

Firebox® X Core™ e-Series **Firebox® X Peak™ e-Series** **Hardware Guide**

Firebox X550e, Firebox X750e, Firebox X1250e,
Firebox X5500e, Firebox X6500e, Firebox X8500e,
Firebox X8500e-F



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Product (s):

Internet Firewall and VPN (Encryption) Network Device, including Models T2BE8, T2BE4F4, T1AE8, T1AE4.

EU Directive(s):

Low Voltage (2006/95/EC)
Electromagnetic Compatibility (2004/108/EC)

Standard(s):

EN60950-1:2001 Safety of ITE (valid until: 2010 12 01)

EN550022:2006 Class A Emissions for ITE
EN61000-3-2:2000 W/A2:05 Harmonics
EN61000-3-3:1995 W/A1:01 Flicker
EN550024:1998 W/A1:01 & A2:03 Immunity for ITE

Signature

Full Name Joe Wang

Position Chief Executive Officer

Date 09 October 2008

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This device has been tested and found to comply with limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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Hardware Guide

The WatchGuard® Firebox® X line of security appliances deliver unparalleled unified threat management, superior performance, ease of use, and value for your growing network. Our security services give you fully integrated protection from spyware, spam, viruses, worms, trojans, web-based exploits, and blended threats. From firewall and VPN protection to secure remote access, WatchGuard Firebox X offers support for a broad range of network environments.

This guide introduces the Firebox X e-Series. The e-Series models are WatchGuard's first RoHS-compliant (lead-free) hardware products.

Firebox X Core

Our best-selling Firebox® X Core™ line of integrated security appliances gives the strongest protection available out of the box for businesses that must have integrated security, ease of use, and the capacity to extend and scale to meet growing needs.

Firebox X Core e-Series is available in models Firebox X550e, Firebox X750e, and Firebox X1250e.

Firebox X Peak

Our highest-performance line of integrated security appliances, Firebox® X Peak™ uses dynamic, multi-layered security to proactively protect your network. Capable of gigabit throughput, Firebox X Peak has the reliability, redundancy, traffic management, and port density that demanding, high-speed networks require.

Firebox X Peak e-Series is available in models Firebox X5500e, Firebox X6500e, Firebox X8500e, and Firebox X8500e-F. These new models give superior performance and improved scalability. Firebox X Peak is available with fiber optic interfaces on the X8500e-F model.

Fireware and Fireware Pro Appliance Software

Firebox® X Core™ e-Series and Firebox® X Peak™ e-Series devices support WatchGuard's next generation appliance software, which comes in two versions—Fireware® and Fireware® Pro. Each version delivers exceptional protection against today's sophisticated threats and make sure that your business stays connected. Fireware Pro offers additional advanced networking capabilities. For more information on the differences between Fireware and Fireware Pro, see the *WatchGuard System Manager User Guide*.

Fireware Pro comes bundled with all Firebox X Peak appliances, and is available as an upgrade for Firebox X Core appliances.

Package Contents

The package contains this Hardware Guide on a CD-ROM and:

- Firebox® X Core™ or Firebox X Peak™ device
- Quick Start Guide
- Hardware warranty card
- LiveSecurity® Service license key certificate
- 1 straight-through Ethernet cable (green)
- 1 cross-over Ethernet cable (red)
- 1 serial cable (blue)
- 4 rubber pads for the bottom of the Firebox
- 1 rack-mounting kit

Hardware Specifications (Firebox X Core)

This table shows the hardware specifications for the Firebox® X Core™ e-Series models.

	X550e	X750e	X1250e
Processor	1.3 GHz Intel-based processor	1.3 GHz Intel-based processor	1.3 GHz Intel-based processor
Memory: Flash	128 Mbyte	128 Mbyte	128 Mbyte
Memory: RAM	512 Mbyte	512 Mbyte	512 Mbyte
Power supply	100-240 VAC Autosensing	100-240 VAC Autosensing	100-240 VAC Autosensing
Dimensions	D=14.0"(35.56 cm) W=16.75" (42.55 cm) H=1.75"(4.45 cm)	D=14.0" W=16.75" H=1.75"	D=14.0" W=16.75" H=1.75"
Weight	12.1 lbs (5.49 Kg)	12.1 lbs	12.1 lbs

Interface Specifications (Firebox X Core)

This table shows the interface specifications for the Firebox® X Core™ e-Series models.

Network interfaces X550e	4 x 10/100 Mbps Fast Ethernet auto-negotiate (half/full duplex) RJ-45
Network interfaces X750e, X1250e	8 x 10/100/1000 Gigabit* Ethernet auto-negotiate (half/full duplex) RJ-45 * 1000 Gigabit Ethernet is available on the X1250e and any X750e that is upgraded to an X1250e
Serial ports	1 DB9

Hardware Specifications (Firebox X Peak)

This table shows the hardware specifications for the Firebox® X Peak™ e-Series models.

	X5500e	X6500e	X8500e	X8500e-F
Processor	2.0 GHz Intel-based processor	2.0 GHz Intel-based processor	2.0 GHz Intel-based processor	2.0 GHz Intel-based processor
Memory: Flash	128 Mbyte	128 Mbyte	128 Mbyte	128 Mbyte
Memory: RAM	1 Gbyte	1 Gbyte	1 Gbyte	1 Gbyte
Power supply	100-240 VAC Autosensing	100-240 VAC Autosensing	100-240 VAC Autosensing	100-240 VAC Autosensing
Dimensions	D=14.0" (35.56 cm)) W=16.75" (42.55 cm) H=1.75" (4.45 cm)	D=14.0" W=16.75" H=1.75"	D=14.0" W=16.75" H=1.75"	D=14.0" W=16.75" H=1.75"
Weight	12.3 lbs (5.58 Kg)	12.3 lbs	12.3 lbs	12.3 lbs

Interface Specifications (Firebox X Peak)

This table shows the interface specifications for the Firebox® X Peak™ e-Series models.

Network interfaces X5500e, X6500e, X8500e	8 x 10/100/1000 Gigabit Ethernet auto-negotiate (half/full duplex) RJ-45
Network interfaces X8500e-F	4 x 10/100/1000 Gigabit Ethernet auto-negotiate (half/full duplex) RJ-45 4 x 1000BaseSX Small Form Factor Pluggable (SPF) mini-GBIC, MMF LC-Duplex Connector, 850nm laser
Serial ports	1 DB9

Environmental Requirements

We recommend that you use these guidelines to install your Firebox® X Core™ or Firebox X Peak™ devices safely:

- Install in a network rack
- Put in a secure area, such as a locked room, to block the device from people who do not have permission to use it
- Connect to a conditioned power supply to prevent damage from sudden power changes

This table shows other environmental requirements for the two units.

Operating temperature	0 – 45 degrees Celsius (32 – 113 degrees Fahrenheit)
Operating humidity	10% - 85%
Non-operating temperature	–40 – 70 degrees Celsius (–40 – 158 degrees Fahrenheit)

Non-operating humidity	10% – 95% Non-condensing at 55 degrees Celsius (131 degrees Fahrenheit)
Non-operating random vibration	7 – 28 Hz 0.001 to 0.01 G2 per Hz
Acoustic noise	40 dBA at 20° – 25°C
Operating mechanical shock	20.0 G with 11 Msec duration 1/2 sine wave

Hardware Description

This description applies to all Firebox® X Core™ and Firebox X Peak™ e-Series models except where noted.

Front view

The photograph below shows the entire front of the Firebox.



Note: Firebox X Core model X550e and Firebox X Peak model X8500e-F are slightly different on the front, as described on page 9.

The photograph below shows a close-up of the left side of the Firebox. From the left, the indicators are:



LCD indicator panel

The LCD screen shows Firebox status information. Use the buttons to the right of it to change the information that appears, as described in “Using the LCD Interface” on page 10.

LCD console buttons

You use the LCD console buttons to see status information and start recovery procedures.

If you press and hold the Up button when you turn on the power, the Firebox boots into Safe Mode.

For detailed information on the LCD indicator panel and the LCD console buttons, see “Using the LCD Interface” on page 10.

Serial port (Console)

A DB9 connector for the serial port. This port has a cover that you must open to use the port.

Power

A yellow LED (light-emitting diode) shows that the power is on.

Storage

A green LED indicates that the Firebox is writing to or reading from the compact flash card of the hard drive disk (if installed).

Arm/Disarm

A green LED shows the Firebox is armed. A red LED shows the Firebox is disarmed.

Expansion

A green LED shows an upgrade module is installed in the expansion slot in the rear of the unit (described in “Rear view” on page 9). This is always off unless an upgrade is installed.

The photograph below shows a close-up of the right side of the Firebox. (Note: Firebox X Core model X550e and Firebox X Peak model X8500e-F are slightly different, as described on page 9.)

From the left, the indicators and connections are:



LED

The sets of LEDs are labeled 0, 1, 2, 3, and so on. They correspond to the interface ports to their right. The LEDs show the link and connection speed of the interface.

- When the interface operates at 10 Mbit, the top LED is green.
- When the interface operates at 100 Mbit, the middle LED is green.
- When the interface operates at 1000 Mbit, the bottom LED is green.
- If you have a Firebox X Peak e-Series device with the Fiber interface enabled, the behavior of the LED lights is different. The LED labeled 10|LNK shows link status for the Fiber interface; the 100|TX LED shows transmission activity; and the 1000|RX LED shows activity related to received packets.

Interface ports

The interface ports have standard RJ45 connectors and are labeled 0, 1, 2, 3, and so on. The maximum speed for each interface depends on the Firebox X Core or Peak model you purchased.

The Firebox X Core model 550e has a total of four ports. All other Core and Peak models have eight ports.

The Firebox X Peak model 8500e-F has four fiber ports on the right. These ports appear in the photograph below.



Rear view

The rear view of the Firebox X has the AC receptacle, fans, and power switch.



Hard Disk Drive

Reserved for possible future use.

Expansion Slot

An upgrade expansion card can be installed in the future.

Fans

The three fans decrease the internal temperature of the Firebox.

Power Switch

Turns the Firebox on or off.

AC Receptacle

Accepts the detachable AC power cord supplied with the Firebox. The power supply for the Firebox is a WatchGuard standard auto-sensing AC power supply.

Using the LCD Interface

You can use the LCD interface and buttons for different operations.

The WatchGuard Firebox can operate in two modes:

Default Mode

The Firebox normal operating mode, with the Firebox booting from the Fireware appliance software and operating with the rules set in the configuration file you have saved to the Firebox.

Safe Mode

In Safe Mode, you can get access to a Firebox when all access to the Firebox is lost. You can also use Safe Mode to reset Firebox passphrases when you do not know or have forgotten them. To recover the Firebox while started from Safe Mode, you must use the Quick Setup Wizard or the Web Quick Setup Wizard. You must put a Firebox into safe mode to use the Quick Setup Wizard. In safe mode, the Firebox is running Fireware and is configured with factory-

default IP addresses. If you want to reconfigure a Firebox with the Quick Setup Wizard, the license files and certificates are saved when you put the Firebox into safe mode.

To put a Firebox into safe mode, press the down arrow on the Firebox front panel during device bootup. Keep the button depressed until you see the words "WatchGuard Technologies." When the Firebox is in safe mode, the LCD display shows the model number of the Firebox followed by the word "Safe."

LCD keypad button control

There are four buttons to the right of the LCD display.

Left Button

This button is the "selection" button. It does the work of a computer mouse "left-click" button and lets you select from different options.

Right Button

Use this button to select fields in the LCD display. It does the work of the TAB key in a Windows dialog box.

Up Button

This button lets you increase the value of a selected item, or move up in a group of menu entries.

Down Button

This button lets you decrease the value of a selected item, or move down in a group of menu entries.

Using the LCD interface in Firebox Default Mode

Unless you specifically put a Firebox in safe mode, it boots automatically into Default Mode. It uses the Fireware appliance software on the Firebox and operates with the rules set in the configuration file you have saved to the Firebox.

You can use the four-button keypad to see information about the Firebox, which appears in the LCD display. In Default Mode, use the buttons to move around a hierarchical “tree view”. Use the **Right** button to move forward through the list of categories. To see information in a category, use the **Up** and **Down** buttons to move up and down through the “tree”. Use any button to stop the auto-cycling on the LCD display.

The Default Mode shows:

Hardware Monitoring

Firebox serial number

CPU temperature

CPU temperature and the system temperature

CPU fan status

Case cooling fan speeds for three different fans in the Firebox

Voltage

CPU core voltage, the battery voltage, and the 3.3V power supply voltage

Configuration Information

IP addresses and subnet masks assigned to the each interface on the Firebox

Default gateway

Firebox Model Information

Appliance software type

Appliance software build number

Uptime

Time interval since the Firebox was last restarted

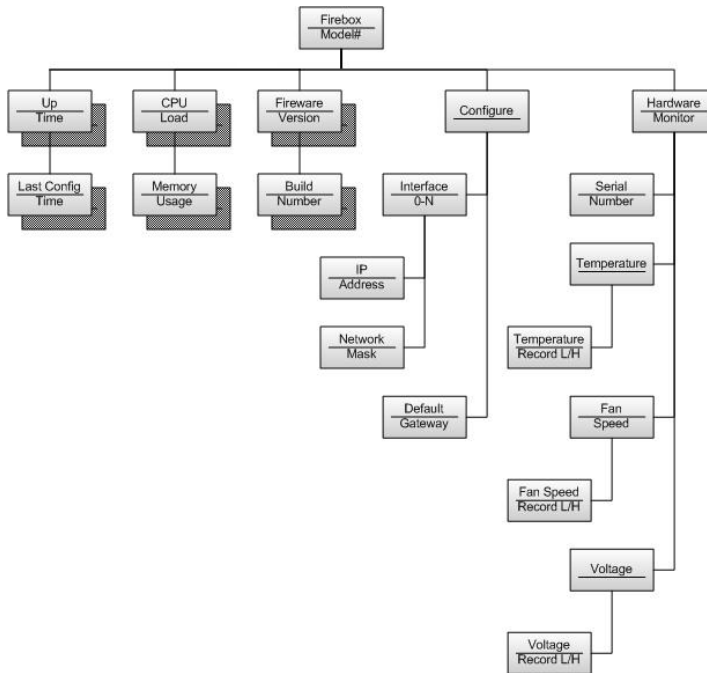
Time interval since the last time a configuration was saved to the Firebox

Load

Load average, showing the average system load for the past 1, 5, and 15 minutes

Memory usage

Current memory use on the Firebox.



LCD Interface Display Flowchart

Example

To see the CPU temperature of the Firebox from your LCD display, use the **Right** button to scroll through options until you see **Hardware Monitor**. Then, use the **Down** button to move into the “tree” view. Use the **Right** button to scroll through the Hardware Monitor entries until you find the CPU temperature. Use the **Up** button to return to the main category level.