Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports
Cisco Small Business Voice Gateways and ATAs

Innovative Triple-Play Networking Solution with QoS

Highlights

- All-in-one broadband router with Wireless-G, network security firewall, 4-port network switch, and 2 phone ports
- Two standard phone ports enable feature-rich telephone service over a broadband Internet connection with advanced voice quality of service
- Simple, highly secure wireless capability that is easy to configure, with industry-standard push-button setup, MAC address filtering, and dual SSID
- Share a mobile broadband network connection among several WiFi clients with a compatible USB Broadband Modem**
- Network security that delivers peace of mind, helping protect against Internet and wireless threats

Figure 1. Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports

Product Overview

The Cisco® WRP400 Wireless-G Broadband Router with 2 Phone Ports (Figure 1) is an impressive and versatile networking solution, offering advanced triple-play services prioritization in a single intelligent, compact device.

Whether it's broadband Internet connectivity, voice over IP (VoIP) or bandwidth-intensive applications such as multimedia gaming, streaming media, or IPTV, the innovative Cisco WRP400 provides users with the quality of service (QoS) capabilities they need to support the latest generation of applications.

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The wireless access router integrated into the Cisco WRP400 links both Wireless-G (802.11g at 54 Mbps) and Wireless-B (802.11b at 11Mbps) clients. The WRP400 also includes a built-in, 4-port, full-duplex, 10/100 Ethernet switch to connect PCs directly or to attach additional hubs and switches. A robust firewall helps protect local computers and prevents malicious attacks from outside intruders. Two telephone ports enable high-quality feature-rich VoIP service using existing analog phones.

When on the road, take the Cisco WRP400 along with you to remote locations and share your mobile broadband network connection with your colleagues using a compatible USB broadband modem. At the office, the mobile broadband network can be configured on the Cisco WRP400 as an auto-failover and recovery connection if the Ethernet WAN port loses Internet connectivity.

As the center of a home or small business network, the Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports can help provide a high-quality online experience with fault-tolerant data delivery, exceptional voice quality, and continuous, uninterrupted streaming media.

Features

- **Toll-quality voice and carrier-grade feature support:** The Cisco WRP400 delivers clear, high-quality voice communication in diverse network conditions. Excellent voice quality in a demanding IP network is consistently achieved via an advanced implementation of standard voice coding algorithms. The WRP400 is interoperable with common telephony equipment such as voicemail, fax, and interactive voice response systems.
- **Large-scale deployment and management:** The WRP400 offers key features and capabilities that enable service providers to provide customized services to their subscribers. It can be remotely provisioned and supports dynamic, in-service software upgrades. The ability to perform highly secure profile uploads saves providers the time and expense of managing and preconfiguring or reconfiguring customer premises equipment (CPE).
- **Ironclad security:** Cisco understands that security for both end users and service providers is a fundamental requirement for a solid, carrier-grade telephony service. The Cisco WRP400 supports highly secure, encryption-based methods for communication, provisioning and servicing.

Specifications

Table 1 contains the specifications, package contents, and minimum requirements for the Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports.

Table 1. Specifications for the Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports

Hardware
• One 10/100 802.3/u (RJ-45) WAN interface • Four 10/100 802.3/u (RJ-45) LAN interfaces • Integrated 802.11b/g wireless access point • Two FXS RJ-11 interfaces • One USB 2.0 port (support for Mobile Broadband Modem** – available separately) • Reset button/restore factory defaults • LEDs: Power, Internet, Ethernet, Wireless, Phone(s), WPS • Power: external, 5V DC, 2A (full range switching power adapter) • Wi-Fi Protected Setup (WPS) button

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Software

- Static and dynamic routing (Routing Information Protocol [RIP] 1, RIP 2)
- Auto failover and recovery of Ethernet WAN connection enabled with USB Mobile Broadband Modem**
- Multicast pass-through
- Denial-of-service (DoS) prevention
- Web based configuration
- VPN pass-through with IP Security (IPsec), Layer 2 Tunnelling Protocol (L2TP), and Point-to-Point Tunneling Protocol (PPTP)
- Event logging
- Dynamic Host Configuration Protocol (DHCP) server
- Access control lists
- Universal Plug and Play (UPnP)
- Password-protected configuration or management sessions for web access
- Remote management (Session Initiation Protocol [SIP] SUBSCRIBE and NOTIFY message; use NOTIFY message to reset the box remotely) and remote web management
- Internet Group Management Protocol (IGMP) multicast and IGMP snooping (versions 1, 2, and 3) support
- 802.1p prioritization QoS support
- Differentiated Services (DiffServ), type of service (ToS) classification
- Network edge (DMZ) hosting
- Wi-Fi Protected Access (WPA) and WPA2
- Wi-Fi Multimedia (WMM)
- Dual service set identifiers (SSIDs)

Voice

- SIP v2, RFC 3216
- Sending SIP messages via User Datagram Protocol (UDP)/TCP
- G.711a, G.711u, G.729, G.726 codecs
- G.711 pass-through
- Echo cancellation (G.167 and G.168)
- Dynamic jitter buffer
- Simple traversal of UDP through Network Address Translation (NAT) (Serial Tunnel [STUN], RFC 3489)
- Session Description Protocol (SDP), RFC 2327
- Real Time Protocol (RTP)/Real Time Control Protocol (RTCP) over UDP
- Three-way conferencing
- Remote firmware upgrade
- Dual-tone multifrequency (DTMF) tone detection and generation
- Voice activity detection (VAD)
- Silence suppression
- Comfort noise generation (CNG)
- Caller ID generation and detecting (frequency shift keying [FSK] and DTMF)
- Media loopback
- SIP Transport Layer Security (TLS)
- SIP channels support both UDP and TCP transport
- Support for 2 simultaneous T.38 or G.729 calls
- T.38 fax relay, including V.17, V.21, V.27ter, and V.29 and fax pass-through (pulse code modulation [PCM])
  - T.38 support is dependent on fax machine and network/transport resilience*

Package Contents

- Cisco WRP400 Wireless-G Broadband Router with 2 Phone Ports
- Setup CD-ROM with Norton Internet Security
- Documentation on CD-ROM
- Ethernet cable
- Power adapter
- Quick installation

Minimum Requirements

- High-speed Internet connection (cable/DSL/other)
- Activated VoIP service

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Specifications*	
Data networking	• MAC address (IEEE 802.3) • IPv4 (RFC 791) upgradable to v6 (RFC 1883) • Address Resolution Protocol (ARP) • DNS A record (RFC 1706), SRV record (RFC 2782) • DHCP client (RFC 2131) • DHCP server (RFC 2131) • Point-to-Point Protocol over Ethernet (PPPoE) client (RFC 2516) • Internet Control Message Protocol (ICMP) (RFC 792) • TCP (RFC 793) • UDP (RFC 768) • RTP (RFC 1889, RFC 1890) • RTCP (RFC 1889) • Trivial File Transfer Protocol (TFTP) • Real Time Streaming Protocol (RTSP) • HTTP • NAT (RFC 1631) • Reverse NAT • SDP • Simple Network Time Protocol (SNTP) (RFC 2030) • ToS (RFC 791, RFC 1349) • QoS: packet prioritization by type • Router or bridge mode of operation • MAC address cloning • Port forwarding • IP multicast/IGMP versions 1, 2, and 3/IGMP proxy
Voice features	• Voice algorithms • G.711 (a-law and µ-law) • G.726 (16/24/32/40 kbps) • G.729 AB • G.723.1 (6.3 kbps, 5.3 kbps) • Call forwarding: no answer/busy/unconditional • Support for 2 simultaneous calls • SIP TLS • Call transfer • Call waiting/hold/retrieve • Three-way conferencing • Call ID number and name (primary line and on call waiting) • Call ID block (prevents sending out the caller ID) • Anonymous call blocking • Distinctive ringing • Do not disturb setting • Repeat dialing on busy • Call return • Emergency call support • Dial plan • Speed dial • Auto-attendant • Multiroom meet-me conference • In-band/SIP-INFO DTMF translation
Provisioning, administration, and maintenance	• Web browser administration and configuration via integral web server • Telephone keypad configuration with interactive voice prompts • Automated provisioning and upgrade via HTTP, TFTP, HTTPS • Asynchronous notification of upgrade availability via NOTIFY • Nonintrusive in-service upgrades • Report generation and event logging • Stats in BYE message • Syslog and debug server records • Per line and purpose configurable syslog and debug options

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Physical interfaces	• Four 100BASE-T RJ-45 Ethernet ports (IEEE 802.3) • Two RJ-11 FXS phone ports-for analog circuit telephone devices • One USB 2.0 port (support for Mobile Broadband Modem** – available separately)
Buttons	Reset, WPS
Subscriber line interface circuit (SLIC)	Ring voltage: 40 to 90 Vpk • Ring frequency: 20 to 25 Hz • Ring waveform: trapezoidal with 1.2 to 1.6 crest factor • Maximum ringer load: 3 ringer equivalence numbers (RENs) • On-hook/off-hook characteristics: ◦ On-hook voltage (tip/ring): - 46 to -56V ◦ Off-hook current: 18 to 20 mA ◦ Terminating impedance: ◦ 600 ohm resistive ◦ 270 ohm + 750 ohm//150 nF complex impedance • Frequency response: 300 to 3400 Hz
Regulatory compliance	FCC (Part 15 Class B), CE, ICES-003, RoHS
Number of antennas	1
Connector type	Fixed
Detachable (y/n)	No
RF power (effective isotropic radiated power [EIRP]) in dBm	(Average, not including antenna) • 802.11g: typ. 18 dBm at normal temperature range (with PA) • 802.11b: typ. 20 dBm at normal temperature range (with PA)
Antenna gain	2 dBi
UPnP able/certified	Yes
Power supply	• Switching type (100-240V) automatic • DC input voltage: +5V DC at 2.0A max. • Power consumption: 7.9W (average) • Power adapter: 100-240V 50-60 Hz (26-34 VA) AC input, 1.8m cord
Indicator lights/LEDs	Power, Ethernet, Wireless, Phone 1, Phone 2, Internet, WPS
Documentation	• Quick Installation and User Guide are downloaded from www.cisco.com/go/smallbiz • SPA ATA Administration Guide - service providers only • Provisioning Guide-service providers only
Security features	• Password-protected configuration for web access • DoS prevention • URL filtering and keyword, Java, ActiveX, proxy, cookie blocking • VPN pass-through for IPsec, PPTP, and L2TP protocols • 64- and 128-bit Wired Equivalent Privacy (WEP) with pass-phrase WEP key generation • SSID broadcast disable • Access restriction by MAC and IP addresses • WPS, WPA, WPA2
Security key bits	64, 128
Environmental	
Dimensions **W x H x D**	5.51 x 5.51 x 1.06 in. (140 x 140 x 27 mm)
Weight	10.05 oz (285 g)
Power	External, switching 5V DC 2A
Certification	FCC, CE, CB, IC, UL, Wi-Fi (802.11b + WPA2, 802.11g + WPA2, WMM)
Operating temperature	32°to 104℉ (0°to 40℃)
Storage temperature	-4°to 158℉ (-20°to 70℃)
Operating humidity	0% to 85%, relative humidity, noncondensing
Storage humidity	5% to 90%, noncondensing
Product Warranty	
1-year limited hardware warranty with return to factory replacement and 90-day limited software warranty.	

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* Many specifications are programmable within a defined range or list of options. Please see the SPA ATA Administration Guide for details. The target configuration profile is uploaded to the WRP400 at the time of provisioning.

** USB mobile broadband modems are sold separately. For a current list of USB mobile broadband modems that are compatible with the Cisco WRP400, please visit www.cisco.com/en/US/products/ps10028/index.html. A voice service is sensitive to latency from network congestion. Voice quality over the mobile broadband network cannot be guaranteed.

Cisco Limited Warranty for Cisco Small Business Series Products

This Cisco Small Business product comes with a 1-year limited hardware warranty with return to factory replacement and a 90-day limited software warranty. In addition, Cisco offers software application updates for bug fixes and telephone technical support at no charge for the first 12 months following the date of purchase. To download software updates, go to: http://www.cisco.com/go/smallbiz.

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