

## Cisco Small and Medium Business Class Solutions

Deploying advanced applications **can help** small and medium-sized businesses (SMBs) like yours to enable innovative applications and network services that increase productivity, customer satisfaction, and profitability. Cisco® SMB Class Solutions are tailored, integrated network solutions and services that **can help** SMBs to create an intelligent, empowered environment. With an environment based on Cisco SMB Class Solutions, you can achieve fast, secure access to important resources—while at the workplace, at home or a remote or branch office, or while on the road.

Cisco SMB Class Solutions include intelligent application-enabling network services, innovative **end-user** applications, a solid network infrastructure, and responsive customer services **and support**. Cisco SMB Class Solutions can help your business implement advanced applications **without draining budgets**, bandwidth, or staff.

Cisco SMB Class Solutions are delivered with and through Cisco Systems® partners. Designed specifically to meet the needs of SMBs, they feature:

- Tailored, cohesive, and intelligent networks that can power your business now and in the future
- Intelligent, application-enabling services (connectivity, voice, mobility, security, and business resilience), delivered over the industry’s most widely recognized routers and switches, provide “right-sized” and proven solutions for your business
- You can enjoy high performance, rich features, scalability, investment protection, and adaptability while **helping to reduce total cost of ownership**.

Cisco also provides easy-to-use blueprints for extending network capability to support advanced applications in businesses with from fewer than 20 users up to 1000 users. These blueprints are based on Cisco’s extensive experience in creating networks for successful SMBs.

## Cisco IP Communications

SMBs recognize the need to provide interactive, engaging, and streamlined ways for employees, partners, and customers to communicate and get immediate access to information about products and services. Cisco IP Communications solutions converge data, voice, and video onto a single network and **help** your business to take advantage of innovative, cost-efficient IP Communications features and applications.

Cisco IP Communications products include IP telephony, unified communications, IP videoconferencing and audio conferencing, IP video broadcasting, and IP contact center, offering these advantages:

- High availability to safeguard business operations and to **help lower** total cost of ownership.

Examples of reduced ownership costs include:

- Lower costs for moves, adds, and changes
- Streamlined administration associated with managing one network

Examples of high availability include:

- Resilient Cisco AVVID (Architecture for Voice, Video and Integrated Data) with network redundancy to guard against network outages
- Features like Survivable Remote Site Telephony (SRST) to help ensure that telephony services are available at remote locations in the event of a WAN outage
- V<sup>3</sup>PN and quality of service (QoS) to securely deliver and prioritize real-time voice and video traffic
- Integrated applications like Cisco Unity™ and Cisco Unity Express **help** increase business productivity with rich voice-mail, auto attendant, and messaging features.
- Cisco IP Communications solutions provide comprehensive security, including call-processing security, network access security, and secure network design recommendations.
- Cisco IP Communications solutions meet stringent QoS requirements.
- The flexibility and scalability of the Cisco IP Communications infrastructure **helps** your business to grow at its own pace, and provides easier migration to innovative new business applications to help you gain competitive advantages.
- The vast network of qualified Cisco resellers and partners provides a variety of management options and expertise.
- Cisco IP Communications solutions are backed by the company’s award-winning technical support services, which help to ensure ease of installation, maintenance, and support of your network.

Cisco IP Communications blueprints for SMBs are formulated according to size:

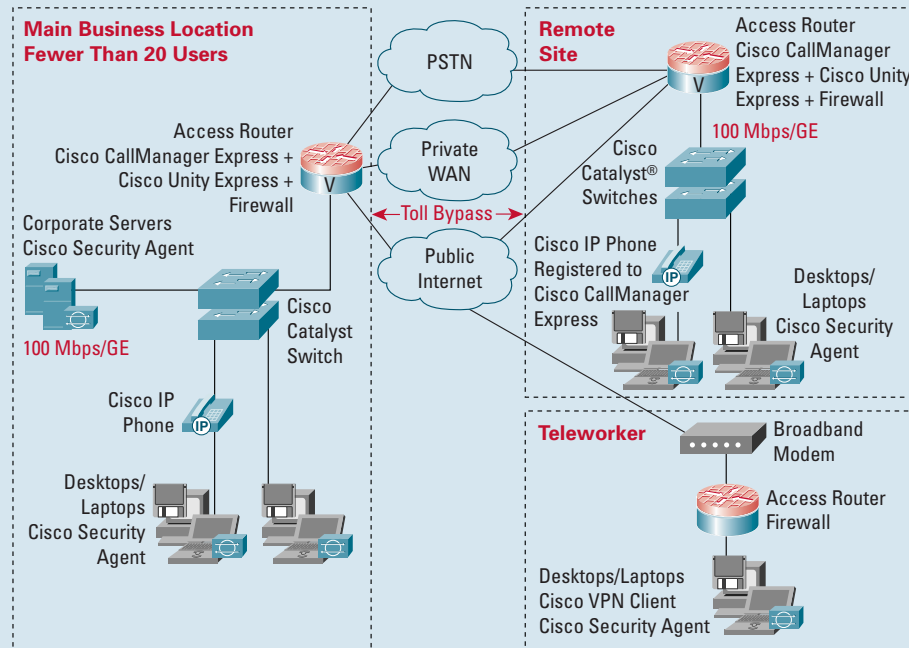
- IP Communications Blueprint: Fewer than 20 user ports per site
- IP Communications Blueprint: 20 to 50 user ports per site
- IP Communications Blueprint: 50 to 100 user ports per site
- IP Communications Blueprint: 100 to 250 user ports per site
- IP Communications Blueprint: 250 to 500 user ports per site
- IP Communications Blueprint: 500 to 1000 user ports per site

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 1: IP Communications Blueprint for SMBs with Fewer than 20 User Ports per Site**

### IP Communications Blueprint



Note: See footnote to Figure 6.

## Product Table

The following table briefly describes Cisco solutions for SMBs with fewer than 20 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 1: Solution Features for Headquarters and Remote Sites**

	Fewer Than 20 (SMB Complete)	Fewer Than 20 (SMB Enhanced)
<b>Router</b>	<b>Cisco 2801 Integrated Services Router</b> (supports up to 24 IP phones)	<b>Cisco 2811 Integrated Services Router</b> (supports up to 36 IP phones)
<b>Call processing</b>	Cisco CallManager Express (integrated call processing)  For small offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.	Cisco CallManager Express (integrated call processing)  For small offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.
<b>Call-processing redundancy</b>	Yes; secondary router required	Yes; secondary router required

**Table 1: Solution Features for Headquarters and Remote Sites (Continued)**

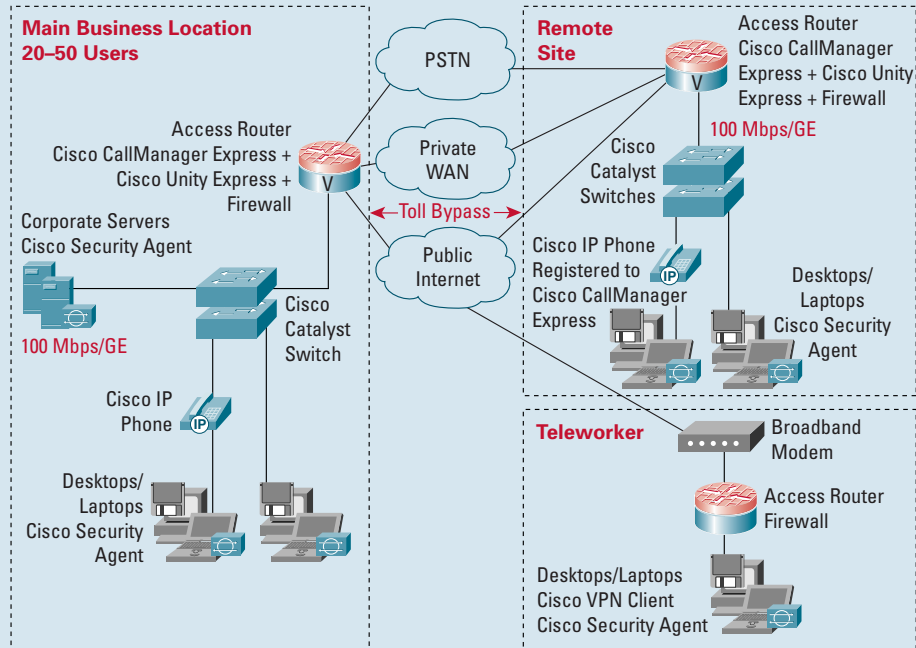
	<b>Fewer Than 20 (SMB Complete)</b>	<b>Fewer Than 20 (SMB Enhanced)</b>
Voice mail	<p>Cisco Unity Express (integrated voice-mail module)</p> <p>Cisco Unity (external server)</p> <p>Used in conjunction with Cisco Call-Manager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>	<p>Cisco Unity Express (integrated voice-mail module)</p> <p>Cisco Unity (external server)</p> <p>Used in conjunction with Cisco Call-Manager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 2: IP Communications Blueprint for SMBs with 25 to 50 User Ports per Site**

### IP Communications Blueprint



Note: See footnote to Figure 6.

## Product Table

The following table briefly describes Cisco solutions for SMBs with 20 to 50 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 2: Solution Features for Headquarters and Small or Remote Sites**

	20 to 50 Users (SMB Complete)	20 to 50 Users (SMB Enhanced)
<b>Router</b>	Cisco 2821 Integrated Services Router (supports up to 48 IP phones)	Cisco 2821 Integrated Services Router (supports up to 96 IP phones)
<b>Call processing</b>	Cisco CallManager Express (integrated call processing) For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.	Cisco CallManager Express (integrated call processing) For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.
<b>Call-processing redundancy</b>	Yes; secondary router required	Yes; secondary router required

**Table 2: Solution Features for Headquarters and Small or Remote Sites (Continued)**

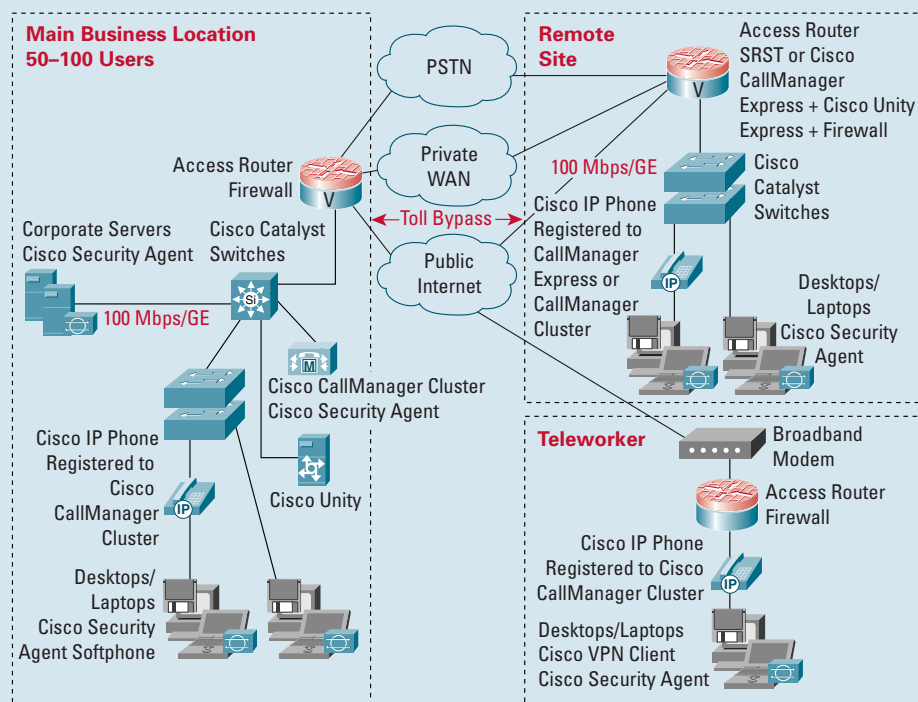
	<b>20 to 50 Users (SMB Complete)</b>	<b>20 to 50 Users (SMB Enhanced)</b>
Voice mail	<p>Cisco Unity Express (integrated voice-mail module)</p> <p>Cisco Unity (external server)</p> <p>Used in conjunction with Cisco Call-Manager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>	<p>Cisco Unity Express (integrated voice-mail module)</p> <p>Cisco Unity (external server)</p> <p>Used in conjunction with Cisco Call-Manager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 3: IP Communications Blueprint for SMBs with 50 to 100 User Ports per Site**

### IP Communications Blueprint



Note: See footnote to Figure 6.

## Product Table

The following table briefly describes Cisco solutions for SMBs with 50 to 100 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 3: Solution Features for Headquarters**

	50 to 100 Users (SMB Complete)	50 to 100 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 2851 Integrated Services Router (supports up to 96 IP phones)</b>	<b>Cisco 3825 Integrated Router (supports up to 168 IP phones)</b>
<b>Call processing</b>	<p>Cisco CallManager Express (integrated call processing)</p> <p>Cisco CallManager (external Cisco 7815 Media Convergence Server)</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, voice-over-IP (VoIP) gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p>	<p>Cisco CallManager (integrated call processing)</p> <p>Cisco CallManager (external Cisco 7825 Media Convergence Server)</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p>

**Table 3: Solution Features for Headquarters (Continued)**

	50 to 100 Users (SMB Complete)	50 to 100 Users (SMB Enhanced)
Call processing (continued)	The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.	The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.
Call-processing redundancy	Cisco CallManager Express (secondary router required)  Cisco CallManager (standby Cisco 7815 Media Convergence Server required)	Cisco CallManager Express (secondary router required)  Cisco CallManager (redundant Cisco 7825 Media Convergence Server required)
Voice mail	Cisco Unity Express (integrated local voice-mail network module)  Cisco Unity (external server)  Used in conjunction with Cisco CallManager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.  Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.	Cisco Unity Express (integrated local voice-mail network module)  Cisco Unity (external server)  Used in conjunction with Cisco CallManager Express, Cisco Unity Express offers integrated voice-mail and autoattendant capabilities. Together, they provide a simple, consistent, distributed architecture that can be easily replicated for multiple sites.  Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.

**Solution for Small or Remote Sites**

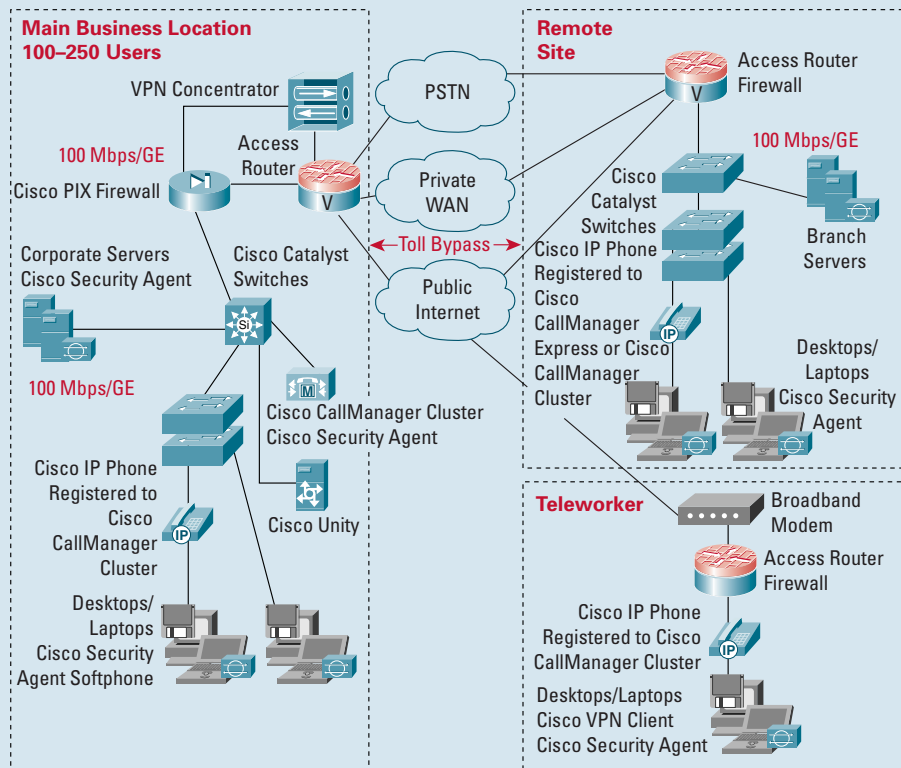
	50 to 100 Users (SMB Complete)	50 to 100 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 2851 Integrated Services Router (supports up to 96 IP phones)</b>	<b>Cisco 3825 Integrated Services Router (supports up to 168 IP phones)</b>
Call processing	Cisco CallManager Express (local integrated call processing)  Cisco CallManager Survivable Remote Site Telephony (SRST) branch office  For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture can provide the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.	Cisco CallManager Express (local integrated call processing)  Cisco CallManager SRST branch office  For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture can provide the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.
Call-processing redundancy	Cisco CallManager Express (secondary router required)  Cisco CallManager SRST branch office	Cisco CallManager Express (secondary router required)  Cisco CallManager SRST branch office
Voice mail	Cisco Unity (external server)  Cisco Unity Express (integrated local voice-mail network module)	Cisco Unity (external server)  Cisco Unity Express (integrated local voice-mail network module)

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 4: IP Communications Blueprint for SMBs with 100 to 250 User Ports per Site**

### IP Communications Blueprint



Note: See footnote to Figure 6.

## Product Table

The following table briefly describes Cisco solutions for SMBs with 100 to 250 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 4: Solution Features for Headquarters**

	100 to 250 Users (SMB Complete)	100 to 250 Users (SMB Enhanced)
<b>Router</b>	Cisco 3825 Integrated Services Router (supports up to 168 IP phones with Cisco CallManager Express)	Cisco 3845 Integrated Services Router (supports up to 240 IP phones with Cisco CallManager Express)
<b>Call processing</b>	<p>Cisco CallManager Express (local integrated call processing)</p> <p>Cisco CallManager Cisco 7825 Media Convergence Server</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications.</p>	<p>Cisco CallManager Express (local integrated call processing)</p> <p>Cisco CallManager Cisco 7825 Media Convergence Server</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications.</p>

**Table 4: Solution Features for Headquarters (Continued)**

	100 to 250 Users (SMB Complete)	100 to 250 Users (SMB Enhanced)
Call processing (continued)	<p>Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>	<p>Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>
Call-processing redundancy	<p>Cisco CallManager Express (secondary router required)</p> <p>Cisco CallManager Redundant Cisco 7825 Media Convergence Server(s)</p>	<p>Cisco CallManager Express (secondary router required)</p> <p>Cisco CallManager Redundant Cisco 7825 Media Convergence Server(s)</p>
Voice mail	<p>Cisco Unity (external server)</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>	<p>Cisco Unity (external server)</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>

**Solution Features for Small and Remote Sites**

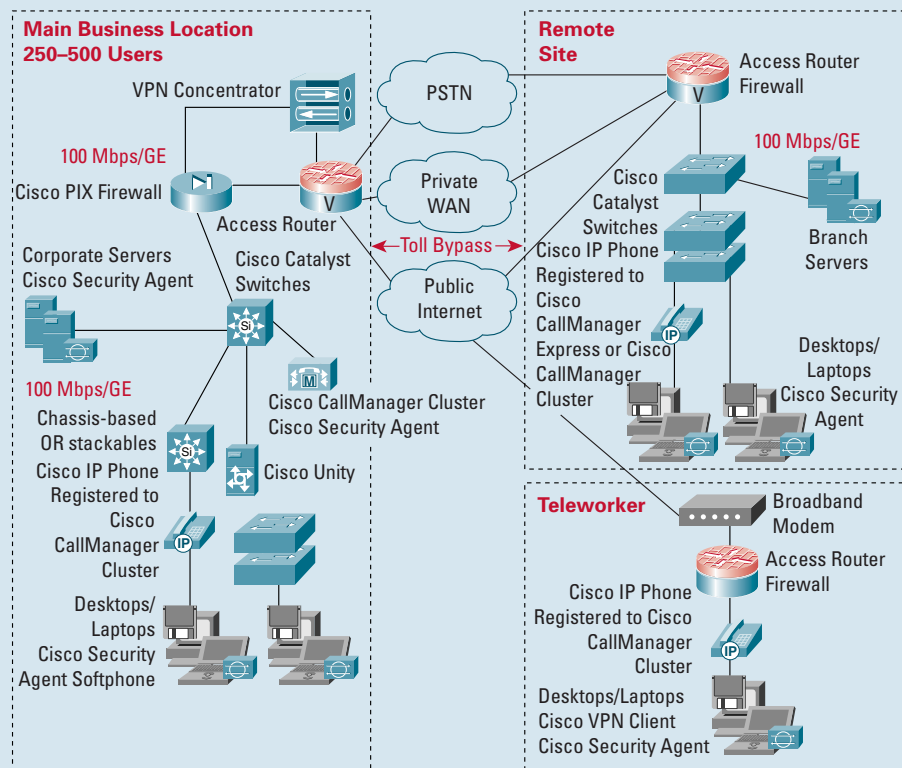
	100 to 250 Users (SMB Complete)	100 to 250 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 3825 Integrated Services Router (supports up to 168 IP phones with Cisco CallManager Express)</b>	<b>Cisco 3845 Integrated Services Router (supports up to 240 IP phones with Cisco CallManager Express)</b>
Call processing	<p>Cisco CallManager Express (local integrated call processing)</p> <p>Cisco CallManager SRST branch office</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with redundancy for call-processing.</p>	<p>Cisco CallManager Express (local integrated call processing)</p> <p>Cisco CallManager SRST branch office</p> <p>For small offices and enterprise branch offices that need converged voice and data communications quickly and efficiently, Cisco CallManager Express allows customers to enable feature-rich call processing via their existing or planned access routing platforms.</p> <p>For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with redundancy for call-processing.</p>
Call-processing redundancy	<p>Cisco CallManager Express (secondary router required)</p> <p>Cisco CallManager SRST branch office</p>	<p>Cisco CallManager Express (secondary router required)</p> <p>Cisco CallManager SRST branch office</p>
Voice mail	<p>Cisco Unity (external server)</p>	<p>Cisco Unity (external server)</p>

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 5: IP Communications Blueprint for SMBs with 250 to 500 User Ports per Site**

### IP Communications Blueprint



Note: See footnote to Figure 6.

## Product Table

The following table briefly describes Cisco solutions for SMBs with 250 to 500 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 5: Solution Features for Headquarters**

	250 to 500 Users (SMB Complete)	250 to 500 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 3825 Integrated Services Router</b>	<b>Cisco 3845 Integrated Services Router</b>
<b>Call processing</b>	<p>Cisco CallManager</p> <p>Cisco 7825 Media Convergence Server</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>	<p>Cisco CallManager</p> <p>Cisco 7825 Media Convergence Server</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>
<b>Call-processing redundancy</b>	<p>Cisco CallManager</p> <p>Redundant Cisco 7825 Media Convergence Server(s)</p>	<p>Cisco CallManager</p> <p>Redundant Cisco 7825 Media Convergence Server(s)</p>

**Table 5: Solution Features for Headquarters (Continued)**

	<b>250 to 500 Users (SMB Complete)</b>	<b>250 to 500 Users (SMB Enhanced)</b>
Voice mail	<p>Cisco Unity (external server)</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>	<p>Cisco Unity (external server)</p> <p>Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.</p>

**Solution Features for Small and Remote Sites**

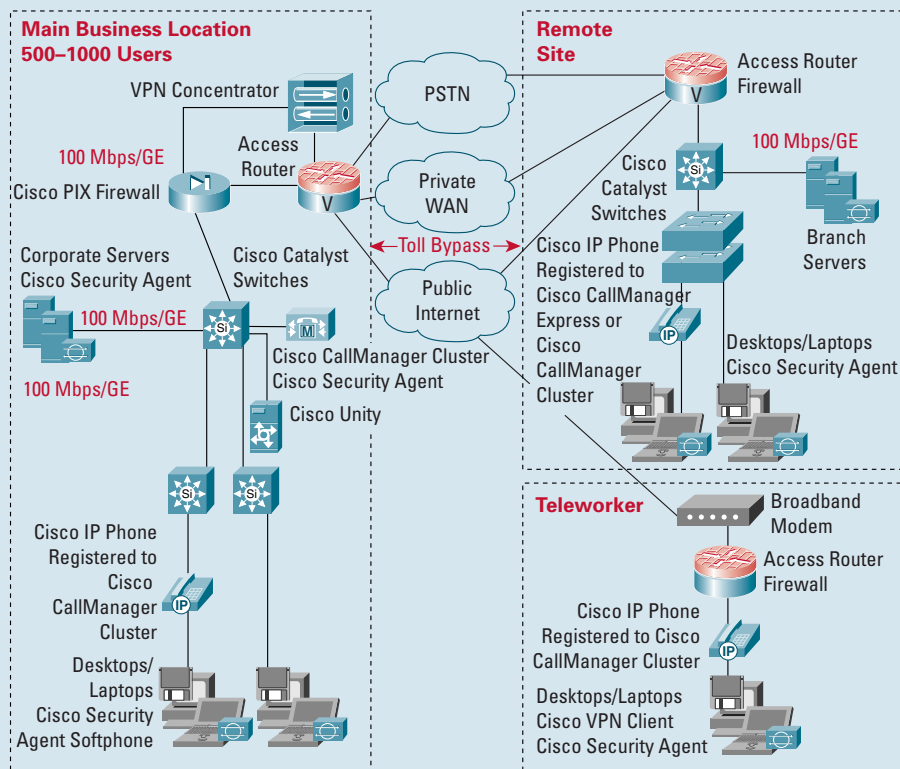
	<b>250 to 500 Users (SMB Complete)</b>	<b>250 to 500 Users (SMB Enhanced)</b>
<b>Router</b>	<b>Cisco 3825 Integrated Services Router</b>	<b>Cisco 3845 Integrated Services Router</b>
Call processing	<p>Cisco CallManager SRST branch office</p> <p>For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.</p>	<p>Cisco CallManager SRST branch office</p> <p>For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.</p>
Call-processing redundancy	Cisco CallManager SRST branch office	Cisco CallManager SRST branch office
Voice mail	Cisco Unity (external server)	Cisco Unity (external server)

## Introduction

This reference blueprint provides a network diagram and product table for your main office, remote office, and teleworkers. This is only a suggested blueprint.

**Figure 6: IP Communications Blueprint for SMBs with 500 to 1000 User Ports per Site**

### IP Communications Blueprint



1. This network blueprint is intended to be an educational resource and a starting point in planning your network solution; it is not a final recommendation from Cisco. To determine the deployment most appropriate for your company we suggest you work with a Cisco representative, Cisco channel partner, or a solution provider.

## Product Table

The following table briefly describes Cisco solutions for SMBs with 500 to 1000 user ports per site. It is intended to be a starting point in choosing Cisco products for your main business location, remote offices, and teleworkers.

**Table 6: Solution Features for Headquarters**

	500 to 1000 Users (SMB Complete)	500 to 1000 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 3845 Integrated Services Access Router</b>	<b>Cisco 7200</b>
<b>Call processing</b>	<p>Cisco CallManager</p> <p>Cisco 7825 Media Convergence Server</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>	<p>Cisco CallManager</p> <p>Cisco 7825 Media Convergence Server</p> <p>Cisco CallManager is the software-based call-processing component of the Cisco enterprise IP telephony solution; it is enabled by Cisco AVVID. Cisco CallManager software extends enterprise telephony features and capabilities to packet telephony network devices such as IP phones, media processing devices, VoIP gateways, and multimedia applications. Additional data, voice, and video services such as unified messaging, multimedia conferencing, collaborative contact centers, and interactive multimedia response systems interact with the IP telephony solution through Cisco CallManager open telephony APIs. Cisco CallManager is installed on Cisco 7800 Series media convergence servers and selected third-party servers.</p> <p>The Cisco 7800 Series is a powerful platform for Cisco AVVID. Media convergence servers provide reliable, highly available support for Cisco CallManager and other IP telephony software applications. It is a scalable platform designed to meet a customer's size, price, and performance needs.</p>

**Table 6: Solution Features for Headquarters (Continued)**

	500 to 1000 Users (SMB Complete)	500 to 1000 Users (SMB Enhanced)
Call-processing redundancy	Cisco CallManager Redundant Cisco 7825 Media Convergence Server(s)	Cisco CallManager Redundant Cisco 7825 Media Convergence Server(s)
Voice mail	Cisco Unity (external server)  Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.	Cisco Unity (external server)  Cisco Unity is a powerful unified communications solution that provides advanced, convergence-based communication services such as voice and unified messaging. Users can listen to e-mail over the telephone, check voice messages from the Internet, and (when integrated with a supported third-party fax server) forward faxes to any local fax machine, increasing organizational productivity while improving customer service and responsiveness. Cisco Unity complements the full range of Cisco IP-based voice solutions, including Cisco CallManager, Cisco IP Contact Center, and Cisco Personal Assistant.

**Solution Features for Small and Remote Sites**

	500 to 1000 Users (SMB Complete)	500 to 1000 Users (SMB Enhanced)
<b>Router</b>	<b>Cisco 3825 Integrated Services Access Router</b>	<b>Cisco 7200 Router</b>
Call processing	Cisco CallManager SRST branch office  For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.	Cisco CallManager SRST branch office  For businesses with multiple remote sites on a QoS-enabled WAN, a centralized call-processing architecture provides the needed scalability and support. The remote sites rely on the centralized Cisco CallManager to handle call processing and on Cisco Unity software for unified messaging. In the rare event of an IP WAN failure, remote sites can take advantage of the SRST feature integrated into Cisco access routers. This feature provides the IP endpoints at the branch offices with the core call-processing capability for redundancy.
Call-processing redundancy	Cisco CallManager SRST branch office	Cisco CallManager SRST branch office
Voice mail	Cisco Unity (external server)	Cisco Unity (external server)



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(0406R) 1714/ROTL 10/04