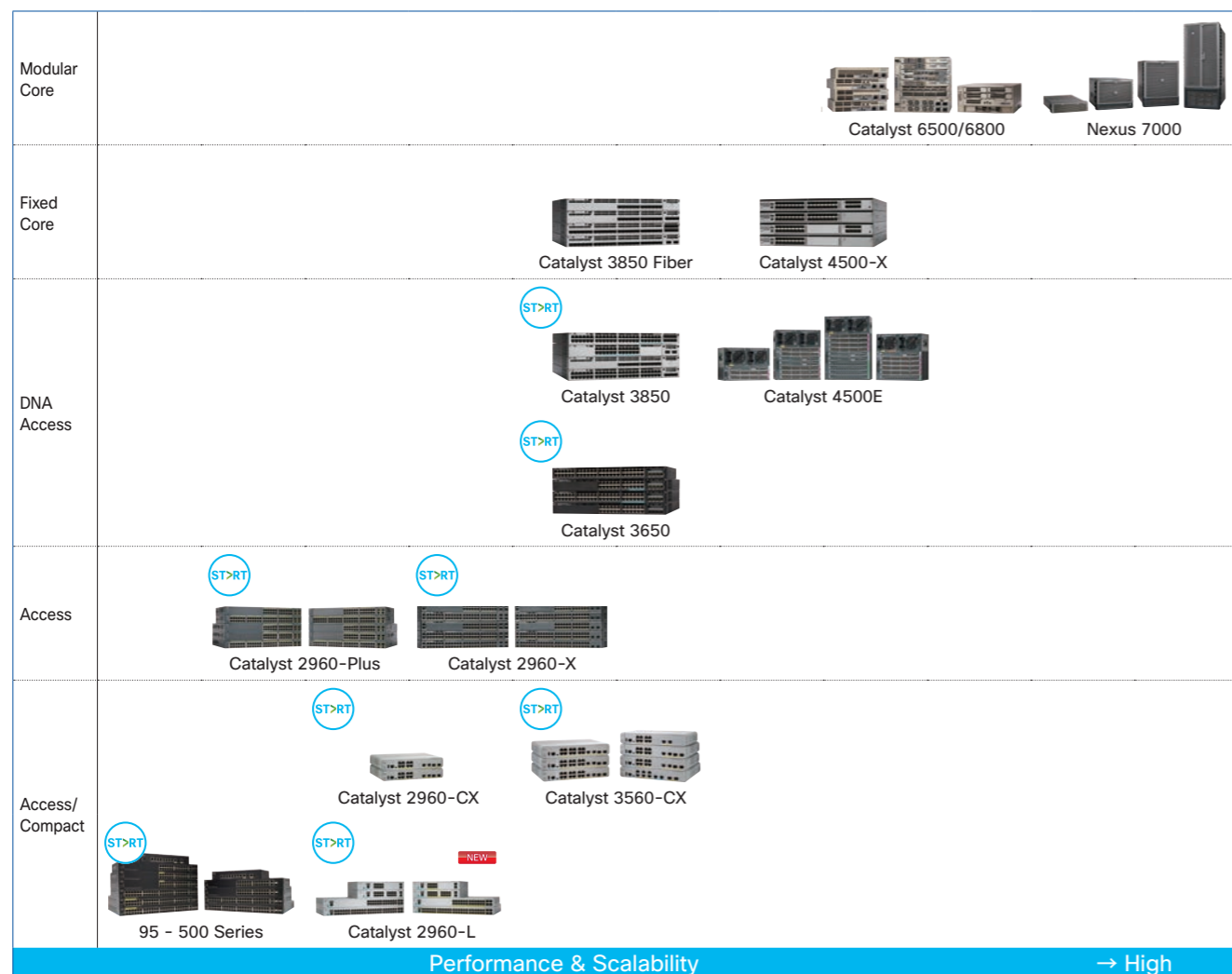




Positioning Map of Cisco Switches

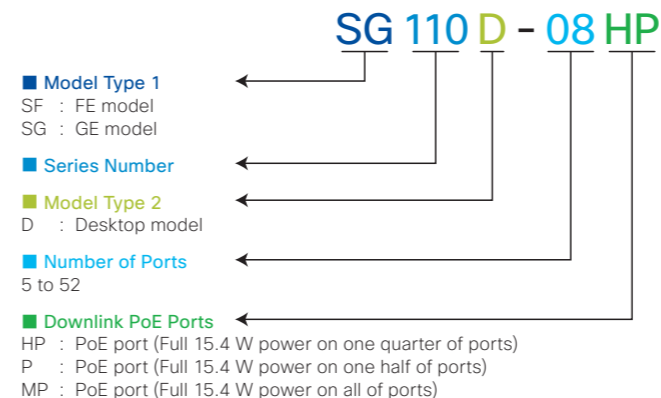


Cisco 95 - 500 Series	Layer 2/3 compact and standalone switches suitable for the small-sized network. Provide an ideal combination of features and affordability for growing businesses.	P16
Cisco Catalyst 2960-L Series <small>NEW</small>	Layer 2 standalone switches suitable for deployment in the access layer. GE is supported on all downlink ports.	P19
Cisco Catalyst 2960-Plus Series	Layer 2 standalone switches suitable for deployment in the access layer. FE is supported on all downlink ports.	P19
Cisco Catalyst 2960-CX Series	Layer 2 compact switches suitable for deployment in the access layer. Deliver basic network services even outside the wiring closet.	P21
Cisco Catalyst 3560-CX Series	Layer 3 compact and standalone switches suitable for deployment in the access layer. Deliver advanced network services even outside the wiring closet.	P21
Cisco Catalyst 2960-X Series	Layer 2/3 stackable switches suitable for deployment in the access layer. GE is supported on all downlink ports.	P22
Cisco Catalyst 3650 Series	Layer 2/3 stackable switches suitable for deployment in the access or core layer. Provide capabilities that ideally suited to support the convergence of wired and wireless access.	P23
Cisco Catalyst 3850 Series	Layer 2/3 stackable switches suitable for deployment in the access or core layer. Provide capabilities that ideally suited to support the convergence of wired and wireless access.	P25

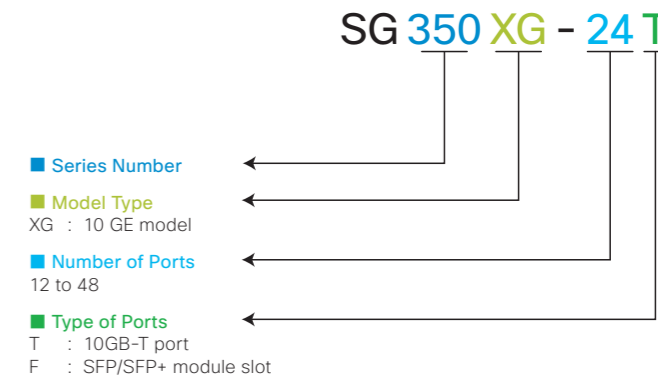
How to Distinguish Specifications from SKU of Cisco Switches

The SKU of each Cisco Switch contains a broad description of the product's specification.

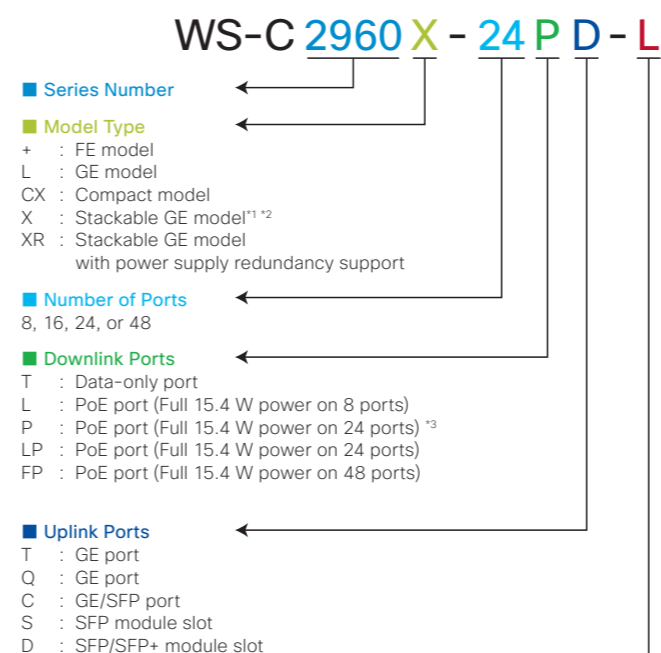
Cisco 95/110/250/350/350X/550X Series



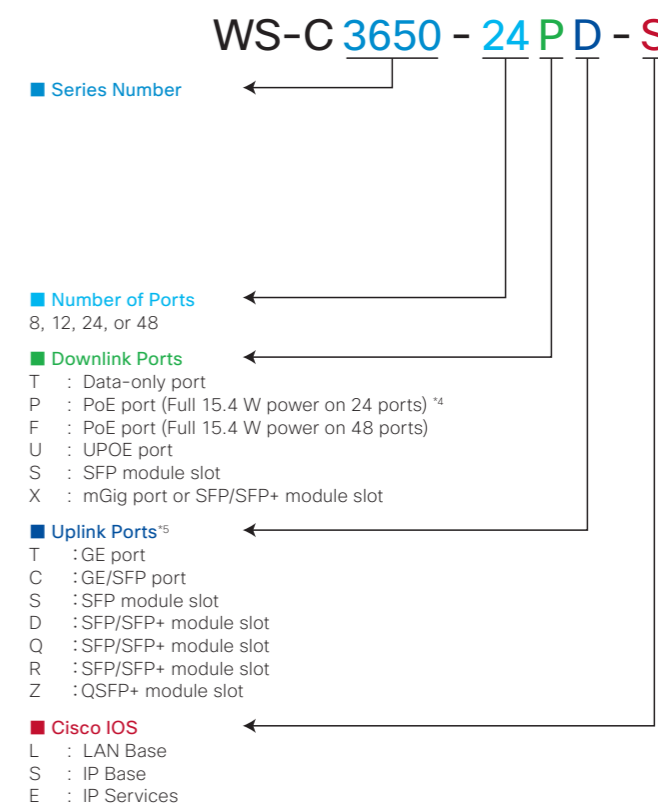
Cisco 350XG/550XG Series



Cisco Catalyst 2960-L/Plus/CX/X Series



Cisco Catalyst 3560-CX/3650/3850 Series



*1 The LAN Lite model does not support stacking. *2 WS-C2960X-24PSQ-L does not support stacking. *3 Compact switches support full 15.4 W power on 8 ports. *4 Compact switches support full 15.4 W power on 8 or 12 ports. *5 The Network Module is required for the Cisco Catalyst 3850 Series (Except for 48-port fiber model).

Ports

The Cisco Switches support the following interface ports:

- Fast Ethernet port (FE)
- Gigabit Ethernet port (GE)
- Multigigabit Ethernet port (mGig)
- SFP module slot (SFP)
- Dual-Purpose port (GE/SFP)
- 10GBASE-T port (10GB-T)
- SFP+ module slot (SFP/SFP+)
- QSFP+ module slot (QSFP)

The bracketed notations are abbreviations used in the specification comparison tables in this catalog. A dual-purpose port is an interface combining a Gigabit Ethernet port with an SFP module slot and is notated as GE/SFP (Either one can be activated independently). Similarly, SFP+ module slots are notated as SFP/SFP+ due to their compatibility with SFP. SFP/SFP+ modules can be mounted to QSFP+ module slots using an appropriate converter. In most cases, the supported port interfaces and number of ports of each product can be determined from their SKU.

Cisco IOS on Cisco Catalyst Switches

Cisco Catalyst Switches incorporate the **Cisco IOS (Internetwork Operating System)**, which is a high-performance network infrastructure software. **LAN Lite** and **LAN Base** feature sets provide the L2 level features, and **IP Lite**, **IP Base**, **IP Services** feature sets provide the L3 level features, respectively. Cisco IOS provided with the Cisco Catalyst 3560-CX/3650/3850 Series is delivered in a single universal image. The universal image contains the entire Cisco IOS feature set that can be activated via a software license. A software image needed to be installed in order to use the new functions on previous Cisco Catalyst Switches. However, on the Cisco Catalyst 3560-CX/3650/3850 Series Switches, advanced functions can be activated immediately using the **Cisco IOS Upgrade License**.

■ **Cisco IOS XE Denali 16.3** NEW
Cisco IOS XE Denali 16.3 delivers key innovations in the areas of Application Experience, Network Programmability and Security. This is the first-ever release to introduce **Multiprotocol Label Switching (MPLS)** on the **Cisco Catalyst 3650/3850 Series**, which brings in higher reliability and flexibility in our customer deployments. This is the extended maintenance release for Cisco IOS XE Denali 16.x with a plan for forty-eight months of software maintenance to help drive long-term stability in customer deployments. This release was extensively beta tested by several customers and partners demonstrating Cisco's commitment to delivering the highest quality software. In addition, the engineering team also successfully deployed this release in production environment at several locations within the Cisco campus.

■ Series Compatibility Comparison (Cisco Catalyst 2960-CX/3560-CX/2960-Plus/2960-X/3650/3850 Series)

Supported Series	LAN Lite (LL)	LAN Base (LB)	IP Lite (IPL)	IP Base (IPB)	IP Services (IPS)
Catalyst 2960-L	●	-	-	-	-
Catalyst 2960-Plus	●	●	-	-	-
Catalyst 2960-CX	-	●	-	-	-
Catalyst 3560-CX	-	-	-	●	●
Catalyst 2960-X	●	●	● ^{*1}	-	-
Catalyst 3650	-	●	-	●	●
Catalyst 3850	-	●	-	●	●

■ Cisco IOS Specification Comparison (L2 Features)

Feature	LL	LB	IPL	IPB	IPS
IEEE 802.1Q Trunking	●	●	●	●	●
DTP	●	●	●	●	●
UDLD	●	●	●	●	●
VTP	●	●	●	●	●
CDP	●	●	●	●	●
LLDP	●	●	●	●	●
LLDP-MED	● ^{*2}	●	●	●	●
STP (Spanning Tree Protocol)	●	●	●	●	●
Flex Link	-	●	●	●	●
EtherChannel	●	●	●	●	●
LACP	●	●	●	●	●
Link State Tracking	● ^{*2}	●	●	●	●
Resilient Ethernet Protocol (REP)	-	-	-	● ^{*3}	● ^{*3}
Per-Port Storm Control	●	●	●	●	●

■ Cisco IOS Specification Comparison (L3 Features)

Feature	LL	LB	IPL	IPB	IPS
Static Routing	-	●	●	●	●
RIP	-	-	●	●	●
EIGRP Stub	-	-	●	●	●
EIGRP	-	-	-	-	●
OSPF for Routed Access	-	-	●	●	●
OSPF v2/v3	-	-	-	-	●
BGP	-	-	-	-	●
IS-IS	-	-	-	-	●
Policy Based Routing (PBR)	-	-	●	●	●
VRF-Lite	-	-	-	-	●
PIM Stun	-	-	●	●	●
PIM	-	-	-	-	●
WCCP	-	-	●	●	●
SSO	-	● ^{*4}	-	● ^{*5}	● ^{*5}
NSF	-	-	-	●	●
MPLS	-	-	-	-	● ^{*5}

■ Cisco IOS Specification Comparison (Managability)

Feature	LL	LB	IPL	IPB	IPS
SNMP	●	●	●	●	●
RMON	●	●	●	●	●
SPAN	●	●	●	●	●
RSPAN	● ^{*2}	●	●	●	●
TDR	●	●	●	●	●
Smart Ports	●	●	●	●	●
Smart Install (client)	●	●	●	●	●
Smart Install (director)	-	● ^{*4}	-	●	●
Cisco IOS IP SLA (responder)	-	●	●	●	●
Cisco IOS IP SLA (initiator)	-	-	-	●	●
Cisco IOS EEM	-	-	-	●	●
Wireshark	-	-	-	● ^{*5}	● ^{*5}
Netflow-Lite	-	-	-	●	●
Flexible Netflow	-	●	●	●	●
EnergyWise	●	●	●	●	●
GOLD (GOLD-Lite)	●	●	●	●	●
OBFL	●	●	●	●	●

■ Cisco IOS Specification Comparison (Security)

Feature	LL	LB	IPL	IPB	IPS
SSH	●	●	●	●	●
SSL	●	●	●	●	●
SCP	●	●	●	●	●
HTTPS	●	●	●	●	●
TACACS+	●	●	●	●	●
RADIUS	●	●	●	●	●
Port Security	●	●	●	●	●
DHCP Snooping	● ^{*2}	●	●	●	●
Dynamic ARP Inspection (DAI)	● ^{*2}	●	●	●	●
IP Source Guard	-	●	●	●	●
MAC Authentication Bypass for Voice	●	●	●	●	●
Private VLAN Edge	●	●	●	●	●
Private VLAN	-	-	●	●	●
Layer 2 - 4 ACL	-	●	●	●	●
Router ACL	-	● ^{*5}	●	●	●
VLAN ACL	● ^{*2}	-	●	●	●
Time Range ACL	-	●	●	●	●
Web Authentication	● ^{*2}	●	●	●	●
TrustSec SXP	-	●	●	●	●
TrustSec SGT/SGACL	-	● ^{*6}	●	●	●
MACsec	-	-	●	●	●
NEAT	-	●	●	●	●

■ Cisco IOS Specification Comparison (QoS)

Feature	LL	LB	IPL	IPB	IPS
SRR	●	●	●	●	●
Priority Queue	●	●	●	●	●
Auto QoS	● ^{*2}	●	●	●	●
DSCP	● ^{*2}	●	●	●	●
Weighted Tail Drop (WTD)	● ^{*2}	● ^{*7}	-	● ^{*7}	●
Dynamic Buffer Limiting (DBL)	-	-	-	-	-
Control Plane Policing (CoPP)	-	● ^{*4}	-	● ^{*5}	● ^{*5}
Per VLAN Policy	-	-	●	●	●

*1 Cisco Catalyst 2960-XR Series only. *2 Cisco Catalyst 2960-L Series only. *3 Cisco Catalyst 3650/3850 Series are to be supported in future software release.
 *4 Cisco Catalyst 2960-CX/2960-X Series are not supported. *5 Cisco Catalyst 3560-CX Series are not supported. *6 Cisco Catalyst 3650/3850 Series are not supported.
 *7 Cisco Catalyst 3560/3850 Series only.

Cisco Catalyst 2960-L Series NEW

Layer 2 standalone switches equipped Gigabit Ethernet downlink ports. These switches provide entry-level enterprise-class services for branch offices, conventional workspaces, and out-of-wiring closet applications. They can be configured and managed with a CLI or an on-box GUI.



■ Highlights

- Equipped with Cisco IOS **LAN Lite** Image
- Stylish, fan-less design and silent in operation (Excludes one model)
- Equipped with **PoE+** power supplying downlink ports (PSE models)
- Operating temperature advantage: - 5 °C to 55 °C
- Less than 11.5-inch depth fit in use cases with space limitation

■ Cisco Catalyst 2960-L Series^{*1}

SKU	Downlinks		Uplinks		Cisco IOS	Web Auth	Max VLANs	PoE		Fanless	AC Power	Magnet	Rack Mount
	GE	SFP	GE	SFP				Ports	Power Budget				
WS-C2960L-8TS-LL	8	-	2	-	LAN Lite	●	64	-	-	●	Internal	- ^{*2}	-
WS-C2960L-8PS-LL	8	-	2	-	LAN Lite	●	64	8	67 W	●	Internal	- ^{*2}	-
WS-C2960L-16TS-LL	16	-	2	-	LAN Lite	●	64	-	-	●	Internal	- ^{*2}	-
WS-C2960L-16PS-LL	16	-	2	-	LAN Lite	●	64	16	120 W	●	Internal	- ^{*2}	-
WS-C2960L-24TS-AP	24	-	4	-	LAN Lite	●	64	-	-	●	Internal	-	1 RU
WS-C2960L-24PS-AP	24	-	4	-	LAN Lite	●	64	24	195 W	●	Internal	-	1 RU
WS-C2960L-48TS-AP	48	-	4	-	LAN Lite	●	64	-	-	●	Internal	-	1 RU
WS-C2960L-48PS-AP	48	-	4	-	LAN Lite	●	64	48	370 W	-	Internal	-	1 RU

*1 Not orderable in Australia and New Zealand. *2 Magnet and Mounting Tray (CMPCT-MGNT-TRAY=) is required.

Cisco Catalyst 2960-Plus Series

L2 fixed-configuration switches equipped Fast Ethernet downlink ports. Based on the Fast Ethernet models of the Cisco Catalyst 2960 Series, these switches have twice the memory capacity and support the new Cisco IOS 15.0(2)SE and higher.



■ Highlights

- Equipped with Cisco IOS **LAN Base** Image (Excludes LAN Lite models)
- Equipped with PoE power supplying downlink ports (PSE models)

■ Cisco Catalyst 2960-Plus Series

SKU	Downlinks		Uplinks		Cisco IOS	Web Auth	Max VLANs	PoE		AC Power	Rack Mount
	FE	GE	SFP	GE/SFP				Ports	Power Budget		
WS-C2960+24TC-S	24	-	-	2	LAN Lite	-	64	-	-	Internal	1 RU
WS-C2960+24LC-S	24	-	-	2	LAN Lite	-	64	8	123 W	Internal	1 RU
WS-C2960+24PC-S	24	-	-	2	LAN Lite	-	64	24	370 W	Internal	1 RU
WS-C2960+48TC-S	48	-	-	2	LAN Lite	-	64	-	-	Internal	1 RU
WS-C2960+48PST-S	48	2	2	-	LAN Lite	-	64	48	370 W	Internal	1 RU
WS-C2960+24TC-L	24	-	-	2	LAN Base	●	255	-	-	Internal	1 RU
WS-C2960+24LC-L	24	-	-	2	LAN Base	●	255	8	123 W	Internal	1 RU
WS-C2960+24PC-L	24	-	-	2	LAN Base	●	255	24	370 W	Internal	1 RU
WS-C2960+48TC-L	48	-	-	2	LAN Base	●	255	-	-	Internal	1 RU
WS-C2960+48PST-L	48	2	2	-	LAN Base	●	255	48	370 W	Internal	1 RU

Intuitive Web User Interface

The Cisco Catalyst 2960-L Series support an on-box, intuitive web-based user interface (UI) for easy and quick installation, configuration management, and monitoring of the switch. This web UI, the **Cisco Configuration Professional Express**, is planned to be supported in future Cisco IOS releases of the Cisco Catalyst 2960-Plus/CX/X Series also.



Cisco Catalyst 2960 Series Transition Guide

■ Cisco Catalyst 2960-SF/2960-S/2960-Plus/2960-L/2960-X Series^{*1}

Legacy Models				Current Models		Suggested Models	
Fast Ethernet		Gigabit Ethernet		Fast Ethernet	Gigabit Ethernet		
Stacking Not Supported	Stacking Supported	Stacking Not Supported	Stacking Supported	Stacking Not Supported	Stacking Not Supported	Stacking Supported	
WS-C2960S-F24TS-S	-	WS-C2960S-24TS-S	-	WS-C2960+24TC-S	WS-C2960L-24TS-AP WS-C2960X-24TS-LL	-	
-	-	-	-	WS-C2960+24LC-S WS-C2960+24PC-S	WS-C2960L-24PS-AP	-	
WS-C2960S-F48TS-S	-	WS-C2960S-48TS-S	-	WS-C2960+48TC-S	WS-C2960L-48TS-AP WS-C2960X-48TS-LL	-	
-	-	-	-	WS-C2960+48PST-S	WS-C2960L-48PS-AP	-	
-	WS-C2960S-F24TS-L	-	WS-C2960S-24TS-L	WS-C2960+24TC-L	-	WS-C2960X-24TS-L WS-C2960XR-24TS-I	
-	-	-	WS-C2960S-24TD-L	-	-	WS-C2960X-24TD-L WS-C2960XR-24TD-I	
-	WS-C2960S-F24PS-L	-	WS-C2960S-24PS-L	WS-C2960+24LC-L WS-C2960+24PC-L	WS-C2960X-24PSQ-L	WS-C2960X-24PS-L WS-C2960XR-24PS-I	
-	-	-	WS-C2960S-24PD-L	-	-	WS-C2960X-24PD-L WS-C2960XR-24PD-I	
-	WS-C2960S-F48TS-L	-	WS-C2960S-48TS-L	WS-C2960+48TC-L	-	WS-C2960X-48TS-L WS-C2960XR-48TS-I	
-	-	-	WS-C2960S-48TD-L	-	-	WS-C2960X-48TD-L WS-C2960XR-48TD-I	
-	WS-C2960S-F48LPS-L	-	WS-C2960S-48LPS-L	WS-C2960+48PST-L	-	WS-C2960X-48LPS-L WS-C2960XR-48LPS-I	
-	WS-C2960S-F48FPS-L	-	WS-C2960S-48FPS-L	-	-	WS-C2960X-48FPS-L WS-C2960XR-48FPS-I	
-	-	-	WS-C2960S-48LPD-L	-	-	WS-C2960X-48LPD-L WS-C2960XR-48LPD-I	
-	-	-	WS-C2960S-48FPD-L	-	-	WS-C2960X-48FPD-L WS-C2960XR-48FPD-I	

■ Series Comparison

Series	2960-SF		2960-S		2960-Plus		2960-L	2960-X		
	LAN Lite	LAN Base	LAN Lite	LAN Base	LAN Lite	LAN Base	LAN Lite	LAN Lite	LAN Base	IP Lite
Basic L2 Features	●	●	●	●	●	●	●	●	●	●
Advanced L2 Features	-	●	-	●	-	●	-	-	●	●
Basic L3 Features	-	-	-	-	-	-	-	-	-	●
DNA (APIC-EM)	-	●	-	●	-	-	-	-	●	●
Web UI	-	-	-	-	-	-	●	-	-	-
1 GE Downlink	-	-	●	●	-	-	●	●	●	●
10 GE Uplink	-	-	-	●	-	-	-	-	●	●
Full PoE 15.4 W	-	●	-	●	-	-	●	-	●	●
PoE+ 30 W	-	●	-	●	-	-	●	-	●	●
RPS	-	-	-	●	-	●	-	-	●	-
Power Redundancy	-	-	-	-	-	-	-	-	-	●
FlexStack	-	●	-	●	-	-	-	-	-	-
FlexStack Plus	-	-	-	-	-	-	-	-	●	●
8-port Compact Models	-	-	-	-	-	-	●	-	-	-
16-port Compact Models	-	-	-	-	-	-	●	-	-	-
Fanless Models	-	-	-	-	-	-	●	-	●	-

*1 Search for EOL10043 at cisco.com.

Cisco Catalyst 2960-CX Series

The compact switches are Layer 2 switches that are purpose built to enhance scalability and reduce costs through cable consolidation. Extend enterprise-class services to wherever you want, far from the wiring closet. They provide advanced networking features for security and management, equivalent to Cisco Catalyst 2960-X Series.

■ Highlights

- Equipped with Cisco IOS LAN Base Image
- Stylish, fan-less design and silent operation
- Equipped with PoE+ power supplying downlink ports (WS-C2960CX-8PC-L)
- Operating temperature advantage: -5 °C to 45 °C
- Traffic visibility: support Cisco NetFlow-Lite up to Layer 4, supported both on all downlink and uplink ports.



■ Cisco Catalyst 2960-CX Series

SKU	Downlinks		Uplinks			Cisco IOS	Web Auth	MAC sec	Max VLANs	PoE			AC Power	Magnet	Rack Mount
	GE	mGig	GE	SFP	SFP/SFP+					Ports	Power Budget	Pass through			
WS-C2960CX-8TC-L	8	-	2	2	-	LAN Base	●	-	255	-	-	-	Internal	- ^{*1}	- ^{*2}
WS-C2960CX-8PC-L	8	-	2	2	-	LAN Base	●	-	255	8	124 W	-	Internal	- ^{*1}	- ^{*2}

*1 Magnet and Mounting Tray (CMPCT-MGNT-TRAY=) is required. Optional new Power Adapter Bracket (PWR-ADPT-BRKT=) is available.

*2 Rack Mounting Brackets (RCKMNT-19-CMPCT=/RCKMNT-23-CMPCT=) is required. Optional new Power Adapter Bracket (PWR-ADPT-BRKT=) is available.

Cisco Catalyst 3560-CX Series

The compact switches are Layer 3 switches that are purpose built to enhance scalability and reduce costs through cable consolidation. Extend enterprise-class services to wherever you want, far from the wiring closet. They provide advanced networking features for security and management, equivalent to Cisco Catalyst 3650/3850 Series.

■ Highlights

- Equipped with Cisco IOS universal image (IP Base, upgradable to IP services)
- Stylish, fan-less design and silent operation
- Equipped with Cisco Catalyst Multigigabit Technology (mGig)-enabled downlink ports (some models)
- Equipped with PoE+ power supplying downlink ports (PSE models)
- PoE pass-through: industry's first UPOE powered switch that can pass through up to 146 W to power up the devices connected to the switch (WS-C3560CX-8PT-S)
- Operating temperature advantage: -5 °C to 45 °C
- Traffic visibility: support Cisco NetFlow-Lite up to Layer 4, supported both on all downlink and uplink ports.



■ Cisco Catalyst 3560-CX Series

SKU	Downlinks		Uplinks			Cisco IOS	Web Auth	MAC sec	Max VLANs	PoE			AC Power	Magnet	Rack Mount
	GE	mGig	GE	SFP	SFP/SFP+					Ports	Power Budget	Pass through			
WS-C3560CX-8TC-S	8	-	2	2	-	IP Base	●	●	1023	-	-	-	Internal	- ^{*2}	- ^{*3}
WS-C3560CX-8PT-S	8	-	2	-	-	IP Base	●	●	1023	8	240 W	●	External ^{*1}	- ^{*2}	- ^{*3}
WS-C3560CX-8PC-S	8	-	2	2	-	IP Base	●	●	1023	8	240 W	-	Internal	- ^{*2}	- ^{*3}
WS-C3560CX-8XPD-S	6	2	-	-	2	IP Base	●	●	1023	8	240 W	-	Internal	- ^{*2}	- ^{*3}
WS-C3560CX-12TC-S	12	-	2	2	-	IP Base	●	●	1023	-	-	-	Internal	- ^{*2}	- ^{*3}
WS-C3560CX-12PC-S	12	-	2	2	-	IP Base	●	●	1023	12	240 W	-	Internal	- ^{*2}	- ^{*3}
WS-C3560CX-12PD-S	12	-	2	-	2	IP Base	●	●	1023	12	240 W	-	Internal	- ^{*2}	- ^{*3}

■ Cisco IOS Upgrade License for Cisco Catalyst 3560-CX Series

SKU	Description
L-C3560CX-RTU=	Cisco IOS IP Services license for Cisco Catalyst 3560-CX Series

*1 Power Adapter and Power Cord is Required when not using PoE receiving. *2 Magnet and Mounting Tray (CMPCT-MGNT-TRAY=) is required. Optional new Power Adapter Bracket (PWR-ADPT-BRKT=) is available.

*3 Rack Mounting Brackets (RCKMNT-19-CMPCT=/RCKMNT-23-CMPCT=) is required. Optional new Power Adapter Bracket (PWR-ADPT-BRKT=) is available.

Comparison of Cisco Catalyst Compact Switches

■ Comparison of Cisco Catalyst 2960-CG & 2960-CX Compact Switches

Parameter	Feature	2960-CG	2960-CX
Ports	Uplinks	2 x GE/SFP	2 x GE and 2 x SFP
	Downlinks	8 x GE	8 x GE
PoE	PoE	-	124 W PoE+
	Perpetual PoE	-	● ^{*1}
Hardware	DRAM, Flash	128 MB, 64 MB	512 MB, 128 MB
	Security	802.1x	802.1x, SXP ^{*2}
Other	AVC	-	NetFlow Lite

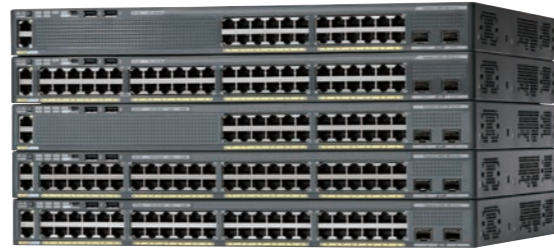
■ Comparison of Cisco Catalyst 3560-CG & 3560-CX Compact Switches

Parameter	Feature	3560-CG	3560-CX
Ports	Uplinks	2 x GE or 2 x SFP	2 x GE and SFP/SFP+ ^{*3}
	Downlinks	8 x GE	8 x GE or 12 x GE
	mGig	-	● ^{*4}
PoE	PoE	124 W PoE+	240 W PoE+
	PoE pass-through	1 x UPOE, 23.8 W	2 x UPOE, 144.8 W ^{*1}
	DC Power	-	● ^{*1}
	Power Stacking	-	Horizontal ^{*1}
Software	Cisco IOS	IP Base Only	IP Base, IP Services
	Hardware	DRAM, Flash	128 MB, 64 MB
Other	Security	802.1x, MACsec	802.1x, MACsec, SXP ^{*1} , SGACL
	AVC	NO	NetFlow Lite
	IPv6	Basic	Enhanced

*1 On roadmap. *2 SGACL is not supported. *3 WS-C3560CX-8XPD-S & WS-C3560CX-12PD-S only. *4 WS-C3560CX-8XPD-S only.

Cisco Catalyst 2960-X Series

Stackable L2/L3 fixed-configuration switches equipped Gigabit Ethernet downlink ports. A flexible and redundant power supply configuration is achieved via a stack function and mounting of multiple power supply modules or a redundant power supply system.



- **Highlights**
- Equipped with Cisco IOS Universal Image (Supports LAN Lite/LAN Base/IP Lite)*1
- Supports Layer 3 functions including HSRP and VRRP (IP Lite model)
- Equipped with PoE+ power supplying downlink ports (PSE model)
- Equipped with full PoE powering power supply (WS-C2960X-48FPS-L/WS-C2960X-48FPD-L/WS-C2960XR-48FPS-I/WS-C2960XR-48FPD-I)
- Supports multiple Power Supply Modules (IP Lite model)
- Supports **Cisco FlexStack Plus** (LAN Base/IP Lite models)

■ Cisco Catalyst 2960-X Series

SKU	Downlinks		Uplinks		Cisco IOS	Web Auth	Max VLANs	PoE		Power Supply	Power Redundancy	RPS	Flex Stack Plus	Fanless	Rack Mount
	GE	SFP	SFP/SFP+	Ports				Power Budget							
WS-C2960X-24TS-LL	24	-	2	-	LAN Lite	-	64	-	-	Fixed AC	-	-	-	-	1 RU
WS-C2960X-48TS-LL	48	-	2	-	LAN Lite	-	64	-	-	Fixed AC	-	-	-	-	1 RU
WS-C2960X-24TS-L	24	-	4	-	LAN Base	●	1024	-	-	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-24TD-L	24	-	-	2	LAN Base	●	1024	-	-	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-24PSQ-L	24	2	2	-	LAN Base	●	1024	8	110 W	Fixed AC	-	-	-	●	1 RU
WS-C2960X-24PS-L	24	-	4	-	LAN Base	●	1024	24	370 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-24PD-L	24	-	-	2	LAN Base	●	1024	24	370 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48TS-L	48	-	4	-	LAN Base	●	1024	-	-	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48TD-L	48	-	-	2	LAN Base	●	1024	-	-	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48LPS-L	48	-	4	-	LAN Base	●	1024	48	370 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48FPS-L	48	-	4	-	LAN Base	●	1024	48	740 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48LPD-L	48	-	-	2	LAN Base	●	1024	48	370 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960X-48FPD-L	48	-	-	2	LAN Base	●	1024	48	740 W	Fixed AC	-	●	●*2	-	1 RU
WS-C2960XR-24TS-I	24	-	4	-	IP Lite	●	1024	-	-	250 W AC	●	-	●*2	-	1 RU
WS-C2960XR-24TD-I	24	-	-	2	IP Lite	●	1024	-	-	250 W AC	●	-	●*2	-	1 RU
WS-C2960XR-24PS-I	24	-	4	-	IP Lite	●	1024	24	370 W	640 W AC	●	-	●*2	-	1 RU
WS-C2960XR-24PD-I	24	-	-	2	IP Lite	●	1024	24	370 W	640 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48TS-I	48	-	4	-	IP Lite	●	1024	-	-	250 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48TD-I	48	-	-	2	IP Lite	●	1024	-	-	250 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48LPS-I	48	-	4	-	IP Lite	●	1024	48	370 W	640 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48FPS-I	48	-	4	-	IP Lite	●	1024	48	740 W	1025 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48LPD-I	48	-	-	2	IP Lite	●	1024	48	370 W	640 W AC	●	-	●*2	-	1 RU
WS-C2960XR-48FPD-I	48	-	-	2	IP Lite	●	1024	48	740 W	1025 W AC	●	-	●*2	-	1 RU

■ Power Supply Module for the Cisco Catalyst 2960-XR Series

SKU	Description	Compatible SKU
PWR-C2-250WAC	250 W AC power supply module	WS-C2960XR-24TS-I/WS-C2960XR-24TD-I/WS-C2960XR-48TS-I/WS-C2960XR-48TD-I
PWR-C2-640WAC	640 W AC power supply module	WS-C2960XR-24PS-I/WS-C2960XR-24PD-I/WS-C2960XR-48LPS-I/WS-C2960XR-48LPD-I
PWR-C2-1025WAC	1025 W AC power supply module	WS-C2960XR-48FPS-I/WS-C2960XR-48FPD-I

*1 Upgrade is not supported. *2 Cisco FlexStack Plus module (C2960X-STACK) is required.

Cisco FlexStack Plus module

When equipped with the optional **Cisco FlexStack Plus Module (C2960X-STACK)**, the **LAN Base/IP Lite** models of the **Cisco Catalyst 2960-X Series** support connection of up to eight switches in a stack at 80 Gbps.

Cisco FlexStack Plus is backward-compatible with Cisco FlexStack. Up to four switches can be connected in a stack at 40 Gbps when (and only when) the LAN Base model of the Cisco Catalyst 2960-X Series is combined with the LAN Base model of the Cisco Catalyst 2960-SF/S Series.

■ Combined Stacks Compatibility List

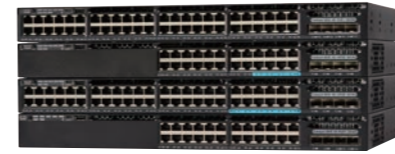
	2960-SF/S LAN Base	2960-X LAN Base	2960-XR IP Lite
2960-SF/S LAN Base	●	●	-
2960-X LAN Base	●	●	-
2960-XR IP Lite	-	-	●

■ Cisco FlexStack Plus Module

SKU	C2960X-STACK
Compatible IOS	LAN Base/IP Lite
Maximum Number of Devices	8
Stack Bandwidth	80 Gbps
Architecture	Hardware drop table
Dynamic Ring Load-balancing	-
Stack Convergence	100 milliseconds

Cisco Catalyst 3650 Series

Stackable L2/L3 fixed-configuration switches that offer the wireless controller function. These switches incorporate a 160 Gbps stack function and support multiple Power Supply Modules to achieve a flexible redundant configuration. They also provide common intelligent services for both wired/wireless LAN networks, such as QoS and security.



- **Highlights**
- Equipped with Cisco IOS XE Universal Image (Supports **LAN Base/IP Base/IP Services**)
- Equipped with the **Unified Access Data Plane (UADP)** ASIC
- Built-in controller function capable of managing up to 50 wireless access points (Supports IP Base/IP Services)
- Equipped with **Cisco Catalyst Multigigabit Technology (mGig)**-enabled downlink ports (some models)
- Equipped with PoE+/UPOE power supplying downlink ports (UPOE ports are only incorporated on some PSE models)
- Equipped with MACsec-enabled downlink/uplink ports (IP Base/IP Services models)
- Supports **Cisco StackWise-160**
- **Mini model** less than 12 inches deep (WS-C3650-24PDM/WS-C3650-48FQM)

■ Cisco Catalyst 3650 Series (1 of 2)

SKU	Wireless Throughput	Downlinks		Uplinks			Cisco IOS	MAC sec	Max VLANs	PoE ¹			Power Supply	Power Redundancy	RPS	Rack Mount
		GE	mGig	SFP	SFP/SFP+	QSFP+				Ports	UPOE Ports	Power Budget				
WS-C3650-24TS-L	20 Gpbs	24	-	4	-	-	LAN Base	-*2	255	-	-	250 W AC	●	-	1 RU	
WS-C3650-24TS-S	20 Gpbs	24	-	4	-	-	IP Base	●	4094	-	-	250 W AC	●	-	1 RU	
WS-C3650-24TS-E	20 Gpbs	24	-	4	-	-	IP Services	●	4094	-	-	250 W AC	●	-	1 RU	
WS-C3650-24TD-L	20 Gpbs	24	-	2	2	-	LAN Base	-*2	255	-	-	250 W AC	●	-	1 RU	
WS-C3650-24TD-S	20 Gpbs	24	-	2	2	-	IP Base	●	4094	-	-	250 W AC	●	-	1 RU	
WS-C3650-24TD-E	20 Gpbs	24	-	2	2	-	IP Services	●	4094	-	-	250 W AC	●	-	1 RU	
WS-C3650-24PS-L	20 Gpbs	24	-	4	-	-	LAN Base	-*2	255	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-24PS-S	20 Gpbs	24	-	4	-	-	IP Base	●	4094	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-24PS-E	20 Gpbs	24	-	4	-	-	IP Services	●	4094	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-24PDM-L	20 Gpbs	24	-	2	2	-	LAN Base	-*2	255	24	-	390 W	640 W AC	-	●	1 RU
WS-C3650-24PDM-S	20 Gpbs	24	-	2	2	-	IP Base	●	4094	24	-	390 W	640 W AC	-	●	1 RU
WS-C3650-24PDM-E	20 Gpbs	24	-	2	2	-	IP Services	●	4094	24	-	390 W	640 W AC	-	●	1 RU
WS-C3650-24PD-L	20 Gpbs	24	-	2	2	-	LAN Base	-*2	255	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-24PD-S	20 Gpbs	24	-	2	2	-	IP Base	●	4094	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-24PD-E	20 Gpbs	24	-	2	2	-	IP Services	●	4094	24	-	390 W	640 W AC	●	-	1 RU
WS-C3650-8X24PD-L	NEW 20 Gpbs	24	8	-	2	-	LAN Base	-*2	255	24	-	390 W	750 W AC	●	-	1 RU
WS-C3650-8X24PD-S	NEW 20 Gpbs	24	8	-	2	-	IP Base	●	4094	24	-	390 W	750 W AC	●	-	1 RU
WS-C3650-8X24PD-E	NEW 20 Gpbs	24	8	-	2	-	IP Services	●	4094	24	-	390 W	750 W AC	●	-	1 RU
WS-C3650-8X24UQ-L	NEW 20 Gpbs	24	8	-	4	-	LAN Base	-*2	255	24	24	820 W	1100 W AC	●	-	1 RU
WS-C3650-8X24UQ-S	NEW 20 Gpbs	24	8	-	4	-	IP Base	●	4094	24	24	820 W	1100 W AC	●	-	1 RU
WS-C3650-8X24UQ-E	NEW 20 Gpbs	24	8	-	4	-	IP Services	●	4094	24	24	820 W	1100 W AC	●	-	1 RU

*1 For the default power supply configuration. *2 Cisco IOS IP Base/IP Services License is required.

Cisco Catalyst 3000 Series Transition Guide

■ Cisco Catalyst 3560-X/3650 Series¹

Legacy Models	Current Models	Legacy Models	Current Models
WS-C3560X-24T-L/S/E	WS-C3650-24TS-L/S/E WS-C3650-24TD-L/S/E	WS-C3560X-48P-L/S/E	WS-C3650-48PS-L/S/E WS-C3650-48PD-L/S/E
WS-C3560X-24P-L/S/E	WS-C3650-24PS-L/S/E WS-C3650-24PD-L/S/E WS-C3650-8X24PD-L/S/E	WS-C3560X-48PF-L/S/E	WS-C3650-12X48FD-L/S/E WS-C3650-48FS-L/S/E WS-C3650-48FD-L/S/E WS-C3650-48FQ-L/S/E
WS-C3560X-24U-L/S/E	WS-C3650-24PS-L/S/E WS-C3650-24PD-L/S/E WS-C3650-8X24PD-L/S/E WS-C3650-8X24UQ-L/S/E	WS-C3560X-48U-L/S/E	WS-C3650-12X48FD-L/S/E WS-C3650-12X48UQ-L/S/E WS-C3650-12X48UR-L/S/E WS-C3650-12X48UZ-L/S/E
WS-C3560X-48T-L/S/E	WS-C3650-48TS-L/S/E WS-C3650-48TD-L/S/E WS-C3650-48TQ-L/S/E		WS-C3650-48FS-L/S/E WS-C3650-48FD-L/S/E WS-C3650-48FQ-L/S/E WS-C3650-12X48FD-L/S/E WS-C3650-12X48UQ-L/S/E WS-C3650-12X48UR-L/S/E WS-C3650-12X48UZ-L/S/E

■ Cisco Catalyst 3750-X/3850 Series¹

Legacy Models	Current Models	Legacy Models	Current Models
WS-C3750X-24T-L/S/E	WS-C3850-24T-L/S/E	WS-C3750X-48P-L/S/E	WS-C3850-48P-L/S/E
WS-C3750X-24P-L/S/E	WS-C3850-24P-L/S/E	WS-C3750X-48PF-L/S/E	WS-C3850-48F-L/S/E
WS-C3750X-24U-L/S/E	WS-C3850-24U-L/S/E WS-C3850-24XU-L/S/E	WS-C3750X-48U-L/S/E	WS-C3850-48U-L/S/E WS-C3850-12X48U-L/S/E
WS-C3750X-48T-L/S/E	WS-C3850-48T-L/S/E	WS-C3750X-12S-S/E	WS-C3850-12S-S/E
		WS-C3750X-24S-S/E	WS-C3850-24S-S/E

*1 Search for EOL10623 at cisco.com.

■ Additional Access Point License for the Cisco 3850 Series

SKU	Additional	Primary Upgrade SKU
L-LIC-CTIOS-1A	1	L-LIC-CT3850-UPG

■ Cisco IOS XE Upgrade License for the Cisco Catalyst 3850 Series

SKU	Description
L-C3850-12-S-E	Cisco IOS IP Services License for 12-port IP Base model
L-C3850-24-L-S	Cisco IOS IP Base License for 24-port LAN Base model
L-C3850-24-S-E	Cisco IOS IP Services License for 24-port IP Base model
L-C3850-24-L-E	Cisco IOS IP Services License for 24-port LAN Base model
L-C3850-48-L-S	Cisco IOS IP Base License for 48-port LAN Base model
L-C3850-48-S-E	Cisco IOS IP Services License for 48-port IP Base model
L-C3850-48-L-E	Cisco IOS IP Services License for 48-port LAN Base model

■ Cisco Catalyst 3850 Series Bundle

SKU	Bundle				Cisco IOS
	Model	Network Module	Number of Access Point Licenses		
WS-C3850-24PW-S	WS-C3850-24P-S	-	5	IP Base	
WS-C3850-24UW-S	WS-C3850-24U-S	-	5	IP Base	
WS-C3850-24XUW-S	WS-C3850-24XU-S	-	5	IP Base	
WS-C3850-48W-S	WS-C3850-48P-S	-	5	IP Base	
WS-C3850-48PW-S	WS-C3850-48F-S	-	5	IP Base	
WS-C3850-48UW-S	WS-C3850-48U-S	-	5	IP Base	
WS-C3850-12X48UW-S	WS-C3850-12X48U-S	-	5	IP Base	
WS-C3850-16XS-S	WS-C3850-12XS-S	C3850-NM-4-10G	5	IP Base	
WS-C3850-16XS-E	WS-C3850-12XS-E	C3850-NM-4-10G	5	IP Services	
WS-C3850-32XS-S	WS-C3850-24XS-S	C3850-NM-8-10G	5	IP Base	
WS-C3850-32XS-E	WS-C3850-24XS-E	C3850-NM-8-10G	5	IP Services	

Cisco Catalyst Multigigabit Technology (mGig)

■ Challenges for Wired LAN Posed by 11ac "Gigabit Wireless LAN"

IEEE 802.11ac is a super high-speed wireless standard that delivers a theoretical maximum throughput of up to 6.9 Gbps. Wireless LAN is literally entering the "Gigabit era", but the migration to 11ac is presenting wired LAN with "old and new" challenges. In other words, these are the same old challenges that were experienced during the migration from 11a/g to 11n. During the migration from 11a/g to 11n, it was obvious that Fast Ethernet switches (max 100 Mbps) had insufficient capacity to serve as access switches for accommodating the access points. Similarly today, it is obvious that 1-Gigabit Ethernet switches (1 GE, max 1000 Mbps) have insufficient capacity when migrating from 11n to 11ac. Specifically:

- A bottleneck will occur if the uplink port of the access switches accommodating multiple 11ac compatible access points is 1 GE.
- A bottleneck will occur if the downlink port of the access switches accommodating 11ac Wave compatible access points is 1 GE.

Therefore, as was during the migration from 11a/g to 11n, replacement of access switches is therefore indispensable in order to unleash the full potential of 11ac.

The only current IEEE standard that is faster than 1 GE is 10 Gigabit Ethernet (10 GE) with copper or optical fiber cables. However, there are some difficulties associated with the deployment of 10 GE-compatible switches.

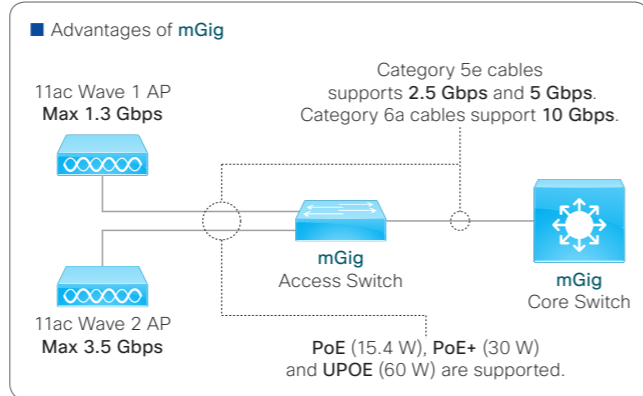
- Cable re-installation is required in many cases: Category 5e accounts for 46 % and Category 6 accounts for 28 % of the copper cables currently installed in corporations around the world, respectively. 10 GE via copper is not supported for Category 5e cables and is limited to a length of 55 meters for Category 6 cables. Installations of optical fiber cables and copper wire cables both require huge costs.
- Current 10 GE does not support PoE: Power supply units and power cables would be required for the access points.

■ Cisco Catalyst Multigigabit Technology (mGig)

Cisco's innovative **Cisco Catalyst Multigigabit Technology (mGig)** has been developed to address all of these challenges posed by the deployment of 11ac. Largely, mGig offers the following three advantages:

- Multi-speed: Category 5e cables support 100 Mbps, 1 Gbps, 2.5 Gbps and 5 Gbps; and category 6a cables support 10 Gbps, respectively.
- Cable type: A wide variety of cable types are supported including Category 5e, Category 6, and Category 6a.
- PoE: PoE (15.4 W), PoE+ (30 W), and UPOE (60 W) are supported unlike the current 10 GE.

mGig is based on the technology of the NBASE-T Alliance established by Cisco in October 2014. A large number of vendors are participating in the NBASE-T Alliance; and IEEE standardization is currently being promoted for 2.5GBASE-T for 5GBASE-T.



■ Cisco Catalyst Multigigabit Technology (mGig): Speeds and Cables

Cable Type	1 Gbps	2.5 Gbps	5 Gbps	10 Gbps
Cat 5e	●	●	●	-
Cat 6	●	●	●	● (55m)
Cat 6a	●	●	●	●

Modules & Accessories

■ Cisco Redundant Power System (RPS) 2300

SKU	Description	Compatible Series							
		95 - 500	2960-L	2960-Plus	2960-CX	3560-CX	2960-X	3650	3850
PWR-RPS2300	Cisco RPS 2300 Chassis	-	-	-	-	-	●*1	●*2	-
C3K-PWR-750WAC	750 W AC Power Supply Module for Cisco RPS 2300	-	-	-	-	-	●*1	●*2	-
CAB-RPS2300=	Spare 14-pin RPS Cable for Cisco RPS 2300	-	-	-	-	-	-	-	-
CAB-RPS2300-E=	Spare 22-pin RPS Cable for Cisco RPS 2300	-	-	-	-	-	●*1	●*2	-

■ Cisco Transceiver Module

SKU	Description	Max Distance	Compatible Series							
			95 - 500	2960-L	2960-Plus	2960-CX	3560-CX	2960-X	3650	3850
MGBT1	1000BASE-T SFP Module	100 m	●	-	-	-	-	-	-	-
MGBSX1	1000BASE-SX SFP Module	500 m	●	-	-	-	-	-	-	-
MGBLH1	1000BASE-LHSFP Module	40 km	●	-	-	-	-	-	-	-
MGBBX1	1000BASE-BX SFP Module	20 km	●	-	-	-	-	-	-	-
GLC-FE-100FX	100BASE-FX SFP Module	2 km	-	-	●	-	-	-	-	-
GLC-GE-100FX	100BASE-FX SFP Module	2 km	-	-	●	●	●	●	●	●
GLC-TE	1000BASE-T SFP Module	100 m	-	-	●	●	●	●	●	●
GLC-SX-MMD	1000BASE-SX SFP Module	1 km	-	-	●	●	●	●	●	●
GLC-LH-SMD	1000BASE-LX SFP Module	10 km	●	-	●	●	●	●	●	●
GLC-BX-D	1000BASE-BX SFP Module	10 km	-	-	●*1	●	●	●	●	●
GLC-BX-U	1000BASE-BX SFP Module	10 km	●	-	●*1	●	●	●	●	●
GLC-EX-SMD	1000BASE-EX SFP Module	40 km	-	-	-	●	●	●	●	●
GLC-ZX-SMD	1000BASE-ZX SFP Module	70 km	-	-	●*1	●	●	●	●	●
SFP-H10GB-CU1M	10GBASE-CU SFP Module	1 m	●	-	-	-	●	●	●	●
SFP-H10GB-CU1-5M	10GBASE-CU SFP Module	1.5 m	-	-	-	-	●	●	●	●
SFP-H10GB-CU2M	10GBASE-CU SFP Module	2 m	-	-	-	-	●	●	●	●
SFP-H10GB-CU2-5M	10GBASE-CU SFP Module	2.5 m	-	-	-	-	●	●	●	●
SFP-H10GB-CU3M	10GBASE-CU SFP Module	3 m	●	-	-	-	●	●	●	●
SFP-H10GB-CU5M	10GBASE-CU SFP Module	5 m	●	-	-	-	●	●	●	●
SFP-H10GB-ACU7M	10GBASE-ACU SFP Module	7 m	-	-	-	-	●	●	●	●
SFP-H10GB-ACU10M	10GBASE-ACU SFP Module	10 m	-	-	-	-	●	●	●	●
SFP-10G-AOC1M	10GBASE-AOC SFP Module	1 m	-	-	-	-	●	●	●	●
SFP-10G-AOC2M	10GBASE-AOC SFP Module	2 m	-	-	-	-	●	●	●	●
SFP-10G-AOC3M	10GBASE-AOC SFP Module	3 m	-	-	-	-	●	●	●	●
SFP-10G-AOC5M	10GBASE-AOC SFP Module	5 m	-	-	-	-	●	●	●	●
SFP-10G-AOC7M	10GBASE-AOC SFP Module	7 m	-	-	-	-	●	●	●	●
SFP-10G-AOC10M	10GBASE-AOC SFP Module	10 m	-	-	-	-	●	●	●	●
SFP-10G-SR-S	S-class 10GBASE-SR SFP+ Module	400 m	●	-	-	-	-	●	●	●
SFP-10G-SR	10GBASE-SR SFP+ Module	400 m	●	-	-	-	●	●	●	●
SFP-10G-LRM	10GBASE-LRM SFP Module	300 m	●	-	-	-	●	●	●	●
SFP-10G-LR-S	S-class 10GBASE-LR SFP+ Module	10 km	●	-	-	-	-	●	●	●
SFP-10G-LR	10GBASE-LR SFP+ Module	10 km	●	-	-	-	-	●	●	●
SFP-10G-BXD-I	10GBASE-BX SFP+ Module	10 km	-	-	-	-	-	-	●	●
SFP-10G-BXU-I	10GBASE-BX SFP+ Module	10 km	-	-	-	-	-	-	●	●
SFP-10G-BX40D-I	10GBASE-BX SFP+ Module	40 km	-	-	-	-	-	-	●	●
SFP-10G-BX40U-I	10GBASE-BX SFP+ Module	40 km	-	-	-	-	-	-	●	●
SFP-10G-ER-S	S-class 10GBASE-ER SFP+ Module	40 km	-	-	-	-	-	●	●	●
SFP-10G-ER	10GBASE-ER SFP+ Module	40 km	-	-	-	-	-	●	●	●
SFP-10G-ZR-S	S-class 10GBASE-ZR SFP+ Module	80 km	-	-	-	-	-	-	●	●
SFP-10G-ZR	10GBASE-ZR SFP+ Module	80 km	-	-	-	-	-	-	●	●
QSFP-H40G-CU1M	40GBASE-CU CFP Module	1 m	-	-	-	-	-	-	-	●
QSFP-H40G-CU3M	40GBASE-CU CFP Module	3 m	-	-	-	-	-	-	-	●
QSFP-H40G-CU5M	40GBASE-CU CFP Module	5 m	-	-	-	-	-	-	-	●
QSFP-H40G-ACU7M	40GBASE-ACU CFP Module	7 m	-	-	-	-	-	-	-	●
QSFP-H40G-ACU10M	40GBASE-ACU CFP Module	10 m	-	-	-	-	-	-	-	●
QSFP-40G-SR-BD	40GBASE-SR CFP Module	150 m	-	-	-	-	-	-	-	●
QSFP-40G-SR4	40GBASE-SR4 CFP Module	150 m	-	-	-	-	-	-	-	●
QSFP-40G-CSR4	40GBASE-CSR4 CFP Module	400 m	-	-	-	-	-	-	-	●
QSFP-40G-LR4	40GBASE-LR4 CFP Module	10 km	-	-	-	-	-	-	-	●

*1 LAN Base models only. *2 Mini models only.