

WatchGuard Uses Intel® Xeon® 6 Soc in Advanced Firewall Appliances

Three new Firebox High-Performance Rackmount cybersecurity appliances keep organizations ahead of AI-based cyber-attacks with high-performance firewalls and multifunction security services.



Cyber-attacks are becoming faster, more adaptive, and more difficult to predict as threat actors use artificial intelligence to automate reconnaissance, refine phishing campaigns, generate malware variations, and shorten the time between vulnerability discovery and exploitation. Organizations are no longer defending against isolated attacks; they are confronting persistent, machine-assisted campaigns that can evolve in real time.

As a result, security infrastructure is responding with equal speed and resilience to detect threats earlier and contain them before they spread. This trend has expanded the job of the firewall from perimeter control to multifunction security service platform.



Modern firewalls are designed to filter traffic and integrate virtual private networking, intrusion prevention and detection, application awareness, encrypted traffic inspection, segmentation, and policy enforcement.

For smaller companies and distributed enterprises, the expanded firewall is especially important because the firewall may be the only security system installed to protect branch offices, retail locations, campuses, and remote edge locations.

Meeting these expectations requires significantly greater processing power. To remain effective, firewalls must inspect every packet at wire speed while simultaneously handling encryption, decryption, deep packet inspection, threat detection, VPN sessions, and policy decisions without introducing latency.

WatchGuard, delivers enterprise cyber security protection with its Firebox High-Performance Rackmount series of firewall appliances that utilize Intel® Xeon® 6 SoC.

These processors provide a strong foundation for delivering the performance, reliability, and operational consistency required in modern cybersecurity environments.

New Appliances Support

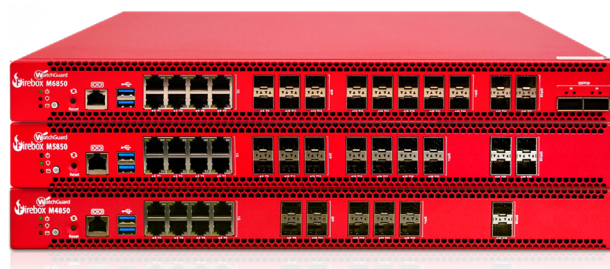
The Firebox High-Performance Rackmount product family includes three new high-performance hardware appliances that can be mixed and matched within an organization. The hardware runs WatchGuard's security services software suites (see Fig. 1) that lets the customer choose the level of protection required for each of their locations.

The security services software suites include Basic Security, Prime Security, and Total Security. Each of the Firebox High-Performance Rackmount appliances can run any of the security services packages. The choice of appliance is based on traffic volumes and the number of connected users.

Included in Security Suite	Basic Security	Prime Security	Total Security
Stateful Firewall	✓	✓	✓
VPN	✓	✓	✓
SD-WAN	✓	✓	✓
Access Portal	✓	✓	✓
Intrusion Prevention Service	✓	✓	✓
Application Control	✓	✓	✓
WebBlocker	✓	✓	✓
spamBlocker	✓	✓	✓
Gateway AntiVirus	✓	✓	✓
Geolocation Blocking	✓	✓	✓
Botnet Detection	✓	✓	✓
Network Discovery	✓	✓	✓
APT Blocker		✓	✓
DNSWatch		✓	✓
Shadow AI		✓	✓
IntelligentAV			✓
ThreadSync (XDR)			✓
EDR Core			✓
Networking Monitor System			✓
WatchGuard Cloud			
Centralized Management	✓	✓	✓
Visibility and Reporting	✓	✓	✓
Log Data Retention	45 Days	90 Days	365 Days
Report Data Retention	1 Day	7 Days	30 Days
Support	Standard (24 x 7)	Standard (24 x 7)	Gold (24 x 7)

Figure 1. Security services available on the Firebox High-Performance Rackmount appliances.

High-Performance Rackmount Systems



The three high-performance appliances that make up the Firebox High-Performance Rackmount family are 1RU (20.25" x 17.32" x 1.73" (515mm x 440mm x 44mm))-high appliances that use the Intel Xeon 6 SoC to set a new performance benchmark for enterprise security, performance, and availability.

Each of the systems provide Watchguard's maximum UTM (Full Scan), a Watchguard innovation that measures the security performance for each security app with all security services turned on. By maxing out performance, customers can get a meaningful understanding of their network performance. The processing performance of the Intel Xeon 6 SoC is what enables Watchguard customers to run the highest level of protection without compromising on the bandwidth they need to run their business.

For upgradeability, the systems come with an Open Compute Platform (OCP) 3.0 expansion bay. Currently the system supports expansion cards that deliver 100Gbps on all models along with additional 25Gbps ports. Future upgrades of crypto accelerators, local storage for logging network traffic and events, or other subsystems.

System reliability features include dual, high availability network connections that can be run in either active/passive mode for instant link conversion or active / active mode for maximum bandwidth. The system supports dual, hot-swappable and redundant power supplies.

The individual product features include:

Firebox M4850

This appliance is built as the entry point to the Firebox High-Performance Rackmount family. The M4850 delivers 17.3 Gbps of UTM (full scan) performance which is an improvement over other vendor's threat protection throughput. This performance is for organizations or locations with up to 5,000 users.

Firebox M5850

Designed for sustained performance in campus and core environments, this appliance features 27.0 Gbps of UTM (full scan) throughput. The Firebox M5850 is purpose-built for organizations that need performance for users spread across larger sites, campus networks, and distributed enterprise environments. These sites have constant flows of encrypted traffic and dense application configurations that constantly pressure the firewall.

Firebox M6850

This appliance delivers up to 36 Gbps throughput for UTM (full scan) which is an industry leading performance for a firewall appliance in 1U form factor[JLI.1]. Connectivity options include two built-in 100Gbps ports with an option to add two more via an OCP expansion bay. The 1U appliance can process more than 100

Gbps of large packet firewall throughput (UDP 1518 bytes) with IMIX throughput totaling 29 Gbps. It provides maximum capacity for high-growth edge applications. This includes no pre-determined limit to the number of users supported and unrestricted VPN tunnels. Built for data center edge, core infrastructure, and high-growth enterprises, the M6850 enables customers to standardize on a single firewall platform that can accommodate future increases in users, applications, and encrypted traffic without repeated hardware refreshes.

Intel Xeon 6 SoC Provides Deep Packet Inspection Performance

The Intel Xeon 6 SoC, with Performance-cores (P-cores), optimized for compute-heavy, latency-sensitive applications, is designed to deliver performance and capabilities for network security workloads. Intel Xeon 6 SoC configurations scale up to 128 P-cores per socket, with Intel® Advanced Matrix Extensions (Intel® AMX) for AI acceleration, delivers substantial

performance-per-watt gains and high deterministic throughput in a system on chip (SoC) design.

Firewall appliances benefit significantly from the P-core configurations, which allows WatchGuard to consolidate multiple parallel security functions onto fewer physical servers while lowering total cost of ownership.

Furthermore, the system on chip (SoC) design integrates high-speed networking capabilities with up to 200 Gbps of throughput and up to eight Ethernet ports directly onto the silicon, drastically reducing the hardware footprint required to ingest and analyze massive streams of threat data.

Security workloads inside firewall appliances are heavily accelerated through Intel's specialized, built-in Intel® QuickAssist Technology (Intel® QAT), which offloads and accelerates intensive cryptographic processes and TLS/SSL encryption from the CPU cores, freeing up compute cycles for deep packet inspection and real-time firewall threat analysis.

	Firebox M4850	Firebox M5850	Firebox M6850
THROUGHPUT AND CONNECTIONS			
User Counts (recommended)	2,500	7,500	10,000
Firewall (UDP 1518)	66.5 Gbps	79.0 Gbps	104 Gbps
VPN (UDP 1518)	18.9 Gbps	26.0 Gbps	32.0 Gbps
AntiVirus	27.0 Gbps	36.5 Gbps	43.0 Gbps
IPS (Full Scan)	25.0 Gbps	33.5 Gbps	40.0 Gbps
UTM (Full Scan)	19.1 Gbps	27.0 Gbps	36.0 Gbps
HTTPS (Full Scan)	8.8 Gbps	13.8 Gbps	18.5 Gbps
Network Interfaces	1 Gbps RJ45 x 8 1 Gbps SFP x 4 10 Gbps SFP+ x 6 25 Gbps SFP28 x 2	1 Gbps RJ45 x 8 1 Gbps SFP x 6 10 Gbps SFP+ x 8 25 Gbps SFP28 x 4	1 Gbps RJ45 x 8 1 Gbps SFP x 6 10 Gbps SFP+ x 10 25 Gbps SFP28 x 4 100 Gbps QSFP28 x 2
EDR Core Licenses	250	250	250
Concurrent Connections	37,000,000	38,000,000	67,000,000
New Connections per Second	260,000	286,000	330,000
New Connections per Second (proxy)	61,500	73,000	85,000
VLAN Support	Unrestricted	Unrestricted	Unrestricted
VPN TUNNELS			
Branch Office VPN	5,000	Unrestricted	Unrestricted
Mobile VPN	10,000	Unrestricted	Unrestricted

Figure 2. WatchGuard Firebox firewall offerings based on Intel® Xeon® 6 SoC.

By building on widely adopted industry-standard Intel® architecture-based platforms, WatchGuard benefits from extensive driver support, validated hardware compatibility, and rapid access to security and performance enhancements. The combination of Intel hardware and WatchGuard software delivers the high availability, and dependable operation customers expect for mission-critical firewall deployments, where consistent uptime, predictable performance, and long lifecycle support are essential.

Conclusion

As cyber threats become more sophisticated and AI accelerates the speed and scale of attacks, organizations need firewall infrastructure that can deliver increasingly complex security services without compromising network performance.

The WatchGuard Firebox M4850, M5850, and M6850 allow organizations to match firewall capacity to their traffic, users, and application requirements while maintaining a common WatchGuard security platform. With features including high availability, redundant power, OCP 3.0 expansion, and support for high-speed network interfaces, the appliances are also designed to accommodate evolving security and connectivity requirements.

This scalability enables customers to deploy the appropriate system today while providing a path to support growing volumes of encrypted traffic and increasingly demanding security workloads.

Intel Xeon 6 SoC provides the compute and networking foundation for this performance. Performance-cores provide processing capacity for compute-intensive security workloads, while integrated Intel® QuickAssist Technology accelerates cryptographic and encryption operations and frees CPU resources for functions such as deep packet inspection and threat analysis.

Together, WatchGuard security software and Intel Xeon 6 SoC enable a new generation of firewall appliances designed to deliver the security performance, network throughput, availability, and scalability organizations need as both network traffic and cyber threats continue to evolve.

Top Five Use Cases for Firebox High-Performance Rackmount

- **Perimeter Threat Prevention:** Blocks malware, ransomware, intrusions, and encrypted threats with advanced inspection.
- **Secure SD-WAN and Branch Connectivity:** Provides secure, high-performance connectivity for branches, retail sites, and remote offices.
- **Data Center Segmentation:** Secures east-west traffic to limit lateral movement and contain breaches.
- **Hybrid Cloud and Multi-Cloud Security:** Applies consistent security policies across on-premises and cloud environments.
- **High-Speed Network Edge Security:** Supports secure 25Gbps, 50Gbps, and 100 Gbps connectivity for enterprise and data center networks
- **Reduced engineering effort and total cost of ownership**

Learn More

[WatchGuard Homepage](#)

[Firebox M6850](#)

[Firebox M5850](#)

[Firebox M4850](#)

[WatchGuard Firewall Software](#)

[Intel® Xeon® 6 Processor](#)



Notices & Disclaimers

Performance varies by use, configuration and other factors.

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See configuration disclosure for details. No product or component can be absolutely secure.

Intel optimizations, for Intel compilers or other products, may not optimize to the same degree for non-Intel products.

Your costs and results may vary.

Intel technologies may require enabled hardware, software or service activation.

Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

See our complete legal [Notices and Disclaimers](#).

Intel is committed to respecting human rights and avoiding causing or contributing to adverse impacts on human rights. See Intel's [Global Human Rights Principles](#). Intel's products and software are intended only to be used in applications that do not cause or contribute to adverse impacts on human rights.

© Intel Corporation. Intel, the Intel logo, Xeon, the Xeon logo and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.