



**Integrated ADSL modem and router *plus* SIP-based Voice over IP for telephone calls over the Internet**

**Zoom's TelePort feature allows one or more normal phones to place and receive calls worldwide over the Internet, and also to connect to any phone on the Public Switched Telephone Network.**

**Clear natural-sounding voice quality with Quality of Service (QoS) support**

**Integrated design with built-in firewall simplifies setup and improves security**

**Built-in router provides shared Internet access for up to 253 concurrent users. Up to 5 computers can plug directly into the X5v**

**Built-in 10/100 four-port Ethernet Switch for computers, hubs, wireless access points**

**Advanced Firewall includes Stateful Packet Inspection, protection from Denial of Service Attacks, NAT, and more**

**Works with any operating system that supports an Internet browser including Windows, Macintosh and Linux**

**Two year warranty**



# ZoomTel ADSL X5v

ADSL Modem/Router/Gateway/Firewall/4-port Switch  
*plus* VoIP for voice calls over the Internet

## Model 5585

The ADSL X5v integrates a full-rate ADSL modem, router, firewall, four-port 10/100 Ethernet switch, USB port, and VoIP analog telephone adapter into a single cost-effective product.

The TelePort™ feature provides a phone port that lets you use your standard single-line phone for conventional phone calls or free and very low-cost Voice Over IP (VoIP) calls. \* Because the X5v integrates Internet telephony with a full featured ADSL gateway, setup is easy and system security is ensured. Integration of the voice processing with the firewall in the router ensures reliability of VoIP calls and reduces service provider support requirements.

The X5v's built-in four-port Ethernet switch eliminates the need for a separate Ethernet hub for most home networks and many small offices. The USB port allows direct connection of a fifth computer to the ADSL X5v. By adding external hubs or a wireless access point, the X5v can provide simultaneous Internet access for up to 253 computers.

The Local Phone port of the Model 5585 includes the TelePort, an intelligent relay that allows a single phone to place and receive both VoIP calls and calls over the Public Switched Telephone Network (PSTN). PSTN Fail-Over allows the X5v to automatically route calls over the dial-up phone network when power is lost. PSTN support also allows emergency dialing using services like 911 or 112 calling.

The X5v uses Session Initiation Protocol (SIP) for compatibility with a wide range of VoIP infrastructure equipment. Quality of Service prioritizes voice data packets over other packets, so that voice quality remains high, even when there is substantial non-voice traffic.

Setup is easy using any authorized local or remote computer's Web browser and the graphical user interface built into the X5v. After setup, the X5v voice features work even without an attached computer. Flash memory allows easy firmware updates, including additions to the voice compression codecs. The integrated VoIP terminal adapter can be configured remotely using a TFTP download, from the VoIP service provider.

The X5v is built and supported by Zoom Telephonics, a publicly traded company (NASDAQ:ZOOM) with over 30 years of experience in telephony and data communications.

\* Voice features of the Model 5585 require a VoIP service.

## ADSL X5v

ADSL Modem + Router + Gateway + Firewall + 4-port Switch  
plus VoIP for voice calls over the Internet

Model 5585

### ADSL Gateway Specifications

ADSL Compliance	<ul style="list-style-type: none"><li>• Compliant with ADSL standards:<ul style="list-style-type: none"><li>- Full-rate ANSI T1.413 Issue 2, G.hs (G.994.1) and ITU G.dmt (G.992.1) standards</li><li>- Splitterless G.lite (G.992.2) specification</li><li>- Annex A</li></ul></li><li>• DMT modulation and demodulation</li><li>• Full-rate adaptive modem<ul style="list-style-type: none"><li>- Maximum downstream rate of 8 Mbps</li><li>- Maximum upstream rate of 896 Kbps</li></ul></li><li>• Supports splitterless ADSL implementation</li><li>• Interoperable with all major DSLAM manufacturers</li></ul>	Router Characteristics	<ul style="list-style-type: none"><li>• Static routing</li><li>• RIP V2, RIP V1</li><li>• DNS Proxy</li><li>• Port Forwarding</li><li>• DHCP (Dynamic Host Configuration Protocol) server and client</li><li>• NAT (Network Address Translation)</li><li>• NATP (Network Address and Port Translation)</li><li>• Simultaneous USB and Ethernet operation</li><li>• TFTP - Trivial File Transfer Protocol support (RFL 1350)</li><li>• STUN - Simple Traversal of UDP over NATs (RFC 3789)</li></ul>
ATM Protocols	<ul style="list-style-type: none"><li>• WAN mode support: PPP over ATM (RFC 2364) and PPP over Ethernet (RFC 2516)</li><li>• LAN mode support: bridged/routed Ethernet over ATM (RFC 1483) &amp; Classical IP over ATM (RFC 1577)</li><li>• ATM Forum UNI 3.1/4.0 PVC</li><li>• Up to eight virtual circuits</li><li>• ATM segmentation and re-assembly</li><li>• ATM AAL5 (adaptation layer type 5)</li><li>• OAM F4/F5</li></ul>	Phone Ports	<ul style="list-style-type: none"><li>• Two RJ-11 jacks, one for the ADSL/PSTN connection and one filtered jack for local phones</li></ul>
Bridge Mode	<ul style="list-style-type: none"><li>• Ethernet to ADSL self learning - Transparent Bridging (IEEE 802.1D)</li><li>• Supports up to 128 MAC learning addresses</li><li>• Bridge MAC Address Filtering</li></ul>	USB Interface	<ul style="list-style-type: none"><li>• Compliant with USB Specification, Revision 1.1</li><li>• Full-speed USB (12 Mbps)</li></ul>
Security	<ul style="list-style-type: none"><li>• SPI (Stateful Packet Inspection) Firewall</li><li>• Protection from DOS (Denial of Service) Attacks</li><li>• User authentication for PPP</li><li>• PAP (Password Authentication Protocol)</li><li>• CHAP (Challenge Authentication Protocol)</li><li>• Password protected system management</li></ul>	Status Indicators	<ul style="list-style-type: none"><li>• Nine indicators - power, link, data, USB, four LAN port connection indicators &amp; VoIP</li></ul>
Ethernet Interface	<ul style="list-style-type: none"><li>• IEEE 802.3 compliant</li><li>• Four 10/100 Mbps auto-sensing RJ-45 ports</li></ul>	HTML Graphic User Interface	<ul style="list-style-type: none"><li>• Password protected access</li><li>• Menu-selected firmware upgrade</li><li>• WAN and LAN side connection statistics</li><li>• Configuration of static routes and routing table</li><li>• Configuration of NAT/NAPT</li><li>• Selection of bridge or router mode</li><li>• Specification of PPP user ID and password</li><li>• Configuration of virtual circuits</li></ul>
		Warranty	<ul style="list-style-type: none"><li>• 2 years</li></ul>
		Size	<ul style="list-style-type: none"><li>• 19 x 14.6 x 3.2 cm; 7.50 x 5.75 x 1.25 inches</li></ul>
		Regulatory Approval	<ul style="list-style-type: none"><li>• CE, UL, C-UL, FCC Part 15B, FCC Part 68, CS-03</li></ul>

### Voice over IP Analog Telephone Adapter Specifications

Analog Voice Port	<ul style="list-style-type: none"><li>• Type: Loop-start FXS interface</li><li>• DTMF tone detection/generation</li></ul>	Voice Compression Coders	<ul style="list-style-type: none"><li>• G.729A, G.711 A-Law, G.711 U-Law</li></ul>
Off-hook Detection	<ul style="list-style-type: none"><li>• V.21/V.25 Modem/fax tone detection</li><li>• Ring occurs for incoming VoIP and POTS calls</li><li>• Ring generation with 5 Ringer Equivalents - supports more than 5 typical telephones</li></ul>	Line-echo Cancellation	<ul style="list-style-type: none"><li>• G.165, G.168 compliant</li><li>• 8 to 128 msec configurable echo length</li><li>• Nonlinear echo suppression</li></ul>
Call Control VoIP Protocol	<ul style="list-style-type: none"><li>• SIP (RFC 3261)</li><li>• Digest Authentication using MD5</li><li>• Record-Route Headers</li><li>• Distinct SIP Proxy separate from SIP Domain/Realm</li></ul>	Voice Features	<ul style="list-style-type: none"><li>• Voice activity detection (VAD)</li><li>• Comfort noise generation (CNG)</li><li>• Dynamic jitter buffer (adaptive)</li><li>• Packet Loss Concealment</li><li>• Bell 202 and V.23 Caller ID</li><li>• Quality of Service (QoS) provides priority for RTP (voice audio) traffic sent through the router</li><li>• STUN support for voice traffic</li></ul>

### System Requirements

Any Windows, Macintosh, or Linux computer with an Ethernet port.  
**OR** A Windows computer supporting a USB port

### Package contents:

- X5v ADSL Gateway
- Ethernet cable
- USB cable
- Phone cable
- CD ROM
- User manual
- Power adapter



#### International Headquarters

Zoom Telephonics, Inc., 207 South Street, Boston, MA 02111 USA  
Tel: 617 535-9383 800-631-3116 Fax: 617 423-3923  
[www.zoom.com](http://www.zoom.com) Nasdaq: ZOOM

#### European Sales/Support

Zoom Technologies, Inc. Central House 2 Kings Road Fleet, Hants  
GU51 3AD UK Tel: +44 (0) 1252 625323 Fax +44 (0) 1252 617920