# Firebox X Edge e-Series Hardware

The WatchGuard® Firebox® X Edge e-Series is a firewall for small organizations and branch offices. The Firebox X Edge e-Series product line includes:

- Firebox X Edge e-Series
- Firebox X Edge e-Series Wireless
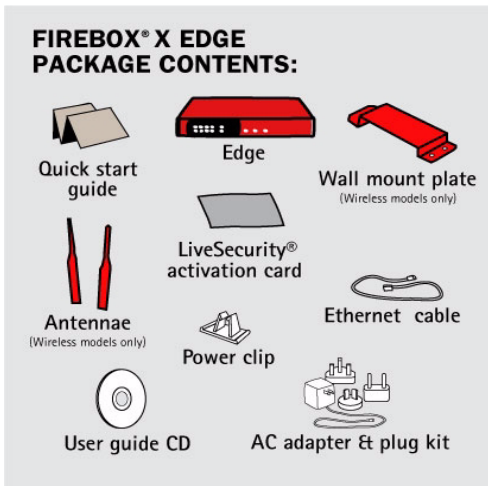- Firebox X Edge e-Series DSL



## Package Contents

The Firebox® X Edge e-Series package includes:

- Hardware firewall

- Firebox X Edge e-Series User Guide on CD-ROM
- Firebox X Edge e-Series QuickStart Guide
- LiveSecurity® Service activation card
- Hardware warranty card
- AC adapter (12V/1.2A) with international plug kit. (For the Firebox X Edge DSL models, a larger 12V/2.0A AC adapter is supplied.)
- Power cable clip, to attach to the cable and connect to the side of the Edge. This decreases the tension on the power cable.
- One straight-through cable
- Wall mount plate (wireless models only)
- Two antennae (wireless models only)



FIREBOX® X EDGE PACKAGE CONTENTS:

Quick start guide

Edge

Wall mount plate (Wireless models only)

LiveSecurity® activation card

Antennae (Wireless models only)

Power clip

Ethernet cable

User guide CD

AC adapter & plug kit

# Specifications

The specifications for the Firebox® X Edge e-Series and the Firebox X Edge e-Series Wireless are:

| | |
|---|---|
| Processor | X Scale (ARM) |
| CPU | 266 MHz |
| Memory: Flash | 64 MB |
| Memory: RAM | 128 MB |
| Ethernet interfaces | 6 each 10/100 |
| Serial ports | 1 DB9 |
| Power supply | 12V/1.2A |
| Operating temperature | 0 - 40 C |
| Environment | Indoor use only |
| Dimensions for Firebox X Edge e-Series | Depth = 6.25 inches<br>Width = 7.4 inches<br>Height = 1.25 inches |
| Dimensions for Firebox X Edge e-Series Wireless, including antenna | Depth = 6.25 inches<br>Width = 10.9 inches<br>Height = 1.25 inches |
| Weight of Firebox X Edge e-Series | 1.9 U.S. pounds |
| Weight of Firebox X Edge e-Series Wireless | 2.0 U.S. pounds |

The specifications for the Firebox® X Edge e-Series DSL are:

| | |
|---|---|
| Processor | X Scale (ARM) |
| CPU | 266 MHz |
| Memory: Flash | 64 MB |
| Memory: RAM | 128 MB |
| Ethernet interfaces | 5 each 10/100 |
| DSL interface | 1 RJ11 |
| Serial ports | 1 DB9 |
| Power supply | 12V/2.0A |

| Operating temperature | 0 - 40 C |
|---|---|
| Environment | Indoor use only |
| Dimensions for Firebox X Edge e-Series DSL | Depth = 6.25 inches<br>Width = 10 inches<br>Height = 1.25 inches |
| Weight | 2.0 U.S. pounds |

# Hardware Description

The Firebox® X Edge e-Series has a simple hardware architecture. All indicator lights are on the front panel and all ports and connectors are on the rear panel of the device.

## Front panel

The front panel of the Firebox X Edge has 18 indicator lights to show the link status. The top indicator light in each link pair comes on when a link is made and flashes when traffic goes through the related interface. The bottom indicator light in each pair comes on when the link speed is 100 Mbps. If the bottom indicator light does not come on, the link speed is 10 Mbps.



### WAN 1, 2

Each WAN indicator shows the physical connection to the external Ethernet interfaces. The light is yellow when traffic goes through the related interface.

### WAP

The WAP indicator shows that the Firebox X Edge is activated as a wireless access point. The light is green when traffic goes through the wireless interface on a Firebox X Edge e-Series Wireless model.

**Fail/Over**

The Fail/Over indicator shows a WAN failover. The light is green when there is a WAN failover from WAN1 to WAN2. The light goes off when the external interface connection goes back to WAN1.

**Link**

The link indicator shows a physical connection to a trusted Ethernet interface. The trusted interfaces have the numbers 0 through 6. The light comes on when traffic goes through the related interface.

**100**

When a trusted network interface operates at 100 Mbps, the related 100 indicator light comes on. When it operates at 10 Mbps, the indicator light does not come on.

**Status**

The status indicator shows a management connection to the Firebox X Edge. The light goes on when you use your browser to connect to the Firebox X Edge configuration pages. The light goes off a short time after you close your browser.

**Mode**

The mode indicator shows the status of the external network connection. The light comes on when the Ethernet cable is correctly connected to the WAN1 interface. The light is green if the Firebox X Edge can connect to the external network and send traffic. The light flashes if the Firebox X Edge cannot connect to the external network and send traffic.

**Attn**

The Attn indicator is reserved for future use.

**Power**

The power indicator shows that the Firebox X Edge is on.

## Rear view



**Serial port (DB9)**
   Use the serial port to connect an external modem to the
   Firebox X Edge.

**Ethernet interfaces LAN0 through LAN2**
   The Ethernet interfaces with the marks LAN0 through LAN2 are
   for the trusted network.

**OPT interface**
   This Ethernet interface is for the optional network.

**WAN interfaces 1 and 2**
   The WAN1 and WAN2 interfaces are for external networks.

———————— **NOTE** ————————
If you use a Firebox X Edge e-Series DSL model,  WAN1 is your
interface to the DSL connection.

**Power input**
   A 12V/1.2A power supply is included with your Firebox X Edge.
   Connect the AC adapter to the Firebox X Edge and to a power
   source. The power supply tip is plus (+) polarity.

———————— **NOTE** ————————
If you use a Firebox X Edge e-Series DSL model, you must use the
12V/2.0A AC adapter that comes with the Firebox X Edge e-Series
DSL.

**RESET button**
   To reset the Firebox X Edge, use the procedure in "Factory
   Default Settings" on page 43.

## Side panels

### Computer lock slot

There is a slot for a computer lock on the two side panels of the Firebox X Edge.

### Antennae (wireless model only)

There are wireless antennae on the two side panels of the Firebox X Edge e-Series Wireless models.

### Wall mounting plate (wireless model only)

The wall mounting plate enables you to put the Firebox X Edge in a good location to increase the range.

# About the Firebox X Edge e-Series Wireless.



The Firebox X Edge e-Series Wireless conforms to IEEE 802.11g/b wireless LAN standards. Some key features that have an effect on performance of an 802.11g/b wireless device include antenna directional gain, signal attenuation (path loss), and channel data rate.

## Antenna directional gain

Antenna directional gain is based on the shape of the radiation pattern around the antenna. The Firebox X Edge e-Series Wireless uses

two 5.1 dBi swivel-mount whip antennas. The whip antenna has a radiation pattern similar to a sphere that is squashed in the center. If the antenna points up, the gain is largest in the horizontal direction and less in the vertical direction.

## Signal attenuation

Signal attenuation refers to the loss of signal power. It can be caused by multi-path reflection. Multi-path reflection occurs when RF signals that come to the receiver must move along more than one path because of walls and other surfaces between the transmitter and the receiver. It changes based on the phase at which the signals come, but signal strength can be increased or decreased by as much as 30dB.

To decrease the effect of multi-path reflection, the Firebox X Edge Wireless uses two antennas spaced some distance apart. This decreases signal cancellation and allows the software to find the best antenna to receive and transmit as conditions change.

Wireless clients usually have one antenna and are more sensitive to the effects of antenna location. Because of this, the Firebox X Edge e-Series Wireless can receive signals from a wireless client even if the client does not receive signals from the Firebox X Edge.

## Channel data rate

Channel data rate changes with the modulation type, which changes based on conditions including noise and the distance between transmitter and receiver. In general, the available data rates for an IEEE 802.11g/b device change from 1 Mbps in the worst conditions to 54 Mbps in the best conditions

# About the Firebox X Edge e-Series DSL



The Firebox X Edge e-Series DSL connects your network to a high-speed broadband Internet connection. This model includes an internal SerComm integrated ADSL modem and one RJ11 port.

You can configure all available DSL properties using the web-based interface of the Firebox X Edge.

The Firebox X Edge e-Series DSL is supplied in two hardware configurations:

### Annex A

Annex A supports the public switched telephone network (PSTN) environment. This configuration is used in the United States and many other countries.

### Annex B

Annex B supports the Integrated Services Digital Network (ISDN) environment. This configuration is used in some European countries.