (ISE)
  - Network assurance provided through the Cisco DNA Center
  - Faster launch of new business services and significantly improved issue resolution time
- SD-Access Embedded Wireless: The Cisco Catalyst 9800 embedded Wireless Controller Software package can be installed on Cisco Catalyst 9300 Series switches to enable wireless controller functionality for distributed branches and small campuses. Once installed, the Catalyst 9800 embedded Wireless Controller running on a Catalyst 9300 Series switch can support up to 200 APs and 4000 Clients (C9300L supports 50 APs / 1000 Clients). A maximum two wireless controllers can be enabled per site on two different Catalyst 9300 Series switches which will increase to scale up to 400 APs and 8000 Wireless Clients (C9300L: 100 APs / 2000 Clients). The Catalyst 9800 embedded Wireless Controller Software package will enable wireless functionality only for SD-Access deployments with two supported topologies:
  - The Catalyst 9800 embedded Wireless Controller Software package can be enabled on Catalyst 9300 Series switches functioning as Co-Located Border and Control Plane
- Embedded Wireless on Catalyst 9k switches (SD-Access network not required) using WebUI: The Cisco Catalyst 9800 embedded Wireless Controller Software package can be installed on Cisco Catalyst 9300/L Series switches to enable wireless controller functionality. This solution is designed for Single secure site deployment. Configuration needed to enable wireless is enabled using simple WebUI. Once installed, the Catalyst 9800 embedded Wireless Controller running on a Catalyst 9300 Series switch can support up to 200 APs and 4000 Clients (C9300L supports 50 APs / 1000 Clients). A maximum of two wireless controllers can be enabled per site on two different Catalyst 9300 Series switches which will increase to scale up to 400 APs and 8000 Wireless Clients (C9300L: 100 APs / 2000 Clients). Up to 4 VRFs are supported.
  - C9800 Wireless Software Package can be enabled on Catalyst 9300 Series switches functioning as Fabric in a Box

- Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network
- Advanced security
  - Encrypted Traffic Analytics (ETA): You benefit from the power of machine learning to identify and take actions toward threats or anomalies in your network, including malware detection in encrypted traffic (without decryption) and distributed anomaly detection
  - Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models
  - Trustworthy solutions: Hardware anchored Secure Boot and Secure Unique Device Identification (SUDI) support for Plug and Play, to verify the identity of the hardware and software

Platform details

Switch models and configurations

Models	FRU Power Supply	FRU Fans	Modular Uplinks	Stacking Bandwidth Support	Cisco StackPower	Catalyst 9800 Embedded WLC	SD-Access Support
Modular uplink models (C9300 SKUs)	✓	✓	✓	480 Gbps	✓	Yes (200 APs)	Yes (256 Virtual Networks)
Fixed uplink Models (C9300L SKUs)	✓	✓	✗	320 Gbps	✗	Yes (50 APs)	Yes (256 Virtual Networks)

The Cisco Catalyst 9300 Series is made up of fourteen modular uplink switch models and fourteen fixed uplink switch models.

Figure 1.
Cisco Catalyst 9300 Series switches

Table 1 lists port scale and power details for the Cisco Catalyst 9300 Series models.

Table 1. Cisco Catalyst 9300 Series switch configurations

Model	Total 10/100/1000, Multigigabit copper or SFP Fiber	Uplink Configuration	Default AC power supply	Available PoE power
Modular uplink models				
C9300-24T	24 Data	Modular Uplinks	350W AC	N/A
C9300-48T	48 Data	Modular Uplinks	350W AC	N/A
C9300-24P	24 POE+	Modular Uplinks	715W AC	445W
C9300-48P	48 POE+	Modular Uplinks	715W AC	437W
C9300-24U	24 Cisco UPOE	Modular Uplinks	1100W AC	830W
C9300-48U	48 Cisco UPOE	Modular Uplinks	1100W AC	822W
C9300-24UX	24 Multigigabit Cisco UPOE (100M, 1G, 2.5G, 5G, or 10 Gbps)	Modular Uplinks	1100W AC	560W
C9300-48UXM	48 Cisco UPoE 36x 100 Mbps,1G, 2.5G + 12x Multigigabit (100M, 1G, 2.5G, 5G, or 10 Gbps)	Modular Uplinks	1100W AC	490W
C9300-48UN	48x 5 Gbps UPOE ports (100M, 1G, 2.5G, 5G)	Modular Uplinks	1100W AC	645W
C9300-24UB	24 Cisco UPOE	Modular Uplinks	1100W AC	830W
C9300-24UXB	24 Multigigabit Cisco UPOE (100M, 1G, 2.5G, 5G, or 10 Gbps)	Modular Uplinks	1100W AC	560W
C9300-48UB	48 Cisco UPOE	Modular Uplinks	1100W AC	822W
C9300-24H	24 Cisco UPOE+	Modular Uplinks	1100W AC	830W
C9300-48H	48 Cisco UPOE+	Modular Uplinks	1100W AC	822W
C9300-24S	24x 1G SFP	Modular Uplinks	715W AC	N/A
C9300-48S	48x 1G SFP	Modular Uplinks	715W AC	N/A
Fixed uplink models				
C9300L-24T-4G	24 Data	4x 1G fixed uplinks	350W AC	N/A
C9300L-24T-4X	24 Data	4x 10G fixed uplinks	350W AC	N/A
C9300L-48T-4G	48 Data	4x 1G fixed uplinks	350W AC	N/A

Model	Total 10/100/1000, Multigigabit copper or SFP Fiber	Uplink Configuration	Default AC power supply	Available PoE power
C9300L-48T-4X	48 Data	4x 10G fixed uplinks	350W AC	N/A
C9300L-24P-4G	24 PoE+	4x 1G fixed uplinks	715W AC	505W
C9300L-24P-4X	24 PoE+	4x 10G fixed uplinks	715W AC	505W
C9300L-48P-4G	48 PoE+	4x 1G fixed uplinks	715W AC	505W
C9300L-48P-4X	48 PoE+	4x 10G fixed uplinks	715W AC	505W
C9300L-48PF-4G	48 PoE+	4x 1G fixed uplinks	1100W AC	890W
C9300L-48PF-4X	48 PoE+	4x 10G fixed uplinks	1100W AC	890W
C9300L-24UXG-4X	24 UPOE 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G	4x 10G fixed uplinks	1100W AC	880W
C9300L-24UXG-2Q	24 UPOE 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G	2x 40G fixed uplinks	1100W AC	722W
C9300L-48UXG-4X	48 UPOE 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G	4x 10G fixed uplinks	1100W AC	675W
C9300L-48UXG-2Q	48 UPOE 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G	2x 40G fixed uplinks	1100W AC	675W

Cisco Catalyst 9300 Series switches (C9300 SKUs) support optional network modules for uplink ports (Figure 2). These field-replaceable network modules with 25G and 40G speeds in the Cisco Catalyst 9300 Series enable greater architectural flexibility and infrastructure investment protection by allowing a nondisruptive migration from 10G to 25G and beyond. The default switch configuration does not include the network module. When you purchase the switch, you can choose from the network modules described in Table 2.

Figure 2.
Cisco Catalyst 9300 Series Network Modules

Table 2. Network module numbers and descriptions

Network module	Description
C9300-NM-4G	Catalyst 9300 Series 4x 1G Network Module
C9300-NM-4M	Catalyst 9300 Series 4x Multigigabit Network Module
C9300-NM-8X	Catalyst 9300 Series 8x 10G Network Module
C9300-NM-2Q	Catalyst 9300 Series 2x 40G Network Module
C9300-NM-2Y	Catalyst 9300 Series 2x 25G Network Module

Please note: Existing Catalyst 3850 network modules are also supported in Cisco Catalyst 9300 Series switches.

For additional details, please read our FAQs: https://www.cisco.com/c/dam/en/us/products/collateral/switches/catalyst-9300-series-switches/nb-09-cat-9k-faq-cte-en.pdf.

Power supplies

Cisco Catalyst 9300 Series switches support dual redundant power supplies. The switches ship with one power supply by default, and the second power supply can be purchased when the switch is ordered or at a later time. If only one power supply is installed, it should always be in power supply bay #1. The switches also ship with three field-replaceable fans.

Figure 3.
Cisco Catalyst 9300 Series Dual Redundant power supplies

Table 3 lists the different power supplies available in these switches and available PoE power.

Table 3. Power supply models

Model	Default power supply	Available PoE power	With 350W Secondary PS	With 715W Secondary PS	With 1100W Secondary PS
C9300-24T	PWR-C1-350WAC***	n/a	n/a	n/a	n/a
C9300-48T	PWR-C1-350WAC***	n/a	n/a	n/a	n/a
C9300-24P	PWR-C1-715WAC***	445W	720W*	720W*	720W*

Model	Default power supply	Available PoE power	With 350W Secondary PS	With 715W Secondary PS	With 1100W Secondary PS
C9300-48P	PWR-C1-715WAC***	437W	787W	1152W	1440W*
C9300-24U	PWR-C1-1100WAC	830W	1180W	1440W*	1440W*
C9300-48U	PWR-C1-1100WAC	822W	1172W	1537W	1800W**
C9300-24H	PWR-C1-1100WAC	830W	1180W	1545W*	1930W*
C9300-48H	PWR-C1-1100WAC	822W	1172W	1537W	1922W*
C9300-24UX	PWR-C1-1100WAC-P	560W	910W	1275W	1440W*
C9300-48UXM	PWR-C1-1100WAC-P	490W	840W	1205W	1590W
C9300-48UN	PWR-C1-1100WAC-P	645W	995W	1360W	1745W
C9300-24UB	PWR-C1-1100WAC	830W	1180W	1440W*	1440W*
C9300-24UXB	PWR-C1-1100WAC-P	560W	910W	1275W	1440W*
C9300-48UB	PWR-C1-1100WAC	822W	1172W	1537W	1800W**
C9300-24S	PWR-C1-715WAC-P	n/a	n/a	n/a	n/a
C9300-48S	PWR-C1-715WAC-P	n/a	n/a	n/a	n/a
C9300L-24T-4G	PWR-C1-350WAC-P	n/a	n/a	n/a	n/a
C9300L-24T-4X	PWR-C1-350WAC-P	n/a	n/a	n/a	n/a
C9300L-48T-4G	PWR-C1-350WAC-P	n/a	n/a	n/a	n/a
C9300L-48T-4X	PWR-C1-350WAC-P	n/a	n/a	n/a	n/a
C9300L-24P-4G	PWR-C1-715WAC-P	505W	720W*	720W*	720W*
C9300L-24P-4X	PWR-C1-715WAC-P	505W	720W*	720W*	720W*
C9300L-48P-4G	PWR-C1-715WAC-P***	505W	855W	1220W	1440W*
C9300L-48P-4X	PWR-C1-715WAC-P***	505W	855W	1220W	1440W*
C9300L-48PF-4G	PWR-C1-1100WAC-P	890W	1240W	1440W	1440W*
C9300L-48PF-4X	PWR-C1-1100WAC-P	890W	1240W	1440W	1440W*
C9300L-24UXG-4X	PWR-C1-1100WAC-P	880W	1230W	1440W	1440W*
C9300L-24UXG-2Q	PWR-C1-1100WAC-P	722W	1072W	1440W	1440W*
C9300L-48UXG-4X	PWR-C1-1100WAC-P***	675W	1025W	1390W	1775W
C9300L-48UXG-2Q	PWR-C1-1100WAC-P***	675W	1025W	1390W	1775W

Model	Primary power supply	Available PoE power	With 350W Secondary PS	With 715W Secondary PS	With 1100W Secondary PS	With 1900W Secondary PS
C9300-24H	PWR-C1-1100WAC-P	830W	1180W	1545W	1930W	2160W
C9300-48H	PWR-C1-1100WAC-P	822W	1172W	1537W	1922W	2722W
C9300-24H	PWR-C1-1900WAC-P	1630W	1980W	2160W	2160W	2160W
C9300-48H	PWR-C1-1900WAC-P	1622W	1972W	2337W	2722W	2880W

* Limited by port number and port rating (e.g. 24 PoE+ 30W ports = 720W)

** Limited by design

*** Upgrade options for 715W and 1100W PSU are available

Stacking

Cisco Catalyst 9300 Series switch models are designed for stacking switches as a single virtual switch, enabling customers to have a single management plane and control plane for up to 448 access ports.

Figure 4.
Cisco Catalyst 9300 Series modular uplink models stack (C9300 SKUs) and fixed uplink models stack (C9300L SKUs)

Table 4 lists the supported stacking options.

Table 4. Supported stacking options

Model	Stacking support	Stacking bandwidth support	Optional Stacking hardware	Number of members	Supported stack members
Modular uplink models (C9300 SKUs)	StackWise®-480	480 Gbps	StackWise Cable	8	Other C9300 SKUs with same license level C9300 higher scale SKUs only stack with other like higher scale models
Fixed uplink models (C9300L SKUs)	StackWise-320	320 Gbps	C9300L-STACK-KIT	8	Other C9300L SKUs with same license level

Mixed stacking between 9300 and 9300 higher/increased scale platforms is **not supported**. You cannot stack fixed uplink models (C9300L SKUs) with modular uplink models (C9300 SKUs) or other Catalyst switches, e.g.

Cisco Catalyst 3850 and 3650 Series. Any combination of C9300 models can form a stack. Separately, any combination of C9300L models can form a stack.

Catalyst 9300 higher scale SKUs (C9300-24UB, C9300-24UXB, C9300-48UB) need to be stacked with other higher scale models in order to achieve a stack with the higher scale supported by these models.

StackWise cables that are available to configure stacking with Catalyst 9300 Series modular uplink models (C9300 SKUs) come in lengths of 0.5m, 1m and 3m.

The optional StackWise-320 kit for Catalyst 9300 Series fixed uplink models (C9300L SKUs) consists of two stack adapters and a stacking cable. The default stacking cable is 0.5 m, but options of 1m and 3m are also available. Table 5 lists the stacking accessories.

Table 5. Stacking accessories

Model	Description
STACK-T1-50CM	Data stack 50 cm (cable option with C9300 SKUs)
STACK-T1-1M	Data stack 1m (cable option with C9300 SKUs)
STACK-T1-3M	Data stack 3m (cable option with C9300 SKUs)
C9300L-STACK-KIT	Stack kit for C9300L SKUs only: Two data stack adapters and one data stack cable
STACK-T3-50CM	Data stack 50cm cable (default cable with C9300L Stack Kit)
STACK-T3-1M	Data stack 1m cable (cable option with C9300L Stack Kit)
STACK T3-3M	Data stack 3m cable (cable option with C9300L Stack Kit)

Figure 5.
Cisco Catalyst 9300 Series switch stack units

Fan

Cisco Catalyst 9300 Series switches also come with three field-replaceable fans and support (N+1) redundancy. Table 6 lists the fan module part number.

Table 6. Fan modules

Model	Description
FAN-T2=	Fan module

Performance and scalability

Performance and scalability metrics for the Cisco Catalyst 9300 Series are provided in Table 7.

Table 7. Performance specifications

Description	Performance – C9300 modular uplink SKUs	Performance – C9300 higher scale, modular uplink SKUs	Performance: C9300L fixed uplink SKUs
Total number of MAC addresses	32,000	64,000	32,000
Total number of IPv4 routes (ARP plus learned routes)	32,000 (24,000 direct routes and 8000 indirect routes)	112,000 (48,000 direct routes and 64,000 indirect routes)	32,000 (24,000 direct routes and 8000 indirect routes)
IPv6 routing entries	16,000	56,000	16,000
Multicast routing scale	8,000	16,000	8,000
QoS scale entries	5,120	18,000	5,120
ACL scale entries	5,120	18,000	5,120
Packet buffer per SKU	16 MB buffer for 24- or 48-port Gigabit Ethernet models 32 MB buffer for 24 and 48-port Multigigabit	32 MB buffer for 24- and 48-port Gigabit Ethernet models 64 MB buffer for 24-port Multigigabit model (24UXB)	16 MB buffer for 24 and 48 port Gigabit Ethernet models
FNF entries	64,000 flow on 24- and 48-port Gigabit Ethernet models 128,000 flows on 24-port Multigigabit	128,000 flow on 24- and 48-port Gigabit Ethernet models 256,000 flows on 24-port Multigigabit	64,000 flow on 24- and 48-port Gigabit Ethernet models
DRAM	8 GB	8 GB	8 GB
Flash	16 GB	16 GB	16 GB
VLAN IDs	4094	4094	4094
Total Switched Virtual Interfaces (SVIs)	1000	1000	1000
Jumbo frames	9198 bytes	9198 bytes	9198 bytes
Total routed ports per Catalyst 9300 Series stack	448	448	416

Table 8. Bandwidth specifications

SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300-24T	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48T	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24P	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48P	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24U	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48U	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UX	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-48UXM	580 Gbps	1060 Gbps	431.54 Mpps	788.69 Mpps
C9300-48UN	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24UB	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48UB	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UXB	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24H	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48H	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24S	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48S	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300L-24T-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24T-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48T-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48T-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-24P-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24P-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48P-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48P-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-48PF-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48PF-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps

SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300L-24UXG-4X	272 Gbps	592 Gbps	202.38 Mpps	440.47 Mpps
C9300L-24UXG-2Q	352 Gbps	672 Gbps	261.90 Mpps	500.00 Mpps
C9300L-48UXG-4X	392 Gbps	712 Gbps	291.66 Mpps	529.76 Mpps
C9300L-48UXG-2Q	472 Gbps	792 Gbps	351.19 Mpps	589.28 Mpps

All models are at wire-speed nonblocking performance for both IPv4 and IPv6. The forwarding rates in the table above are measured with 64 byte IPv4 packet sizes.

SD-Access architecture

What if you could give time back to IT? Provide network access in minutes for any user or device to any application – without compromise? SD-Access is the industry's first policy-based automation from network edge to cloud. Your foundation for your digital network, Cisco SD-Access. Built on the principles of the Cisco DNA, SD-Access provides end-to-end segmentation to keep user, device and application traffic separate without a redesign of the network. It automates user access policy so organizations can make sure the right policies are set for any user or device with any application across the network. This is accomplished with a single network fabric across LAN and WLAN which creates a consistent user experience anywhere without compromising on security.

There are many challenges today in managing the network to drive business outcomes. These limitations are due to manual configuration and fragmented tool offerings. SD-Access provides:

- A transformational management solution that reduces operational expenses and enhances business agility
- Consistent management of wired and wireless network provisioning and policy
- Automated network segmentation and group-based policy
- Contextual insights for fast issue resolution and capacity planning
- Open and programmable interfaces for integration with third-party solutions

For an overview of key use-cases SD-Access addresses, refer to SD-Access Solution Overview.

Platform benefits

Cisco IOS XE opens a completely new paradigm in network configuration, operation, and monitoring through network automation. Cisco's automation solution is open, standards-based, and extensible across the entire lifecycle of a network device. The various automation mechanisms are outlined below.

- **Automated device provisioning** is the ability to automate the process of upgrading software images and installing configuration files on Cisco Catalyst switches when they are being deployed in the network for the first time. Cisco provides both turnkey solutions such as Plug and Play and off-the-shelf tools such as Zero-Touch Provisioning (ZTP) and Preboot Execution Environment (PXE) that enable an effortless and automated deployment.

- **API-driven configuration** is available with modern network switches such as the Cisco Catalyst 9300 Series. It supports a wide range of automation features and provides robust open APIs over NETCONF and RESTCONF and GNMI using YANG data models for external tools, both off-the-shelf and custom built, to automatically provision network resources.
- **Granular visibility** enables model-driven telemetry to stream data from a switch to a destination. The data to be streamed is identified through subscription to a data set in a YANG model. The subscribed data set is streamed to the destination at specified intervals. Additionally, Cisco IOS XE enables the push model. It provides near-real-time monitoring of the network, leading to quick detection and rectification of failures.
- **Seamless software upgrades and patching** supports OS resilience. Cisco IOS XE supports patching, which provides fixes for critical bugs and security vulnerabilities between regular maintenance releases. This support lets you add patches without having to wait for the next maintenance release.

Security

- **Encrypted Traffic Analytics (ETA)** is a unique capability for identifying malware in encrypted traffic coming from the access layer. Since more and more traffic is becoming encrypted, the visibility this feature affords for threat detection is critical for keeping your network secure at different layers.
- **AES-256 MACsec encryption** is the IEEE 802.1AE standard for authenticating and encrypting packets between switches. The Cisco Catalyst 9300 Series switches support 256-bit and 128-bit Advanced Encryption Standard (AES), providing the most secure link encryption.
- **Trustworthy solutions built with Cisco Trust Anchor Technologies** provide a highly secure foundation for Cisco products. With the Catalyst 9300 Series, these technologies enable hardware and software authenticity assurance for supply chain trust and strong mitigation against man-in-the-middle attacks that compromise software and firmware. Trust Anchor capabilities include:
  - **Image signing:** Cryptographically signed images provide assurance that the firmware, BIOS, and other software are authentic and unmodified. As the system boots, the system's software signatures are checked for integrity.
  - **Secure Boot:** Cisco Secure Boot technology anchors the boot sequence chain of trust to immutable hardware, mitigating threats against a system's foundational state and the software that is to be loaded, regardless of a user's privilege level. It provides layered protection against the persistence of illicitly modified firmware.
  - **Cisco Trust Anchor module:** A tamper-resistant, strong cryptographic, single-chip solution provides hardware authenticity assurance to uniquely identify the product so that its origin can be confirmed to Cisco. This provides assurance that the product is genuine.

Cloud Security

- **Umbrella Integration:**

  Small to midsize networks reliant on managed service providers can now host Cisco Umbrella agent directly on their Catalyst 9300 series switches. This allows the business to easily customize their DNS filtering policies granularly at user or group level to prevent BYOD or IoT guest or corporate users from accessing malicious or inappropriate websites, without having to rely on the MSP to push the policies out. It also lets them optimize use of bandwidth by allowing direct cloud access for trusted apps. Requires DNA-Advantage License and Umbrella License per device.

Resiliency and high availability

- **StackWise-480:** Cisco Catalyst 9300 Series modular uplink models (C9300 SKUs) support the industry's highest back-panel stacking bandwidth solution (480 Gbps) with StackWise-480. Up to 8 Switches can be configured in a Stackwise-480 with the special connector at the back of the switch using dedicated stack cables.
- **StackWise-320:** The Cisco Catalyst 9300 Series fixed uplink models (C9300L SKUs) support stacking bandwidth solution (320 Gbps) with StackWise-320. Up to 8 Switches can be optionally configured in a Stackwise-320 with the special Stack Kit at the back of the switch using dedicated stack cables.
- **Cisco StackPower:** Cisco StackPower is an innovative power interconnect system that allows the power supplies in a stack to be shared as a common resource among all the switches. This allows you to simply add one extra power supply in any switch of the stack and either provide power redundancy for any of the stack members or simply add more power to the shared pool. Up to 4 switches can be configured in a StackPower stack with the special connector at the back of the switch. However, with the use of XPS-2200 appliance, up to 9 switches can be configured in the StackPower stack. **Cisco StackPower is only supported on the models with modular uplink stack - C9300 SKUs.**

Figure 6.
Cisco Catalyst 9300 Series StackPower

- **High availability:** The Catalyst 9300 Series supports high-availability features, including the following:
  - Cross-stack EtherChannel provides the ability to configure Cisco EtherChannel technology across different members of the stack for high resiliency.
  - **Flexlink+:** Flexlink+ allows the setting up of active and backup interfaces or port channels, which can provide Layer 2 failover redundancy without the use of Spanning Tree Protocol (STP).
  - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) provides rapid spanning tree convergence independent of spanning tree timers and also offers the benefit of Layer 2 load balancing and distributed processing.
  - Per-VLAN Rapid Spanning Tree (PVRST+) allows rapid spanning tree (IEEE 802.1w) reconvergence on a per-VLAN spanning tree basis, providing simpler configuration than MSTP. In both MSTP and PVRST+ modes, stacked units behave as a single spanning tree node.
  - Switch-port auto-recovery ("err-disable" recovery) automatically attempts to reactivate a link that is disabled because of a network error.

- The Catalyst 9300 Series platform delivers the best NSF/SSO resiliency architecture in a stackable solution with sub-50-ms failover.
- Always-On wireless network with stateful switchover when wireless functionality is enabled on stack of Catalyst 9300 Series switches.

Deep buffer Technology

Cisco Catalyst 9300 higher scale models have a deeper buffer to address the requirements of rich multi-media lossless content delivery and large routing tables in a fixed access solution with a wide range of uplink choices for deployment flexibility.

Flexible Netflow

- **Flexible NetFlow (FNF):** Cisco IOS Software FNF is the next generation in flow visibility technology. It enables optimization of the network infrastructure, reduces operation costs, and improves capacity planning and security incident detection with increased flexibility and scalability. The Catalyst 9300 Series is capable of up to 64,000 flow entries on 48-port and 24 port models and up to 128,000 flow entries on Multigigabit models.

Application visibility and control

- **NBAR2:** Next-Generation Network-Based Application Recognition (NBAR2) enables advanced application classification techniques, accuracy with up to 1400 predefined and well-known application signatures and up to 150 encrypted applications on the Cisco Catalyst 9000 switches. The most popular applications included are Skype, Office 365, Microsoft Lync, Cisco WebEx®, and Facebook, among many others that are predefined and easy to configure. NBAR2 provides the network administrator with an important tool to identify, control, and monitor end-user application usage while helping ensure a quality user experience and securing the network from malicious attacks. NBAR2 leverages FNF to report application performance and activities within the network to any supported NetFlow collector, such as Cisco Prime®, Cisco Stealthwatch®, or any compliant third-party tool.

QoS

- **Superior QoS:** The Cisco Catalyst 9300 Series offers Gigabit Ethernet speeds with intelligent services that keep traffic flowing smoothly, even at 10 times the normal network speed. Industry-leading mechanisms for cross-stack marking, classification, and scheduling deliver superior performance for data, voice, and video traffic at wire speed. Superior QoS includes granular wireless bandwidth management and fair sharing, 802.1p Class of Service (CoS) and Differentiated Services Code Point (DSCP) field classification, Shaped Round Robin (SRR) scheduling, Committed Information Rate (CIR), and eight egress queues per port.

Service discovery

- **Multicast DNS (mDNS) gateway:** This service discovery gateway capability facilitates sharing of services advertised using the Apple mDNS (Bonjour) protocol, such as printers, Apple TVs, and file services across the network. Additionally, the administrator can create policies defining which services can be seen and accessed by the users in the network. This capability facilitates a Bring-Your-Own-Device (BYOD) rollout.

Smart operation

- **WebUI:** WebUI is an embedded GUI-based device-management tool that provides the ability to provision the device, to simplify device deployment and manageability, and to enhance the user experience. It comes with the default image, so there is no need to enable anything or install any license on the device. You can use WebUI to build configurations, and to monitor and troubleshoot the device without having CLI expertise.
- **Efficient switch operation*:** Cisco Catalyst 9300 Series switches provide optimum power saving with Energy Efficient Ethernet (EEE) on the RJ-45 ports and low-power operations for industry best-in-class power management and power consumption capabilities. The ports support reduced power modes so that ports not in use can move into a lower power utilization state. Other efficient switch operation features are as follows:
  - Per-port power consumption command allows customers to specify a maximum power setting on an individual port.
  - Per-port PoE power sensing measures actual power being drawn, enabling more intelligent control of powered devices. The PoE MIB provides proactive visibility into power usage and allows you to set different power-level thresholds.
- **RFID tags:** Catalyst 9300 Series switches have an embedded RFID tag that facilitates easy asset and inventory management using commercial RFID readers.
- **Blue beacon:** Catalyst 9300 Series switches support a blue beacon LED for easy identification of the switch being accessed.

Open standards based fabric

The Cisco Catalyst 9300 Series Switches support modern fabric technologies such as VXLAN with BGP-EVPN control plane, with open APIs. This technology provides the flexibility to build open standards based fabrics to secure infrastructure, users and data. This fabric architecture provides rich unicast and multicast protocol support to optimally route or bridge traffic as well as support for integrated campus services all of which can be automated via open APIs to effectively configure and monitor the network.

Programmability

Cisco IOS-XE provides open standards based APIs such as NETCONF, RESTCONF, gNMI to simplify provisioning and configuration, that allows network administrators to save time when provisioning new network devices and to prevent the human errors that often are a byproduct of manual configuration. Integrating Zero Touch Provisioning with various Devops toolkits allows network admins to drastically reduce the time and resources needed to onboard a device onto their network. The ability to collect real-time statistics through model driven telemetry through gRPC and gNMI allows administrator to integrate to many health monitoring tools to optimize their environments and to troubleshoot and provide alerts about any potential problems.

High-Performance IP routing

The Cisco Express Forwarding hardware routing architecture delivers extremely high-performance IP routing in Cisco Catalyst 9300 Series switches, based on:

- IP unicast routing protocols (including static, Routing Information Protocol Version 1 [RIPv1], RIPv2, RIPng, and Open Shortest Path First [OSPF], Routed Access) are supported for small network routing applications with the Network Essentials stack. Equal-cost routing facilitates Layer 3 load balancing and redundancy across the stack.
- Advanced IP unicast routing protocols (including Full [OSPF], Enhanced Interior Gateway Routing Protocol [EIGRP], Border Gateway Protocol Version 4 [BGPv4], and Intermediate System-to-Intermediate System Version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. IPv6 routing (using OSPFv3 and BGPv6) is supported in hardware for maximum performance.
- Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM Sparse Mode (PIM SM), and Source-Specific Multicast (SSM).
- IPv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting.

Audio Video Bridging (AVB)

Starting with Cisco IOS XE Software Release 16.8, the Cisco Catalyst 9300 Series supports the IEEE 802.1 AVB standard. This standard provided the means for highly reliable delivery of low-latency, time-synchronized audio and video streaming services through Layer 2 Ethernet networks. The standard also makes it easier to integrate new services and for AV equipment from different vendors to interoperate.

Benefits

- Improves quality of experience by lowering jitter and latency for time-synchronized delivery of high-quality AV.
- Provides scalability of applications across networked deployments, including expansive and complex AV infrastructure.
- Lowers Total Cost of Ownership (TCO) with reduced cabling (lowers CapEx) and no license fees (lowers OpEx).

For more details about AVB and specific models supported, check https://www.cisco.com/go/avb.

Multigigabit Ethernet technology: Cisco Multigigabit Ethernet technology allows you to achieve bandwidth speeds from 1 Gbps to 10 Gbps over traditional Category 5e/6 cabling or above. This technology addresses the need for exponential increases in bandwidth with the enormous growth of 802.11ac Wave 2, to be eclipsed by the growth of Wi-Fi 6 and new wireless applications without having to replace current cabling infrastructure.

Multiprotocol label switching (MPLS)

The Cisco Catalyst 9300 Series Switches support Multiprotocol label switching (MPLS) which combines the performance and capabilities of Layer 2 (data link layer) switching with the proven scalability of Layer 3 (network layer) routing. MPLS enables the explosive growth in network utilization while providing the opportunity to differentiate services without sacrificing the existing network infrastructure. MPLS support includes

- **MPLS L3 VPN:** An MPLS Virtual Private Network (VPN) consists of a set of sites that are interconnected by means of a Multiprotocol Label Switching (MPLS) provider core network. At each customer site, one or more customer edge (CE) devices attach to one or more provider edge (PE) devices.
- **VPLS:** VPLS (Virtual Private LAN Service) enables enterprises to link together their Ethernet-based LANs from multiple sites via the infrastructure provided by their service provider.
- **EoMPLS:** EoMPLS is a category of Any Transport over MPLS (AToM) to transport Layer 2 packets over an MPLS backbone.
- **MPLS over GRE:** L3VPN over GRE and VPLS over GRE, are supported to tunnel MPLS/VPLS packets over non-MPLS networks utilizing GRE tunneling

Power over ethernet leadership

Cisco Universal Power over Ethernet (Cisco UPOE® and Cisco UPOE+): PoE removes the need for wall sockets to power each PoE-enabled device and eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments. Cisco UPOE extends the IEEE PoE+ standard to double the power per port to 60 watts. This facilitates delivery of network power to a broad range of devices requiring higher power, including virtual desktop terminals, IP turrets, compact switches, building management gateways, LED lights, wireless access points, and IP phones. Designed for smart building and IoT applications, Cisco Catalyst 9300 UPOE+ switches (delivering PoE power up to 90W) provide data and power over a single cable to power devices like wireless access points, digital signage, security cameras, thermal cameras with PTZ features, LED lighting fixtures and large display screens. UPOE+ offers reduced cabling and installation costs without need for permits, device daisy-chaining application that require higher power draw, real-time device information, centralized management and remote control, faster and flexible device installation where devices can be positioned in a practical location instead of proximity to the electrical outlets.

Catalyst 9300 Series modular uplink (C9300 SKUs) and fixed uplink (C9300L SKUs) models both support Cisco UPOE or PoE+ and PoE, thereby addressing the largest range of network power needs.

Tables 9 and 10 show the power supply combinations required for different PoE needs.

Table 9. Power supply requirements for Catalyst 9300 Series modular uplink PoE/PoE+ models (C9300-xxP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 2 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 2 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 1 PWR-C1-1100WAC/PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC

Table 10. Power supply requirements for Catalyst 9300 Series UPOE models (C9300-xxU/UXM/UN SKUs)

	24-port Cisco UPOE switch	48-port Cisco UPOE switch	48 and 24-port Multigigabit Cisco UPOE switch*
Cisco UPOE (60W per port) & IEEE 802.3bt type3 on all ports (24-port switch) or up to 30 ports (48-port switch)	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P

Table 11. Power supply requirements for Catalyst 9300 Series UPOE+ models (C9300-xxH SKUs)

	24-port Cisco UPOE+ switch	48-port Cisco UPOE+ switch
Cisco UPOE+ (90W per port) & IEEE 802.3bt type4 on 21 ports (24-port and 48-port switch)	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WAC-P/PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 2 PWR-C1-1900WAC-P

Table 12. Power supply requirements for Catalyst 9300 Series fixed uplink PoE/PoE+ models (C9300L-xxP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC-P/PWR-C1-715WDC	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P/PWR-C1-715WDC	2 PWR-C1-1100WAC-P or 1 PWR-C1-1100WAC-P and 1 PWR-C1-715WAC-P/PWR-C1-715WDC

- **Perpetual PoE:** With Perpetual PoE, the PoE power is maintained during a switch reload. This is important for IoT endpoints such as PoE-powered lights, so that there is no disruption during switch reboot.
- **Fast PoE:** When power is restored to a switch, PoE starts delivering power to endpoints without waiting for the operating system to fully load, thereby speeding up the time for the endpoint to start up.

* C9300-48UN, C9300-24UX, C9300-48UXM are available with PWR-C1-1100WAC-P Platinum-rated power supply. Platinum-rated power supplies are more efficient, lowering operating power costs

* PWR-C1-1100WAC-UP and PWR-C1-715WAC-UP Platinum-rated power supply upgrade options are available to upgrade the default AC power supply to 1100W or 715W

Software requirements

Cisco DNA Software for Access Switching **is available for the Cisco Catalyst 9300 Series.**

Cisco DNA Software for Access Switching offers comprehensive solutions for the enterprise campus and branch offices. Cisco DNA for Access Switching introduces a simpler and more economical way to deploy access, aggregation, and core switches across enterprise campus and branch locations.

The Cisco DNA Subscription for Switching offer delivers an unbound network on an open and extensible architecture to help you navigate the digital journey. This subscription offer simplifies the buying process and includes lower initiation costs and flexible terms. It includes: Cisco DNA Premier with full Cisco DNA capabilities and SD-Access, bundled with ISE Base, ISE Plus, and StealthWatch.

For ordering information for Cisco DNA Software for the Cisco Catalyst 9300 Series, go to https://www.cisco.com/c/en/us/products/software/one-access/switching-part-numbers.html.

Cisco Catalyst 9300 Series switches run on Cisco IOS XE 16.5.1a release or later with the following exceptions. Catalyst 9300 Series 1G fiber models (C9300-xxS SKUs) are supported on Cisco IOS XE 16.11.1a release or later. Catalyst 9300 Series fixed uplink models (C9300L SKUs) are supported on Cisco IOS XE 16.11.1b release or later. These software releases includes all the features listed earlier in the Platform Benefits section.

Licensing

Packaging

The Cisco Catalyst 9000 family of switches introduces a new and simplified licensing package in the form of base and add-on licenses.

- **The perpetual licensing** package includes the Network Essentials and Network Advantage licensing options that are tied to the hardware. Between them, the base licensing packages cover switching fundamentals, management automation, troubleshooting, and advanced switching features. These Network licenses are perpetual.

  The subscription licensing package includes the Cisco DNA Essentials and Cisco DNA Advantage options. In addition to on-box capabilities, the features available with this package provide Cisco innovations on the switch, as well as on Cisco DNA Center. The Cisco DNA subscription licenses are mandatory at the time of configuration. With Cisco DNA software licenses, customers receive embedded SWSS – which covers 24x7x365 Cisco Technical Assistance Center (TAC) support, software release updates, advanced support analytics, and designated service management. This is valid only for the Cisco DNA software subscription stacks (Cisco DNA Essentials, Advantage, and Premier).

  Note: For full hardware support, including the perpetual network stack, customers will require Smart Net Total Care for 24x7x365 Cisco Technical Assistance Center (TAC) support, proactive security and product alerts, and product lifecycle management. An additional option for hardware support is Solution Support for your multivendor Cisco solution environment.

License consumption is easily determined by the package itself. While perpetual licenses are always permanent and without an expiration date, subscription licenses have to be purchased for a 3-, 5-, or 7-year term (and hence are also known as term-based licenses). Table 13 shows the combinations of perpetual and subscription licenses that must be purchased.

Table 13. Licensing combinations

	Cisco DNA Essentials	Cisco DNA Advantage	Cisco DNA Premier
Network Essentials	Yes	No	No
Network Advantage	No*	Yes	Yes

* At the time of Cisco DNA license renewal, the Cisco DNA Essentials license can be purchased to be used with Network Advantage

Managing licenses with Smart Accounts: Creating Smart Accounts by using the Cisco Smart Software Manager (SSM) enables you to manage your software licenses from a centralized website. You can set up Cisco SSM to receive daily email alerts and to be notified of expiring subscription licenses that you want to renew.

You must order a Cisco DNA subscription term license in order to purchase a switch. When the license term expires, you can either renew the add-on license to continue using it or deactivate the add-on license and then reload the switch to continue operating with the base license capabilities.

Both the base and add-on licenses are also available for a 90-day evaluation period. An evaluation license is activated temporarily, without purchase. An expired evaluation license cannot be reactivated after reload.

Note: It is not required to deploy Cisco DNA Center just to use one of the above packages.

Tables 14 shows the features included in the Network Essentials and Advantage packages.

Table 14 shows the features included in the Cisco DNA Essentials and Advantage packages.

Table 14. Network Essentials and Advantage package features

Features	Network Essentials	Network Advantage
Switch fundamentals Layer 2, Routed Access (RIP, EIGRP Stub, OSPF - 1000 routes), PBR, PIM Stub Multicast (1000 routes)), PVLAN, VRRP, PBR, CDP, QoS, FHS, 802.1X, MACsec-128, CoPP, SXP, IP SLA Responder, SSO	✓	✓
Advanced switch capabilities and scale BGP, EIGRP, HSRP, IS-IS, BSR, MSDP, PIM-BIDIR,* IP SLA, OSPF	✗	✓
Network segmentation VRF, VXLAN, LISP, SGT, MPLS, mVPN	✗	✓
Automation NETCONF, RESTCONF, gRPC, YANG, PnP Agent, ZTP/Open PnP, GuestShell (On-Box Python)	✓	✓
Telemetry and visibility Model-driven telemetry, sampled NetFlow, SPAN, RSPAN	✓	✓
High availability and resiliency Nonstop Forwarding (NSF), Graceful Insertion and Removal (GIR), Fast Software Upgrade (FSU), Software Patching (CLI Based)	✗	✓
IOT integration AVB, PTP, CoAP	✗	✓

Features	Network Essentials	Network Advantage
Security MACsec-256	✗	✓

Table 15. Cisco DNA Essentials and Advantage package features (add a section for other software support and add Prime, ISE and Stealthwatch support)

Features	Cisco DNA Essentials	Cisco DNA Advantage	Cisco DNA Premier
Switch features			
Optimized network deployments Cisco DNA Service for Bonjour	✗	✓	✓
Advanced telemetry and visibility Full Flexible NetFlow, EEM	✓	✓	✓
Optimized telemetry and visibility ERSPAN, AVC (NBAR2), app hosting (in containers/VMs), Wireshark	✗	✓	✓
Advanced security Encrypted Traffic Analytics (ETA)	✗	✓	✓
Cisco DNA Center features			
Day-0 network bring-up automation Cisco Network Plug-and-Play application, network settings, device credentials, LAN automation, host onboarding	✓	✓	✓
Element management Discovery, inventory, topology, software image, licensing, and configuration management	✓	✓	✓
Element management Patch management	✗	✓	✓
Basic Assurance Health dashboards – Network, Client, Application; switch and wired client health monitoring	✓	✓	✓
SD-Access Policy-based automation and assurance for wired and wireless	✗	✓	✓
SD-Access Embedded Wireless C9800 Wireless Software package to enable Wireless Controller Functionality*	✗	✓	✓
Network assurance and analytics Global insights, trends, compliance, custom reports; switch 360, wired client 360; fabric and non-fabric insights; app health, app 360, app performance (loss, latency, jitter)	✗	✓	✓

Features	Cisco DNA Essentials	Cisco DNA Advantage	Cisco DNA Premier
Other Software included (can be purchased separately)			
ISE Base	✗	✗	✓
ISE Plus	✗	✗	✓
StealthWatch	✗	✗	✓

* Note: A purchase of Cisco DNA Advantage or Cisco DNA Premier per Access Point is required in order to enable the Wireless Controller functionality on Catalyst Switches

Product Sustainability

Refer to the CSR/Social Responsibility section for more information on Cisco's environmental sustainability policies and initiatives.

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Information on product takeback and resuse program	Cisco Takeback and Reuse Program
	Safety and compliance	Table 23. Safety and compliance information
	Mean Time Between Failures – MTBF (hours)	Table.16 Model Dimensions, Weight, and Mean Time between failures metrics
Power	Default AC power supply	Table 1. Cisco Catalyst 9300 Series switch configurations
	Power supplies	Table 3. Power supply models Table 19. Power specifications Table 20. Power specifications – platinum rated power supplies
	Fan	Table 6. Fan modules
	Energy Efficient Ethernet	Smart operation
	Power over ethernet (Cisco UPOE and UPOE+)	Power over ethernet leadership
	Power connectors	Table 17. Power connectors

Sustainability Topic		Reference
	Power consumption (ATIS)	Table 21. Power Consumption of Standalone 9300 Series Switches Table 22. Power consumption of Standalone 9300 Series Switches with platinum rated power supply
Material	Product packaging weight and materials	Contact: environment@cisco.com
	Dimensions	Table.16 Model Dimensions, Weight, and Mean Time between failures metrics.
	Weight	Table.16 Model Dimensions, Weight, and Mean Time between failures metrics
	Elimination of wet paint on plastic bezel	2019 Cisco Corporate Social Responsibility Report, Pg. 19 Stepping up our work on circularity

Specifications

Dimensions, Weight, Acoustic, Mean time between failures

The table below shows the dimensions, weights, acoustic and mean time between failures of all models of Cisco Catalyst 9300 Series switches.

Table 16. Model Dimensions, Weight, and Mean Time between failures metrics

General Specifications			
Dimensions (H x W x D) inches			
Model	**Chassis only**	**W/ Default Power Supply**	**W/ 1100W Power Supply**
C9300-24T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UX	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UXB	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24H	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48UXM	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2

General Specifications			
C9300-48UN	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2
C9300-48UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48H	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24S	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2	1.73 X 17.5 X 20.7
C9300-48S	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2	1.73 X 17.5 X 20.7
C9300L-24T-4G	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-24T-4X	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-48T-4G	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-48T-4X	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-24P-4G	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-24P-4X	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-48P-4G	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
C9300L-48P-4X	1.73 X 17.5 X 16.1	1.73 X 17.5 X 17.7	1.73 X 17.5 X 19.2
Dimensions (H x W x D) Cms			
C9300-24T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24UX	4.4 x 44.5 x 43.4	4.4 x 44.5 x 51.3	4.4 x 44.5 x 51.3
C9300-24H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48UXM	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48UN	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6
C9300-48S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6

General Specifications			
C9300L-24T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48PF-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48PF-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
Weight (with default power supply)			
Model	**Pounds**	**Kilograms**	
C9300-24T	16.03	7.27	
C9300-24P	16.33	7.4	
C9300-24U	16.63	7.54	
C9300-24UX	18.18	8.25	
C9300-24UB	16.63	7.54	
C9300-24UXB	18.18	8.25	
C9300-24H	16.63	7.54	
C9300-48T	16.43	7.45	
C9300-48P	16.73	7.59	
C9300-48U	17.03	7.72	
C9300-48UXM	20.50	9.34	

General Specifications		
C9300-48UN	20.05	9.09
C9300-48UB	17.03	7.72
C9300-48H	17.03	7.72
C9300-24S	16.84	7.64
C9300-48S	17.32	7.86
C9300L-24T-4G	14.93	6.78
C9300L-24T-4X	14.93	6.78
C9300L-48T-4G	15.41	7.0
C9300L-48T-4X	15.41	7.0
C9300L-24P-4G	14.99	6.81
C9300L-24P-4X	14.99	6.81
C9300L-48P-4G	15.46	7.03
C9300L-48P-4X	15.46	7.03
C9300L-48PF-4G	15.48	7.03
C9300L-48PF-4X	15.48	7.03
C9300L-24UXG-4X	15.73	7.13
C9300L-24UXG-2Q	16.01	7.26
C9300L-48UXG-4X	16.86	7.65
C9300L-48UXG-2Q	16.86	7.65
Mean Time Between Failures – MTBF (hours)		
C9300-24T	314,790	
C9300-24P	299,000	
C9300-24U	238,410	
C9300-24UX	214,760	
C9300-24UB	354,300	
C9300-24UXB	288.520	
C9300-24H	238,410	

General Specifications	
C9300-48T	305,870
C9300-48P	277,770
C9300-48U	227,410
C9300-48UXM	202,160
C9300-48UN	198,647
C9300-48UB	337,170
C9300-48H	227,410
C9300-24S	284,130
C9300-48S	281,920
C9300L-24T-4G	395,800
C9300L-24T-4X	387,700
C9300L-48T-4G	387,860
C9300L-48T-4X	380,080
C9300L-24P-4G	346,940
C9300L-24P-4X	340,710
C9300L-48P-4G	314,140
C9300L-48P-4X	309,020
C9300L-48PF-4G	303,660
C9300L-48PF-4X	298,880
C9300L-24UXG-4X	332,640
C9300L-24UXG-2Q	291,670
C9300L-48UXG-4X	273,820
C9300L-48UXG-2Q	275,010
PWR-C1-350WAC-P	1,335,012 (ranges from 1.3M to 3.1M depending on temperature, input voltage and vendor)
PWR-C1-715WAC-P	1,054,881 (ranges from 1.05M to 2.6M depending on temperature, input voltage and vendor)
PWR-C1-1100WAC-P	1,217,904 (ranges from 1.2M to 2.8M depending on temperature, input voltage and vendor) (investigating an anomaly in MTBF data received from 1 Power Supply vendor – Artesyn)

General Specifications	
PWR-C1-715WDC	1,812,103 (-48V input at 40C and vendor Delta)
C9300-NM-2Q	10,778,230
C9300-NM-2Y	7,568,820
C9300-NM-4G	8,953,570
C9300-NM-4M	10,549,060
C9300-NM-8X	7,151,930
FAN-T2	4,521,330
Environmental ranges	
Acoustic noise **Measured per ISO 7779 and declared per ISO 9296** **Bystander positions operating to an ambient temperature of 25° C**	With AC power supply (with 24 PoE+ ports loaded for C9300 SKUs) • LpA: 45dB typical, 48 dB max • LwA: 5.6B typical, 5.9B max With AC power supply (with half the number of PoE+ ports loaded for C9300L SKUs) • LpA: 44dB typical, 47 dB max • LwA: 5.5B typical, 5.8B max Typical: Noise emission for a typical configuration Maximum: Statistical maximum to account for variation in production

Connectors

Table 17 shows the supported connectors for the Cisco Catalyst 9300 Series.

Table 17. Connectors

Connectors and cabling	• 1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling • Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling • 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling • SFP transceivers: LC fiber connectors (single-mode or multimode fiber) • SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber) • QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber) • QSFP+ connector • SFP+ connector • Cisco StackWise stacking ports: copper-based Cisco StackWise cabling • Cisco StackPower: Cisco proprietary power stacking cables • Ethernet management port: RJ-45 connectors, 4-pair Cat 5 UTP cabling • Management console port: RJ-45-to-DB9 cable for PC connections
Power connectors	• Customers can provide power to a switch by using the internal power at the back of the switch • Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet

For the latest Cisco transceiver module compatibility information, refer to https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html.

Management and standards support

Table 18 shows management and standards support for the Cisco Catalyst 9300 Series.

Table 18. Management and standards support*

Description	Specification	
Management	BRIDGE-MIB	CISCO-PORT-STORM-CONTROL-MIB
	CISCO-BRIDGE-EXT-MIB	CISCO-POWER-ETHERNET-EXT-MIB
	CISCO-BULK-FILE-MIB	CISCO-PRIVATE-VLAN-MIB
	CISCO-CABLE-DIAG-MIB	CISCO-PROCESS-MIB
	CISCO-CALLHOME-MIB	CISCO-PRODUCTS-MIB
	CISCO-CEF-MIB	CISCO-RF-MIB
	CISCO-CIRCUIT-INTERFACE-MIB	CISCO-RTP-METRICS-MIB
	CISCO-CONFIG-COPY-MIB	CISCO-RTTMON-ICMP-MIB
	CISCO-CONFIG-MAN-MIB	CISCO-STACKWISE-MIB
	CISCO-DEVICE-LOCATION-MIB	CISCO-STP-EXTENSIONS-MIB
	CISCO-DHCP-SNOOPING-MIB	CISCO-SYSLOG-MIB
	CISCO-EIGRP-MIB	CISCO-TCP-MIB
	CISCO-EMBEDDED-EVENT-MGR-MIB	CISCO-UDLDP-MIB
	CISCO-ENTITY-FRU-CONTROL-MIB	CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB
	CISCO-ENTITY-SENSOR-MIB	ENTITY-MIB
	CISCO-ENTITY-VENDORTYPE-OID-MIB	HC-ALARM-MIB
	CISCO-ERR-DISABLE-MIB	HC-RMON-MIB
	CISCO-FLASH-MIB	IEEE8023-LAG-MIB
	CISCO-FLOW-MONITOR-MIB	IF-MIB
	CISCO-FTP-CLIENT-MIB	IP-FORWARD-MIB
	CISCO-HSRP-EXT-MIB	IP-MIB
	CISCO-HSRP-MIB	LLDP-EXT-MED-MIB
	CISCO-IETF-BFD-MIB	LLDP-MIB
	CISCO-IETF-PPVPN-MPLS-VPN-MIB	MAU-MIB
	CISCO-IETF-PW-MPLS-MIB	MPLS-L3VPN-STD-MIB
	CISCO-IF-EXTENSION-MIB	MPLS-LSR-STD-MIB
	CISCO-IGMP-FILTER-MIB	MPLS-VPN-MIB
	CISCO-IMAGE-LICENSE-MGMT-MIB	OLD-CISCO-CHASSIS-MIB
	CISCO-IMAGE-MIB	OLD-CISCO-CPU-MIB
	CISCO-IP-CBR-METRICS-MIB	OLD-CISCO-INTERFACES-MIB
	CISCO-IP-STAT-MIB	

Description	Specification	
	CISCO-IP-TAP-MIB	OLD-CISCO-IP-MIB
	CISCO-IP-URPF-MIB	OLD-CISCO-MEMORY-MIB
	CISCO-IPSEC-FLOW-MONITOR-MIB	OLD-CISCO-SYS-MIB
	CISCO-IPSEC-MIB	OLD-CISCO-TCP-MIB
	CISCO-IPSEC-PROVISIONING-MIB	OLD-CISCO-TS-MIB
	CISCO-IPSLA-AUTOMEASURE-MIB	POWER-ETHERNET-MIB
	CISCO-IPSLA-ECHO-MIB	RFC1213-MIB
	CISCO-IPSLA-JITTER-MIB	RMON-MIB
	CISCO-L2-CONTROL-MIB	RMON2-MIB
	CISCO-L2L3-INTERFACE-CONFIG-MIB	SMON-MIB
	CISCO-LAG-MIB	SNMPv2-MIB
	CISCO-LICENSE-MGMT-MIB	SONET-MIB
	CISCO-LOCAL-AUTH-USER-MIB	TCP-MIB
	CISCO-MAC-NOTIFICATION-MIB	UDP-MIB
	CISCO-MDI-METRICS-MIB	
	CISCO-MEDIA-METRICS-MIB	
	CISCO-MEMORY-POOL-MIB	
	CISCO-MPLS-LSR-EXT-STD-MIB	
	CISCO-NBAR-PROTOCOL-DISCOVERY-MIB	
	CISCO-NHRP-EXT-MIB	
	CISCO-NTP-MIB	
	CISCO-PAGP-MIB	
	CISCO-PORT-SECURITY-MIB	
Standards	IEEE 802.1s	RMON I and II standards
	IEEE 802.1w	SNMPv1, v2c, and v3
	IEEE 802.1x	
	IEEE 802.1x-Rev	
	IEEE 802.3ad	
	IEEE 802.3ae	
	IEEE 802.3af	
	IEEE 802.3at	
	IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports	
	IEEE 802.1D Spanning Tree Protocol	
	IEEE 802.1p CoS prioritization	
	IEEE 802.1Q VLAN	
	IEEE 802.3 10BASE-T specification	

Description	Specification	
	IEEE 802.3u 100BASE-TX specification IEEE 802.3ab 1000BASE-T specification IEEE 802.3z 1000BASE-X specification IEEE 802.3bz Multirate 2.5G/5G specification IEEE 802.3an 10G BASE-T specification	

Power supply specifications

Table 18 lists the power specifications for the Cisco Catalyst 9300 Series based on the kind of power supply used.

Table 19. Power specifications

Description	Specification			
	PWR-C1-1100WAC**	**PWR-C1-715WAC****	**PWR-C1-350WAC****	**PWR-C1-715WDC**
Power supply rated maximum	1100W	715W	350W	715W
Total output BTU (note: 1000 BTU/hr = 293W)	3793 BTU/hr, 1100W	2465 BTU/hr, 715W	1207 BTU/hr, 350W	2440 BTU/hr
Input-voltage range and frequency	115V to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	-36V to -72 VDC
Input current	12-6A	10-5A	4-2A	24-12A
Output ratings	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A	-56V at 12.8A
Output holdup time	10 ms minimum at 100VAC	16.7 ms minimum at 100VAC	16.7 ms minimum at 100VAC	2 ms minimum at -48Vdc
Power-supply input receptacles	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)	Right angle barrier style terminal block
Power cord rating	15A	15A	10A	25A@100VDC
Physical specifications	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: 3.1 lb (1.4 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.6 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.2 lb (1kg)

** These Power Supply options will not be available as options for purchase with C9300 in CCW starting Q2 FY21

Table 20. Power specifications – platinum rated power supplies

Description	Specification				
	*PWR-C1-1900WAC-P		*PWR-C1-1100WAC-P	*PWR-C1-715WAC-P	PWR-C1-350WAC-P
Power supply rated maximum output power	1500W With 115V	1900W With 230 V	1100W	715W	350W
Total output BTU (note: 1000 BTU/hr = 293W)	5118 BTU/hr, with 115V	6483 BTU/hr, With 230V	3754 BTU/hr, 1100W	2440 BTU/hr, 715W	1194 BTU/hr, 350W
Input-voltage range and frequency	115V to 127 VAC, 50 to 60 Hz	200V to 240 VAC 55 to 60 Hz	115V to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz
Input current	16A maximum	12A maximum	12-6A	10-5A	4-2A
Output ratings	-56V at 26.78A	-56V at 33.92A	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A
Output holdup time	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC
Power-supply input receptacles	IEC 320-C22	IEC 320-C22	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)
Power cord rating	20A	16A	15A	15A	10A
Physical specifications	(H x W x D): 1.58 x 3.25 s 13.7 in Weight: xxx lb (x.x kg)		(H x W x D): 1.58 x 3.25 s 13.7 in Weight: 3.1 lb (1.4 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.6 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)
Operating temperature	Normal operating temperature* and altitudes: -5° C to +45° C, up to 5000 feet (1500m) -5° C to +40° C, up to 10,000 feet (3000m) -5° C to +35° C, up to 15,000 feet (5000m) * Minimum ambient temperature for cold start is 32° F (0° C) Short-term* exceptional conditions: -5° C to +55° C, at sea level		Normal operating temperature* and altitudes: • -5° C to +45° C, up to 5000 feet (1500m) • -5° C to +40° C, up to 10,000 feet (3000m) *Minimum ambient temperature for cold start is 32° F (0° C) Short-term* exceptional conditions: • -5° C to +50° C, up to 5000 feet (1500m) • -5° C to +45° C, up to 10,000 feet (3000m) • -5° C to +45° C, at sea level with single fan failure * Not more than following in one-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences		

Description	Specification	
	-5°C to +50°C, up to 5000 feet (1500m) -5°C to +45°C, up to 10,000 feet (3000m) -5°C to +35°C, up to 15,000 feet (5000m) * Not more than following in one-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences	
Storage temperature	40° to 158°F (-40° to 70°C)	-40° to 158°F (-40° to 70°C)
Relative humidity operating and nonoperating noncondensing	5% to 90% noncondensing	5% to 90% noncondensing
Altitude	10,000 ft. (3000 meters), up to 45°C	10,000 ft. (3000 meters), up to 45°C
EMI and EMC compliance	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55032 Class A CISPR 32 Class A AS/NZS 3548 Class A BSMI Class A (AC input models only) VCCI Class A EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3 EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN 61000-6-1	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55032 Class A CISPR 32 Class A AS/NZS 3548 Class A BSMI Class A (AC input models only) VCCI Class A EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3 EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN 61000-6-1
Safety compliance		
LED indicators	“AC OK”: Input power to the power supply is OK “PS OK”: Output power from the power supply is OK	“AC OK”: Input power to the power supply is OK “PS OK”: Output power from the power supply is OK

* PWR-C1-1900WAC-UP is available as an PSU upgrade option to 1900W primary PSU

* PWR-C1-1100WAC-UP is available as an PSU upgrade option to 1100W primary PSU

* PWR-C1-715WAC-UP is available as an PSU upgrade option to 715W primary PSU

Power consumption of standalone 9300 Series Switches

Table 20 shows the power consumption of standalone Cisco Catalyst 9300 Series Switches based on Alliance for Telecommunications Industry Solutions (ATIS) testing using Internet Mix (IMIX) distribution stream traffic, with input voltage of 115VAC at 60 Hz and no PoE loading. The values given are the maximum possible power consumption numbers under the respective test scenarios.

Table 21. Power Consumption of Standalone 9300 Series Switches (tested on IOS XE 16.5.1)

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-24P	715W	Not Installed	115Vac	82.6	91.0	93.4	93.7	93.9	82.0	94.8	95.9	96.1	96.6	93.7	82.9	202.3	325.8	527.5	579.0
			230Vac	81.6	89.8	92.2	92.4	92.6	81.7	93.7	94.6	94.7	95.2	92.6	82.3	199.0	318.2	510.6	559.9
		C9300-NM-4G	115Vac	87.5	93.0	96.5	97.7	98.5	89.8	99.5	102.4	103.0	103.4	98.9	85.4	211.4	334.5	537.8	585.7
			230Vac	86.1	91.3	94.4	95.8	96.6	88.9	98.5	101.5	101.9	102.4	97.9	84.6	207.9	328.0	520.3	568.2
		C9300-NM-4M	115Vac	90.4	100.4	101.6	101.9	102.3	94.1	106.8	107.8	108.2	109.1	105.7	90.8	214.9	337.9	539.4	590.8
			230Vac	89.4	99.1	100.3	100.5	100.7	92.8	106.1	106.5	106.9	107.8	104.9	89.6	211.0	329.7	522.2	571.0
		C9300-NM-2Q	115Vac	88.1	98.6	99.5	99.6	99.9	91.1	104.4	105.2	105.6	106.5	103.3	88.4	212.2	335.2	536.2	586.5
			230Vac	87.1	97.2	98.1	98.3	98.8	90.0	103.3	103.9	104.3	105.2	102.1	87.5	208.0	326.8	519.3	567.6
		C9300-NM-8X	115Vac	90.0	99.4	101.0	101.2	101.6	94.2	107.1	107.9	108.3	109.2	106.0	88.7	215.3	339.6	541.4	591.3
			230Vac	89.0	97.9	99.8	100.0	100.5	93.1	105.8	106.7	107.1	108.1	104.8	87.8	211.7	331.9	524.2	572.3
C9300-24S	715W	C9300-NM-4G	115Vac	99.40	100.30	101.50	102.10	102.50	116.20	117.70	119.10	119.50	119.80	117.76	91.70				
			230Vac	98.00	98.90	99.70	100.60	101.60	114.40	115.80	116.70	117.20	117.70	115.85	90.90				
		C9300-NM-2Q	115Vac	101.90	104.80	105.30	105.40	106.10	117.60	120.50	121.10	121.70	123.10	120.47	85.40				
			230Vac	100.20	103.00	103.50	103.70	104.30	115.70	118.70	119.30	119.50	120.70	118.60	84.40				
		C9300-NM-8X	115Vac	104.60	107.40	108.30	108.50	109.10	121.30	124.10	124.80	125.40	126.40	124.05	85.90				
			230Vac	103.40	105.70	106.40	106.70	107.00	119.40	122.50	122.90	123.20	124.30	122.37	84.60				
		C9300-NM-4M	115Vac	99.15	101.80	102.50	102.70	103.30	116.60	119.70	120.30	121.00	122.20	119.64	82.10				
			230Vac	97.64	100.30	100.80	101.00	101.60	115.40	118.30	118.90	119.30	120.20	118.20	81.20				
		C9300-NM-2Y	115Vac	101.24	104.48	104.75	104.81	105.42	116.40	119.01	120.31	120.58	121.31	118.98	85.02				
			230Vac	99.17	102.36	102.63	102.85	103.57	114.10	117.42	118.00	118.46	119.62	117.31	83.03				

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-24T	350W	Not Installed	115Vac	77.7	86.1	89.1	89.5	89.7	77.5	91.0	91.7	91.9	92.5	89.8	78.1				
			230Vac	77.4	85.4	88.5	88.7	88.8	77.0	89.8	90.7	90.9	91.3	88.7	77.7				
		C9300-NM-4G	115Vac	82.5	88.4	92.1	93.3	94.1	85.9	96.0	98.9	99.7	100.0	95.4	81.2				
			230Vac	81.8	87.6	90.4	92.0	92.9	84.9	94.2	96.9	97.9	98.3	93.7	80.5				
		C9300-NM-4M	115Vac	86.4	96.3	98.0	98.2	98.7	90.2	103.7	104.5	104.9	105.9	102.6	87.0				
			230Vac	85.4	95.1	96.6	96.8	97.3	89.1	102.1	102.9	103.3	104.2	101.0	86.0				
		C9300-NM-2Q	115Vac	84.0	94.7	95.7	95.9	96.1	87.1	101.1	101.7	102.1	103.0	99.9	83.9				
			230Vac	83.2	93.6	94.4	94.6	95.1	86.2	99.2	100.1	100.5	101.4	98.1	83.2				
		C9300-NM-8X	115Vac	86.3	95.6	97.5	97.8	98.2	90.7	103.9	104.7	105.1	106.1	102.8	85.0				
			230Vac	85.4	94.5	96.2	96.4	97.0	89.7	102.2	103.2	103.6	104.5	101.2	84.3				
C9300-24U	1100W	Not Installed	115Vac	87.4	95.9	99.0	99.2	99.4	87.0	100.8	101.5	101.8	102.3	99.6	87.8	313.7	547.9	940.3	1041.4
			230Vac	85.9	94.7	97.3	97.6	97.8	85.5	98.0	99.6	99.8	100.3	96.9	86.4	306.2	529.1	895.6	988.7
		C9300-NM-4G	115Vac	92.2	97.8	101.2	102.7	103.6	95.4	105.2	108.3	109.0	109.4	104.6	94.4	321.0	554.0	943.5	1045.5
			230Vac	90.6	96.1	99.4	100.9	101.7	93.7	103.4	106.4	107.2	107.6	102.8	93.2	313.5	536.6	901.5	994.6
		C9300-NM-4M	115Vac	96.0	106.2	107.6	107.8	108.4	99.7	113.4	114.2	114.6	115.6	112.3	96.1	325.7	559.0	950.6	1053.0
			230Vac	94.3	104.5	105.8	106.1	106.6	97.9	112.1	112.8	113.2	114.0	110.8	94.4	318.3	541.9	906.2	997.8
		C9300-NM-2Q	115Vac	93.4	103.9	104.8	105.0	105.5	96.5	110.4	111.3	111.5	112.4	109.2	93.4	323.2	555.8	946.7	1048.6
			230Vac	91.8	102.0	103.0	103.3	103.7	94.8	108.7	109.4	109.8	110.6	107.5	91.8	314.9	538.4	902.2	994.5
		C9300-NM-8X	115Vac	95.8	105.4	107.3	107.6	108.1	100.2	114.0	114.8	115.2	116.2	112.8	94.4	324.4	557.7	946.6	1049.0
			230Vac	94.0	103.0	105.1	105.4	106.0	98.4	112.0	113.1	113.5	114.5	110.9	93.2	317.8	541.8	907.7	999.1

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-24UB	1100W	Not Installed	115Vac	87.4	95.9	99.0	99.2	99.4	87.0	100.8	101.5	101.8	102.3	99.6	87.8	313.7	547.9	940.3	1041.4
			230Vac	85.9	94.7	97.3	97.6	97.8	85.5	98.0	99.6	99.8	100.3	96.9	86.4	306.2	529.1	895.6	988.7
		C9300-NM-4G	115Vac	92.2	97.8	101.2	102.7	103.6	95.4	105.2	108.3	109.0	109.4	104.6	94.4	321.0	554.0	943.5	1045.5
			230Vac	90.6	96.1	99.4	100.9	101.7	93.7	103.4	106.4	107.2	107.6	102.8	93.2	313.5	536.6	901.5	994.6
		C9300-NM-4M	115Vac	96.0	106.2	107.6	107.8	108.4	99.7	113.4	114.2	114.6	115.6	112.3	96.1	325.7	559.0	950.6	1053.0
			230Vac	94.3	104.5	105.8	106.1	106.6	97.9	112.1	112.8	113.2	114.0	110.8	94.4	318.3	541.9	906.2	997.8
		C9300-NM-2Q	115Vac	93.4	103.9	104.8	105.0	105.5	96.5	110.4	111.3	111.5	112.4	109.2	93.4	323.2	555.8	946.7	1048.6
			230Vac	91.8	102.0	103.0	103.3	103.7	94.8	108.7	109.4	109.8	110.6	107.5	91.8	314.9	538.4	902.2	994.5
		C9300-NM-8X	115Vac	95.8	105.4	107.3	107.6	108.1	100.2	114.0	114.8	115.2	116.2	112.8	94.4	324.4	557.7	946.6	1049.0
			230Vac	94.0	103.0	105.1	105.4	106.0	98.4	112.0	113.1	113.5	114.5	110.9	93.2	317.8	541.8	907.7	999.1
C9300-24UX	1100W	C9300-NM-8X	115Vac	188.0	195.7	196.8	197.4	198.9	208.8	224.6	227.0	228.6	232.0	223.8	168.6	364.2	521.6	784.3	851.4
			230Vac	184.4	192.2	192.9	193.5	195.1	204.6	220.0	222.0	223.5	226.9	219.2	165.3	354.2	505.0	749.7	810.6
C9300-24UXB	1100W	C9300-NM-8X	115Vac	188.0	195.7	196.8	197.4	198.9	208.8	224.6	227.0	228.6	232.0	223.8	168.6	364.2	521.6	784.3	851.4
			230Vac	184.4	192.2	192.9	193.5	195.1	204.6	220.0	222.0	223.5	226.9	219.2	165.3	354.2	505.0	749.7	810.6
C9300-24H	1100W	Not Installed	115Vac	87.4	95.9	99.0	99.2	99.4	87.0	100.8	101.5	101.8	102.3	99.6	87.8	313.7	547.9	940.3	1041.4
			230Vac	85.9	94.7	97.3	97.6	97.8	85.5	98.0	99.6	99.8	100.3	96.9	86.4	306.2	529.1	895.6	988.7
		C9300-NM-4G	115Vac	92.2	97.8	101.2	102.7	103.6	95.4	105.2	108.3	109.0	109.4	104.6	94.4	321.0	554.0	943.5	1045.5
			230Vac	90.6	96.1	99.4	100.9	101.7	93.7	103.4	106.4	107.2	107.6	102.8	93.2	313.5	536.6	901.5	994.6
		C9300-NM-4M	115Vac	96.0	106.2	107.6	107.8	108.4	99.7	113.4	114.2	114.6	115.6	112.3	96.1	325.7	559.0	950.6	1053.0
			230Vac	94.3	104.5	105.8	106.1	106.6	97.9	112.1	112.8	113.2	114.0	110.8	94.4	318.3	541.9	906.2	997.8
		C9300-NM-2Q	115Vac	93.4	103.9	104.8	105.0	105.5	96.5	110.4	111.3	111.5	112.4	109.2	93.4	323.2	555.8	946.7	1048.6
			230Vac	91.8	102.0	103.0	103.3	103.7	94.8	108.7	109.4	109.8	110.6	107.5	91.8	314.9	538.4	902.2	994.5
		C9300-NM-8X	115Vac	95.8	105.4	107.3	107.6	108.1	100.2	114.0	114.8	115.2	116.2	112.8	94.4	324.4	557.7	946.6	1049.0
			230Vac	94.0	103.0	105.1	105.4	106.0	98.4	112.0	113.1	113.5	114.5	110.9	93.2	317.8	541.8	907.7	999.1

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-48P	715W	Not Installed	115Vac	90.5	103.2	104.5	104.7	105.2	89.9	104.9	107.8	109.2	110.2	103.9	91.3	206.1	324.1	514.4	563.2
			230Vac	89.4	102.2	103.4	103.6	104.1	88.9	103.7	106.9	108.4	109.3	102.7	89.9	202.9	316.9	500.6	547.5
		C9300-NM-4G	115Vac	95.3	103.5	106.2	108.1	108.8	98.0	112.1	114.9	115.9	116.2	111.1	94.3	215.0	332.6	523.4	572.1
			230Vac	94.0	102.2	105.2	106.9	107.8	96.4	111.3	114.1	115.2	115.5	110.2	93.1	211.2	324.8	509.3	555.8
		C9300-NM-4M	115Vac	98.7	111.5	112.3	112.7	113.5	101.5	119.7	120.5	121.2	122.8	118.2	99.2	219.1	336.5	528.8	576.6
			230Vac	97.1	110.7	111.5	111.9	112.7	100.6	119.2	120.0	120.7	122.3	117.6	97.9	215.5	329.5	514.2	560.5
		C9300-NM-2Q	115Vac	96.9	110.1	110.7	111.0	111.9	99.3	118.2	119.0	119.7	121.5	116.7	97.6	217.4	335.4	527.4	577.8
			230Vac	95.6	109.2	109.7	110.1	111.0	98.1	117.5	118.2	119.0	120.6	115.8	96.0	213.0	326.9	511.9	558.8
		C9300-NM-8X	115Vac	100.5	113.4	114.2	114.6	115.5	106.4	124.5	125.4	126.1	128.0	123.0	99.5	215.1	334.7	520.8	568.8
			230Vac	99.4	112.8	113.5	113.9	114.9	105.3	124.0	124.9	125.6	127.4	122.5	98.4	212.3	327.4	507.4	553.1
C9300-48S	715W	C9300-NM-4G	115Vac	116.30	117.00	118.40	119.10	119.60	149.40	151.10	152.20	152.90	153.50	151.17	93.50				
			230Vac	114.90	115.60	116.70	117.60	118.10	147.10	148.80	150.10	150.30	150.70	148.82	92.10				
		C9300-NM-2Q	115Vac	117.70	121.30	121.80	122.40	124.10	150.60	154.10	155.30	156.30	158.60	154.20	88.00				
			230Vac	116.40	119.70	120.20	120.80	122.10	147.70	151.20	152.70	153.80	156.10	151.34	87.60				
		C9300-NM-8X	115Vac	120.50	123.60	124.30	125.20	126.00	152.80	156.10	157.60	158.60	160.80	156.24	87.40				
			230Vac	119.00	121.90	122.90	123.40	124.40	150.20	153.90	154.90	155.80	158.30	153.97	88.90				
		C9300-NM-4M	115Vac	118.29	121.62	122.36	122.78	124.03	153.80	157.53	158.17	159.28	161.00	157.50	87.53				
			230Vac	117.15	120.62	120.89	121.30	122.35	150.20	153.61	154.60	155.58	157.86	153.69	86.48				
		C9300-NM-2Y	115Vac	114.30	119.20	119.70	120.30	121.50	144.40	152.00	152.80	153.10	156.10	151.65	85.80				
			230Vac	112.00	118.00	118.60	118.90	120.10	142.20	149.20	150.20	151.00	153.40	148.92	83.90				

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-48T	350W	Not Installed	115Vac	81.5	94.9	95.7	95.9	96.4	80.8	98.6	100.2	101.3	102.3	97.2	82.2				
			230Vac	80.5	93.7	94.6	94.8	95.3	80.1	97.3	99.5	99.9	100.8	96.0	81.5				
		C9300-NM-4G	115Vac	86.4	94.9	97.8	99.4	100.4	89.3	104.6	107.6	108.6	108.9	103.5	85.7				
			230Vac	85.3	93.8	96.6	98.4	99.1	88.2	103.4	106.2	106.9	107.2	102.3	84.8				
		C9300-NM-4M	115Vac	89.6	103.4	104.2	104.6	105.4	93.0	112.7	113.5	114.1	115.7	111.0	90.6				
			230Vac	89.0	102.0	102.8	103.1	103.9	91.9	111.0	111.8	112.4	114.0	109.4	89.3				
		C9300-NM-2Q	115Vac	88.3	102.4	102.9	103.3	104.2	91.0	110.5	111.3	112.1	113.9	108.9	88.6				
			230Vac	87.3	100.9	101.4	101.8	102.7	89.9	108.8	109.6	110.3	112.1	107.2	87.6				
		C9300-NM-8X	115Vac	92.1	105.2	106.1	106.5	107.4	98.6	117.6	118.4	119.1	120.9	116.0	91.0				
			230Vac	91.1	103.9	104.7	105.1	106.0	97.3	115.8	116.6	117.3	119.0	114.3	90.0				
C9300-48U	1100W	Not Installed	115Vac	96.0	110.2	110.9	111.2	111.7	95.6	112.5	114.3	115.9	116.9	111.3	97.0	315.1	544.0	925.9	1023.0
			230Vac	94.8	108.5	109.2	109.4	109.9	94.2	110.0	112.5	114.1	115.0	108.9	95.6	308.6	529.4	889.9	978.8
		C9300-NM-4G	115Vac	97.4	105.8	109.0	110.7	111.0	99.9	115.1	117.8	118.9	119.2	114.0	96.4	319.2	547.3	928.0	1026.3
			230Vac	95.4	103.9	107.4	108.7	110.0	98.8	113.4	116.2	117.0	117.4	112.4	94.9	314.3	535.6	896.0	984.3
		C9300-NM-4M	115Vac	104.4	118.5	119.0	119.5	120.1	107.4	126.8	127.6	128.3	130.0	125.2	104.9	326.2	556.0	938.6	1035.6
			230Vac	102.8	116.0	117.1	117.5	118.2	106.4	124.8	125.5	126.2	127.7	123.2	103.6	320.4	541.4	903.0	991.6
		C9300-NM-2Q	115Vac	102.9	117.2	117.6	118.0	119.0	104.8	123.8	124.6	125.3	127.0	122.2	102.5	324.1	552.4	934.4	1032.6
			230Vac	101.2	114.9	115.5	115.9	117.0	103.9	123.0	123.7	124.4	126.1	121.4	101.7	316.9	537.9	898.2	988.3
		C9300-NM-8X	115Vac	106.7	120.4	121.1	121.5	122.3	112.7	131.5	132.4	133.0	134.8	130.0	105.7	330.0	563.7	941.8	1043.4
			230Vac	105.0	118.5	119.2	119.6	120.2	110.9	129.4	130.2	131.0	132.6	127.9	104.1	324.5	549.0	908.0	998.9

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-48H	1100W	Not Installed	115Vac	96.0	110.2	110.9	111.2	111.7	95.6	112.5	114.3	115.9	116.9	111.3	97.0	315.1	544.0	925.9	1023.0
			230Vac	94.8	108.5	109.2	109.4	109.9	94.2	110.0	112.5	114.1	115.0	108.9	95.6	308.6	529.4	889.9	978.8
		C9300-NM-4G	115Vac	97.4	105.8	109.0	110.7	111.0	99.9	115.1	117.8	118.9	119.2	114.0	96.4	319.2	547.3	928.0	1026.3
			230Vac	95.4	103.9	107.4	108.7	110.0	98.8	113.4	116.2	117.0	117.4	112.4	94.9	314.3	535.6	896.0	984.3
		C9300-NM-4M	115Vac	104.4	118.5	119.0	119.5	120.1	107.4	126.8	127.6	128.3	130.0	125.2	104.9	326.2	556.0	938.6	1035.6
			230Vac	102.8	116.0	117.1	117.5	118.2	106.4	124.8	125.5	126.2	127.7	123.2	103.6	320.4	541.4	903.0	991.6
		C9300-NM-2Q	115Vac	102.9	117.2	117.6	118.0	119.0	104.8	123.8	124.6	125.3	127.0	122.2	102.5	324.1	552.4	934.4	1032.6
			230Vac	101.2	114.9	115.5	115.9	117.0	103.9	123.0	123.7	124.4	126.1	121.4	101.7	316.9	537.9	898.2	988.3
		C9300-NM-8X	115Vac	106.7	120.4	121.1	121.5	122.3	112.7	131.5	132.4	133.0	134.8	130.0	105.7	330.0	563.7	941.8	1043.4
			230Vac	105.0	118.5	119.2	119.6	120.2	110.9	129.4	130.2	131.0	132.6	127.9	104.1	324.5	549.0	908.0	998.9
C9300-48UB	1100W	C9300-NM-8X	115Vac	106.7	120.4	121.1	121.5	122.3	112.7	131.5	132.4	133.0	134.8	130.0	105.7	330.0	563.7	941.8	1043.4
			230Vac	105.0	118.5	119.2	119.6	120.2	110.9	129.4	130.2	131.0	132.6	127.9	104.1	324.5	549.0	908.0	998.9
C9300-48UN	1100W	C9300-NM-8X	115Vac	172.9	176.7	178.7	179.8	181.8	193.8	199.8	201.5	203.1	206.9	199.9	159.1	357.3	525.0	803.9	875.1
			230Vac	171.2	174.8	176.8	178.1	179.9	191.7	197.8	199.4	201.0	204.7	197.9	157.9	351.5	512.1	777.0	843.8
C9300-48UXM	1100W	C9300-NM-8X	115Vac	236.2	241.4	246.6	247.8	249.6	253.2	261.5	272.4	278.5	283.0	262.8	219.2	392.3	528.7	750.8	810.1
			230Vac	232.2	237.4	242.5	243.7	245.6	249.0	256.7	267.6	272.9	277.2	258.0	215.7	382.8	515.2	728.0	784.7
C9300L-24P-4G	715W	Integrated	115Vac	62.33	68.39	69.42	70.19	70.99	62.74	74.98	76.05	76.93	77.70	74.02	61.92	203.54	341.71	569.96	627.59
			230Vac	60.91	67.07	68.18	68.91	69.68	61.32	73.88	74.99	75.84	76.58	72.89	60.60	199.69	334.16	552.06	606.54
			115Vac	62.33	68.39	69.42	70.19	70.99	62.74	74.98	76.05	76.93	77.70	74.02	61.92	203.54	341.71	569.96	627.59
			230Vac	60.91	67.07	68.18	68.91	69.68	61.32	73.88	74.99	75.84	76.58	72.89	60.60	199.69	334.16	552.06	606.54
C9300L-24P-4X	715W	Integrated	115Vac	64.32	70.97	72.60	73.02	73.63	69.27	76.96	79.15	79.85	81.00	76.59	64.99	207.17	343.00	569.93	626.15
			230Vac	64.09	69.90	71.75	72.28	72.92	67.80	76.12	78.34	78.78	79.91	75.67	63.70	203.04	336.39	553.25	607.02
			115Vac	64.32	70.97	72.60	73.02	73.63	69.27	76.96	79.15	79.85	81.00	76.59	64.99	207.17	343.00	569.93	626.15
			230Vac	64.09	69.90	71.75	72.28	72.92	67.80	76.12	78.34	78.78	79.91	75.67	63.70	203.04	336.39	553.25	607.02

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300L-24T-4G	350W	Integrated	115Vac	57.75	63.72	64.67	65.37	66.09	58.39	69.87	70.92	71.74	72.37	68.97	57.30				
			230Vac	56.63	62.65	63.60	64.28	65.02	57.16	68.55	69.59	70.38	70.99	67.65	56.20				
			115Vac	57.75	63.72	64.67	65.37	66.09	58.39	69.87	70.92	71.74	72.37	68.97	57.3				
			230Vac	56.63	62.65	63.60	64.28	65.02	57.16	68.55	69.59	70.38	70.99	67.65	56.2				
C9300L-24T-4X	350W	Integrated	115Vac	58.69	65.61	67.13	67.54	68.03	59.12	71.55	73.49	74.06	75.14	70.66	58.13				
			230Vac	57.36	64.19	65.74	65.94	66.41	57.85	70.03	71.96	72.31	73.54	69.17	56.85				
			115Vac	58.69	65.61	67.13	67.54	68.03	59.12	71.55	73.49	74.06	75.14	70.66	58.13				
			230Vac	57.36	64.19	65.74	65.94	66.41	57.85	70.03	71.96	72.31	73.54	69.17	56.85				
C9300L-48P-4G	715W	Integrated	115Vac	69.21	77.07	78.03	78.82	79.86	70.06	86.76	87.97	88.97	90.01	85.41	68.42	213.65	351.15	575.52	632.46
			230Vac	67.90	76.03	76.95	77.76	78.78	68.72	85.61	86.74	87.62	88.63	84.22	67.16	209.87	342.56	556.81	611.08
			115Vac	69.21	77.07	78.03	78.82	79.86	70.06	86.76	87.97	88.94	90.01	85.41	68.42	213.65	351.15	575.52	632.46
			230Vac	67.90	76.03	76.95	77.76	78.78	68.72	85.61	86.74	87.62	88.63	84.22	67.16	209.87	342.56	556.81	611.08
C9300L-48P-4X	715W	Integrated	115Vac	68.05	78.83	80.51	80.97	81.98	69.18	90.03	91.95	92.67	94.13	88.35	68.50	203.00	337.40	559.30	616.70
			230Vac	66.98	77.59	79.12	79.53	80.51	67.76	88.18	90.24	90.79	92.67	86.58	67.40	200.30	331.50	545.00	598.60
			115Vac	68.05	78.83	80.51	80.97	81.98	69.18	90.03	91.95	92.67	94.13	88.35	68.50	203.0	337.4	559.3	616.7
			230Vac	66.98	77.59	79.12	79.53	80.51	67.76	88.18	90.24	90.79	92.67	86.58	67.40	200.3	331.5	545.0	598.6
C9300L-48PF-4G	1100W	Integrated	115Vac	70.41	79.73	81.33	81.58	82.62	71.36	90.17	91.32	92.11	93.00	88.57	69.35	314.03	558.56	973.60	1082.14
			230Vac	68.66	77.95	78.87	79.64	80.56	69.59	87.79	88.87	89.73	90.72	86.27	67.84	306.85	541.37	928.90	1027.83
C9300L-48PF-4X	1100W	Integrated	115Vac	69.68	80.51	82.08	82.50	83.37	71.08	91.01	93.09	94.17	96.27	89.54	69.35	310.72	552.92	965.47	1079.44
			230Vac	68.14	78.81	80.34	80.71	81.61	69.11	88.83	90.73	91.38	93.06	87.28	67.38	305.26	539.36	924.23	1023.56
C9300L-48T-4G	350W	Integrated	115Vac	60.32	69.53	70.41	71.16	72.00	61.57	79.62	80.62	81.44	82.32	78.083	59.47				
			230Vac	59.75	68.45	69.31	70.05	70.81	60.58	78.05	79.06	79.80	80.67	76.564	59.00				
			115Vac	60.32	69.53	70.41	71.16	72.00	61.57	79.62	80.62	81.44	82.32	78.083	59.47				
			230Vac	59.75	68.45	69.31	70.05	70.84	60.58	78.05	79.06	79.80	80.67	76.564	59.00				

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/EEE	10%	30%	50%	100%	0.01%/EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300L-48T-4X	350W	Integrated	115Vac	63.28	73.75	75.38	75.85	76.86	64.15	83.82	85.53	86.68	88.72	82.34	62.37				
			230Vac	61.91	72.22	73.73	74.13	75.06	62.82	82.21	84.17	84.97	86.77	80.73	60.97				
			115Vac	63.28	73.75	75.38	75.85	76.86	64.15	83.82	85.53	86.68	88.72	82.34	62.37				
			230Vac	61.91	72.22	73.73	74.13	75.06	62.82	82.21	84.17	84.97	86.77	80.73	60.97				

ATIS Testing - 100%				Measured P(W)															
				Half Port Traffic					Full Port Traffic					Weighted Average Pw	No Link	PoE Test (No Traffic)			
SKU	Archer FEP	Uplink	Input	0.01% / EEE	10%	30%	50%	100%	0.01% / EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300L-48UXG-4X	1100W	Integrated	115Vac	107.79	133.06	135.05	136.80	137.79	108.80	156.13	159.76	160.69	163.14	152.09	107.04	332.8	520.2	835.6	918.4
			230Vac	105.60	130.55	132.50	134.12	135.07	106.04	153.51	157.24	158.19	160.17	149.43	104.56	326.0	505.7	801.0	875.3
C9300L-24UXG-4X	1100W	Integrated	115Vac	70.90	87.08	88.80	89.32	90.30	71.26	103.11	105.06	105.80	107.58	100.37	70.87	335.16	579.52	996.96	1108.51
			230Vac	69.20	85.22	87.09	87.51	88.40	69.46	100.48	102.39	103.16	104.94	97.82	68.98	326.96	562.27	951.15	1049.47
C9300L-48UXG-2Q	1100W	Integrated	115Vac	111.73	138.34	140.48	141.17	143.22	112.35	162.30	164.13	165.51	168.68	157.94	111.10	335.47	521.76	835.04	919.11
			230Vac	109.53	135.16	137.16	137.89	139.68	110.21	158.42	161.05	162.32	165.66	154.32	108.86	328.17	507.54	801.77	876.22
C9300L-24UXG-2Q	1100W	Integrated	115Vac	104.07	121.70	122.67	123.44	125.05	104.41	139.04	140.97	142.77	145.33	136.20	103.78	325.38	526.58	861.27	949.66
			230Vac	100.88	118.72	119.46	120.13	122.11	101.16	135.91	137.68	139.26	143.13	133.15	100.52	317.08	510.67	829.62	909.10

Table 22. Power consumption of standalone 9300 Series Switches with platinum rated power supply (tested on Cisco IOS XE 16.8.1)

				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	FEP	Uplink	Input	0.01%/ EEE	10%	30%	50%	100%	0.01%/ EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-24P	715W-P	C9300-NM-8X	115Vac	89.2	94.3	99	100.1	100.7	92	98.9	103.5	105.9	107.1	99	85.8	205.6	324.7	518.9	568.4
			230Vac	86.7	91.8	96.4	97.5	98	89.4	97.1	101.4	103.6	104.5	97	84.1	201.9	318.7	507.2	554.4
C9300-24T	350W-P	C9300-NM-8X	115Vac	83.1	88.2	92.9	94	94.5	85.8	92.9	97.2	99.6	100.4	92.9	80.5				
			230Vac	81.9	86.8	91.3	92.4	92.9	84.4	91.6	95.9	98.2	99	91.6	79.2				
C9300-24U	1100W-P	C9300-NM-8X	115Vac	90.5	95.9	100.5	101.6	102.1	93.3	100.6	104.9	107.2	108.1	100.6	87.9	319.9	549.5	935.3	1034.1
			230Vac	88.1	93.1	97.7	98.8	99.4	92.8	98	102.4	104.6	105.5	98.2	85.4	313.4	535.5	899.7	990.3
C9300-24UX	1100W-P	C9300-NM-8X	115Vac	186.8	191	194.9	197.1	198.9	209	215.4	227.2	230.1	233.1	216.6	165.3	367.5	522.1	776.1	842.3
			230Vac	182.8	186.9	190.6	193	194.1	205	211.2	222.7	225.5	229.8	212.5	162.7	361.1	510.2	752.3	809.9
C9300-24H	1100W-P	C9300-NM-8X	115Vac	90.5	95.9	100.5	101.6	102.1	93.3	100.6	104.9	107.2	108.1	100.6	87.9	319.9	549.5	935.3	1034.1
			230Vac	88.1	93.1	97.7	98.8	99.4	92.8	98	102.4	104.6	105.5	98.2	85.4	313.4	535.5	899.7	990.3
C9300-48P	715W-P	C9300-NM-8X	115Vac	99.1	105.5	110.8	111.3	112.4	99.6	112.5	118.2	120.1	122.2	112.2	94.7	214.7	336.1	521.5	569.4
			230Vac	97.3	103.7	108.9	109.4	110.4	99	110.3	115.8	118.3	119.5	110.1	92.6	213.9	329.3	509.4	555
C9300-48T	350W-P	C9300-NM-8X	115Vac	89.8	95.4	100.4	101.1	102	90.4	102.4	107.5	109.8	111.8	102.2	85.4				
			230Vac	88.7	94.5	99.4	100.1	101	88.7	101.2	106	108.1	109.9	100.8	83.9				
C9300-48U	1100W-P	C9300-NM-8X	115Vac	168.9	170.6	172.4	176.6	178.5	190.8	194	198.3	200.1	203.9	194.6	147.3	355.4	524.9	804.6	875.4
			230Vac	165.7	167.3	169.2	169.9	171.5	186.5	189.6	193.9	195.7	199.8	190.3	145	348.8	511.7	777.7	844.9
C9300-48UN	1100W-P	C9300-NM-8X	115Vac	172.9	176.7	178.7	179.8	181.8	193.8	199.8	201.5	203.1	206.9	199.9	159.1	357.3	525	803.9	875.1
			230Vac	171.2	174.8	176.8	178.1	179.9	191.7	197.8	199.4	201	204.7	197.9	157.9	351.5	512.1	777	843.8
C9300-48UXM	1100W-P	C9300-NM-8X	115Vac	241	248.1	254.8	256.4	258.9	260.1	269.4	281.6	286.5	291.6	270.7	225.1	394.8	531.4	755	809.5
			230Vac	237.5	243.1	249	250.3	251.1	253.9	261.8	273.9	279.2	283.6	263.2	218.5	386.8	518.1	731.3	785.5
C9300-48H	1100W-P	C9300-NM-8X	115Vac	168.9	170.6	172.4	176.6	178.5	190.8	194	198.3	200.1	203.9	194.6	147.3	355.4	524.9	804.6	875.4
			230Vac	165.7	167.3	169.2	169.9	171.5	186.5	189.6	193.9	195.7	199.8	190.3	145	348.8	511.7	777.7	844.9

NyquistCR: Shockley ATIS Testing -100%				Measured P(W)															
				Half port traffic					Full port traffic					Weighted average Pw	No link	PoE test (no traffic)			
SKU	Archer FEP	Uplink	Input	0.01% /EEE	10%	30%	50%	100%	0.01% /EEE	10%	30%	50%	100%			25%	50%	90%	100%
C9300-48H	1900W	C9300-NM-4G	115Vac	91.15	96.80	98.07	69.60	99.12	92.85	10..40	104.67	105.25	105.74	102.58	90.17	419.9	750.2	1296.2	1440.9
			230Vac	90.84	95.57	96.73	97.22	97.75	92.19	102.55	103.94	104.25	104.60	101.72	89.35	517.0	939.1	1637.6	1816.5
C9300-48H	1900W	C9300-NM-2Q	115Vac	93.15	100.87	101.21	101.56	102.40	94.69	108.16	108.96	109.71	111.58	107.16	91.53	420.7	749.8	1299.1	1441.8
			230Vac	92.27	99.91	100.35	100.64	101.53	93.81	106.72	107.52	108.35	110.41	105.80	90.66	516.0	940.1	1635.3	1814.6
C9300-48H	1900W	C9300-NM-8X	115Vac	94.48	102.47	102.94	103.46	104.43	97.27	110.25	110.92	111.75	113.79	109.30	92.43	422.9	751.3	1299.6	1441.6
			230Vac	94.02	101.23	101.69	102.10	103.08	96.24	108.89	109.65	110.53	112.55	108.00	91.44	519.2	943.8	1643.5	1821.3
C9300-48H	1900W	C9300-NM-4M	115Vac	94.02	101.47	102.50	102.61	103.41	96.78	109.46	110.25	110.98	112.77	108.53	91.43	421.8	749.9	1297.5	1440.1
			230Vac	93.08	100.78	101.16	101.45	102.31	95.92	108.19	108.96	109.73	111.46	107.29	90.29	518.5	940.8	1635.2	1810.3
C9300-48H	1900W	C9300-NM-2Y	115Vac	93.40	101.26	101.70	102.03	103.06	94.65	108.27	108.91	109.17	111.32	107.22	91.52	421.5	748.9	1295.7	1436.4
			230Vac	92.57	100.14	100.55	100.95	101.93	94.03	106.73	107.56	108.40	110.35	105.82	90.76	517.0	939.3	1635.0	1809.6
C9300-48H	1900W	Not Installed	115Vac	85.65	92.17	93.35	93.63	94.11	84.96	97.07	98.24	98.40	99.50	96.10	85.76	411.4	739.6	1288.7	1430.7
			230Vac	84.89	91.33	92.45	92.68	93.17	84.33	96.45	97.00	97.36	98.37	95.43	85.32	506.8	928.8	1621.9	1799.9
C9300-24H	1900W	Not Installed	115Vac	80.63	84.52	85.17	85.40	85.65	80.79	86.49	87.62	87.83	88.43	86.12	8041	407.5	741.3	1297.1	1438.1
			230Vac	79.55	83.21	84.70	84.91	85.25	79.70	86.09	87.13	87.36	87.94	85.63	79.39	503.6	931.8	1635.4	1810.3
C9300-24H	1900W	C9300-NM-4G	115Vac	86.38	88.78	89.98	90.51	91.09	87.24	94.12	95.57	96.06	96.63	93.68	85.58	415.5	741.6	1288.9	1433.7
			230Vac	85.98	88.27	89.66	90.6	90.77	86.81	93.47	74.72	95.17	95.73	93.03	84.94	511.5	938.2	1639.5	1818.1
C9300-24H	1900W	C9300-NM-2Q	115Vac	87.16	93.14	93.45	93.62	94.17	89.33	98.20	98.92	99.39	100.11	97.50	85.73	417.1	750.9	1304.4	1448.9
			230Vac	86.66	92.16	92.53	92.8	93.36	88.11	96.56	96.95	97.38	98.39	95.90	84.95	512.7	940.2	1641.6	1818.3
C9300-24H	1900W	C9300-NM-8X	115Vac	88.85	93.82	94.89	95.08	95.69	91.72	99.50	100.50	101.03	102.21	98.99	85.95	419.9	754.5	1307.5	1450.9
			230Vac	88.10	92.69	93.80	94.12	94.71	90.92	98.32	99.29	99.71	100.60	97.81	85.24	515.0	942.7	1644.3	1822.0
C9300-24H	1900W	C9300-NM-4M	115Vac	88.57	93.90	94.22	94.51	96.03	91.37	99.29	100.13	100.44	101.54	98.72	85.83	418.9	744.3	1298.3	1449.9
			230Vac	88.24	93.10	93.33	93.55	94.17	90.90	98.67	99.07	99.65	100.80	98.11	85.65	515.8	943.4	1644.0	1821.9
C9300-24H	1900W	C9300-NM-4M	115Vac	87.81	94.47	94.73	94.79	95.29	89.81	98.27	99.32	100.28	101.12	97.71	86.65	418.6	748.4	1311.1	1448.7
			230Vac	87.26	92.59	92.86	93.13	93.90	88.93	97.03	97.58	97.97	99.03	96.42	85.48	511.9	940.9	1642.0	1819.4

Safety and compliance

Table 22 lists the safety and compliance information for the Cisco Catalyst 9300 Series.

Table 23. Safety and compliance information

Description	Specification
Safety certifications	• UL 60950-1 • CAN/CSA-C222.2 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950.1 • IEEE 802.3
Electromagnetic emissions certifications	• 47 CFR Part 15 • CISPR22 Class A • EN 300 386 V1.6.1 • EN 55022 Class A • EN 55032 Class A • CISPR 32 Class A • EN61000-3-2 • EN61000-3-3 • ICES-003 Class A • TCVN 7189 Class A • V-3 Class A • CISPR24 • EN 300 386 • EN55024 • TCVN 7317 • V-2/2015.04 • V-3/2015.04 • CNS13438 • KN32 • KN35 • IEC 61000-6-1 • EN 61000-6-1 **Additional Certifications for C9300L SKUs:** • QCVN 118:2018/BTTTT • CISPR24/25 • CISPR 32 Class A • VCCI-CISPR 32 Class A • EN55035
Environmental	Reduction of Hazardous Substances (ROHS) 5

Warranty

Cisco enhanced limited lifetime hardware warranty

The Cisco Catalyst 9300 Series Switches come with a Cisco Enhanced Limited Lifetime hardware Warranty (E-LLW) that includes Next-Business-Day (NBD) delivery of replacement hardware where available and 90 days of 8x5 Cisco Technical Assistance Center (TAC) support.

Your formal warranty statement, including the warranty applicable to Cisco software, appears in the information packet that accompanies your Cisco product. We encourage you to review the warranty statement shipped with your specific product carefully before use.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

For further information about warranty terms, visit https://www.cisco.com/go/warranty. Table 23 provides information about the E-LLW.

Table 24. E-LLW details

	Cisco E-LLW
Devices covered	Applies to Cisco Catalyst 9300 Series Switches.
Warranty duration	As long as the original customer owns the product.
End-of-life policy	In the event of discontinuance of product manufacture, Cisco warranty support is limited to 5 years from the announcement of discontinuance.
Hardware replacement	Cisco or its service center will use commercially reasonable efforts to ship a replacement for NBD delivery, where available. Otherwise, a replacement will be shipped within 10 working days after receipt of the Return Materials Authorization (RMA) request. Actual delivery times might vary depending on customer location.
Effective date	Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than 90 days after original shipment by Cisco).
TAC support	Cisco will provide during business hours, 8 hours per day, 5 days per week, basic configuration, diagnosis, and troubleshooting of device-level problems for up to a 90-day period from the date of shipment of the originally purchased Cisco Catalyst 9300 Series product. This support does not include solution or network-level support beyond the specific device under consideration.
Cisco.com access	Warranty allows guest access only to Cisco.com.

CSR/Social Responsibility

Information about Cisco's environmental, social and governance (ESG) policies and intiatives can be found in Cisco's Corporate Social Responsibility (CSR) Report.

Cisco Services

Cisco Services for next-generation Cisco Catalyst 9000 Switches

Achieve infrastructure excellence faster and with less risk. Cisco Catalyst 9000 Services provide expert guidance to help you successfully deploy, manage and support the new Cisco Catalyst 9000 switching family. With unmatched networking expertise, best practices, and innovative tools, we can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software, and protocols into the network. Offering a comprehensive lifecycle of services – from implementation, optimization, technical, and managed services – Cisco experts help you reduce disruption and achieve operational excellence to extract maximum value from your Cisco DNA ready infrastructure.

Learn more about Cisco Services for Enterprise Networks

Software policy for Cisco Catalyst 9300 Series Switches

Software policy for network stack components

Customers with the Network Essentials Stack and Network Advantage Stack software feature sets are provided with maintenance updates and bug fixes designed to maintain compliance of the software. This includes compliance with published specifications, release notes, and industry standards as long as the original end user continues to own or use the product or up to one year from the end-of-sale date for the product, whichever occurs earlier.

Cisco embedded support for Cisco DNA term components

Cisco Embedded Support delivers the right support for Cisco software products and suites. It will keep your business applications performing as expected and protect your investment. Cisco Embedded Support for the Cisco DNA Essentials and Cisco DNA Advantage term components is included. Cisco Embedded Support provides access to TAC support, major software updates, maintenance and minor software releases, and the Cisco Embedded Support site, for increased productivity with anytime access.

Ordering information

Table 24 lists ordering information for the Cisco Catalyst 9300 Series. To place an order, visit the Cisco Ordering home page at https://www.cisco.com/en/US/ordering/or13/or8/order_customer_help_how_to_order_listing.html.

Table 25. Ordering information

Switches	
Product number	**Product description**
C9300-24T-E	Catalyst 9300 24-port modular uplinks data only, Network Essentials
C9300-24T-A	Catalyst 9300 24-port modular uplinks data only, Network Advantage
C9300-24P-E	Catalyst 9300 24-port modular uplinks PoE+, Network Essentials
C9300-24P-A	Catalyst 9300 24-port modular uplinks PoE+, Network Advantage
C9300-24U-E	Catalyst 9300 24-port modular uplinks UPOE, Network Essentials
C9300-24U-E-UL	Catalyst 9300 24-port modular uplinks UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-24U-A	Catalyst 9300 24-port modular uplinks UPOE, Network Advantage
C9300-24U-A-UL	Catalyst 9300 24-port modular uplinks UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-24H-E	Catalyst 9300 24-port modular uplinks UPOE+, Network Essentials
C9300-24H-A	Catalyst 9300 24-port modular uplinks UPOE+, Network Advantage
C9300-24UB-E	Catalyst 9300 higher scale 24-port modular uplinks UPOE, Network Essentials
C9300-24UB-A	Catalyst 9300 higher scale 24-port modular uplinks UPOE, Network Advantage
C9300-24UX-E	Catalyst 9300 24-port modular uplinks mGig UPOE, Network Essentials
C9300-24UX-A	Catalyst 9300 24-port modular uplinks mGig UPOE, Network Advantage
C9300-24UXB-E	Catalyst 9300 higher scale 24-port modular uplinks mGig UPOE, Network Essentials
C9300-24UXB-A	Catalyst 9300 higher scale 24-port modular uplinks mGig UPOE, Network Advantage
C9300-48T-E	Catalyst 9300 48-port modular uplinks data only, Network Essentials
C9300-48T-A	Catalyst 9300 48-port modular uplinks data only, Network Advantage
C9300-48P-E	Catalyst 9300 48-port modular uplinks PoE+, Network Essentials
C9300-48P-A	Catalyst 9300 48-port modular uplinks PoE+, Network Advantage
C9300-48U-E	Catalyst 9300 48-port modular uplinks UPOE, Network Essentials

Switches	
C9300-48U-E-UL	Catalyst 9300 48-port modular uplinks UPOE, Network Essentials (Compatible with UL1069 Standard*)
C9300-48U-A	Catalyst 9300 48-port modular uplinks UPOE, Network Advantage
C9300-48U-A-UL	Catalyst 9300 48-port modular uplinks UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-48H-E	Catalyst 9300 48-port modular uplinks UPOE+, Network Essentials
C9300-48H-A	Catalyst 9300 48-port modular uplinks UPOE+, Network Advantage
C9300-48UXM-E	Catalyst 9300 48-port modular uplinks 2.5G (12 mGig) UPOE, Network Essentials
C9300-48UXM-A	Catalyst 9300 48-port modular uplinks 2.5G (12 mGig) UPOE, Network Advantage
C9300-48UN-E	Catalyst 9300 48-port modular uplinks 5G UPOE, Network Essentials
C9300-48UN-A	Catalyst 9300 48-port modular uplinks 5G UPOE, Network Advantage
C9300-48UB-E	Catalyst 9300 higher scale 48-port modular uplinks 1G UPOE, Network Essentials
C9300-48UB-A	Catalyst 9300 higher scale 48-port modular uplinks 1G UPOE, Network Advantage
C9300-24S-E	Catalyst 9300 24-port modular uplinks 1G SFP, Network Essentials
C9300-24S-A	Catalyst 9300 24-port modular uplinks 1G SFP, Network Advantage
C9300-48S-E	Catalyst 9300 48-port modular uplinks 1G SFP, Network Essentials
C9300-48S-A	Catalyst 9300 48-port modular uplinks 1G SFP, Network Advantage
C9300L-24T-4G-E	Catalyst 9300 24-port fixed uplinks data only, 4X1G uplinks, Network Essentials
C9300L-24T-4G-A	Catalyst 9300 24-port fixed uplinks data only, 4X1G uplinks, Network Advantage
C9300L-24P-4G-E	Catalyst 9300 24-port fixed uplinks PoE+, 4X1G uplinks, Network Essentials
C9300L-24P-4G-A	Catalyst 9300 24-port fixed uplinks PoE+, 4X1G uplinks, Network Advantage
C9300L-48T-4G-E	Catalyst 9300 48-port fixed uplinks data only, 4X1G uplinks, Network Essentials
C9300L-48T-4G-A	Catalyst 9300 48-port fixed uplinks data only, 4X1G uplinks, Network Advantage
C9300L-48P-4G-E	Catalyst 9300 48-port fixed uplinks PoE+, 4X1G uplinks, Network Essentials
C9300L-48P-4G-A	Catalyst 9300 48-port fixed uplinks PoE+, 4X1G uplinks, Network Advantage
C9300L-48PF-4G-E	Catalyst 9300 48-port fixed uplinks Full PoE+, 4X1G uplinks, Network Essentials
C9300L-48PF-4G-A	Catalyst 9300 48-port fixed uplinks Full PoE+, 4X1G uplinks, Network Advantage
C9300L-24T-4X-E	Catalyst 9300 24-port fixed uplinks data only, 4X10G uplinks, Network Essentials

Switches	
C9300L-24T-4X-A	Catalyst 9300 24-port fixed uplinks data only, 4X10G uplinks, Network Advantage
C9300L-24P-4X-E	Catalyst 9300 24-port fixed uplinks PoE+, 4X10G uplinks, Network Essentials
C9300L-24P-4X-A	Catalyst 9300 24-port fixed uplinks PoE+, 4X10G uplinks, Network Advantage
C9300L-24UXG-4X-E	Catalyst 9300 24-port fixed uplinks UPoE, 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G, 4X10G uplinks, Network Essentials
C9300L-24UXG-4X-A	Catalyst 9300 24-port fixed uplinks UPoE, 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G, 4X10G uplinks, Network Advantage
C9300L-48T-4X-E	Catalyst 9300 48-port fixed uplinks data only, 4X10G uplinks, Network Essentials
C9300L-48T-4X-A	Catalyst 9300 48-port fixed uplinks data only, 4X10G uplinks, Network Advantage
C9300L-48P-4X-E	Catalyst 9300 48-port fixed uplinks PoE+, 4X10G uplinks, Network Essentials
C9300L-48P-4X-A	Catalyst 9300 48-port fixed uplinks PoE+, 4X10G uplinks, Network Advantage
C9300L-48PF-4X-E	Catalyst 9300 48-port fixed uplinks Full PoE+, 4X10G uplinks, Network Essentials
C9300L-48PF-4X-A	Catalyst 9300 48-port fixed uplinks Full PoE+, 4X10G uplinks, Network Advantage
C9300L-48UXG-4X-E	Catalyst 9300 48-port fixed uplinks UPoE, 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G, 4X10G uplinks, Network Essentials
C9300L-48UXG-4X-A	Catalyst 9300 48-port fixed uplinks UPoE, 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G, 4x10G uplinks, Network Advantage
C9300L-24UXG-2Q-E	Catalyst 9300 24-port fixed uplinks UPoE, 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G, 2X40G uplinks, Network Essentials
C9300L-24UXG-2Q-A	Catalyst 9300 24-port fixed uplinks UPoE, 8xmGig(100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G, 2x40G uplinks, Network Advantage
C9300L-48UXG-2Q-E	Catalyst 9300 48-port fixed uplinks UPoE, 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G, 2X40G uplinks, Network Essentials
C9300L-48UXG-2Q-A	Catalyst 9300 48-port fixed uplinks UPoE, 12xmGig(100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G, 2x40G uplinks, Network Advantage
Network modules	
Product number	**Product description**
C9300-NM-4G	Catalyst 9300 4 x 1GE Network Module
C9300-NM-4G=	Catalyst 9300 4 x 1GE Network Module, spare
C9300-NM-8X	Catalyst 9300 8 x 10GE Network Module
C9300-NM-8X=	Catalyst 9300 8 x 10GE Network Module, spare
C9300-NM-2Q	Catalyst 9300 2 x 40GE Network Module

Switches	
C9300-NM-2Q=	Catalyst 9300 2 x 40GE Network Module, spare
C9300-NM-2Y	Catalyst 9300 2 x 25G Network Module
C9300-NM-2Y=	Catalyst 9300 2 x 25G Network Module, spare
C9300-NM-4M	Catalyst 9300 4 x mGig Network Module
C9300-NM-4M=	Catalyst 9300 4 x mGig Network Module, spare
NM-BLANK-T1=	Cisco Catalyst Type 1 Network Module Blank, spare
Storage Module	
Product number	**Product description**
SSD-120G	Cisco pluggable USB3.0 SSD storage
SSD-120G=	Cisco pluggable USB3.0 SSD storage, spare
Software licenses for C9300 SKUs	
Product number	**Product description**
C9300-DNA-P-24-3Y	C9300 Cisco DNA Premier, 24-port, 3 Year Term license
C9300-DNA-P-24-5Y	C9300 Cisco DNA Premier, 24-port, 5 Year Term license
C9300-DNA-P-24-7Y	C9300 Cisco DNA Premier, 24-port, 7 Year Term license
C9300-DNA-P-48-3Y	C9300 Cisco DNA Premier, 48-port, 3 Year Term license
C9300-DNA-P-48-5Y	C9300 Cisco DNA Premier, 48-port, 5 Year Term license
C9300-DNA-P-48-7Y	C9300 Cisco DNA Premier, 48-port, 7 Year Term license
C9300-DNA-E-24-3Y	C9300 Cisco DNA Essentials, 24-port, 3 Year Term license
C9300-DNA-E-24-5Y	C9300 Cisco DNA Essentials, 24-port, 5 Year Term license
C9300-DNA-E-24-7Y	C9300 Cisco DNA Essentials, 24-port, 7 Year Term license
C9300-DNA-A-24-3Y	C9300 Cisco DNA Advantage, 24-port, 3 Year Term license
C9300-DNA-A-24-5Y	C9300 Cisco DNA Advantage, 24-port, 5 Year Term license
C9300-DNA-A-24-7Y	C9300 Cisco DNA Advantage, 24-port, 7 Year Term license
C9300-DNA-E-48-3Y	C9300 Cisco DNA Essentials, 48-port, 3 Year Term license
C9300-DNA-E-48-5Y	C9300 Cisco DNA Essentials, 48-port, 5 Year Term license
C9300-DNA-E-48-7Y	C9300 Cisco DNA Essentials, 48-port, 7 Year Term license

Switches	
C9300-DNA-A-48-3Y	C9300 Cisco DNA Advantage, 48-port, 3 Year Term license
C9300-DNA-A-48-5Y	C9300 Cisco DNA Advantage, 48-port, 5 Year Term license
C9300-DNA-A-48-7Y	C9300 Cisco DNA Advantage, 48-port, 7 Year Term license
C9300-DNA-P-24S-3Y	C9300 1G Fiber Cisco DNA Premier, 24-port, 3 Year Term license
C9300-DNA-P-24S-5Y	C9300 1G Fiber Cisco DNA Premier, 24-port, 5 Year Term license
C9300-DNA-P-24S-7Y	C9300 1G Fiber Cisco DNA Premier, 24-port, 7 Year Term license
C9300-DNA-P-48S-3Y	C9300 1G Fiber Cisco DNA Premier, 48-port, 3 Year Term license
C9300-DNA-P-48S-5Y	C9300 1G Fiber Cisco DNA Premier, 48-port, 5 Year Term license
C9300-DNA-P-48S-7Y	C9300 1G Fiber Cisco DNA Premier, 48-port, 7 Year Term license
C9300-DNA-E-24S-3Y	C9300 1G Fiber Cisco DNA Essentials, 24-port, 3 Year Term license
C9300-DNA-E-24S-5Y	C9300 1G Fiber Cisco DNA Essentials, 24-port, 5 Year Term license
C9300-DNA-E-24S-7Y	C9300 1G Fiber Cisco DNA Essentials, 24-port, 7 Year Term license
C9300-DNA-A-24S-3Y	C9300 1G Fiber Cisco DNA Advantage, 24-port, 3 Year Term license
C9300-DNA-A-24S-5Y	C9300 1G Fiber Cisco DNA Advantage, 24-port, 5 Year Term license
C9300-DNA-A-24S-7Y	C9300 1G Fiber Cisco DNA Advantage, 24-port, 7 Year Term license
C9300-DNA-E-48S-3Y	C9300 1G Fiber Cisco DNA Essentials, 48-port, 3 Year Term license
C9300-DNA-E-48S-5Y	C9300 1G Fiber Cisco DNA Essentials, 48-port, 5 Year Term license
C9300-DNA-E-48S-7Y	C9300 Cisco DNA Essentials, 48-port, 7 Year Term license
C9300-DNA-A-48S-3Y	C9300 1G Fiber Cisco DNA Advantage, 48-port, 3 Year Term license
C9300-DNA-A-48S-5Y	C9300 1G Fiber Cisco DNA Advantage, 48-port, 5 Year Term license
C9300-DNA-A-48S-7Y	C9300 1G Fiber Cisco DNA Advantage, 48-port, 7 Year Term license
C9300-LIC=	Electronic Cisco DNA Upgrade License for C9300 switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage
CAT-CDNA-P	Cisco DNA Premier Term Add for Catalyst Switches

Switches	
Software licenses for C9300L SKUs	
Product number	**Product number**
C9300L-DNA-P-24-3Y	C9300L Cisco DNA Premier, 24-port, 3 Year Term license
C9300L-DNA-P-24-5Y	C9300L Cisco DNA Premier, 24-port, 5 Year Term license
C9300L-DNA-P-24-7Y	C9300L Cisco DNA Premier, 24-port, 7 Year Term license
C9300L-DNA-P-48-3Y	C9300L Cisco DNA Premier, 48-port, 3 Year Term license
C9300L-DNA-P-48-5Y	C9300L Cisco DNA Premier, 48-port, 5 Year Term license
C9300L-DNA-P-48-7Y	C9300L Cisco DNA Premier, 48-port, 7 Year Term license
C9300L-DNA-E-24-3Y	C9300L Cisco DNA Essentials, 24-port, 3 Year Term license
C9300L-DNA-E-24-5Y	C9300L Cisco DNA Essentials, 24-port, 5 Year Term license
C9300L-DNA-E-24-7Y	C9300L Cisco DNA Essentials, 24-port, 7 Year Term license
C9300L-DNA-A-24-3Y	C9300L Cisco DNA Advantage, 24-port, 3 Year Term license
C9300L-DNA-A-24-5Y	C9300L Cisco DNA Advantage, 24-port, 5 Year Term license
C9300L-DNA-A-24-7Y	C9300L Cisco DNA Advantage, 24-port, 7 Year Term license
C9300L-DNA-E-48-3Y	C9300L Cisco DNA Essentials, 48-port, 3 Year Term license
C9300L-DNA-E-48-5Y	C9300L Cisco DNA Essentials, 48-port, 5 Year Term license
C9300L-DNA-E-48-7Y	C9300L Cisco DNA Essentials, 48-port, 7 Year Term license
C9300L-DNA-A-48-3Y	C9300L Cisco DNA Advantage, 48-port, 3 Year Term license
C9300L-DNA-A-48-5Y	C9300L Cisco DNA Advantage, 48-port, 5 Year Term license
C9300L-DNA-A-48-7Y	C9300L Cisco DNA Advantage, 48-port, 7 Year Term license
C9300L-LIC=	Electronic Cisco DNA Upgrade License for C9300L switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage
Power supplies	
Product number	**Product description**
PWR-C1-350WAC=	350WAC power supply spare
PWR-C1-715WAC=	715WAC power supply spare
PWR-C1-715WDC=	715WDC power supply spare
PWR-C1-1100WAC=	1100WAC power supply spare

Switches	
PWR-C1-350WAC-P=	350WAC Platinum-rated power supply spare
PWR-C1-715WAC-P=	715WAC Platinum-rated power supply spare
PWR-C1-1100WAC-P=	1100WAC Platinum-rated power supply spare
PWR-C1-715WAC-UP	Upgrade to 715WAC Platinum-rated power supply
PWR-C1-1100WAC-UP	Upgrade to 1100WAC Platinum-rated power supply
Cisco StackWise-480 and StackPower cables	
Product number	**Product description**
STACK-T1-50CM=	Cisco StackWise-480 50cm stacking cable spare
STACK-T1-1M=	Cisco StackWise-480 1m stacking cable spare
STACK-T1-3M=	Cisco StackWise-480 3m stacking cable spare
CAB-SPWR-30CM=	Cisco Catalyst 3850 StackPower cable 30cm spare
CAB-SPWR-150CM=	Cisco Catalyst 3850 StackPower cable 150cm spare
Cisco StackWise-320 Accessories	
Product number	**Product description**
C9300L-STACK-KIT	Stack Kit for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable
C9300L-STACK-KIT=	Stack Kit for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable, spare
STACK-T3-50CM	50CM Type 3 Stacking Cable – default with Stack Kit for C9300L SKUs
STACK-T3-50CM=	50CM Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-1M	1M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-1M=	1M Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-3M	3M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-3M=	3M Type 3 Stacking Cable, spare for C9300L SKUs
Spare power cords	
CAB-TA-NA=	AC power cord for Cisco Catalyst (North America)
CAB-TA-AP=	AC power cord for Cisco Catalyst (Australia)
CAB-TA-AR=	AC power cord for Cisco Catalyst (Argentina)
CAB-TA-SW=	AC power cord for Cisco Catalyst (Switzerland)

Switches	
CAB-TA-UK=	AC power cord for Cisco Catalyst (United Kingdom)
CAB-TA-JP=	AC power cord for Cisco Catalyst (Japan)
CAB-TA-250VAC-JP=	Japan 250VAC power cord for Cisco Catalyst (Japan)
CAB-TA-EU=	AC power cord for Cisco Catalyst (Europe)
CAB-TA-IT=	AC power cord for Cisco Catalyst (Italy)
CAB-TA-IN=	AC power cord for Cisco Catalyst (India)
CAB-TA-CN=	AC power cord for Cisco Catalyst (China)
CAB-TA-DN=	AC power cord for Cisco Catalyst (Denmark)
CAB-TA-IS=	AC power cord for Cisco Catalyst (Israel)
CAB-ACBZ-12A=	AC power cord for Cisco Catalyst (Brazil), 12A/125V BR-3-20 plug up to 12A
CAB-ACBZ-10A=	AC power cord for Cisco Catalyst (Brazil), 10A/250V BR-3-10 plug up to 10A
CAB-C15-CBN	Cabinet jumper power cord, 250VAC 13A, C14-C15 connectors

Optics online reference

The Cisco Catalyst 9300 Series supports a wide range of optics. Because the list of supported optics is updated on a regular basis, consult the tables available here for the latest QSFP+, SFP+, and SFP compatibility information: https://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html.

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Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

Document history

New or revised topic	Described In	Date
Added information about Shockley (90W UPoE+) PIDs	Across different sections	Feb 10, 2020
Added new SKUs for C9300L – Full PoE+ and mGig SKUs	Content added to all the tables	December 2, 2019
Updates for Brattain Program for C9300 – this is higher buffer and higher scale SKUs	All relevant sections	October 9, 2019
Adding Primary PSU upgrade option for 9300	Table 3: Power supply models	June 20, 2019
Product name change: Cisco ONE to Cisco DNA	Introduction	May 10, 2019
Wi-Fi 6 addition	Product Overview: Features	May 10, 2019
Add: Features	Product Overview: Features	May 10, 2019
Add: Modular uplink models table	Platform Details	May 10, 2019
Edit: Cisco Catalyst 9300 Series modular uplink	Platform Details	May 10, 2019
Edit: Table 1: Cisco Catalyst 9300 Series Switch configurations; uplink configuration add	Platform Details	May 10, 2019
Edit: Table 2: Name change to "Catalyst 9300..."	Platform Details	May 10, 2019
Add: Figure 3: pic for Franklin	Platform Details	May 10, 2019
Edit: Table 3: Power supply models	Platform Details	May 10, 2019
Add: Stacking, Table 4	Platform Details	May 10, 2019
Add: Stacking Accessories, Table 5	Platform Details	May 10, 2019
Edit: Replaced C3850 stack picture with C9300 stack picture	Platform Details	May 10, 2019
Add: Fan, Table 6	Platform Details	May 10, 2019
Edit: Table 7	Performance and Scalability	May 10, 2019
Add: Bandwidth Specifications	Performance and Scalability	May 10, 2019

New or revised topic	Described In	Date
Add: StackWise-320	Resiliency and High Availability	May 10, 2019
Edit: name change from Cisco One to Cisco DNA Software	Software Requirements	May 10, 2019
Edit: text edits	Licensing	May 10, 2019
Edit: Table 13	Licensing	May 10, 2019
Edit: Table 14	Specifications	May 10, 2019
Edit: Table 15	Connectors	May 10, 2019
Edit: Table 17	Power Supply Specifications	May 10, 2019
Edit: Table 21	Safety and Compliance	May 10, 2019
Edit: Table 23	Ordering Information	May 10, 2019
Added support for SD-Access Embedded Wireless	Added support for SD-Access Embedded Wireless Controller functionality.	Nov 13, 2018
Updated Platinum Power Supply specifications	Platinum rated power supplies available on the C9300 switches.	Oct 5, 2018
Updated availability of SSD card	Availability of 120G storage module for the C9300.	Oct 5, 2018
Updated Product overview	Added Catalyst 9500 high density platforms and updated associated speeds and densities, e.g. Up to 6.4-Tbps switching capacity with up to 2 Bpps of forwarding performance from “3.2 Tbps/1 Bpps” a. 32 port 100G, b. 32 port 40G, c. 48 port 25G. Added Catalyst 9500 mid density platform a. 24 port 25G, b. 16 port 1/10G. Added new optical interfaces - QSFP28, SFP28. Added new power supply options - 650W, 1600W. Added RESCONF support. Stackwise Virtual extended to all Catalyst 9500 platforms.	Mar 31, 2018
Updated Audio Video Bridging	AVB support noted for certain platforms. Corrected references to Catalyst 9000 switches, rather than Catalyst 9000 Series switches. Corrected references to Cisco IOS XE, rather than IOS-XE.	Dec 15, 2017

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