Cisco Systems

Cisco Small and Medium Business Extended Product Guide

Purpose Built SMB Solutions

This guide is designed to help you determine the best solutions to recommend to your customers. Other resources you may want to review include the IDC Smart Business Roadmap Discovery Guide and the Solutions Recommendations Guide.

SMB Customers Face Unique Challenges

The role of technology is changing for today's small and medium-sized businesses (SMBs). As organizations and competitors become more global, they are turning to network technology to better connect with customers, suppliers, and customers.

To remain competitive and to thrive, companies must deploy technology and network solutions that help solve critical business challenges—both today and for the future. To keep pace with these challenges, businesses require a forward-looking technology plan—one that not only addresses current problems, but will also scale easily and effectively as needs change. To implement the solution, they need a trusted IT partner that can help them plan and control the evolution of their company, closely aligning a technology strategy to suit their business needs.

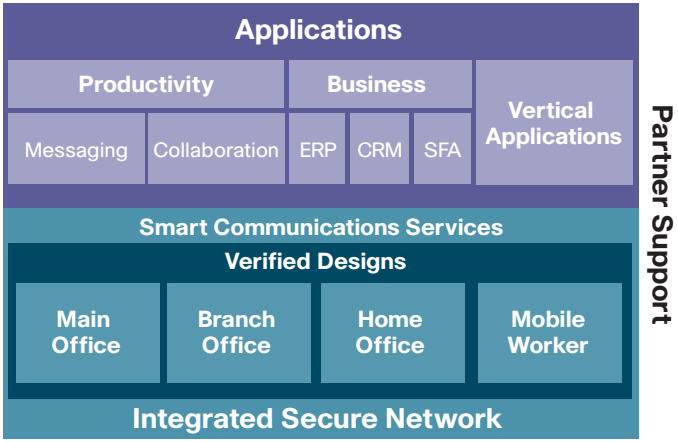
Selling to SMBs: Cisco Smart Business Communications

A common situation when selling into the SMB market is bridging the communications gap between the technical and business decision makers within the customer's organization. Cisco Systems® has developed the Smart Business Communications solution and the Smart Business Roadmap to help businesses bridge this gap.

Cisco® Smart Business Communications gives organizations a "smart" platform, with intelligence built into the IT systems. Cisco Smart Business Communications provides secure, immediate, and flexible access to company and customer data—anytime, anywhere—allowing customers to build closer relationships with their customers, suppliers, and employees.

The Cisco Smart Business Communications architectural framework (Figure 1) guides customers' IT evolution. The architecture has two layers: an integrated secure network layer with embedded smart communications services and an applications layer that is connected to the network for faster deployment and maximum utilization. Both layers are supported by Cisco Specialized Partners as they design, install, maintain, or host customer IT systems.

Figure 1 Cisco Smart Business Communications Architecture



Cisco's Smart Business Communications architecture (Figure 1) is a framework that guides customers' IT evolution for optimal business performance.

The Cisco Smart Business Communications architecture has two layers: An integrated secure network with embedded Smart Communication Services that connect to the applications layer for faster deployment and maximum resource utilization.

Both layers are supported by Cisco Specialized Partners as they design, install, maintain, or host customer IT systems, including their applications and their network.

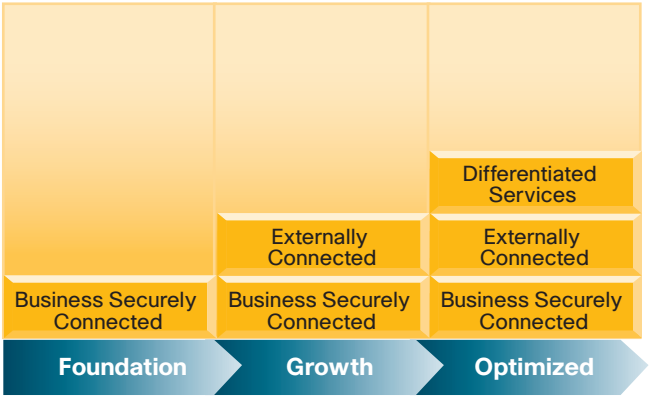
The Smart Business Communications architecture is a tested guide for implementing technologies for SMB customers. Cisco has verified network design guides for four typical network environments, making it easier for partners to design and install customer networks because they are tested by our systems engineers.

- **Main office or company headquarters:** Usually where the majority of heavy IT processing and call management occurs.
- **Branch or remote offices:** These offices need the same security, reliability, and access to information as employees at the main office. In the retail industry, these would be stores; in manufacturing companies, these might be sales offices.
- **Home offices:** Not just for small businesses, but also for employees who may work full-time out of their homes, such as call center agents.
- **Mobile workers:** Mobile workers need the same connectivity as when they are working in the office. E-mail and customer records can be accessed while at the airport waiting for the next flight.

Cisco Smart Business Roadmap

The Cisco Smart Business Roadmap (Figure 2) is designed to help you improve the way you sell to your customers. Using the Smart Business Roadmap, you can elevate the discussion with your customers from point products to resolving business challenges.

Figure 2 Cisco Smart Business Roadmap



The roadmap enables you to help your customers resolve their business challenges with a technology strategy. You work with customers to develop a plan that addresses their current challenges while setting them up for long-term success. The customized plan is designed to be implemented over time at a pace that is right for the customer, helping you develop long-term relationships.

The roadmap helps shorten the sales cycle, increase deal size and attachment rate, and improve customer relationships by enabling you to sell on business challenges that are resolved through technology, i.e. selling on value.

Cisco Offerings

Cisco offers a comprehensive line of technology solutions to meet customer needs. Cisco offers routers, switches, security devices, VPNs, wireless LANs, IP communications solutions, and the software necessary to integrate each element into a secure, productive, reliable, and easy-to-manage network. Cisco's unique end-to-end networking solutions enable organizations to communicate, collaborate, and compete more effectively by providing real-time access to information, enhanced communications, and improved business processes for today while helping companies evolve to meet constantly changing business requirements.

Cisco solutions offer:

- **Integrated, end-to-end security**—To safeguard confidential business data, a Cisco network provides enhanced security that protects the network from internal and external threats. An integrated security solution also simplifies security management and greatly reduces the total cost of network ownership.
- **High network availability**—A Cisco network helps ensure the reliable network access and maximum uptime that companies depend on to support new users, open new offices, deploy new services, extend their networks to customers and partners, support a more mobile workforce, and more. Cisco switches and routers include support for network and link redundancy, dynamic routing, automatic failover, and redundant power for improved fault tolerance and network availability.
- **Predictable performance**—Intelligent, end-to-end network management maximizes the availability and performance of critical applications. Cost-conscious SMBs can increase WAN bandwidth to serve more users and conduct more business over the Internet without upgrading to more expensive WAN facilities.
- **Ease of use**—Intuitive end-to-end Web-based management helps keep administrative expenses down, even as the network expands.
- **Cost-effectiveness**—An end-to-end solution approach reduces complexity and network management costs. Modular and scalable products help reduce costs of future expansion. The Cisco Smart Business Roadmap eases growth with technology planning advice that brings together tailored technology solutions, a lifecycle services approach, and flexible financing options.
- **Investment protection**—Customers can receive trade-in value for existing Cisco products against the purchase of new Cisco products. Cisco's breadth of solutions, and its ability to work closely with companies to help them plan their evolution with a lifecycle services approach, can help companies evolve quickly to meet new challenges.

Cisco Technology Solutions for Small and Medium-Sized Businesses

- The **Cisco Secure Network Foundation** provides a flexible communications platform that serves as the cornerstone to a business' evolution and as the foundation for other networking solutions. The Cisco Secure Network

Foundation delivers integrated security and maximizes reliability, helping to ensure that data is protected and that applications function as promised.

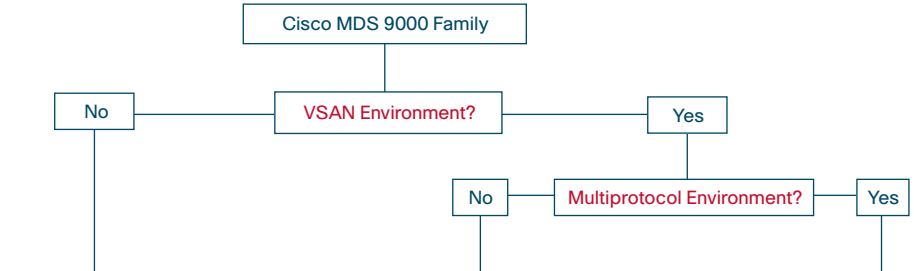
Wireless and mobility solutions are part of the Cisco Secure Network Foundation. These solutions enhance productivity by making information and applications more readily available to employees in the office, on the road, or at home. With Cisco wireless solutions, companies can set up standalone wireless LANs in buildings, branch offices, kiosks, or wherever they need connectivity. They can transmit data, voice, and video between buildings and provide site-to-site links that cost less than leased lines. Cisco wireless products deliver the same level of security, scalability, and manageability that a business enjoys with a wired LAN.

The Cisco Secure Network Foundation protects an organization's communications by identifying, preventing, and adapting to threats from both internal and external sources. With this protection, organizations are better prepared to take advantage of their network resources—improving business processes and cutting costs.

- The **Cisco Unified Communications Solution** is the industry's first integrated voice, video, data, and wireless communications system designed and priced for SMBs. This innovative systems approach to security, connectivity, and communications enables organizations to grow and optimize their business. The Cisco Unified Communications Solution is smart, simple, and secure. It provides an intelligent, resilient, adaptable infrastructure that enables companies to enhance the way they do business and build a competitive edge.
- **Service and support through local partners** provides the technical expertise and customer services needed to successfully deploy and operate the network. No matter what phase an organization is in—preparation, planning, design, implementation, operation, or optimization—Cisco and its certified, localized partners have a specific support strategy that can help accelerate the success of technology deployments and ongoing support.

For more information, visit www.cisco.com/go/smbpartner

Cisco Storage Networking Products



Cisco MDS 9020 Fabric Switch

- Cost-effective Fibre Channel SAN switching ideal for SMBs
- GUI-based SAN management software included with every switch
- Twenty fixed 4-Gbps line-rate ports
- Nondisruptive software upgrades to minimize service interruptions
- Runs on Cisco FarbicWare OS
- Compact 1-RU form factor
- Ideal for DAS to SAN migration

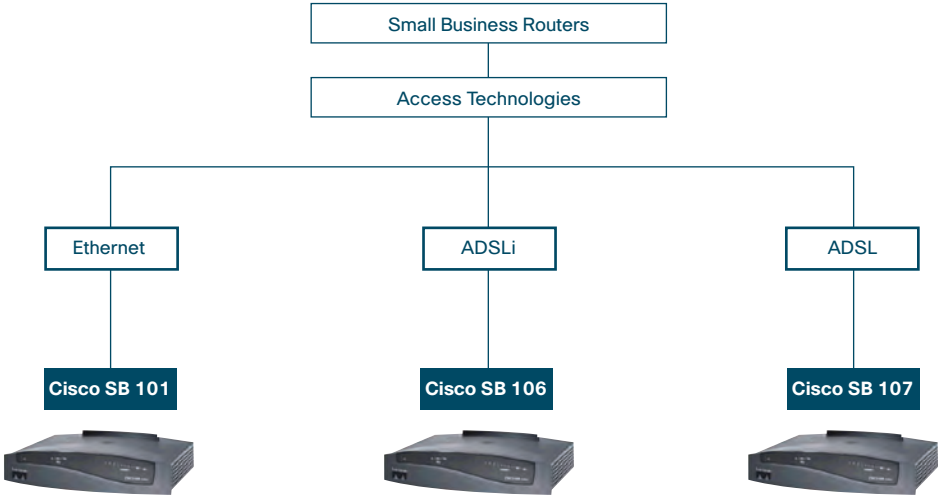
Cisco MDS 9100 Series Multilayer Fabric Switch

- High-density 2-Gbps Fibre Channel SAN switching in 20 and 40 fixed-port configurations
- Virtual SAN (VSAN) and Inter-VSAN Routing allow sharing of centralized resources
- High-availability features: Hot-swappable fans and power supplies, PortChannel link aggregation
- Cisco Fabric Manager and diagnostic tools integrated in every switch
- Compact 1-RU form factor
- Ideal for aggregating high-density SAN-server connections

Cisco MDS 9200 Series Multilayer Fabric Switch

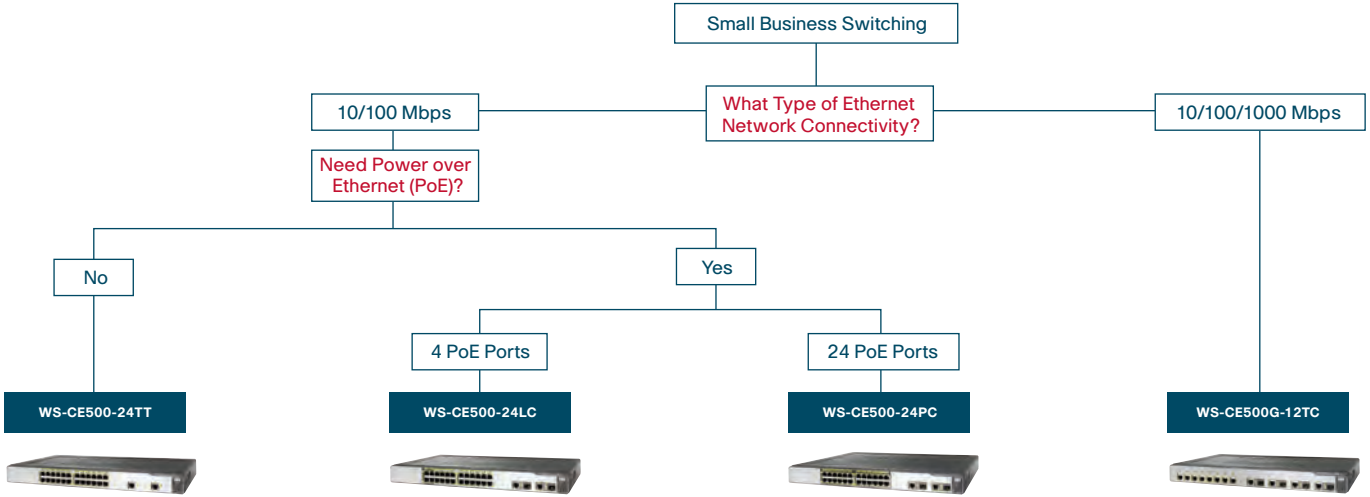
- Semi-modular 2-Gbps SAN switching with base system consisting of 16 Fibre Channel ports (9216), or 14 FC and 2 GE ports (9216i) in a 3-RU chassis
- One open slot supports all MDS 9000 Family modules
- VSAN and Inter-VSAN Routing allow sharing of centralized resources
- Integrated multiprotocol support (Fibre Channel, iSCSI, FCIP, FICON)
- High-availability features: Nondisruptive software upgrades, hot-swappable fans and power supplies, PortChannel link aggregation

Cisco SB Series Small Business Routers



Note:
ADSLi = ADSL over ISDN
ADSL = ADSL over POTS

Cisco Catalyst Express 500 Series Small Business Switches



- Twenty-four 10/100-Mbps ports for desktop connectivity
- Two 10/100/1000-Mbps copper ports for switch interconnect uplink or server connectivity

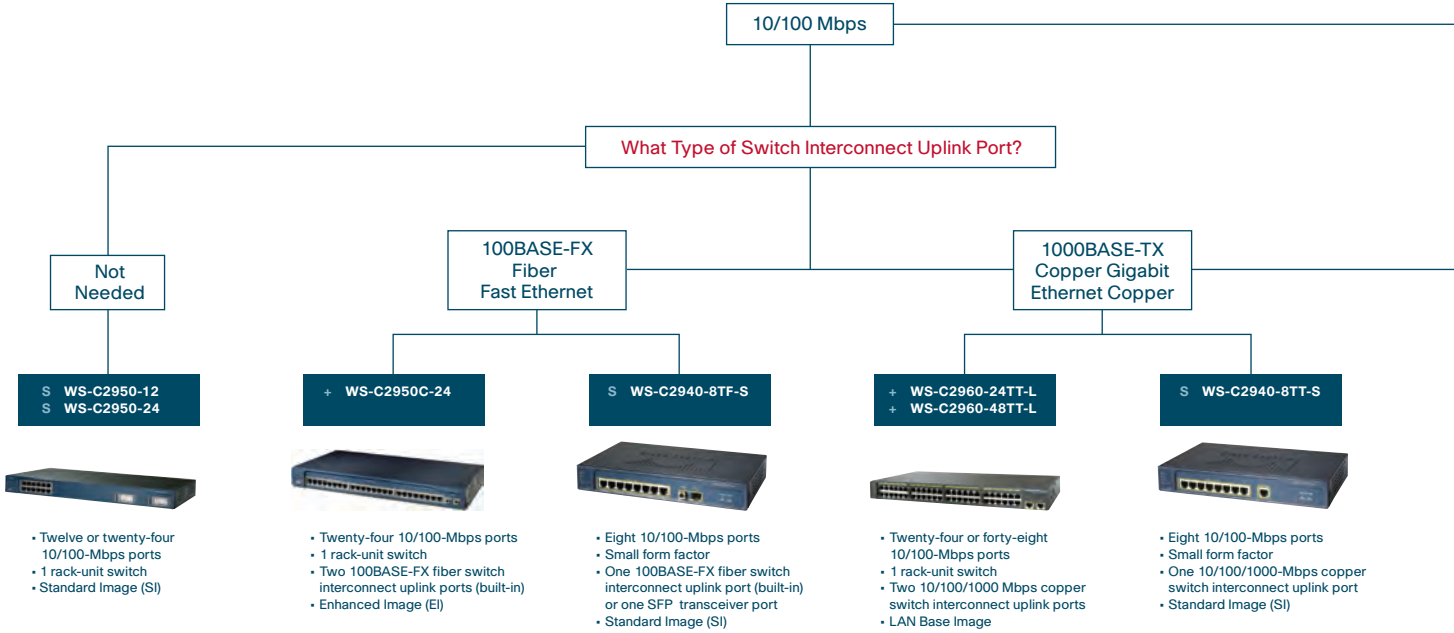
- Twenty 10/100-Mbps ports for desktop connectivity
- Four 10/100-Mbps PoE ports for desktop, wireless access point, IP telephony, or closed-circuit TV camera connectivity
- Two 10/100/1000-Mbps copper or SFP ports for switch interconnect uplink or server connectivity

- Twenty-four 10/100 Mbps PoE ports for desktop, wireless, IP telephony, or closed-circuit TV camera connectivity
- Two 10/100/1000-Mbps copper or SFP ports for switch interconnect uplink or server connectivity

- Eight 10/100/1000-Mbps copper and four 10/100/1000 Mbps copper or SFP ports for switch aggregation or server connectivity

NOTE: Cisco Catalyst Express 500 Series switches are Web/GUI managed only with preset configuration options.

Cisco Catalyst Switches: Layer 2 Access Switches



S Standard Image (SI)
+ Enhanced Image (EI)—for enhanced security/QoS (= LAN Base)

Layer 2 Access Switching

What Type of Ethernet Network Connectivity?

1000BASE-SX Fiber Gigabit Ethernet

S **WS-C2950SX-24**
S **WS-C2950SX-48**

- Twenty-four or forty-eight 10/100-Mbps ports
- 1 rack-unit switch
- Two 1000BASE-SX fiber switch interconnect uplink ports (built-in)
- Standard Image (SI)

Flexible Switch Interconnect Uplink

\+ **WS-C2960-24TC-L**
\+ **WS-C2960-48TC-L**

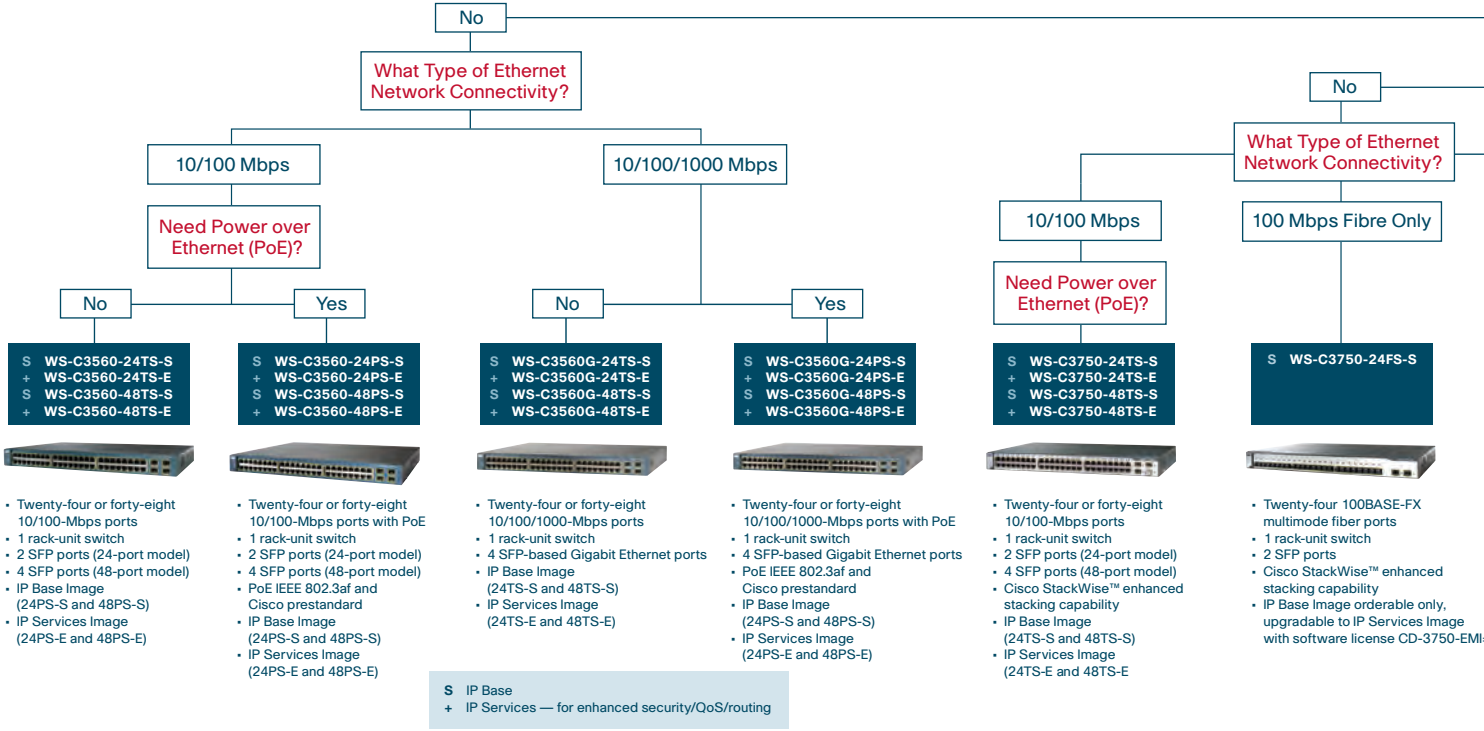
- Twenty-four or forty-eight 10/100-Mbps ports
- 1 rack-unit switch
- Two dual-purpose copper (built-in) or SFP transceiver switch interconnect uplink ports
- LAN Base Image

10/100/1000 Mbps

\+ **WS-C2960G-24TC-L**

- Twenty 10/100/1000-Mbps ports
- 1 rack-unit switch
- Four dual-purpose copper (built-in) or SFP transceiver switch interconnect uplink ports
- LAN Base Image

Cisco Catalyst Switches: Layer 2 and 3 Fixed-Configuration Switches



- Twenty-four or forty-eight 10/100-Mbps ports
- 1 rack-unit switch
- 2 SFP ports (24-port model)
- 4 SFP ports (48-port model)
- IP Base Image (24PS-S and 48PS-S)
- IP Services Image (24PS-E and 48PS-E)

- Twenty-four or forty-eight 10/100-Mbps ports with PoE
- 1 rack-unit switch
- 2 SFP ports (24-port model)
- 4 SFP ports (48-port model)
- PoE IEEE 802.3af and Cisco prestandard
- IP Base Image (24PS-S and 48PS-S)
- IP Services Image (24PS-E and 48PS-E)

- Twenty-four or forty-eight 10/100/1000-Mbps ports
- 1 rack-unit switch
- 4 SFP-based Gigabit Ethernet ports
- IP Base Image (24TS-S and 48TS-S)
- IP Services Image (24TS-E and 48TS-E)

- Twenty-four or forty-eight 10/100/1000-Mbps ports with PoE
- 1 rack-unit switch
- 4 SFP-based Gigabit Ethernet ports
- PoE IEEE 802.3af and Cisco prestandard
- IP Base Image (24PS-S and 48PS-S)
- IP Services Image (24PS-E and 48PS-E)

- Twenty-four or forty-eight 10/100-Mbps ports
- 1 rack-unit switch
- 2 SFP ports (24-port model)
- 4 SFP ports (48-port model)
- Cisco StackWise™ enhanced stacking capability
- IP Base Image (24TS-S and 48TS-S)
- IP Services Image (24TS-E and 48TS-E

- Twenty-four 100BASE-FX multimode fiber ports
- 1 rack-unit switch
- 2 SFP ports
- Cisco StackWise™ enhanced stacking capability
- IP Base Image orderable only, upgradable to IP Services Image with software license CD-3750-EMI

S IP Base
+ IP Services — for enhanced security/QoS/routing

Layer 2/Layer 3
Fixed-Configuration Switching

Need the Extensibility of Stackable? — Yes

Need Power over Ethernet (PoE)? — Yes

10/100/1000 Mbps

What Type of Switch Interconnect Uplink Port?

No

S WS-C3750G-24T-S
+ WS-C3750G-24T-E

- Twenty-four 10/100/1000-Mbps ports
- 1 rack-unit switch
- Cisco StackWise enhanced stacking capability
- IP Base (24T-S)
- IP Services (24T-E)

Small Form-Factor Pluggable (SFP)

S WS-C3750G-24TS-S
+ WS-C3750G-24TS-E
S WS-C3750G-48TS-S
+ WS-C3750G-48TS-E

- Twenty-four or forty-eight 10/100/1000-Mbps ports
- 1 rack-unit switch
- 4 SFP-based Gigabit Ethernet ports
- Cisco StackWise enhanced stacking capability
- IP Base (24TS-S and 48TS-S)
- IP Services (24TS-E and 48TS-E)

10 Gigabit

S WS-C3750G-16TD-S
+ WS-C3750G-16TD-E

- Sixteen 10/100/1000-Mbps ports
- 1 rack-unit switch
- 1 10 Gigabit uplink
- Cisco StackWise enhanced stacking capability
- IP Base (16TD-S)
- IP Services (16TD-E)

Gigabit Fibre

S WS-C3750-12S-S
+ WS-C3750-12S-E

- Twelve SFP-based Gigabit ports
- 1 rack-unit switch
- Cisco StackWise enhanced stacking capability
- IP Base (12S-S)
- IP Services (12S-E)

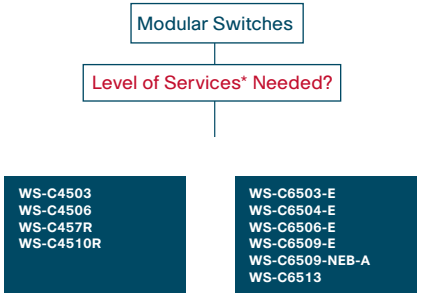
10/100 Mbps

S WS-C3750-24PS-S
+ WS-C3750-24PS-E
S WS-C3750-48PS-S
+ WS-C3750-48PS-E

- Twenty-four or forty-eight 10/100-Mbps ports with PoE
- 1 rack-unit switch
- 2 SFP ports (24-port model)
- 4 SFP ports (48-port model)
- PoE IEEE 802.3af and Cisco prestandard
- Cisco StackWise enhanced stacking capability
- IP Base (24PS-S and 48PS-S)
- IP Services (24PS-E and 48PS-E)

S WS-C3750G-24PS-S
+ WS-C3750G-24PS-E
S WS-C3750G-48PS-S
+ WS-C3750G-48PS-E

- Twenty-four or forty-eight 10/100/1000-Mbps ports with PoE
- 1 rack-unit switch
- 4 SFP-based Gigabit Ethernet ports
- PoE IEEE 802.3af and Cisco prestandard
- Cisco StackWise enhanced stacking capability
- IP Base (24PS-S and 48PS-S)
- IP Services (24PS-E and 48PS-E)



- 3/6/7/10-slot chassis model options
- Flexible supervisor selection
- Redundant supervisor option
- Up to 102 Mpps and 136 Gbps performance
- PoE with redundant power
- Large selection of line cards to meet SMB connectivity needs
- Integrated high-availability and security features
- Easy-to-use GUI configuration tools
- Extended investment protection
- Low total cost of ownership

- Highest level of services*
- 32 or 720 Gbps performance options
- Modular PoE option
- Large variety of services modules, supervisor modules, and line cards
- 3/4/6/9/13-slot chassis model options
- Highest availability: Cisco IOS Modularity
- Highest level of security: security services modules, DoS protection
- Voice-aware services: autoconfiguration for voice, scalable wireless voice serv

Cisco Catalyst Switches: Management and Software Images

Cisco Network Assistant

- **Intuitive, centralized network management:** A PC-based network management application designed for SMB networks with up to 250 users, Cisco Network Assistant offers centralized network management and configuration capabilities. This application also features an intuitive GUI where users easily can apply common services such as configuration management, inventory reports, password synchronization, and drag-and-drop Cisco IOS Software upgrades across Cisco SMB-class switches, routers, and access points. Cisco Network Assistant is available at no cost and can be downloaded by registered Cisco.com users
- **Smartports Advisor:** Cisco Smartports technology provides a set of common configurations that help accurately enable network security and QoS functions for Cisco network devices. The Smartports Advisor helps Cisco Catalyst Express 500 Series switches automatically discover connected Cisco devices and suggests appropriate Smartports roles. Unique to the Cisco Catalyst Express 500 Series are additional Smartports roles for third-party devices such as servers, and the ability to detect misconfigured ports.
- **Troubleshooting Advisor:** Cisco Network Assistant simplifies troubleshooting even further by automatically identifying potential network issues—such as cabling issues and configuration errors—and documenting them with a graphical trend chart. The troubleshooting advisor provides users with an explanation of the problem and gives them the option to take corrective action with a single mouse click.

Cisco Catalyst Switch Software Image Descriptions

- **LAN Base Image for Cisco IOS Software:** The enhanced Layer 2 Cisco IOS Software image for switches based on most recent hardware architecture.
- **Standard Image (SI) for Cisco IOS Software:** Offers Cisco IOS Software functions for basic data, voice, and video services.
- **Enhanced Image (EI) for Cisco IOS Software:** Offers the same standard services as SI, plus intelligent services such as rate limiting and security filtering for deployment at the network edge for networks with requirements for additional security, advanced QoS, and high availability.
- **IP Base License:** Offers advanced QoS, rate-limiting, ACLs, and basic routing. Can be upgraded in the field to an Advanced IP Services License.
- **IP Services License:** Provides a richer set of enterprise-class features, including advanced hardware-based IP Unicast and IP Multicast routing as well as policy-based Routing (PBR). Can be upgraded in the field to Advanced IP Services License.
- **Advanced IP Services License:** Adds IPv6 routing to both IP Services and IP Base images.

Cisco Integrated Services Routers: Secure Routing

Fixed or Modular?

Fixed Configuration

Advanced Functions for QoS, Security, and Voice Transport?

No

Yes

Firewall Security, Site-to-Site VPN, Basic IP QoS

Switch Ports and VLANs?

4 Switch Ports Up to 4 VLANs

8 Switch Ports Up to 8 VLANs

Cisco 850 Integrated Services Router

- 4-port 10/100-Mbps switch
- Ethernet WAN port (851/851W)
- ADSL WAN port (857/857W)
- Cisco IOS Firewall
- IPsec VPN, 3DES, AES, 5 tunnels
- WLAN 802.11b/g (851W/857W)

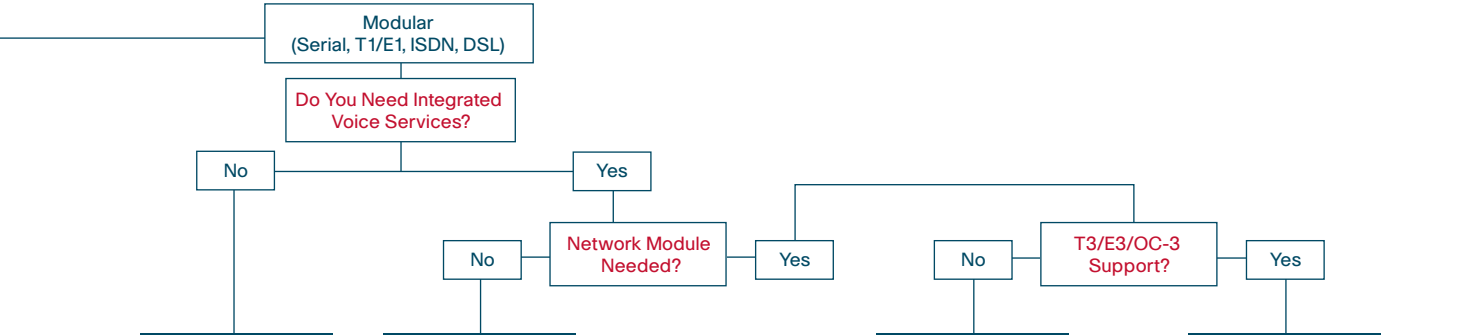
Note:
ADSLi = ADSL over ISDN
ADSL = ADSL over POTS

Cisco 870 Integrated Services Router

- 4-port 10/100 Mbps switch
- Fast Ethernet WAN port (871/871W)
- ADSL over ISDN WAN port (876/876W)
- ADSL over POTS WAN port (877/877W)
- G.SHDSL WAN port (878/878W)
- Cisco IOS Firewall, DMZ, 802.1X
- Cisco IPS, NAC
- IPSec VPN, 3DES, AES, 10 tunnels
- QoS, Access Zone Routing
- Optional ISDN backup (876/876W only)
- WLAN 802.11b/g (871W/876W/877W/878W)
- USB 2.0 port (871)
- Optional POE

Cisco 1800 Integrated Services Router

- 8-port 10/100 Mbps switch
- ADSL WAN port (1801/1801W)
- ADSLi WAN port (1802/1802W)
- G.SHDSL WAN port (1803/1803W)
- 2 Fast Ethernet WAN ports (1811/1811W/1812/1812W)
- Cisco IOS Firewall, IPS, NAC
- IPSec VPN 3DES, AES, 50 tunnels, SSLVPN
- Advanced QoS
- Standard ISDN or analoge backup
- 802.1Q, 802.1X
- WLAN 802.11a/b/g (1801W,1802W,1803W,1811W,1812W)
- 2 USB 2.0 ports (1811/1811W/1812/1812W)
- Optional POE



- 2-port Fast Ethernet
- 2 HWIC/VWIC/WICs
- Advanced Integration Module
- Cisco IOS Firewall, IPS, NAC, SSL VPN
- IPsec VPN, up to 800 tunnels
- Advanced QoS
- 802.1Q, 802.1X

- 2-port Fast Ethernet
- 2 HWIC/VWIC/WICs
  1 VWIC/WIC/VIC
  1 VWIC/VIC (voice only)
- 2 Advanced Integration Modules
- Cisco IOS Firewall, IPS, NAC, SSL VPN
- IPsec VPN, up to 1500 tunnels
- Advanced QoS
- 802.1Q, 802.1X
- 2 onboard PVDM slots for voice
- Optional Cisco Unified CallManager Express, SRST, voicemail, PoE

- 2-port Fast Ethernet
- 4 HWICs
- 2 Advanced Integration Modules
- 1 Network Module
- 1 Network Module Extended (NME)
- Cisco IOS Firewall, IPS, NAC, IPsec VPN up to 1500 tunnels, SSL VPN
- Advanced QoS
- 802.1Q, 802.1X
- Up to 3 onboard PVDM slots for voice
- Optional Cisco Unified CallManager Express, SRST, voicemail, PoE

- 2-port Fast Ethernet
- 4 HWICs
- 2 Advanced Integration Modules
- 4 Network Modules
- Cisco IOS Firewall, IPS, NAC, IPsec VPN up to 2500 tunnels, SSL VPN
- 1 SFP-based Gigabit port
- Advanced QoS
- 802.1Q, 802.1X
- Up to 4 onboard PVDM Slots for Voice
- Optional Cisco Unified CallManager Express, SRST, voicemail, PoE

Cisco Routers: Wireless and Management

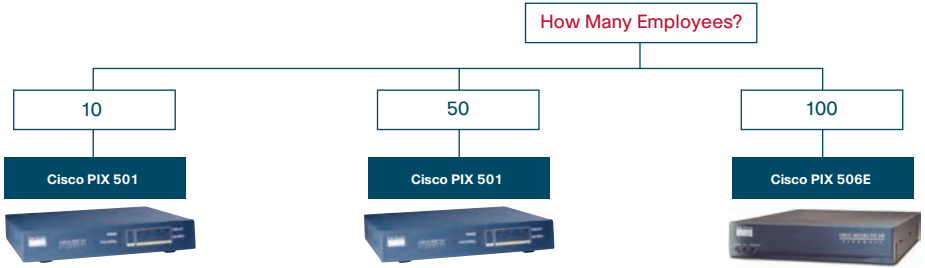
Wireless Module: HWIC 802.11 Access Point for Modular Cisco Integrated Services Routers

- 802.11a/b/g and 802.11b/g models
- Removable antennas

Cisco Wireless LAN Controller Module for Cisco Integrated Services Routers

- Manages up to 6 Cisco Aironet lightweight access points

Cisco PIX: Security Appliances



Cisco PIX® 501 Security Appliance
(10 users with 3DES)
PIX-501-BUN-K9

- Stateful inspection firewall (10 Mbps clear-text throughput)
- 56-bit DES IPsec VPN (6 Mbps throughput)
- 168-bit 3DES IPsec VPN (3 Mbps throughput)
- 128-bit AES IPsec VPN (4.5 Mbps throughput)
- 10 simultaneous remote-access/site-to-site VPN peers
- Intrusion detection
- 4-port 10/100 switch
- Plug and play, Auto Update, and Easy VPN
- Free VPN client

Cisco PIX 501 Security Appliance
(50 users with 3DES)
PIX-501-50-BUN-K9

- Stateful inspection firewall (10 Mbps clear-text throughput)
- 56-bit DES IPsec VPN (6 Mbps throughput)
- 168-bit 3DES IPsec VPN (3 Mbps throughput)
- 128-bit AES IPsec VPN (4.5 Mbps throughput)
- 10 simultaneous remote-access/site-to-site VPN peers
- Intrusion detection
- 4-port 10/100 switch
- Plug and play, Auto Update, and Easy VPN
- Free VPN client

Cisco PIX 506E Security Appliance
(100 users with 3DES)
PIX-506E-BUN-K9

- Stateful inspection firewall (10 0Mbps clear-text throughput)
- 56-bit DES IPsec VPN (20 Mbps throughput)
- 168-bit 3DES IPsec VPN (17 Mbps throughput)
- 128-bit AES IPsec VPN (30 Mbps throughput)
- 25 simultaneous remote-access/site-to-site VPN peers
- Intrusion detection
- 2 10/100 ports
- Plug and play, Auto Update, and Easy VPN
- Free VPN client

Cisco ASA: Security Appliances

How Many Users?

Up to 500

Cisco ASA 5510

Ideal solution for SMB and remote/ branch offices in an easy-to-deploy, cost-effective appliance

1 RU security appliance providing:

- Market-proven security and VPN capabilities
- 3 or 5 integrated 10/100 FE interfaces
- Optional security services module for IPS/anti-X protection
- Combined IPsec/WebVPN
- Extensible VPN peer counts and high availability capabilities
- Up to 300 Mbps firewall throughput
- Up to 150 Mbps Firewall+IPS throughput
- Up to 170 Mbps VPN throughput

500–1000

Cisco ASA 5520

Ideal solution for medium-sized networks requiring high availability and Gigabit Ethernet interfaces

- RU security appliance providing:
- Market-proven security and VPN capabilities
- 1 FE and 4 GE integrated interfaces
- Optional security services module for IPS/anti-X protection
- Combined IPsec/WebVPN
- Extensible VPN peer counts
- Security contexts and virtual interfaces
- Up to 450 Mbps firewall throughput
- Up to 375 Mbps Firewall+IPS throughput
- Up to 225 Mbps VPN throughput

1000 and Above

Cisco ASA 5540

Ideal solution for medium-sized and large networks and SMB managed service provider networks, in a reliable and modular appliance

- RU security appliance providing:
- Market-proven security and VPN capabilities
- 1 FE and 4 GE integrated interfaces
- Optional security services module for IPS/anti-X protection
- Combined IPsec/WebVPN
- Extensible VPN peer counts
- Security contexts and virtual interfaces
- Up to 650 Mbps firewall throughput
- Up to 450 Mbps Firewall+IPS throughput
- Up to 325 Mbps VPN throughput

Cisco Security Management: Cisco Security Mars

Cisco Security Monitoring, Analysis, and Response System (Cisco Security MARS) is a high-performance, scalable appliance for threat management, monitoring, and mitigation that helps customers make better network security decisions. The appliance:

- Combines traditional security event monitoring with network intelligence, to deliver automated mitigation capabilities
- Empowers companies to quickly and confidently identify, manage, and eliminate network attacks, as well as maintain compliance
- Collects events from firewalls, VPN concentrators, host/network IPSs, and system logs, then correlates them with vulnerability assessment to detect anomalies
- Monitors security data from across the network's IDS/IPS, firewalls, routers, switches, Cisco Security Agent syslot, SNMP, and host event logs (Windows and UNIX)
- Analyzes data to rapidly locate known and unknown attacks
- Responds to an attack by "reaching-out" and taking action on your network

Cisco Adaptive Security Device Manager

- Intuitive, Web-based interface for securely managing a single remote Cisco PIX or ASA Security Appliance
- Web-based real-time monitoring of CPU/memory utilization, interface throughput, connections, and VPN tunnels.
- Full-featured wizards for initial firewall
- Twenty-four or forty-eight 10/100-Mbps ports with PoE
- 1 rack-unit switch
- 2 SFP ports (24-port model)
- 4 SFP ports (48-port model)
- PoE IEEE 802.3af and Cisco prestandard

Cisco Unified Communications Solutions

Voice Gateways

Cisco 2801-CCME/K9

Cisco 2801 Bundle

Options suggestions:
- 1-port RJ-48 multiflex trunk E1
- 1 Cisco Catalyst Express 500 24PC 24-port 10/100 switch with PoE

Cisco 2811-CCME/K9

Cisco 2811 Bundle

Options suggestions:
- 1-port RJ-48 multiflex trunk E1
- 2 Cisco Catalyst Express 500 24PC 24-port 10/100 switches with PoE or 1 Cisco Catalyst 3560 24/48-port 10/100 switch with PoE

Cisco 2821-CCME/K9

Cisco 2821 Bundle

Options suggestions:
- 1-port RJ-48 multiflex trunk E1
- 1 Cisco Catalyst 3560 24/48-port 10/100 switch with PoE

Cisco 2851-CCME/K9

Cisco 2851 Bundle

Options suggestions:

- 1-port RJ-48 multiflex trunk E1
- 1 Cisco Catalyst Switch 3560 24/48-port 10/100 switch with POE or 1 Cisco Catalyst 3750 Series Switch

Cisco 3825-CCME/K9

Cisco 3825 Bundle

Options suggestions:

- 2-port RJ-48 multiflex trunk E1
- 1 Cisco Catalyst 3560 24/48-port 10/100 switch with PoE or 1 Cisco Catalyst 3750 Series switch

Cisco 3845-CCME/K9

Cisco 3845 Bundle

Options suggestions:

- 2-port RJ-48 multiflex trunk E1
- 1-port RJ-48 multiflex trunk E1
- 1 Cisco Catalyst 3560 24/48-port 10/100 switch with PoE or 1 Cisco Catalyst 3750 Series switch

Cisco Catalyst 6500 and 7600 Series Communication Media Module

- T1/E1 gateway
- 24-port FXS Module available
- Cisco Unified Survivable Remote Site Telephony (SRST) available, supporting up to 480 IP phones
- Conferencing and transcoding

Selecting WAN and Voice Modules

- VIC-2E/M—2-port E&M VIC
- VIC-2FXS—2-port analog FXS VIC
- VIC-2FXO—2-port analog FXO VIC
- VIC-2FXO-EU—2-port analog FXO VIC (for Europe)
- VIC-2BRI-NT/TE—2-port BRI VIC (NT and TE)
- VIC-2BRI-S/T-TE—2-port BRI VIC (terminal)
- VWIC2-1MFT-E1—1-port E1/PRI VWIC
- VWIC2-2MFT-E1—2-port E1/PRI VWIC
- VIC2-2FXS—2-port VIC (FXS)
- VIC2-2FXO—2-port VIC (FXO: universal)
- VIC2-4FXO—4-port VIC (FXO: universal)
- VIC2-2E/M—2-port E&M VIC
- VIC2-2BRI-NT/TE—2-port BRI VIC (NT and TE)
- 1-slot IP communications voice/fax network module (up to 4 channels of analog/BRI voice)
- 2-slot IP communications voice/fax network module (up to 8 channels of analog/BRI voice)
- 2-slot IP communications enhanced voice/fax network module (up to 24 channels of analog/BRI voice)

Cisco Unified Communications Solutions: Call Processing

Cisco Unified CallManager Express

Cisco Unified CallManager Express provides call processing for Cisco Unified IP Phones. Embedded in Cisco IOS Software, this solution enables the widely deployed portfolio of Cisco integrated services routers and multiservice access routers to deliver the telephony features that small or medium-sized offices need. With Cisco Unified CallManager Express, customers can scale IP telephony to a small or medium-sized site with a solution that is simple to deploy, administer, and maintain. The Cisco Unified CallManager Express solution is best suited for customers that are looking for a low-cost, reliable, feature-rich telephony solution for up to 240 users. Its many system and convergence features include:

- Paging
- Intercom
- Integration with Microsoft CRM
- Basic automatic call distribution (ACD)

New features included with Cisco Unified CallManager 4.0 include:

- Basic QSig support
- IP Communicator (possible)
- International language installer
- MOH for internal callers
- Localization for template/phone
- Support for secure device signaling using TLS

IP Phones Supported per Router Platform

Router Platform	Number of IP Phones Supported
Cisco 2801	24
Cisco 2811	36
Cisco 2821	48
Cisco 2851	96
Cisco 3825	168
Cisco 3845	240

Cisco Unified CallManager

Cisco Unified CallManager is the software-based call-processing component of the Cisco Business Communications Solution for SMBs and enterprises. Cisco Unified CallManager software extends telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, voice over IP (VoIP) gateways, and multimedia applications.

The Cisco Unified CallManager solution offers high resiliency and redundancy for mission-critical communications. Branch offices use Cisco Unified Survivable Remote Site Telephony, the industry-leading survivability feature in Cisco integrated services routers and multiservice access routers, to provide a subset of call processing capabilities to remote users in the event of a WAN failure. For centralized resiliency, customers can create a cluster of multiple Cisco Unified CallManager servers, which can be managed as a single system. A unique industry capability, Cisco Unified CallManager clustering aggregates the power of multiple, distributed Cisco Unified CallManager systems, enhancing the scalability and accessibility of the servers to phones, gateways, and applications.

With Version 5.0, Cisco Unified CallManager now provides the choice of operating system: either a Windows-based sever or an appliance model.

The appliance comes with a single firmware image that includes both the underlying operating system as well as the Cisco Unified CallManager application. The appliance can be accessed through a GUI. To enhance the security on the appliance, Cisco Security Agent comes pre-loaded; a host-based firewall has been added, along with IPsec connectivity between all cluster members.

Cisco Unified Survivable Remote Site Telephony

Cisco offers a cost-effective, reliable solution for providing continuous Unified Communications services to branch offices using Cisco Unified Survivable Remote Site Telephony. A unique, industry-first capability embedded in Cisco IOS Software running on Cisco routers, Cisco Unified Survivable Remote Site Telephony provides feature-rich call processing redundancy for centralized Cisco Unified CallManager or CallManager Express deployments, while using the existing network infrastructure. If the WAN link to the remote office fails and the connection to the Cisco Unified CallManager is lost, branch office phones are automatically redirected to the Cisco Unified Survivable Remote Site Telephony branch router, which takes over and provides a core/critical subset of the functions provided by Cisco Unified CallManager—minimizing the impact to the business. Once the disrupted WAN link is restored, the phones automatically reregister with the original Cisco Unified CallManager—no manual intervention is required.

If the router servicing Cisco Unified CallManager Express IP phones is interrupted, the Cisco Unified Survivable Remote Site Telephony router takes over and provides a core/critical features until connectivity is restored. Once the connection is restored, the phones will automatically register back to the Cisco Unified CallManager Express router.

Router Platform	Cisco Unified Survivable Remote Site Telephony Support
2801	24 IP phones/120 directory numbers
2811	36 IP phones/144 directory numbers
2821	48 IP phones/192 directory numbers
2851	96 IP phones/255 directory numbers
3825	336 IP phones/960 directory numbers
3845	720 IP phones/960 directory numbers

Cisco Unified Communications Solutions: Voicemail

Cisco Unity Express

Cisco Unity® Express enables SMBs and enterprise branch offices to cost effectively integrate voicemail and auto attendant services inside Cisco routers for a lower total cost of ownership and increased employee productivity. An essential component of the Cisco Unified Communications portfolio of products, Cisco Unity Express provides:

- Affordable messaging and greeting services for increased customer service and rich employee communications
- Integrated voicemail; IMAP4 client access support
- Scalability from 4 to 16 concurrent voicemail or auto attendant calls and 12 to 250 mailboxes
- Cisco Unified CallManager 5.0 and 4.2 support
- Message notification
  - E-mail
  - Phone
  - SMS
  - E-page
  - Numeric page
- Intuitive telephone prompts and a GUI for fast, convenient voicemail and auto attendant administration
- Deployment flexibility with Cisco Unified CallManager Express, Cisco CallManager, and Cisco Unity systems

Available as a network module or advanced integration module, Cisco Unity Express is a simple addition to Cisco 2800 and 3800 Series routers.

Cisco Unity Connection

Cisco Unity Connection combines integrated messaging, speech recognition, and call routing rules into an easy-to-manage system for midmarket customers with up to 1500 users.

Cisco Unity Connection transparently integrates messaging and speech components with your data network to provide continuous global access to calls and messages. These advanced, convergence-based communication services help you use voice commands to place calls or listen to messages in “hands-free” mode and check voice messages from your desktop, either integrated into an e-mail inbox or from a Web browser. Cisco Unity Connection also features robust auto attendant functions that include intelligent routing and easily customizable call-screening and messagenotification options.

Built on a platform that is easy to install and maintain, Cisco Unity Connection provides an intuitive Web-browser-based system administration interface that dramatically simplifies the installation, support, and ongoing management of your system, ultimately lowering your organization’s total cost of ownership.

Cisco Unity

Cisco Unity is a powerful Unified Communications solution that provides advanced, convergence-based communications services such as voicemail and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and when integrated with a Cisco fax server (or a supported third-party fax server), can forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Available for Lotus Domino and Microsoft Exchange environments, the Cisco Unity solution helps customers improve communications, boost productivity, and enhance customer service capabilities across their organizations.

Example Cisco Unity features for end users include:

- Customize your message-notification options, manage personal greetings, or change passwords with Cisco Unity Assistant (the Cisco Personal Communications Assistant Web-browser-based personal administrator).
- Record up to five personal greetings (alternate, busy, internal, offhours, or standard).
- Set an expiration date for any personal greeting.
- Manage an alternate greeting, require callers to listen to full greeting, or notify users when a greeting is on.
- Provide message notification for new messages through devices such as SMTP text, pagers, and phone destinations.
- Provide message notification with Short Message Service (SMS) text messaging for mobile users; Cisco Unity Unified Messaging supports the Short Message Peer to Peer (SMPP) 3.4 protocol for interoperability with all major SMS providers.
- Specify an after-greeting action; after a subscriber greeting, callers can be directed to leave a message, sign in, or hang up, or they can be sent to call handlers, a directory handler, an interview handler, or a subscriber.

Cisco Unified Communications Solutions: Conferencing

Cisco Unified MeetingPlace Express

Cisco Unified MeetingPlace® Express promotes communication and collaboration by helping people meet from any place, at any time, and with anyone. Organizations can expand their market reach, improve operational effectiveness, and speed decisions by integrating virtual meetings into everyday communications. With just a phone and a Web browser, users can collaborate with co-workers, demonstrate products and services to customers, and deliver compelling presentations. Cisco Unified MeetingPlace Express helps enable highly productive virtual meetings by integrating meeting management and control capabilities directly into Web and Cisco Unified IP Phone interfaces.

Cisco Unified MeetingPlace

Cisco Unified MeetingPlace is a complete rich-media conferencing solution that integrates voice, video, and Web conferencing capabilities. Cisco Unified MeetingPlace is deployed "on-network," behind the firewall. This solution integrates directly with an organization's private voice and data networks and enterprise applications, providing significant cost savings, high security, and an enhanced user experience.

Cisco Unified MeetingPlace delivers a superior user experience by providing intuitive interfaces that make setting up, attending, and managing meetings simple and straightforward. The feature-rich voice, video, and Web conferencing capabilities enable a range of meeting applications— from highly collaborative meetings to training sessions and presentations.

Cisco Unified MeetingPlace takes advantage of existing corporate voice (IP and circuit-switched) and data networks to greatly reduce or eliminate transport toll charges and recurring conferencing charges. On-network deployment results in a more secure meeting environment that allows organizations to isolate their confidential meetings and content behind the firewall for secure data network transport while providing the flexibility to meet with external parties.

Cisco Unified Communications Solutions: Contact Center

Cisco Unified Contact Center Express

Cisco Unified Contact Center Express meets the needs of individual departments, enterprise branches, or small to medium-sized companies that are planning to deploy an entry-level or mid-market contact center solution. Designed for formal and informal contact centers, Cisco Unified Contact Center Express delivers sophisticated call routing, contact management, and administration features. Cisco Unified Contact Center Express offers ease of installation, configuration, and application hosting.

Cisco Unified Contact Center Express enhances the efficiency of any contact center organization by simplifying business application integration, easing agent administration, increasing agent flexibility, and providing efficiency gains in network hosting. These features help reduce business costs and improve customer response for your contact center. This single-server, integrated "contact center in a box" gives you independence in agent location, improves agent scalability, and provides powerful automatic call distributor (ACD) features, such as conditional routing, call-in-queue and expected-wait-time messages, enterprise data displays, real-time data, and historical reporting together with integrated interactive voice response (IVR) services. Cisco Unified Contact Center Express provides true integration of ACD and IVR functions and offers a single, integrated service creation environment.

Cisco Unified Contact Center Enterprise Edition

Cisco Unified Contact Center Enterprise uses an IP infrastructure to deliver skills-based contact routing, voice self-service, computer telephony integration (CTI), and multichannel contact management. By combining multichannel ACD functions with IP telephony in a unified solution, Cisco Unified Contact Center Enterprise helps your company rapidly deploy a distributed voice-over-IP (VoIP) contact center infrastructure.

Cisco Unified Contact Center Enterprise segments customers, monitors resource availability, and delivers each contact to the most appropriate resource anywhere in the enterprise. The software profiles each customer contact using related data such as dialed number and calling line ID, callerentered digits, data submitted on a Web form, and information obtained from a customer database lookup. Simultaneously, the system monitors the resources available in the contact center to meet customer needs, including agent skills and availability, IVR status, and queue lengths.

This combination of customer and contact center data is processed through user-defined routing scripts that graphically reflect your company's business rules, enabling Cisco Unified Contact Center Enterprise to route each contact to the right place. Wherever an agent is based, the system delivers a rich set of call event and customer-provided data to the targeted desktop as a contact arrives, personalizing service and increasing efficiency. Throughout the process, distributed fault tolerance helps ensure uninterrupted operation.

Cisco Unified Communications Solutions: Applications

Cisco Unified MobilityManager

Cisco Unified MobilityManager makes it easy for workers to keep in touch with the business at hand, whether they're mobile or at their desks. It includes Cisco Mobile Connect mobility services to extend the benefits of Cisco Unified Communications to on- and off-campus workers. This application server integrates with Cisco Unified CallManager to intelligently manage, filter, route, and place calls between a worker's IP phone and remote mobile phone. With Cisco Unified MobilityManager, a worker can receive and place business calls from the devices most convenient for the task without interrupting calls, whether in the office, in transit, or at a remote location. Cisco Unified MobilityManager also helps IT and telecom managers better serve the communication needs of their mobile workers, while enabling them to use the Unified Communications network resources available with Cisco Unified CallManager.

Cisco Emergency Responder

Cisco Emergency Responder enhances emergency calling from Cisco Unified CallManager. It helps ensure that Cisco Unified CallManager sends emergency calls to the appropriate Public Safety Answering Point (PSAP) for the caller's location, and that the PSAP can identify the caller's location and, if necessary, return the call. Cisco Emergency Responder can also notify customer security personnel of an emergency call in progress and the caller's location.

Cisco Emergency Responder helps Cisco Unified CallManager customers comply more effectively with their legal or regulatory obligations and reduce their risk of liability related to emergency calls.

Sum of the features include:

- Automatically tracks IP phone location
- Provides emergency call routing instructions to Cisco Unified CallManager
- Identifies caller location toLECs and PSAPs
- Eliminates administration for IP phone relocation
- Supports emergency callback
- Alerts customer security personnel to emergency calls in progress
- Logs emergency calls and location record changes

Cisco Fax Server

The Cisco Fax Server is an easy-to-use, easy-to-manage fax and e-document delivery solution that helps companies integrate voice, fax, data, and desktop applications. Companies using the Cisco Fax Server can efficiently and securely send and receive documents through fax, e-mail, print devices, or the Internet.

The Cisco Fax Server increases employee productivity by automating fax delivery of user-created documents; reduces costs by eliminating manual faxing, paper, phone lines, and fax machines; and improves customer service by providing secure, confirmed, and immediate document delivery.

Cisco Unified Connector

Cisco Unified Connector 3.0 integrates the Cisco Business Communications Solution with the Microsoft Business Solution Customer Relationship Management (Microsoft CRM) application to provide everyone in a small and medium-sized business (SMB) with an easy-to-use and more complete CRM solution. The Unified Connector integrates the Cisco Business Communications Solution products with Microsoft CRM at the desktop, without requiring additional hardware. In addition, the Microsoft CRM client uses Microsoft Outlook or Internet Explorer as the primary client for managing tasks and contacts.

Cisco Unified Connector 3.0 is a highly configurable client/server-based application that supports the following primary features in Cisco Unified Communications environments that are using Microsoft CRM:

- Automatic detection and screen-pop searches of the CRM database for both incoming and outgoing phone calls
- Automatic creation of phone call activity records for incoming and outgoing calls with call duration tracking
- Click-to-dial from the Microsoft CRM user interface
- Multisite configuration capabilities with geographically correct dialing configurations per user
- Easily pop associated Microsoft CRM customer service cases
- Easy-to-use search system allows the user to search by name or phone number and have access to contact records and associated support cases
- Integration with Cisco Unified CallManager, Cisco Unified CallManager Express, and Cisco Unified Contact Center Express
- Does not require an additional server

These features allow CRM users to personalize their interaction with callers, improving customer service. It also helps to enforce administrative policy for creating phone call activity records.

Cisco Unified Presence Server

Cisco Unified Presence Server offers an environment to enable nextgeneration services and features. This environment has been created to enable differentiated services for Cisco Business Communications Solution users by providing unique user experiences and application connectivity.

Cisco Unified Presence services allow customers to use Session Initiation Protocol (SIP) to deploy differentiated services in their business communications environment. SIP is attractive as a signaling standard because it can connect and control communications sessions between applications, independent of media type or the function performed by the end applications. It provides the methods to connect, signal, and control sessions. SIP is quite different from a "functionally based" signaling protocol, such as Q.SIG, which is used not only to establish sessions, but also to define the specific features those sessions can support. The distinction is important—it greatly affects interoperability and flexibility. As a peer-to-peer protocol, the intelligence involved in SIP-enabled applications is distributed to endpoints and other components, not centralized in a single call-control component. New features can be added without upgrading infrastructure components such as proxy servers, and developers do not require intimate knowledge of the SIP infrastructure in order to write SIP-enabled applications.

Cisco Unified Communications Solutions: Voice Management

Cisco Unified Operations Manager

Cisco Unified Operations Manager 1.1 is part of the Cisco Unified Communications Management Suite. It provides a real-time, service-level view of the entire Cisco Unified Communications system and presents the current operational status of each element. It continuously monitors the current operational status of elements such as Cisco Unified CallManager, Cisco Unified CallManager Express, Cisco Unity, Cisco Unity Express, Cisco Unified Contact Center Enterprise, Cisco Unified Contact Center Express, and Cisco Unified MeetingPlace Express, as well as Cisco gateways, routers, switches, and IP phones, and provides an integrated set of diagnostic capabilities for faster trouble isolation and resolution.

Cisco Unified Service Monitor

Cisco Unified Service Monitor 1.0 evaluates and provides quality of voice metrics about active IP telephony calls in a monitored network. It is a component of the CiscoWorks IP Communications management solution that provides real-time management information and diagnostic tools to help ensure an efficient deployment and subscriber satisfaction.

Features and benefits:

- Real-time voice quality monitoring
- Real-time voice quality alerts
- Ease of installation and use
- Scalability and redundancy

Cisco Unified IP Phones

Basic Features

Cisco Unified IP Phone 7902G

- Entry-level phone
- Single line
- No display
- No configurable fixed keys

Cisco Unified IP Phone 7905G

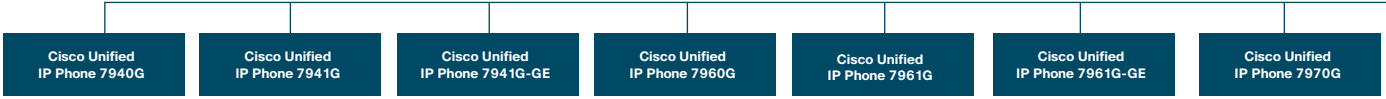
- Pixel-based display
- Single line
- Four dynamic soft keys
- Listening mode support
- Supports text-only XML

Cisco Unified IP Phone 7911G

- Graphical monochrome display with resolution of 192x64 pixels
- Single line
- Lighted hold key
- Lighted menu key
- Four soft-key buttons and a scroll toggle bar
- Supports text-and audio-based XML applications
- IEEE standards-based 802.3af inline power
- Cisco Inline Power

Cisco Unified IP Phone 7912G

- Pixel-based display
- Single line
- Four dynamic soft keys
- Listening mode support
- Dual-port integrated Ethernet switch
- Supports text-only XML



- Ideal for desktop office use
- B/W graphic display with two fixed lines of characters
- Four dynamic soft keys
- Four configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port

- High-resolution B/W graphic display
- Four dynamic soft keys
- Four configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port
- IEEE standards-based 802.3af inline power
- Cisco Inline Power
- Double-byte and Unicode characters
- Lighted line keys

- 10/100/1000BASE-T Ethernet
- High-resolution B/W graphic display
- Four dynamic soft keys
- Four configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port
- IEEE standards-based 802.3af inline power
- Cisco Inline Power
- Double-byte and Unicode characters
- Lighted line keys

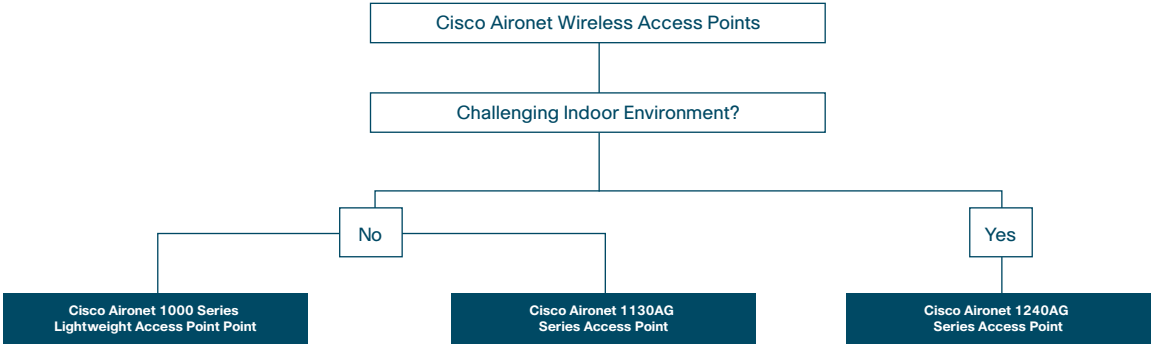
- Ideal for desktop office use
- B/W graphic display with two fixed lines of characters
- Four dynamic soft keys
- Six configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port

- High-resolution B/W graphic display
- Four dynamic soft keys
- Six configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port
- IEEE standards-based 802.3af inline power
- Double-byte and Unicode characters
- Lighted line keys

- 10/100/1000BASE-T Ethernet
- High-resolution B/W graphic display
- Four dynamic soft keys
- Six configurable keys
- Integrated external headset socket
- Full-duplex speakerphone
- Integrated dual Ethernet switch port
- IEEE standards-based 802.3af inline power
- Cisco Inline Power
- Double-byte and Unicode characters
- Lighted line keys

- Eight programmable keys
- 320x234 pixel touch screen display
- Five soft keys
- Advanced XML support
- IEEE 802.3af inline power support
- Can connect external microphone and speakers

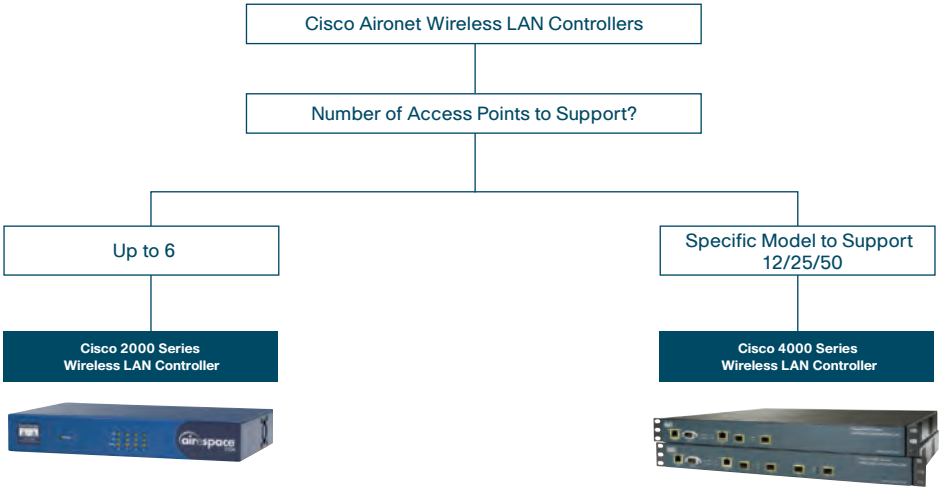
Cisco Wireless Products



- Zero-touch configuration and management
- Simultaneous air monitoring and data service
- Internal and external antenna options
- Works in conjunction with Cisco Wireless LAN Controller and optional Cisco Wireless Control System (WCS)
- Operates as a lightweight access point running LWAPP

- 2.4- and 5-GHz integrated omnidirectional antennas
- 108 Mbps total bandwidth
- Inline power support
- Optional autonomous and LWAPP support

- 2.4- and 5-GHz antenna connectors
- Supports external antennas
- 108 Mbps total bandwidth
- Inline power support
- Optional autonomous and LWAPP support
- Rugged metal chassis
- UL 2043 Plenum Rating and extended operating temperature



- Cisco Wireless LAN Controllers are responsible for systemwide wireless LAN functions, such as security policies, intrusion prevention, RF management, QoS, and mobility. They work in conjunction with Cisco Aironet 1000 Series Lightweight Access Points and the Cisco Wireless Control System (WCS) to support business-critical wireless applications.

Cisco 2700 Series Wireless Location Appliance

- Scalable location tracking and asset management
- Real-time visibility
- Intuitive centralized management and GUI
- Tight integration with a spectrum of technology and application partners through a rich and open application programming interface (API)

Cisco Wireless Control System (WCS)

- Manage LWAPP access points and controllers
- Intuitive GUI and hierarchical maps
- Wireless LAN planning and monitoring tools
- Policy management templates
- Complete wireless LAN intrusion protection
- Integrated location tracking (optional)