



**ADSL2/2+ compliant modem for faster ADSL speeds**

**802.11g Wireless Access Point with non-blocking 802.11b support**

**Quality of Service (QoS) guarantees upstream bandwidth for high priority devices like gaming systems, VoIP adapters, or video**

**Zoom 125 Speed Booster provides a wireless speed boost for data rates above 802.11g\***

**Built-in router provides shared Internet access for up to 253 concurrent users**

**Built-in 10/100 four-port Ethernet switch**

**Easy setup with Zoom's Installation Wizard and auto configuration of ADSL settings**

**On-board software meets WiFi Protected Access™, WPA™, WPA2™, and WEP standards**

**Works with all popular ADSL services**

**Provides Virtual Private Networking Passthrough**

**Advanced security from hacker attacks with Stateful Packet Inspection, Packet filtering, Denial of Service attack and Port Scan detection and prevention**

**Two high-performance antennas for superior wireless range**

**Universal Plug and Play (UPnP)**

**Two year warranty**

# Zoom ADSL X6



- ADSL 2/2+ Modem
- + Wireless Access Point
- + Router
- + Advanced Firewall
- + 4-port Switch

## Model 5590CF

The Model 5590CF provides an extensive range of networking and Internet access features in a surprisingly affordable product. Advanced security features protect sensitive data in the home or office. Setup and management are extraordinarily easy, and wireless connections are made with superior range and speed. Both ADSL and ADSL 2/2+ protocols are supported and automatically negotiated to ensure easy installation and a long useful life for the product.

An Installation Wizard makes setup a snap, with an auto configuration option that will automatically configure the DSL settings used by your service provider. Universal Plug and Play (UPnP) provides easy Local Area Networking configuration and operation

The Model 5590CF makes it easy to provide multiple levels of guaranteed upstream bandwidth for prioritized devices. One or more physical ports on the X6 is designated as the source for prioritized traffic. A gaming adapter, Voice over IP telephone adapter or other device plugged into those ports is then provided with the guaranteed upstream bandwidth selected by the user.

The 802.11g wireless access point provides flexible networking with freedom to roam. With Zoom 125 Speed Booster, wireless data rates can reach 125 Mbps\*. The Model 5590CF is also completely compatible with 802.11g from other manufacturers operating at 54 Mbps. Unlike other wireless access points, the Model 5590CF can support concurrent connections to both 802.11(b) and (g) devices without compromising the data rate of the higher speed devices.

Wireless security meets Wi-Fi Protected Access (WPA and WPA2) standards as well as Wired Equivalency Protection (WEP). Other advanced wireless features include Wireless Distribution System (WDS) to support wireless repeaters/range extenders, and Wireless Multimedia Extensions (WME) to provide Quality of Service (QoS) for Voice over IP and other applications.

Per-port PVC (Private Virtual Channel) is supported with multiple channels and downstream ATM QoS to allow delivery of multimedia services by Internet Service Providers.

Zoom ADSL gateways are backed by a two year warranty and over 29 years of experience in the design and support of communications products.

### Specifications

#### ADSL Compliance

- Compliant with ADSL standards:
  - Full-rate ANSI T1.413 Issue 2, ITU G.dmt (G.992.1) standards
- Compliant with ADSL 2 standards:
  - G.dmt.bis (ITU G.992.3)
- Compliant with ADSL 2+ standards:
  - G.992.5
  - ADSL2 Annex L (Reach extended ADSL)
- DMT modulation and demodulation
- Full-rate adaptive modem
  - Maximum downstream rate of 8 Mbps (ADSL), or 24 Mbps (ADSL 2+)
  - Maximum upstream rate of 896 Kbps (ADSL), or 1024 Kbps (ADSL 2+)
- Interoperable with all major DSLAM manufacturers

#### ATM Protocols

- WAN mode support: PPP over ATM (RFC 2364) and PPP over Ethernet (RFC 2516)
- LAN mode support: Bridged/Routed IP over ATM (RFC 1483) and Classical IP over ATM (RFC 1577)
- ATM Forum UNI 3.1/4.0 PVC
- Up to eight virtual circuits
- ATM segmentation and re-assembly
- ATM AAL5 (adaption layer type 5)
- OAM F4/F5

#### Bridge Mode

- Ethernet to ADSL self learning - Transparent Bridging (IEEE 802.1D)
- Supports up to 128 MAC learning addresses
- RFC2684/1483 bridged PDU encapsulation

# Model 5590CF

## ADSL X6

ADSL 2/2+ Modem  
+ Wireless Access Point  
+ Router  
+ Advanced Firewall  
+ 4-port Switch



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NASDAQ: ZOOM

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## Specifications (continued)

### Router Mode

- Static routing
- DNS Server
- DHCP (Dynamic Host Configuration Protocol) server and client and Relay
- Quality of Service (QoS) guarantees upstream bandwidth for high priority devices like gaming systems, VoIP adapters, or video
- NAT (Network Address Translation)
- Per-Port Private Virtual Channel allows a designated data stream to be sent from a DSLAM to a specific router port
- NAPT (Network Address and Port Translation)
- RIP V1 and V2
- PPP Half Bridge
- Virtual Server/DMZ Support
- RFC2684/1483 routed PDU encapsulation
- IP multitasking, IGMP and IGMP proxy

### Wireless 802.11

- Compliant with IEEE 802.11g and 802.11b standards
- Wireless Distribution System (WDS)
- Wireless Multimedia Extension (WME)
- 2.4 GHz - 2.484 GHz frequency range
- Up to 54 Mbps wireless data rate
- Zoom 125 Speed Booster for up to 125 Mbps effective rate\*
- 64/128 bit Wired Equivalency Protection (WEP) with Pass Phrase
- Wi-Fi Protected Access (WPA2, WPA) with Pass Phrase
- 802.1X Authentication
- Mac address filtering

### Security

- Stateful Packet Inspection (SPI)
- User authentication for PPP
- PAP (Password Authentication Protocol)
- CHAP (Challenge Authentication Protocol)
- Password protected system management
- VPN passthrough: PPTP, L2TP, IPsec tunnel
- Advanced Firewall Ports Filtering
- Black Lists
- Attack Protection
- Denial of Service Protection
- Port Scan Detection and Prevention
- MAC Filtering for both Wired and Wireless Connections

### Ethernet Interface

- IEEE 802.3 compliant
- Four 10/100 Mbps auto-sensing RJ-45 ports

### Wireless Interface Management

- Two antennas, one internal and one swivel external
- Password protected access
- Auto configuration
- Universal Plug and Play (UPnP)
- SNMP Version 1 and 2
- Remote and local command line or HTTP interface configuration
- Software upgradeable firmware and device configuration through HTTP interface
- Loads setup from a file for easy input of a configuration by a service provider
- ATM traffic management functions support UBR, CBR, rt-VBR, nrt-VBR in accordance with ATM forum TM 4.1

### Status Indicators

- Five front panel indicators: Wired LAN connection, Wireless connection, ADSL link, Internet activity, Power
- Eight rear panel indicators report port speed, activity, and link for each Ethernet port

### HTML Graphic User Interface

- Password protected access
- Firmware upgrades
- WAN and LAN side connection statistics
- Configuration of static routes and routing table
- Selection of bridge or router mode
- PPP user ID and password
- Configuration of virtual circuits

### Warranty

- 2 years

### Size

- 7.5 x 6.75 x 1.25 inches, 19 x 17 x 3.2 cm

### Regulatory Approval

- CE, UL, C-UL, FCC Part 15B, FCC Part 68, CS-03, RoHS compliant



\* The 802.11g Wi-Fi standard transmits at a maximum of 54 Mbps. Higher effective speeds can be achieved by using compression algorithms and techniques like packet aggregation and frame bursting. The maximum speed obtained by the Model 5590CF depends on the type of data being sent and the actual data rate of an 802.11 connection.

## System Requirements

- A computer with an Ethernet port, or 802.11g, or 802.11b wireless capability and any operating system that supports TCP/IP (Windows, Mac, Linux or other)

## Package contents:

- ADSL modem with wireless-G router
- Ethernet cable
- Phone cable
- CD ROM
- User manual
- Power adapter
- Filters and phone adapters:  
Filters and/or phone adapters may be included in some markets. Please check the package for specifics or ask your dealer. An ADSL filter allows a telephone, facsimile machine, or other telephone instrument to be used even when you are online with your ADSL modem.