Cisco Catalyst 9300 Series Switches

Built for Security, IoT, Mobility, and Cloud
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The Catalyst 9300 Series switches form the foundational building block for Software-Defined Access (SD-Access), Cisco's lead enterprise architecture. At 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 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-ns) solution. The highly resilient and efficient power architecture features Cisco StackPower, which delivers high-density Cisco Universal Power Over Ethernet (Cisco UPOE®) and Power over Ethernet Plus (PoE+) 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 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 ONE Software

Cisco ONE™ 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 ONE Software helps make buying, managing, and upgrading your network and infrastructure software easier. Cisco ONE 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 ONE Subscription for Switching model

Cisco ONE for Access 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 with Wave 2 access points supported on a single switch with select models
- 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
- Intel® x86 CPU complex with 8-GB memory, and 16 GB of flash and external USB 3.0 SSD pluggable storage slot to host containers
- USB 2.0 slot to load system images and set configurations
- Up to 480 Gbps of local stackable switching bandwidth
- Flexible and dense uplink offerings with 1G, Multigigabit, 10G, and 40G, with platform readiness for 25G
- Flexible downlink options with 1G and Multigigabit links
- Leading PoE capabilities with up to 384 ports of PoE per stack, 60W Cisco UPOE, and PoE+
- 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
- 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: The 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 the Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM)

Policy handled through the Cisco Identity Services Engine (ISE)

Network assurance provided through the Network Data Platform

Faster launch of new business services and significantly improved issue resolution time

- 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 systems: 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**

The Cisco Catalyst 9300 Series is made up of seven different switch models. Any of the models can be used together in a stack of up to eight units.
Table 1 lists port scale and power details for the Cisco Catalyst 9300 Series models.

### Table 1. Cisco Catalyst 9300 Series Switch Configurations

<table>
<thead>
<tr>
<th>Model</th>
<th>Total 10/100/1000 or Multigigabit copper ports</th>
<th>Default AC power supply</th>
<th>Available PoE power</th>
<th>Cisco StackWise-480</th>
<th>Cisco StackPower</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9300-24T</td>
<td>24</td>
<td>350W AC</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>C9300-48T</td>
<td>48</td>
<td>350W AC</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>C9300-24P</td>
<td>24 POE+</td>
<td>715W AC</td>
<td>445W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C9300-48P</td>
<td>48 POE+</td>
<td>715W AC</td>
<td>437W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C9300-24U</td>
<td>24 Cisco UPOE</td>
<td>1100W AC</td>
<td>830W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C9300-48U</td>
<td>48 Cisco UPOE</td>
<td>1100W AC</td>
<td>822W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C9300-24UX</td>
<td>24 Multigigabit Cisco UPOE</td>
<td>1100W AC</td>
<td>560W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C9300-48UXM</td>
<td>48x 2.5G ports (12 mGig – 100 Mbps or 1, 2.5, 5, or 10 Gbps)</td>
<td>1100W AC</td>
<td>490W</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Network Modules**

The Cisco Catalyst 9300 Series Switches support optional network modules for uplink ports. 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.

![Network Modules](image)

Figure 2.
Cisco Catalyst 9300 Series Network Modules
Table 2. Network Module Numbers and Descriptions

<table>
<thead>
<tr>
<th>Network module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9300-NM-4G</td>
<td>9300 Series 4x 1G Network Module</td>
</tr>
<tr>
<td>C9300-NM-8X</td>
<td>9300 Series 8x 10G Network Module</td>
</tr>
<tr>
<td>C9300-NM-2Q</td>
<td>9300 Series 2x 40G Network Module</td>
</tr>
</tbody>
</table>

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


Power Supplies

The 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.

![Cisco Catalyst 9300 Series Dual Redundant Power Supplies](image)

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

<table>
<thead>
<tr>
<th>Models</th>
<th>Default power supply</th>
<th>Available PoE power</th>
<th>With 350W Secondary PS</th>
<th>With 715W Secondary PS</th>
<th>With 1100W Secondary PS</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-port data switch</td>
<td>PWR-C1-350WAC</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>48-port data switch</td>
<td>PWR-C1-350WAC</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>24-port PoE+ switch</td>
<td>PWR-C1-715WAC</td>
<td>445W</td>
<td>795W</td>
<td>1160W</td>
<td>1545W</td>
</tr>
<tr>
<td>48-port PoE+ switch</td>
<td>PWR-C1-715WAC</td>
<td>437W</td>
<td>787W</td>
<td>1152W</td>
<td>1537W</td>
</tr>
<tr>
<td>24-port Cisco UPOE switch</td>
<td>PWR-C1-1100WAC</td>
<td>830W</td>
<td>1180W</td>
<td>1545W</td>
<td>1930W</td>
</tr>
<tr>
<td>48-port Cisco UPOE switch</td>
<td>PWR-C1-1100WAC</td>
<td>822W</td>
<td>1172W</td>
<td>1537W</td>
<td>1922W</td>
</tr>
<tr>
<td>24-port Multigigabit Cisco UPOE switch</td>
<td>PWR-C1-1100WAC</td>
<td>560W – Support in Cisco IOS XE 16.6</td>
<td>910W</td>
<td>1275W</td>
<td>1660W</td>
</tr>
</tbody>
</table>
### Performance and Scalability

Performance and scalability metrics for the Catalyst 9300 Series are provided in Table 4.

Table 4. Performance Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switching capacity</strong></td>
<td>208 Gbps on 24-port Gigabit Ethernet model</td>
</tr>
<tr>
<td></td>
<td>256 Gbps on 48-port Gigabit Ethernet model</td>
</tr>
<tr>
<td></td>
<td>640 Gbps on 24-port Multigigabit Ethernet model</td>
</tr>
<tr>
<td></td>
<td>580 Gbps on 48-port 2.5G (12 mGig) Ethernet model</td>
</tr>
<tr>
<td></td>
<td>All models are wirespeed non-blocking performance</td>
</tr>
<tr>
<td><strong>Stacking bandwidth</strong></td>
<td>480 Gbps</td>
</tr>
<tr>
<td><strong>Total number of MAC addresses</strong></td>
<td>32,000</td>
</tr>
<tr>
<td><strong>Total number of IPv4 routes (ARP plus learned routes)</strong></td>
<td>32,000 (24,000 direct routes and 8000 indirect routes)</td>
</tr>
<tr>
<td><strong>IPv4 routing entries</strong></td>
<td>32,000</td>
</tr>
<tr>
<td><strong>IPv6 routing entries</strong></td>
<td>16,000</td>
</tr>
<tr>
<td><strong>Multicast routing scale</strong></td>
<td>8000</td>
</tr>
<tr>
<td><strong>QoS scale entries</strong></td>
<td>5120</td>
</tr>
<tr>
<td><strong>ACL scale entries</strong></td>
<td>5120</td>
</tr>
<tr>
<td><strong>Packet buffer per SKU</strong></td>
<td>16 MB buffer for 24- or 48-port Gigabit Ethernet models</td>
</tr>
<tr>
<td></td>
<td>32 MB buffer for 24-port Multigigabit</td>
</tr>
<tr>
<td><strong>FNF entries</strong></td>
<td>64,000 flow on 24- and 48-port Gigabit Ethernet models</td>
</tr>
<tr>
<td></td>
<td>128,000 flows on 24-port Multigigabit</td>
</tr>
<tr>
<td><strong>DRAM</strong></td>
<td>8 GB</td>
</tr>
<tr>
<td><strong>Flash</strong></td>
<td>16 GB</td>
</tr>
<tr>
<td><strong>VLAN IDs</strong></td>
<td>4000</td>
</tr>
<tr>
<td><strong>Total Switched Virtual Interfaces (SVIs)</strong></td>
<td>2000</td>
</tr>
<tr>
<td><strong>Jumbo frames</strong></td>
<td>9198 bytes</td>
</tr>
<tr>
<td><strong>Total routed ports per 9300 Series stack</strong></td>
<td>208</td>
</tr>
</tbody>
</table>

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**Description**

**Performance**

<table>
<thead>
<tr>
<th>Description</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless bandwidth per switch</td>
<td>Up to 96 Gbps on 48-port Gigabit Ethernet model Up to 48 Gbps on 24-port Gigabit Ethernet model</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Forwarding rate of switch models (with 2x 40 Gigabit Ethernet uplinks for 24-port models and 48-port models)</th>
<th>Forwarding rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Model</td>
</tr>
<tr>
<td>C9300-24T</td>
<td>C9300-24T</td>
</tr>
<tr>
<td>C9300-24P</td>
<td>C9300-24P</td>
</tr>
<tr>
<td>C9300-24U</td>
<td>C9300-24U</td>
</tr>
<tr>
<td>C9300-48T</td>
<td>C9300-48T</td>
</tr>
<tr>
<td>C9300-48P</td>
<td>C9300-48P</td>
</tr>
<tr>
<td>C9300-48U</td>
<td>C9300-48U</td>
</tr>
<tr>
<td>C9300-24UX</td>
<td>C9300-24UX</td>
</tr>
<tr>
<td>C9300-48UXM</td>
<td>C9300-48UXM</td>
</tr>
<tr>
<td>Forwarding rate for both IPv4 and IPv6</td>
<td>Forwarding rate</td>
</tr>
</tbody>
</table>

**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 industry’s first policy-based automation from network edge to cloud. Your foundation for your digital network, Cisco ® Software-Defined Access (SD-Access). Built on the principles of the Cisco Digital Network Architecture (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 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 Catalyst 9300 Series switches support 256-bit and 128-bit Advanced Encryption Standard (AES) on all ports at all speeds, providing the most secure link encryption.

Trustworthy systems 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.

Resiliency and High Availability

- StackWise-480: The Catalyst 9300 Series supports the industry’s highest back-panel stacking bandwidth solution (480 Gbps) with StackWise-480.

- 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.
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.
- 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.

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 mGig 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 Series. 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

- **Bluetooth ready**: The Catalyst 9300 Series has hardware support to connect a Bluetooth dongle to your switch, enabling you to use this wireless interface as an IP management port interface. The port can be used for configuration and troubleshooting using WebUI or the Command-Line Interface (CLI), and to transfer images and configurations.

- **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**: The Catalyst 9300 Series switches have an embedded RFID tag that facilitates easy asset and inventory management using commercial RFID readers.

- **Blue beacon**: The Catalyst 9300 Series switches support a blue beacon LED for easy identification of the switch being accessed.

  * Energy Efficient Ethernet (EEE) will be fully supported on mGig switches in a future SW release

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 EIGRPv6) 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.

**Multigigabit Ethernet technology:** Cisco Multigigabit Ethernet technology allows you to achieve bandwidth speeds from 1 Gbps to 10 Gbps over traditional Category 5e cabling or above. This technology addresses the need for exponential increases in bandwidth with the enormous growth of 802.11ac and new wireless applications without having to replace current cabling infrastructure.

**Power Over Ethernet Leadership**

**Cisco Universal Power over Ethernet (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. The Catalyst 9300 Series supports Cisco UPOE, PoE+ and PoE, thereby addressing the largest range of network power needs.

Tables 5 and 6 show the power supply combinations required for different PoE needs.

**Table 5. Power Supply Requirements**

<table>
<thead>
<tr>
<th></th>
<th>24-port PoE switch</th>
<th>48-port PoE switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE on all ports (15.4W per port)</td>
<td>1 PWR-C1-715WAC</td>
<td>1 PWR-C1-1100WAC or 2 PWR-C1-715WAC</td>
</tr>
<tr>
<td>PoE+ on all ports (30W per port)</td>
<td>1 PWR-C1-1100WAC or 2 PWR-C1-715WAC</td>
<td>2 PWR-C1-1100WAC or 1 PWR-C1-1100WAC and 1 PWR-C1-715WAC</td>
</tr>
</tbody>
</table>

**Power Supply Requirements for Cisco UPOE**

<table>
<thead>
<tr>
<th></th>
<th>24-port Cisco UPOE switch</th>
<th>48-port Cisco UPOE switch</th>
<th>24-port Multigigabit Cisco UPOE switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco UPOE (60W per port) on all ports (24-port switch) or up to 30 ports (48-port switch)</td>
<td>1 PWR-C1-1100WAC and 1 PWR-C1-715WAC</td>
<td>2 PWR-C1-1100WAC</td>
<td>2 PWR-C1-1100WAC</td>
</tr>
</tbody>
</table>

- **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.
**Software Requirements**

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

Cisco ONE Software for Access Switching offers comprehensive solutions for the enterprise campus and branch offices. Cisco ONE 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 ONE 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 ONE Advantage with full Cisco Digital Network Architecture (DNA) capabilities and Cisco Software-Defined Access (SD-Access).


Cisco Catalyst 9300 Series Switches run on Cisco IOS XE 16.5.1a release or later. This software release 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 base 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.

- **The add-on 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, in the APIC-EM.

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

**Licensing Combinations**

<table>
<thead>
<tr>
<th></th>
<th>Cisco DNA Essentials</th>
<th>Cisco DNA Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Essentials</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Network Advantage</td>
<td>No*</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* At the time of DNA license renewal, the DNA Essentials license can be purchased to be used with Network Advantage.
Ordering and managing licenses with Smart Accounts: Creating Smart Accounts by using the Cisco Smart Software Manager (SSM) enables you to order devices and licensing packages and also 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 add-on licenses that you want to renew.

You must order an add-on 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.

Table 6 shows the features included in the Essentials and Advantage packages.

<table>
<thead>
<tr>
<th>Features</th>
<th>Network Essentials</th>
<th>Network Advantage</th>
<th>Cisco DNA Essentials</th>
<th>Cisco DNA Advantage</th>
<th>Cisco ONE Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Switch features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Switch fundamentals</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Advanced switch capabilities and scale</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>BGP, EIGRP, Hot Standby Router Protocol (HSRP), IS-IS, Bootstrap Router (BSR), Multicast Source Discovery Protocol (MSDP), Bidirectional PIM (PIM-BIDIR), Label Switched Multicast (LSM), IP SLA, Full OSPF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network segmentation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>VPN Routing and Forwarding (VRF), Virtual Extensible LAN (VXLAN), Cisco Locator/ID Separation Protocol (LISP), Cisco TrustSec, SD-Wireless, Multiprotocol Label Switching (MPLS), Layer 3 VPN (L3VPN), Multicast VPN (mVPN)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimized network deployments</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>mDNS gateway</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Features</td>
<td>Network Essentials</td>
<td>Network Advantage</td>
<td>Cisco DNA Essentials</td>
<td>Cisco DNA Advantage</td>
<td>Cisco ONE Advantage</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td>---------------------</td>
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</tr>
<tr>
<td>Automation</td>
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<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Advanced automation</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Telemetry and visibility</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Advanced telemetry and visibility</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Optimized telemetry and visibility</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>High availability and resiliency</td>
<td>x</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Security</td>
<td>x</td>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Advanced security</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Cisco DNA Center Features

| Day 0 network bring-up automation | x | x | ✓ | ✓ | ✓ |
| Element management | x | x | ✓ | ✓ | ✓ |
| Element management | x | x | ✓ | ✓ | ✓ |
| Network monitoring | x | x | ✓ | ✓ | ✓ |
| Static QoS configuration and monitoring | x | x | ✓ | ✓ | ✓ |
| Policy-based automation | x | x | x | ✓ | ✓ |
### Network assurance and analytics

Insights driven from analytics and machine learning for the network, clients and applications that cover onboarding, connectivity, and performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Network Essentials</th>
<th>Network Advantage</th>
<th>Cisco DNA Essentials</th>
<th>Cisco DNA Advantage</th>
<th>Cisco ONE Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network assurance and analytics</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Security analytics and endpoint profiling

**Advanced security analytics** (Visibility and threat detection across the network with Stealthwatch*)

*Flow collector and management licenses included

**Endpoint based policy** (Granular SD-Access with endpoint profiling from ISE)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Network Essentials</th>
<th>Network Advantage</th>
<th>Cisco DNA Essentials</th>
<th>Cisco DNA Advantage</th>
<th>Cisco ONE Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security analytics and endpoint profiling</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
</tr>
<tr>
<td>Endpoint based policy</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Specifications

#### Dimensions, Weight, Acoustic, Mean Time Between Failures

Table 7 shows the dimensions, weights, acoustic and mean time between failures of all models of 9300 Series switches.

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (H x W x D)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inches</td>
<td>Kilograms</td>
</tr>
<tr>
<td>C9300-24T</td>
<td>1.73 x 17.5 x 17.5</td>
<td>16.03</td>
</tr>
<tr>
<td>C9300-24P</td>
<td>1.73 x 17.5 x 17.5</td>
<td>16.33</td>
</tr>
<tr>
<td>C9300-24U</td>
<td>1.73 x 17.5 x 17.5</td>
<td>16.63</td>
</tr>
<tr>
<td>C9300-24UX</td>
<td>1.73 x 17.5 x 18.5</td>
<td>18.18</td>
</tr>
<tr>
<td>C9300-48T</td>
<td>1.73 x 17.5 x 17.5</td>
<td></td>
</tr>
<tr>
<td>C9300-48P</td>
<td>1.73 x 17.5 x 17.5</td>
<td></td>
</tr>
<tr>
<td>C9300-48U</td>
<td>1.73 x 17.5 x 17.5</td>
<td></td>
</tr>
<tr>
<td>C9300-48UXM</td>
<td>1.73 x 17.5 x 18.5</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>Dimensions (H x W x D)</td>
<td>Mean time between failures (hours)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>C9300-48T</td>
<td>16.43 x 7.45 cm</td>
<td></td>
</tr>
<tr>
<td>C9300-48P</td>
<td>16.73 x 7.59 cm</td>
<td></td>
</tr>
<tr>
<td>C9300-48U</td>
<td>17.03 x 7.72 cm</td>
<td></td>
</tr>
<tr>
<td>C9300-48UXM</td>
<td>20.50 x 9.34 cm</td>
<td></td>
</tr>
</tbody>
</table>

**Mean time between failures (hours)**

<table>
<thead>
<tr>
<th>Model</th>
<th>MTBF (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9300-24T</td>
<td>314,790</td>
</tr>
<tr>
<td>C9300-24P</td>
<td>299,000</td>
</tr>
<tr>
<td>C9300-24U</td>
<td>238,410</td>
</tr>
<tr>
<td>C9300-24UX</td>
<td>214,760</td>
</tr>
<tr>
<td>C9300-48T</td>
<td>305,870</td>
</tr>
<tr>
<td>C9300-48P</td>
<td>277,770</td>
</tr>
<tr>
<td>C9300-48U</td>
<td>227,410</td>
</tr>
<tr>
<td>C9300-48UXM</td>
<td>202,160</td>
</tr>
</tbody>
</table>

**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):

- **LpA**: 45dB typical, 48 dB max
- **LwA**: 5.6B typical, 5.9B max

Typical: Noise emission for a typical configuration

Maximum: Statistical maximum to account for variation in production

**Connectors**

Table 8 shows the supported connectors for the Cisco Catalyst 9300 Series.

**Table 8. Connectors**

<table>
<thead>
<tr>
<th>Connectors and cabling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling</td>
</tr>
<tr>
<td>Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling</td>
</tr>
<tr>
<td>1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling</td>
</tr>
<tr>
<td>100BASE-FX, 1000BASE-SX, -LX/LH, -ZX, -8X10, dense wavelength-division multiplexing (DWDM) and Coarse Wavelength-Division Multiplexing (CWDM) SFP transceivers: LC fiber connectors (single-mode or multimode fiber)</td>
</tr>
<tr>
<td>10GBASE-SR, LR, LRM, ER, ZR, DWDM SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)</td>
</tr>
<tr>
<td>QSFP</td>
</tr>
<tr>
<td>SFP+ connector</td>
</tr>
<tr>
<td>Cisco StackWise-480 stacking ports: copper-based Cisco StackWise cabling</td>
</tr>
<tr>
<td>Cisco StackPower: Cisco proprietary power stacking cables</td>
</tr>
</tbody>
</table>
Table 9 shows management and standards support for the Cisco Catalyst 9300 Series.


### Management and Standards Support

Table 9 shows management and standards support for the Cisco Catalyst 9300 Series.

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management</strong></td>
<td></td>
</tr>
<tr>
<td>BRIDGE-MIB</td>
<td>CISCO-PROCESS-MIB</td>
</tr>
<tr>
<td>CISCO-BRIDGE-EXT-MIB</td>
<td>CISCO-PRODUCTS-MIB</td>
</tr>
<tr>
<td>CISCO-BULK-FILE-MIB</td>
<td>CISCO-RF-MIB</td>
</tr>
<tr>
<td>CISCO-CABLE-DIAG-MIB</td>
<td>CISCO-RTP-METRICS-MIB</td>
</tr>
<tr>
<td>CISCO-CALLHOME-MIB</td>
<td>CISCO-RTTMON-ICMP-MIB</td>
</tr>
<tr>
<td>CISCO-CEF-MIB</td>
<td>CISCO-STACKWISE-MIB</td>
</tr>
<tr>
<td>CISCO-CIRCUIT-INTERFACE-MIB</td>
<td>CISCO-STD-EXTENSIONS-MIB</td>
</tr>
<tr>
<td>CISCO-CONFIG-COPY-MIB</td>
<td>CISCO-SYSLOG-MIB</td>
</tr>
<tr>
<td>CISCO-CONFIG-MAN-MIB</td>
<td>CISCO-TCP-MIB</td>
</tr>
<tr>
<td>CISCO-DEVICE-LOCATION-MIB</td>
<td>CISCO-UDLDP-MIB</td>
</tr>
<tr>
<td>CISCO-DHCP-SNOOPING-MIB</td>
<td>CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB</td>
</tr>
<tr>
<td>CISCO-EIGRP-MIB</td>
<td>ENTITY-MIB</td>
</tr>
<tr>
<td>CISCO-EMBEDDED-EVENT-MGR-MIB</td>
<td>HC-ALARM-MIB</td>
</tr>
<tr>
<td>CISCO-ENTITY-FRU-CONTROL-MIB</td>
<td>HC-RMON-MIB</td>
</tr>
<tr>
<td>CISCO-ENTITY-SENSOR-MIB</td>
<td>IEEE8023-LAG-MIB</td>
</tr>
<tr>
<td>CISCO-ENTITY-VENDOR-MIB</td>
<td>IF-MIB</td>
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<tr>
<td>CISCO-ERR-DISABLE-MIB</td>
<td>IP-FORWARD-MIB</td>
</tr>
<tr>
<td>CISCO-FLASH-MIB</td>
<td>IP-MIB</td>
</tr>
<tr>
<td>CISCO-FLOW-MONITOR-MIB</td>
<td>LLDP-EXT-MED-MIB</td>
</tr>
<tr>
<td>CISCO-FTP-CLIENT-MIB</td>
<td>LLDP-MIB</td>
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<tr>
<td>CISCO-HSRP-EXT-MIB</td>
<td>MAU-MIB</td>
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<tr>
<td>CISCO-LSR-STD-MIB</td>
<td>MPLS-L3VPN-STD-MIB</td>
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<td>CISCO-IP-MIB</td>
<td>MPLS-LSR-STD-MIB</td>
</tr>
<tr>
<td>CISCO-IP-MIB</td>
<td>MPLS-VPN-MIB</td>
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<td>CISCO-MPLS-VPN-MIB</td>
<td>OLD-CISCO-CHASSIS-MIB</td>
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<tr>
<td>CISCO-MPLS-VPN-MIB</td>
<td>OLD-CISCO-CPU-MIB</td>
</tr>
<tr>
<td>CISCO-MPLS-VPN-MIB</td>
<td>OLD-CISCO-INTERFACES-MIB</td>
</tr>
<tr>
<td>CISCO-MPLS-VPN-MIB</td>
<td>OLD-CISCO-IP-MIB</td>
</tr>
<tr>
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<tr>
<td>CISCO-MPLS-VPN-MIB</td>
<td>OLD-CISCO-MEMORY-MIB</td>
</tr>
<tr>
<td>Description</td>
<td>Specification</td>
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<td>CISCO-IP-CBR-METRICS-MIB</td>
<td>OLD-CISCO-SYS-MIB</td>
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<tr>
<td>CISCO-IP-STAT-MIB</td>
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<tr>
<td>CISCO-IP-TAP-MIB</td>
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<tr>
<td>CISCO-IP-URPF-MIB</td>
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<td>CISCO-IPSEC-MIB</td>
<td>RMON-MIB</td>
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<td>RMON2-MIB</td>
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<td>SMON-MIB</td>
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<td>CISCO-IPSLA-ECHO-MIB</td>
<td>SNMPv2-MIB</td>
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<td>CISCO-IPSLA-JITTER-MIB</td>
<td>SONET-MIB</td>
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<tr>
<td>CISCO-L2-CONTROL-MIB</td>
<td>TCP-MIB</td>
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<td>CISCO-MAC-NOTIFICATION-MIB</td>
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<td>CISCO-MPLS-LSR-EXT-STD-MIB</td>
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<td>CISCO-PAGP-MIB</td>
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<td>CISCO-PORT-SECURITY-MIB</td>
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<td>CISCO-PORT-STORM-CONTROL-MIB</td>
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<td>CISCO-POWER-ETHERNET-EXT-MIB</td>
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<tr>
<td>CISCO-PRIVATE-VLAN-MIB</td>
<td></td>
</tr>
</tbody>
</table>

**Standards**

<table>
<thead>
<tr>
<th>EEE 802.1s</th>
<th>RMON I and II standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE 802.1w</td>
<td>SNMPv2, v2c, and v3</td>
</tr>
<tr>
<td>IEEE 802.1x</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.1x-Rev</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3ad</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3af</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3at</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.1D Spanning Tree Protocol</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.1p CoS prioritization</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.1Q VLAN</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3 10BASE-T specification</td>
<td></td>
</tr>
<tr>
<td>IEEE 802.3u 100BASE-TX specification</td>
<td></td>
</tr>
</tbody>
</table>
### Power Supply Specifications

Table 10 lists the power specifications for the Cisco Catalyst 9300 Series based on the kind of power supply used.

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PWR-C1-1100WAC</td>
</tr>
<tr>
<td>Power supply rated maximum</td>
<td>1100W</td>
</tr>
<tr>
<td>Total output BTU (note: 1000 BTU/hr = 293W)</td>
<td>3793 BTU/hr, 1100W</td>
</tr>
<tr>
<td>Input-voltage range and frequency</td>
<td>115V to 240 VAC, 50 to 60 Hz</td>
</tr>
<tr>
<td>Input current</td>
<td>12-6A</td>
</tr>
<tr>
<td>Output ratings</td>
<td>-56V at 19.64A</td>
</tr>
<tr>
<td>Output holdup time</td>
<td>10 ms minimum at 102.5VAC</td>
</tr>
<tr>
<td>Power-supply input receptacles</td>
<td>IEC 320-C16 (IEC60320-C16)</td>
</tr>
<tr>
<td>Power cord rating</td>
<td>13A</td>
</tr>
<tr>
<td>Physical specifications</td>
<td>(H x W x D): 1.58 x 3.25 x 13.7 in Weight: 3 lb (1.4 kg)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>23° to 113°F (-5° to 45°C)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40° to 158°F (-40° to 70°C)</td>
</tr>
<tr>
<td>Relative humidity operating and non-operating noncondensing</td>
<td>5% to 90% noncondensing</td>
</tr>
<tr>
<td>Altitude</td>
<td>10,000 ft. (3000 meters), up to 45°C</td>
</tr>
<tr>
<td></td>
<td>C9300-48T: 305,870</td>
</tr>
<tr>
<td></td>
<td>C9300-24U: 238,410</td>
</tr>
</tbody>
</table>
## Description

### Specification

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR-C1-1100WAC</td>
<td>PWR-C1-715WAC</td>
</tr>
<tr>
<td>C9300-48U: 227,410</td>
<td></td>
</tr>
</tbody>
</table>

### EMI and EMC compliance

- FCC Part 15 (CFR 47) Class A
- ICES-003 Class A
- EN 55022 Class A
- CISPR 22 Class A
- AS/NZS 3548 Class A
- BSMI Class A (AC input models only)
- VCCI Class A
- EN 55024, EN300386, EN 50082-1, 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

- UL 60950-1, CAN/CSA-C22.2 No. 60950-1, EN 60950-1, IEC 60950-1, CCC, CE Marking

### LED indicators

- "AC OK": Input power to the power supply is OK
- "PS OK": Output power from the power supply is OK

---

### Power Consumption of Standalone 9300 Series Switches

Table 11 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 11. Power Consumption of Standalone 9300 Series Switches

<table>
<thead>
<tr>
<th>SKU</th>
<th>FEP</th>
<th>Uplink</th>
<th>Input Voltage</th>
<th>Half Port Traffic</th>
<th>Full Port Traffic</th>
<th>Weighted Average Power</th>
<th>No Link</th>
<th>PoE Test (No Traffic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C9300-48U</td>
<td>115V</td>
<td>Not Installed</td>
<td>115Vac</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>25% 50% 95% 100%</td>
<td>98.1</td>
<td></td>
</tr>
<tr>
<td>C9300-715W</td>
<td>115V</td>
<td>Not Installed</td>
<td>115Vac</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>25% 50% 95% 100%</td>
<td>98.1</td>
<td></td>
</tr>
<tr>
<td>NM-8-10G</td>
<td>115V</td>
<td>Not Installed</td>
<td>115Vac</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>0.01% / EEE 10% 30% 50% 100%</td>
<td>25% 50% 95% 100%</td>
<td>98.1</td>
<td></td>
</tr>
<tr>
<td>SKU</td>
<td>FEP</td>
<td>Uplink</td>
<td>Input</td>
<td>Half Port Traffic</td>
<td>Full Port Traffic</td>
<td>Weighted Average Pwr</td>
<td>No Link</td>
<td>PoE Test (No Traffic)</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>--------</td>
<td>--------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>---------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.01%</td>
<td>10%</td>
<td>50%</td>
<td>100%</td>
<td>0.01%</td>
</tr>
<tr>
<td>24P</td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>85.6</td>
<td>89.8</td>
<td>92.2</td>
<td>94.4</td>
<td>95.6</td>
</tr>
<tr>
<td></td>
<td>115Vac</td>
<td>NM-4-G</td>
<td></td>
<td>87.5</td>
<td>92.0</td>
<td>96.5</td>
<td>97.7</td>
<td>98.5</td>
</tr>
<tr>
<td></td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>86.1</td>
<td>92.3</td>
<td>94.6</td>
<td>95.6</td>
<td>96.6</td>
</tr>
<tr>
<td>350W</td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>88.1</td>
<td>98.6</td>
<td>99.5</td>
<td>99.6</td>
<td>99.9</td>
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<tr>
<td></td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>87.1</td>
<td>92.3</td>
<td>98.1</td>
<td>98.3</td>
<td>98.8</td>
</tr>
<tr>
<td></td>
<td>231Vac</td>
<td>NM-8-G</td>
<td></td>
<td>89.0</td>
<td>97.9</td>
<td>99.8</td>
<td>100.0</td>
<td>101.5</td>
</tr>
<tr>
<td>555W</td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>85.4</td>
<td>95.3</td>
<td>99.4</td>
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<td></td>
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<td></td>
<td>96.0</td>
<td>101.6</td>
<td>107.6</td>
<td>108.4</td>
<td>109.7</td>
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<tr>
<td></td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>94.3</td>
<td>104.5</td>
<td>105.8</td>
<td>106.1</td>
<td>106.6</td>
</tr>
<tr>
<td>715W</td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>93.4</td>
<td>103.9</td>
<td>104.8</td>
<td>105.0</td>
<td>105.5</td>
</tr>
<tr>
<td></td>
<td>231Vac</td>
<td>NM-4-G</td>
<td></td>
<td>91.8</td>
<td>102.0</td>
<td>103.0</td>
<td>103.3</td>
<td>103.7</td>
</tr>
<tr>
<td></td>
<td>231Vac</td>
<td>NM-8-G</td>
<td></td>
<td>95.8</td>
<td>104.5</td>
<td>107.3</td>
<td>107.6</td>
<td>108.4</td>
</tr>
<tr>
<td></td>
<td>231Vac</td>
<td>NM-8-G</td>
<td></td>
<td>94.0</td>
<td>103.0</td>
<td>105.1</td>
<td>105.4</td>
<td>105.6</td>
</tr>
</tbody>
</table>

Note: The table above represents measured P(W) values for Cisco products. The values are provided for different power levels and conditions.
| SKU | FEP | Uplink | Input | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% | 0.01% / EEE | 10% | 50% | 50% | 100% |
|-----|-----|-------|-------|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|
| NM-4-UG | 115Vac | 95.3 | 103.5 | 106.8 | 108.8 | 188.0 | 111.9 | 119.9 | 115.5 | 116.2 | 113.1 | 94.3 | 215.0 | 332.6 | 524.4 | 572.1 |
| | 230Vac | 94.0 | 102.2 | 105.2 | 109.7 | 178.4 | 111.3 | 117.7 | 112.1 | 112.8 | 110.2 | 93.1 | 212.2 | 334.8 | 519.3 | 555.8 |
| | 115Vac | 98.7 | 112.5 | 112.7 | 112.5 | 171.5 | 119.7 | 120.5 | 121.2 | 122.8 | 128.2 | 99.2 | 219.2 | 336.5 | 518.8 | 576.6 |
| | 230Vac | 97.1 | 110.7 | 111.4 | 111.9 | 171.6 | 119.2 | 120.0 | 120.7 | 122.3 | 127.6 | 97.9 | 215.5 | 339.5 | 514.2 | 560.5 |
| | 115Vac | 96.9 | 110.1 | 110.7 | 111.0 | 111.9 | 178.3 | 118.2 | 119.0 | 117.7 | 115.5 | 126.7 | 97.6 | 217.4 | 335.4 | 517.4 | 577.8 |
| | 230Vac | 95.6 | 109.3 | 109.7 | 110.1 | 111.0 | 171.7 | 117.5 | 118.2 | 117.0 | 118.8 | 96.0 | 213.0 | 326.9 | 519.3 | 558.8 |
| | 115Vac | 100.5 | 113.4 | 114.2 | 114.6 | 116.5 | 170.4 | 114.5 | 115.4 | 116.1 | 118.0 | 123.0 | 99.5 | 215.0 | 334.7 | 510.8 | 568.8 |
| | 230Vac | 99.4 | 112.8 | 113.5 | 113.9 | 114.9 | 170.3 | 114.0 | 114.9 | 115.6 | 117.4 | 122.5 | 98.4 | 212.3 | 327.4 | 517.4 | 553.1 |
| C9300-4XU | 1100W | Not Installed | 96.0 | 110.2 | 110.9 | 111.2 | 111.7 | 115.6 | 115.5 | 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 | 172.1 | 110.0 | 110.5 | 110.4 | 115.0 | 108.9 | 95.6 | 308.6 | 529.4 | 889.9 | 978.8 |
| | 115Vac | 97.4 | 109.8 | 109.0 | 110.7 | 111.0 | 171.9 | 115.3 | 117.8 | 118.9 | 119.0 | 114.0 | 96.4 | 319.0 | 527.3 | 848.0 | 1016.3 |
| | 230Vac | 97.4 | 109.3 | 107.4 | 108.7 | 110.0 | 171.8 | 113.4 | 112.2 | 117.0 | 117.4 | 112.4 | 94.9 | 314.3 | 515.6 | 896.0 | 984.3 |
| | 115Vac | 104.0 | 116.5 | 119.0 | 119.5 | 120.1 | 174.7 | 112.6 | 116.3 | 113.0 | 125.2 | 114.9 | 326.2 | 555.0 | 938.6 | 1055.6 |
| | 230Vac | 102.8 | 118.0 | 117.1 | 117.3 | 118.3 | 176.4 | 116.4 | 114.8 | 120.5 | 121.7 | 121.2 | 103.6 | 301.4 | 514.4 | 890.0 | 950.6 |
| | 115Vac | 102.9 | 117.2 | 116.8 | 118.0 | 119.0 | 178.8 | 123.8 | 124.6 | 125.3 | 127.0 | 122.2 | 102.5 | 314.1 | 534.4 | 934.0 | 1073.6 |
| | 230Vac | 101.9 | 114.9 | 115.5 | 115.9 | 117.0 | 179.9 | 123.0 | 123.7 | 124.4 | 126.1 | 121.4 | 101.7 | 316.9 | 537.9 | 938.2 | 1088.3 |
| | 115Vac | 106.7 | 120.4 | 121.1 | 121.5 | 122.3 | 131.7 | 131.5 | 132.4 | 131.0 | 130.0 | 105.7 | 330.0 | 575.7 | 941.8 | 1041.4 |
| | 230Vac | 105.0 | 118.5 | 119.2 | 119.6 | 120.2 | 131.9 | 139.4 | 139.0 | 138.6 | 132.9 | 104.3 | 324.5 | 549.0 | 908.0 | 998.9 |
| C9300-2XU | 1100W | NM-8-UG | 115Vac | 188.0 | 195.7 | 196.8 | 197.4 | 198.9 | 208.8 | 244.6 | 227.0 | 218.6 | 213.0 | 168.6 | 316.2 | 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 | 216.9 | 219.215 | 352.2 | 505.0 | 749.7 | 816.6 |
Safety and Compliance

Table 12 lists the safety and compliance information for the Cisco Catalyst 9300 Series.

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety certifications</td>
<td>• UL 60950-1&lt;br&gt;• CAN/CSA-C22.2 No. 60950-1&lt;br&gt;• EN 60950-1&lt;br&gt;• IEC 60950-1&lt;br&gt;• AS/NZS 60950.1&lt;br&gt;• IEEE 802.3</td>
</tr>
<tr>
<td>Electromagnetic emissions certifications</td>
<td>• 47 CFR Part 15&lt;br&gt;• CISPR22 Class A&lt;br&gt;• EN 300 386 V1.6.1&lt;br&gt;• EN 55022 Class A&lt;br&gt;• EN 55032 Class A&lt;br&gt;• CISPR 32 Class A&lt;br&gt;• EN61000-3-2&lt;br&gt;• EN61000-3-3&lt;br&gt;• ICES-003 Class A&lt;br&gt;• TCVN 7189 Class A&lt;br&gt;• V-3 Class A&lt;br&gt;• CISPR24&lt;br&gt;• EN 300 386&lt;br&gt;• EN55024&lt;br&gt;• TCVN 7317</td>
</tr>
<tr>
<td>Environmental</td>
<td>Reduction of Hazardous Substances (ROHS) 5</td>
</tr>
</tbody>
</table>

Warranty

Cisco Enhanced Limited Lifetime Hardware Warranty

The Cisco Catalyst 9300 Series Switches come with a Cisco Enhanced Limited Lifetime 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 13 provides information about the E-LLW.
Table 13. E-LLW Details

<table>
<thead>
<tr>
<th></th>
<th><strong>Cisco E-LLW</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Devices covered</td>
<td>Applies to Cisco Catalyst 9300 Series Switches.</td>
</tr>
<tr>
<td>Warranty duration</td>
<td>As long as the original customer owns the product.</td>
</tr>
<tr>
<td>End-of-life policy</td>
<td>In the event of discontinuance of product manufacture, Cisco warranty support is limited to 5 years from the announcement of discontinuance.</td>
</tr>
<tr>
<td>Hardware replacement</td>
<td>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.</td>
</tr>
<tr>
<td>Effective date</td>
<td>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).</td>
</tr>
<tr>
<td>TAC support</td>
<td>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.</td>
</tr>
<tr>
<td>Cisco.com access</td>
<td>Warranty allows guest access only to Cisco.com.</td>
</tr>
</tbody>
</table>

**Cisco Services**

Achieve infrastructure excellence faster and with less risk. Cisco Catalyst 9K Services provide expert guidance to help you successfully deploy, manage and support the new Catalyst 9K Series Switches. 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 minimize disruption and achieve operational excellence to extract maximum value from your 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 Essential 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 DNA Essentials and 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 16 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](https://www.cisco.com/en/US/ordering/or13/or8/order_customer_help_how_to_order_listing.html).

**Table 14. Ordering Information**

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<thead>
<tr>
<th>Switches</th>
<th>Product Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C9300-24T-E</td>
<td>Catalyst 9300 24-port data only, Network Essentials</td>
</tr>
<tr>
<td></td>
<td>C9300-24T-A</td>
<td>Catalyst 9300 24-port data only, Network Advantage</td>
</tr>
<tr>
<td></td>
<td>C9300-24P-E</td>
<td>Catalyst 9300 24-port PoE+, Network Essentials</td>
</tr>
<tr>
<td></td>
<td>C9300-24P-A</td>
<td>Catalyst 9300 24-port PoE+, Network Advantage</td>
</tr>
<tr>
<td></td>
<td>C9300-24U-E</td>
<td>Catalyst 9300 24-port UPOE, Network Essentials</td>
</tr>
<tr>
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<td>C9300-24U-A</td>
<td>Catalyst 9300 24-port UPOE, Network Advantage</td>
</tr>
<tr>
<td></td>
<td>C9300-24UX-E</td>
<td>Catalyst 9300 24-port mGig UPOE, Network Essentials</td>
</tr>
<tr>
<td></td>
<td>C9300-24UX-A</td>
<td>Catalyst 9300 24-port mGig UPOE, Network Advantage</td>
</tr>
<tr>
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<td>C9300-48T-E</td>
<td>Catalyst 9300 48-port data only, Network Essentials</td>
</tr>
<tr>
<td></td>
<td>C9300-48T-A</td>
<td>Catalyst 9300 48-port data only, Network Advantage</td>
</tr>
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<td></td>
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<td>Catalyst 9300 48-port PoE+, Network Essentials</td>
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<td>Catalyst 9300 48-port UPOE, Network Advantage</td>
</tr>
<tr>
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<td>C9300-48UXM-E</td>
<td>Catalyst 9300 48-port 2.5G (12 mGig) UPOE, Network Essentials</td>
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<tr>
<td></td>
<td>C9300-48UXM-A</td>
<td>Catalyst 9300 48-port 2.5G (12 mGig) UPOE, Network Advantage</td>
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<table>
<thead>
<tr>
<th>Network modules</th>
<th>Product Number</th>
<th>Product Description</th>
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<tbody>
<tr>
<td></td>
<td>C9300-NM-4G</td>
<td>Catalyst 9300 4 x 1GE Network Module</td>
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<td></td>
<td>C9300-NM-4G=</td>
<td>Catalyst 9300 4 x 1GE Network Module, spare</td>
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<tr>
<td></td>
<td>C9300-NM-8X</td>
<td>Catalyst 9300 8 x 10GE Network Module</td>
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<td>C9300-NM-8X=</td>
<td>Catalyst 9300 8 x 10GE Network Module, spare</td>
</tr>
<tr>
<td></td>
<td>C9300-NM-2Q</td>
<td>Catalyst 9300 2 x 40GE Network Module</td>
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## Switches

<table>
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<th>Product Description</th>
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<tbody>
<tr>
<td>C9300-NM-2Q=</td>
<td>Catalyst 9300 2 x 40GE Network Module, spare</td>
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## Stacking cables

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<thead>
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<th>Product Number</th>
<th>Product Description</th>
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<tbody>
<tr>
<td>STACK-T1-50CM</td>
<td>50CM Type 3 Stacking Cable</td>
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<tr>
<td>STACK-T1-50CM=</td>
<td>50CM Type 3 Stacking Cable, spare</td>
</tr>
<tr>
<td>STACK-T1-1M</td>
<td>1M Type 3 Stacking Cable</td>
</tr>
<tr>
<td>STACK-T1-1M=</td>
<td>1M Type 3 Stacking Cable, spare</td>
</tr>
<tr>
<td>STACK-T1-3M</td>
<td>3M Type 3 Stacking Cable</td>
</tr>
<tr>
<td>STACK-T1-3M=</td>
<td>3M Type 3 Stacking Cable, spare</td>
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## Software licenses

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<th>Product Number</th>
<th>Product Description</th>
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<tbody>
<tr>
<td>C1A1TCAT93001</td>
<td>C9300 C1 Advantage Term, 24-Port: Includes Term Licenses for DNA Advantage, 25 ISE Base &amp; 25 ISE Plus Endpoints, 25 Stealthwatch Flows (including Virtual Flow Collector &amp; Management Console). Requires separate purchase of ISE appliance/ISE VM and DNA Center appliance</td>
</tr>
<tr>
<td>C1A1TCAT93001-3Y</td>
<td>C9300 C1 Advantage, 24-port, 3Y Term – DNA, 25 ISE PLS and ISE BASE, 25 SWATCH</td>
</tr>
<tr>
<td>C1A1TCAT93001-5Y</td>
<td>C9300 C1 Advantage, 24-port, 5Y Term – DNA, 25 ISE PLS and ISE BASE, 25 SWATCH</td>
</tr>
<tr>
<td>C1A1TCAT93001-7Y</td>
<td>C9300 C1 Advantage, 24-port, 7Y Term – DNA, 25 ISE PLS and ISE BASE, 25 SWATCH</td>
</tr>
<tr>
<td>C1A1TCAT93002</td>
<td>C9300 C1 Advantage Term, 48-Port: Includes Term Licenses for DNA Advantage, 25 ISE Base &amp; 25 ISE Plus Endpoints, 25 Stealthwatch Flows (including Virtual Flow Collector &amp; Management Console). Requires separate purchase of ISE appliance/ISE VM and DNA Center appliance</td>
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<tr>
<td>C1A1TCAT93002-3Y</td>
<td>C9300 C1 Advantage, 48-port, 3Y Term – DNA, 25 ISE PLS and ISE BASE, 25 SWATCH</td>
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<td>C1A1TCAT93002-7Y</td>
<td>C9300 C1 Advantage, 48-port, 7Y Term – DNA, 25 ISE PLS and ISE BASE, 25 SWATCH</td>
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<tr>
<td>C1AA1TCAT93001</td>
<td>C9300 C1 Advantage Add-On Term: Includes Term Licenses for 25 ISE Base &amp; 25 ISE Plus Endpoints, 25 Stealthwatch Flows (including Virtual Flow Collector &amp; Management Console). Requires separate purchase of ISE appliance/ISE VM and DNA Center appliance</td>
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<tr>
<td>C1AA1TCAT93001-3Y</td>
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<td>C1AA1TCAT93001-5Y</td>
<td>C9300 C1 Advantage Add-on 5Y Term - 25 ISE PLS and ISE BASE, 25 SWATCH</td>
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<tr>
<td>C1AA1TCAT93001-7Y</td>
<td>C9300 C1 Advantage Add-on 7Y Term - 25 ISE PLS and ISE BASE, 25 SWATCH</td>
</tr>
<tr>
<td>C9300-DNA-E-24-3Y</td>
<td>C9300 DNA Essentials, 24-port, 3 Year Term license</td>
</tr>
<tr>
<td>C9300-DNA-E-24-5Y</td>
<td>C9300 DNA Essentials, 24-port, 5 Year Term license</td>
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### Switches

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tr>
<td>C9300-DNA-E-24-7Y</td>
<td>C9300 DNA Essentials, 24-port, 7 Year Term license</td>
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<tr>
<td>C9300-DNA-A-24-3Y</td>
<td>C9300 DNA Advantage, 24-port, 3 Year Term license</td>
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<td>C9300-DNA-A-24-5Y</td>
<td>C9300 DNA Advantage, 24-port, 5 Year Term license</td>
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<td>C9300-DNA-A-24-7Y</td>
<td>C9300 DNA Advantage, 24-port, 7 Year Term license</td>
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<tr>
<td>C9300-DNA-E-48-3Y</td>
<td>C9300 DNA Essentials, 48-port, 3 Year Term license</td>
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<td>C9300-DNA-E-48-5Y</td>
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<td>C9300-DNA-E-48-7Y</td>
<td>C9300 DNA Essentials, 48-port, 7 Year Term license</td>
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<tr>
<td>C9300-DNA-A-24-3Y</td>
<td>C9300 DNA Advantage, 48-port, 3 Year Term license</td>
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<tr>
<td>C9300-DNA-A-24-5Y</td>
<td>C9300 DNA Advantage, 48-port, 5 Year Term license</td>
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<tr>
<td>C9300-DNA-A-24-7Y</td>
<td>C9300 DNA Advantage, 48-port, 7 Year Term license</td>
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<tr>
<td>C9300-LIC</td>
<td>Electronic DNA Upgrade License for C9300 Switches</td>
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### Power supplies

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<tr>
<th>Product Number</th>
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<tr>
<td>PWR-C1-350WAC=</td>
<td>350WAC power supply spare</td>
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<tr>
<td>PWR-C1-715WAC=</td>
<td>715WAC power supply spare</td>
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<tr>
<td>PWR-C1-1100WAC=</td>
<td>1100WAC power supply spare</td>
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### Cisco StackWise-480 and StackPower cables

<table>
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<th>Product Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>STACK-T1-50CM=</td>
<td>Cisco StackWise-480 50cm stacking cable spare</td>
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<tr>
<td>STACK-T1-1M=</td>
<td>Cisco StackWise-480 1m stacking cable spare</td>
</tr>
<tr>
<td>STACK-T1-3M=</td>
<td>Cisco StackWise-480 3m stacking cable spare</td>
</tr>
<tr>
<td>CAB-SPWR-30CM=</td>
<td>Cisco Catalyst 3850 StackPower cable 30cm spare</td>
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<tr>
<td>CAB-SPWR-150CM=</td>
<td>Cisco Catalyst 3850 StackPower cable 150cm spare</td>
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### Spare power cords

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>CAB-TA-NA=</td>
<td>AC power cord for Cisco Catalyst (North America)</td>
</tr>
<tr>
<td>CAB-TA-AP=</td>
<td>AC power cord for Cisco Catalyst (Australia)</td>
</tr>
<tr>
<td>CAB-TA-AR=</td>
<td>AC power cord for Cisco Catalyst (Argentina)</td>
</tr>
<tr>
<td>CAB-TA-SW=</td>
<td>AC power cord for Cisco Catalyst (Switzerland)</td>
</tr>
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</table>
### Switches

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

### 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](https://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html).

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### Document History

<table>
<thead>
<tr>
<th>New or revised topic</th>
<th>Described In</th>
<th>Date</th>
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<tbody>
<tr>
<td>Added new platform 36 ports x 2.5G + 12 mGig ports. Added new 4x mGig uplink module details. Added RESTCONF support. Added support for Cisco AVB.</td>
<td>Ports</td>
<td>Mar 31, 2018</td>
</tr>
<tr>
<td>Added support for Cisco SD-DNA Service for Bonjour. Corrected references to Catalyst 9000 switches, rather than Catalyst 9000 Series switches. Corrected references to Cisco IOS XE, rather than IOS-XE.</td>
<td>Bonjour</td>
<td>Dec 15, 2017</td>
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