# Cisco

# C1-WSC3850-48XS-S

## Datasheet

# Product Overview

- Cisco C1-WSC3850-48XS-S belongs to the Catalyst 3850 series, designed for high-density, next-generation access switching.

- It is ideally suited for enterprises, education campuses, and service providers seeking unified wired and wireless management.

- Core specifications include 48 × 10 Gigabit Ethernet SFP+ ports, 1280 Gbps switching capacity, and 909 Mpps forwarding rate.

- The device delivers advanced features like converged wired and wireless access, integrated wireless controller, and StackWise-480 stacking support.

- Centralized management and CLI reduce deployment and operational complexity, while flexible licensing adapts to evolving network needs.

- C1-WSC3850-48XS-S empowers scalable, secure, and streamlined edge networking for growing organizations across multiple regions.

# Product Highlights

- **Unified Wired and Wireless Platform:** Delivers seamless access for both wired and wireless services on a single Cisco IOS XE platform, simplifying operations.

- **High Wireless Capacity:** Each 48-port switch supports up to 40 Gbps wireless throughput, ensuring scalability as wireless needs grow.

- **Flexible Controller Modes:** Can function as both Mobility Agent and Mobility Controller, adapting to diverse network topologies.

- **Simplified Image Management:** Single Cisco IOS Software image unifies features, reducing software validation efforts and speeding up deployments.

# Detailed Features



## C1-WSC3850-48XS-S

Quote | Help

| Component | Specification |
|---|---|
| Ports | 48 × 10 Gigabit Ethernet SFP+ ports |
| Switching Capacity | 1280 Gbps |
| Forwarding Rate | 909 Mpps |
| Stacking | StackWise-480, up to 9 units |
| Power Supply Options | PWR-C1-715WAC (715W), PWR-C1-1100WAC (1100W) |

## High-Capacity 10GbE Access

Equipped with 48 × 10 Gigabit Ethernet SFP+ ports, the C1-WSC3850-48XS-S handles large volumes of traffic and supports high-speed network backbones. Its robust switching architecture ensures reliable data delivery for demanding enterprise workloads and real-time applications.

## Converged Wired and Wireless Services

The platform integrates both wired and wireless network access on one device, running unified Cisco IOS XE Software. This improves operational efficiency, streamlines maintenance, and eliminates the need for separate controllers or management solutions, which reduces infrastructure complexity.

## Resilient Stackable Design

Supporting up to 9-member stacks with StackWise-480 technology, this switch enhances availability with Stateful Switchover (SSO). The architecture ensures uninterrupted service and simple scalability, allowing organizations to expand while confidently maintaining network uptime.

## Advanced Quality of Service and Monitoring

Granular QoS and integrated Flexible NetFlow (FNF) are provided for both wired and wireless traffic. This enables precise application visibility and dynamic prioritization of critical services across the campus network, helping to maintain an excellent user experience.

## Integrated Wireless Controller

With the wireless controller built-in, the switch manages up to 100 access points and 2,000 clients per unit or stack. This distributed model offloads the need for dedicated appliances and enables cost-effective, scalable wireless expansion as business requirements grow.

## Dual Role Operation

The C1-WSC3850-48XS-S can act as a Mobility Agent or Mobility Controller. It supports seamless CAPWAP tunnel termination, security policy enforcement, and advanced functions like Radio Resource Management, providing flexibility for various deployment scenarios in large and medium-sized enterprises.

## Unified Management with Single Console

A single CLI console port enables centralized management for wired and wireless networks, reducing administrative touchpoints. This approach simplifies both deployment and ongoing monitoringlowering operational costs and decreasing the risk of configuration errors.

## Future-Proof Scalability

Supports current IEEE 802.11n and upcoming 802.11ac wireless standards, assuring robust performance today and headroom for future upgrades. Combined with high device density, the switch helps organizations smoothly transition to emerging technologies without major hardware changes.

# Technical Specifications

## Product Specifications

| Feature | Value |
| --- | --- |
| Port Configuration | 48 × 10 Gigabit Ethernet SFP+ ports |
| Switching Capacity | 1280 Gbps |
| Forwarding Rate | 909 Mpps |
| Stacking Bandwidth | 480 Gbps |
| DRAM | 8 GB |
| Flash Memory | 8 GB |
| MAC Addresses | 32,000 |
| IPv4 Routes | 24,000 |
| Flexible NetFlow Entries | 96,000 flows |
| VLAN IDs | 4,000 |
| Jumbo Frame Support | 9,198 bytes |

| Feature | Value |
|---|---|
| Wireless APs Supported | 100 per switch/stack |
| Wireless Clients Supported | 2,000 per switch/stack |
| Dimensions (H × W × D) | 1.75 in × 17.5 in × 20.1 in (4.45 cm × 44.5 cm × 51.1 cm) |
| MTBF | 286,900 hours |
| Power Supply Options | PWR-C1-715WAC (715W), PWR-C1-1100WAC (1100W) |
| Power Consumption | Idle: 267.0 W, 100% Traffic: 288.1 W |
| Operating Temperature (Normal) | -5°C to +45°C (up to 5,000 ft) |
| Operating Temperature (Short-term) | -5°C to +50°C (≤96 hrs/year) |
| Humidity (Noncondensing) | 10% to 95% |
| Acoustic Noise | 45 dB(A) max at 25°C |
| Stacking | StackWise-480 (up to 9 units) |
| Management Interfaces | 1 × RJ-45 console, 1 × 10/100 management |
| Security Features | 802.1X authentication, Port security |
| Standards Compliance | IEEE 802.3ae (10GbE), UL, CE, NEBS certified |
| Minimum IOS Version | 16.6.1 or later |
| Key Features | 48-Port 10GbE SFP+ Connectivity, Integrated Wireless Controller for up to 100 APs, StackWise-480 Technology, Energy Efficient Ethernet (EEE) support |

## Product Comparison

| Feature | C1-WSC3850-48XS-S | C9300L-48P-4G-E | C9500-16X-EDU |
|---|---|---|---|
| Fixed Ports | 48 × 10 Gigabit Ethernet SFP+ | 48 × 1G PoE+ + 4 × 1G SFP | 16 × 10G SFP+ |
| Switching Capacity | 1280 Gbps | 104 Gbps | 480 Gbps |
| Forwarding Rate | 909 Mpps | 77.38 Mpps | 360 Mpps |
| Stacking | Up to 9 units (StackWise-480) | Up to 8 units (StackWise-320) | StackWise Virtual, up to 2 units |
| Integrated Wireless Controller | Yes (100 APs, 2,000 clients) | No | No |

| Feature | C1-WSC3850-48XS-S | C9300L-48P-4G-E | C9500-16X-EDU |
|---|---|---|---|
| PoE Support | No (SFP+ only) | PoE+ supported on all 48 ports | No |
| Management | Single IOS XE, single console; Unified wired/ wireless management | Cisco DNA Center, Web UI, CLI | Web UI, CLI, UADP ASIC-based management |
| Dimensions (H × W × D) | 1.75 in × 17.5 in × 20.1 in | 1.73 × 17.5 × 13.8 in | 1.73 in × 17.5 in × 17.5 in |

## Accessories

| Category | Accessories |
|---|---|
| Included Accessories | - Power Supply (PWR-C1-715WAC or 1100WAC)<br>- Mounting Brackets<br>- RJ-45 Console Cable |
| Optional Accessories | - SFP+ Transceivers<br>- Redundant Power Supply<br>- StackWise-480 Stacking Kit |

# Support & Warranty

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# References

[1] Cisco Systems. (2024). Cisco Catalyst 3850 Series Switches Datasheet. Retrieved from https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-3850-series-switches/datasheet_c78-720918.html