

WS-C3850-12S-S Datasheet

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Overview

Cisco Catalyst WS-C3850-12S-S is the next generation enterprise-level stackable switch that is integrated with 12 SFP ports in IP base feature set.

Quick Specs

Figure 1 shows the appearance of the Cisco Catalyst WS-C3850-12S-S.

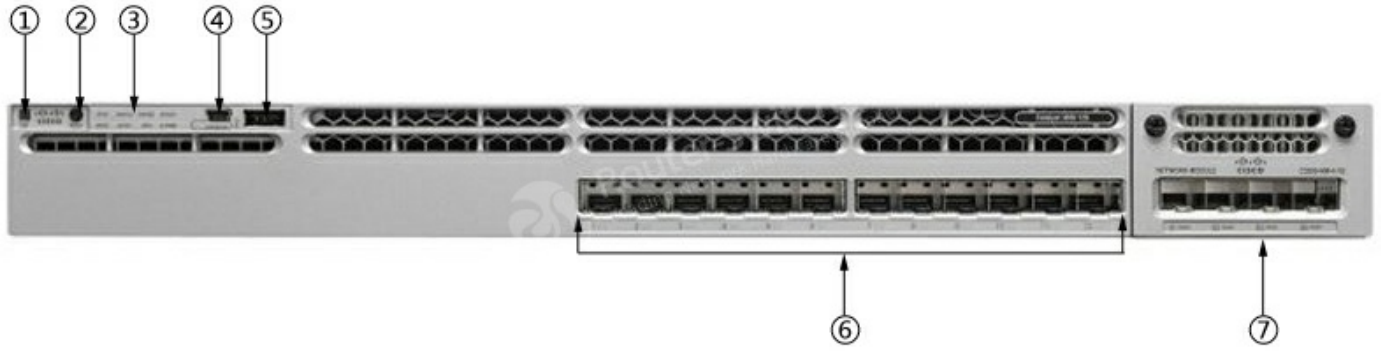


Table 1 shows the Quick Specs.

Product Code	WS-C3850-12S-S
Enclosure Type	1 RU
Feature Set	IP base
Network SFP uplink module selection	C3850-NM-4-1G C3850-NM-2-10G
Ports	12 ports of SFP Ethernet fiber connection with Flexible Netflow feature
Maximum stacking number	9
Stack bandwidth	480Gbps
Forwarding Performance	68.4Mpps
Switching Capacity	68Gbps
RAM	4 G
Flash Memory	2 G
Number of AP per switch/stack	100
Number of wireless clients per switch/stack	2000
Dimensions	44.5 cm x 45.0 cm x 4.45 cm
Package Weight	17.49 Kg

Product Details

Figure 2 shows the front panel of the Cisco 3850 series 12 ports switch.



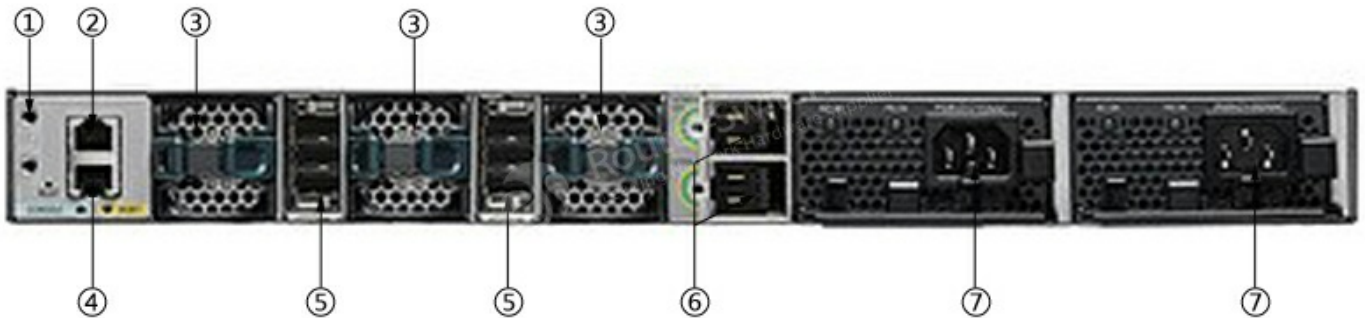
Note

(1) UID (blue beacon) (2) Mode button (3) Status LEDs (4) USB mini-Type B (console) port (5) USB Type A storage port (6) 12 ports of SFP (7) Network SFP uplink module slot

The status LEDs include STAT (status), DUPLX (duplex), SPEED, STACK, SYST (system), ACTV (active) and S-PWR (Stack Power).

The switch supports one hot-swappable network module that provides uplink ports to connect to other devices. The switch should only be operated with either a network module or a blank module installed.

Figure 3 shows the back panel of the WS-C3850-12S-S switch.



Note

(1) Ground connector (2) CONSOLE (RJ-45 console port) (3) Fan modules (4) MGMT port (5) UStackWise port connectors (6) StackPower connectors (7) Power supply modules

Figure 4 shows the StackWise-480 and StackPower connectors.

In order to stacking with LAN base feature set, WS-C3850-12S-S needs to configure in LAN base mode from CLI.



Figure 5 shows the unboxing view of WS-C3850-12S-S.



The Modules, Licenses and Accessories

Table 2 shows some recommended modules, licenses and accessories of this switch.

Models	Description
C3850-NM-4-1G	Cisco 3850 Series 4 x 1GE Network Module
C3850-NM-2-10G	Cisco 3850 Series 2 x 10GE Network Module
L-C3850-12-S-E=	C3850-12 IP Base to IP Services Electronic RTU License
PWR-C1-350WAC	Cisco 3850 Series Power Supply 350W AC
PWR-C1-350WAC/2	Cisco 3850 Series Secondary Power Supply 350W AC Config 1 Secondary Power Supply
STACK-T1-50CM=	Cisco StackWise-480 50cm stacking cable for Cisco Catalyst 3850 series switch
STACK-T1-1M=	Cisco StackWise-480 1m stacking cable for Cisco Catalyst 3850 series switch

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Specification

WS-C3850-12S-S Specification	
model info:	WS-C3850-12S-S
enclosure type	Rack-mountable - 1U
Ports	12 x SFP ports
Network management Interface	<ul style="list-style-type: none">● Ethernet management port: RJ-45 connectors, 4-pair Cat-5 UTP cabling● Management console port: RJ-45-to-DB9 cable for PC connections
Available PoE Power	None
Switching Capacity	68Gbps
Maximum stacking number	9
Stack Bandwidth	480Gbps
Forwarding Performance	68.4Mpps
FNF entries	48,000 flows
Maximum VLANs IDs	1,000
MAC Address Table Size	32K
CPU	Multicore CPU
RAM	4 G
Flash Memory	2 G
Wireless	
Number of AP per switch/stack	100
Number of wireless clients per switch/stack	2000
Total number of WLANs per switch	64
Wireless bandwidth per switch	up to 20Gbps
Supported Aironet AP series	3600, 3500, 2600, 1600, 1260, 1140, 1040
Expansion / Connectivity	
Console ports	USB (Type-B), Ethernet (RJ-45)
Expansion Slot(s)	1 network module slot and 1 power redundant slot
Network Modules Selection	<ul style="list-style-type: none">● C3850-NM-4-1G: 4 x 1G uplinks network module● C3850-NM-2-10G: 2 x 10G or 4 x 1G uplinks network module
Stacking cable	<ul style="list-style-type: none">● STACK-T1-50CM StackWise stacking cable with a 0.5 m length● STACK-T1-1M StackWise stacking cable with a 1.0 m length● STACK-T1-3M StackWise stacking cable with a 3.0 m length

Stack Power Cable (recommended)	<ul style="list-style-type: none"> ● CAB-SPWR-30CM stack power cable with a 30CM length ● CAB-SPWR-150CM stack power cable with a 150CM length
Power supply	PWR-C1-350WAC
Power Device	Power supply - redundant - plug-in module
Power Redundancy	optional
Voltage range (Auto)	100V-240V
Power Consumption of standalone(in Watts)	109.75 (Max)
Miscellaneous	
Width	17.5 Inches (44.5 cm)
Depth	17.7 Inches (45.0 cm)
Height	1.75 Inches (4.45 cm)
Weight	15.48 Pounds (7.02 Kg)
Rack Mounting Kit	optional
MTBF in hours	315,840
Compliant Standards	<ul style="list-style-type: none"> ● IEEE 802.1D Spanning Tree Protoco ● IEEE 802.1p CoS Prioritization ● IEEE 802.1Q VLAN ● IEEE 802.1s ● IEEE 802.1w ● IEEE 802.1X ● IEEE 802.1X-Rev ● IEEE 802.11 ● IEEE 802.1ab (LLDP) ● IEEE 802.3ad ● IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports ● IEEE 802.3 10BASE-T ● IEEE 802.3u 100BASE-TX ● IEEE 802.3ab 1000BASE-T ● IEEE 802.3z 1000BASE-X ● RMON I and II standards ● SNMP v1, v2c, and v3
System software / license	
System software	IOS IP Base (Upgradable)
EnergyWise license	ENERGY-MGMT, ENERGY-MGT-100-K9
Software license	<ul style="list-style-type: none"> ● C3850-12-S-E: IP Base to IP Services RTU paper license ● L-C3850-12-S-E: IP Base to IP Services RTU electronic license
Access Point Licenses	<ul style="list-style-type: none"> ● L-LIC-CT3850-UPG: Primary upgrade license SKU for Cisco 3850 wireless controller (e-delivery) ● L-LIC-CTIOS-1A: 1 access point adder license for Cisco IOS Software based wireless controller (e-delivery) ● LIC-CT3850-UPG: Primary upgrade license SKU for Cisco 3850 wireless controller (paper license) ● LIC-CTIOS-1A: 1 access point adder license for the Cisco IOS Software based wireless controller (paper license)

<p>Features</p>	<ul style="list-style-type: none"> ● RPS Support ● Jumbo Frames ● VLANs ● Voice Vlan ● VTPv2 ● CDPv2 ● LLDP ● 802.3ad LACP and PAgP ● PVST/PVST+ ● 802.1W/802.1S ● Port Fast/Uplink Fast ● Dynamic Trunking Protocol (DTP) ● port CoS Trust and Override ● Trusted Boundary ● ACL Classification ● Ingress Policing ● Auto QoS ● Per VLAN policies ● 802.1p queues ● Scheduling ● Priority Queuing ● Configure CoS Priority Queues ● Configure CoS Priority Queues ● Configure Queue Weights ● Configure Buffers and Thresholds ● Class & Policy Maps ● Modify CoS and DSCP Mapping ● Weighted Tail Drop ● IGMPv1,v2,v3 and MLDv1, v2 ● DHCP server ● DSCP transparency ● HSRP, VRRP, BGP ● RIPv1, v2 EIGRP, PIM OSPF, OSPFv3, EIGRPv6, BGPv4, IS-ISv4 ● VRF-lite ● PIM-SM/DM, PIM sparse-dense mode, SSM ● Flexible Netflow
<p>Advanced Network security</p>	<ul style="list-style-type: none"> ● Port security ● DHCP snooping ● Dynamic ARP inspection (DAI) ● IP source guard ● The Unicast Reverse Path Forwarding (uRPF) ● Bidirectional data support on a SPAN ● User authentication ● Private VLAN ● Router and VLAN ACLs ● complete identity and security ● Multidomain authentication ● MAC address notification ● IGMP filtering ● Cisco security VLAN ACL ● Secure Shell (SSH) Protocol, Kerberos, and Simple Network Management Protocol Version 3 (SNMPv3) ● Port-based ACLs ● TrustSec SXP ● IEEE 802.1ae ● TACACS+ and RADIUS authentication ● Cisco standard and extended IP security router ACLs ● Bridge protocol data unit (BPDU) Guard ● Spanning Tree Root Guard (STRG) ● Wireless end-to-end security

Management	<ul style="list-style-type: none"> ●BRIDGE-MIB ●CISCO-AUTH-FRAMEWORK-MIB ●CISCO-BGP4-MIB, BGP4-MIB ●CISCO-BRIDGE-EXT-MIB ●CISCO-BULK-FILE-MIB ●CISCO-CABLE-DIAG-MIB ●CISCO-CALLHOME-MIB ●CISCO-CEF-MIB ●CISCO-CIRCUIT-INTERFACE-MIB ●CISCO-ENTITY-VENDORTYPE-OID-MIB ●CISCO-CONTEXT-MAPPING-MIB ●CISCO-DEVICE-LOCATION-MIB ●CISCO-DHCP-SNOOPING-MIB ●CISCO-EIGRP-MIB ●CISCO-EMBEDDED-EVENT-MGR-MIB ●CISCO-ENTITY-FRU-CONTROL-MIB ●CISCO-ENTITY-SENSOR-MIB ●ENTITY-MIB ●CISCO-ERR-DISABLE-MIB ●CISCO-CONFIG-COPY-MIB ●CISCO-FLOW-MONITOR-MIB ●CISCO-FTP-CLIENT-MIB ●CISCO-HSRP-EXT-MIB ●CISCO-HSRP-MIB ●CISCO-IETF-ISIS-MIB ●CISCO-IF-EXTENSION-MIB ●CISCO-IGMP-FILTER-MIB ●CISCO-CONFIG-MAN-MIB ●CISCO-IP-CBR-METRICS-MIB ●CISCO-IPROUTE-MIB ●CISCO-IP-STAT-MIB ●CISCO-IP-URPF-MIB ●CISCO-L2L3-INTERFACE-CONFIG-MIB ●CISCO-LAG-MIB ●CISCO-LICENSE-MGMT-MIB ●CISCO-MAC-AUTH-BYPASS-MIB ●CISCO-MAC-NOTIFICATION-MIB ●CISCO-MDI-METRICS-MIB ●CISCO-FLASH-MIB ●CISCO-OSPF-MIB ●CISCO-OSPF-TRAP-MIB ●CISCO-PAE-MIB ●CISCO-PAGP-MIB ●CISCO-PIM-MIB ●CISCO-PING-MIB ●CISCO-PORT-QOS-MIB ●CISCO-PORT-SECURITY-MIB●CISCO-PORT-STORM-CONTROL-MIB ●CISCO-POWER-ETHERNET-EXT-MIB ●CISCO-PRIVATE-VLAN-MIB ●CISCO-PROCESS-MIB ●CISCO-PRODUCTS-MIB●CISCO-RF-MIB ●CISCO-RTP-METRICS-MIB ●CISCO-RTTMON-MIB ●CISCO-SMART-INSTALL-MIB ●CISCO-SNMP-TARGET-EXT-MIB ●CISCO-STACKMAKER-MIB ●CISCO-MEMORY-POOL-MIB ●CISCO-STP-EXTENSIONS-MIB ●CISCO-SYSLOG-MIB ●CISCO-TCP-MIB ●CISCO-UDLD-MIB ●CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB ●CISCO-VLAN-MEMBERSHIP-MIB ●CISCO-VTP-MIB ●EtherLike-MIB ●HC-RMON-MIB ●IEEE8021-PAE-MIB ●IEEE8023-LAG-MIB ●IF-MIB ●IGMP-MIB ●IGMP-STD-MIB ●IP-FORWARD-MIB ●IP-MIB ●IPROUTE-STD-MIB ●LLDP-EXT-MED-MIB ●LLDP-MIB ●NOTIFICATION-LOG-MIB ●OLD-CISCO-MEMORY-MIB ●CISCO-CDP-MIB ●POWER-ETHERNET-MIB ●RMON2-MIB ●RMON-MIB ●SNMP-COMMUNITY-MIB ●SNMP-FRAMEWORK-MIB ●SNMP-MPD-MIB ●SNMP-NOTIFICATION-MIB ●SNMP-PROXY-MIB ●SNMP-TARGET-MIB ●SNMP-USM-MIB ●SNMPv2-MIB ●SNMP-VIEW-BASED-ACM-MIB ●TCP-MIB ●UDP-MIB ●CISCO-IMAGE-MIB ●CISCO-STACKWISE-MIB ●AIRESPLACE-WIRELESS-MIB ●CISCO-LWAPP-IDS-MIB ●CISCO-LWAPP-AP-MIB ●CISCO-LWAPP-CCX-RM-MIB ●CISCO-LWAPP-CLIENT-ROAMING-MIB ●CISCO-LWAPP-DOT11-CCX-CLIENT-DIAG-MIB ●CISCO-LWAPP-DOT11-CCX-CLIENT-MIB ●CISCO-LWAPP-DOT11-CLIENT-CCX-REPORTS-MIB ●CISCO-LWAPP-DOT11-CLIENT-MIB ●CISCO-LWAPP-DOT11-MIB ●CISCO-LWAPP-DOWNLOAD-MIB ●CISCO-LWAPP-LINKTEST-MIB ●CISCO-LWAPP-MFP-MIB ●CISCO-LWAPP-MOBILITY-EXT-MIB ●CISCO-LWAPP-QOS-MIB ●CISCO-LWAPP-REAP-MIB ●CISCO-LWAPP-ROGUE-MIB ●CISCO-LWAPP-RRM-MIB ●CISCO-LWAPP-SI-MIB ●CISCO-LWAPP-TSM-MIB ●CISCO-LWAPP-WLAN-MIB ●CISCO-LWAPP-WLAN-SECURITY-MIB
Technical Support and Services	<ul style="list-style-type: none"> ● Cisco SMARTnet Service ● Cisco Smart Foundation Service ● Cisco SP Base Service ● Cisco Focused Technical Support Services

Environmental Ranges

With AC power supply Operating environment and altitude

Operating temperature up to 5000 ft (1500 m)	23°F to 113°F (-5°C to +45°C)
Operating temperature up to 10,000 ft (3000 m)	23°F to 104°F (-5°C to +40°C)
Short-term exception at sealevel with single fan failure	23°F to 113°F (-5°C to +45°C)
Short-term exception up to 5000 feet (1500 m)	23°F to 122°F (-5°C to 50°C)

Short-term exception up to 10,000 feet (3000 m)	23°F to 113°F (-5°C to 45°C)
With DC power supply Operating environment and altitude (NEBS)	
Operating temperature up to 6000 ft (1800 m)	23°F to 113°F (-5°C to +45°C)
Operating temperature up to 10,000 ft (3000 m)	23°F to 104°F (-5°C to +40°C)
Operating temperature up to 13,000 ft (4000m)	23°F to 95°F (-5°C to 35°C)
Short-term exception up to 6,000 feet (1800 m)	23°F to 131°F (-5°C to +55°C)
Short-term exception up to 10,000 feet (3000 m)	23°F to 122°F (-5°C to +50°C)
Short-term exception up to 13,000 feet (4000 m)	23°F to 113°F (-5°C to +45°C)
Short-term exception at sealevel with single fan failure	23°F to 113°F (-5°C to +45°)
Storage environment	-40°F to 160°F (-40°C to 70°C)
Operating altitude	Up to 13,000 Feet (Up to 4000 Meters)
Storage altitude	Up to 15,000 Feet (Up to 4573 Meters)
Operating relative humidity	10% to 95% noncondensing
Storage relative humidity	10% to 95% noncondensing

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Selection Decision

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Support and Resources

 [Comparison: Cisco Switches vs. HPE/Aruba Switches](#)

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