






# Cisco Firepower Next-Generation Firewalls

The Cisco Firepower® next-generation firewall (NGFW) is the industry’s first fully integrated, threat-focused next-gen firewall with unified management. It uniquely provides advanced threat protection before, during, and after attacks.

	<b>Stop more threats</b>	Contain known and unknown malware with leading Cisco® Advanced Malware Protection (AMP) and sandboxing.
	<b>Gain more insight</b>	Gain superior visibility into your environment with Cisco Firepower next-gen IPS. Automated risk rankings and impact flags identify priorities for your team.
	<b>Detect earlier, act faster</b>	The Cisco Annual Security Report identifies a 100-day median time from infection to detection, across enterprises. Reduce this time to less than a day.
	<b>Reduce complexity</b>	Get unified management and automated threat correlation across tightly integrated security functions, including application firewalling, NGIPS, and AMP.
	<b>Get more from your network</b>	Enhance security, and take advantage of your existing investments, with optional integration of other Cisco and third-party networking and security solutions.

## Performance Highlights

Table 1 summarizes the performance highlights of the Cisco Firepower NGFW 4100 Series and 9300 Security Appliances and select Cisco ASA 5500-X appliances.

**Table 1.** Performance Highlights

Features	Cisco Firepower Model								Cisco ASA 5500-FTD-X Model							
	4110	4120	4140	4150	9300 with 1 SM-24 Module	9300 with 1 SM-36 Module	9300 with 1 SM-44 Module	9300 with 3 SM-44 Modules	5506-FTD-X	5506W-FTD-X	5506H-FTD-X	5508-FTD-X	5516-FTD-X	5525-FTD-X	5545-FTD-X	5555-FTD-X
Firewall throughput (ASA)	35 Gbps	60 Gbps	70 Gbps	75 Gbps	75 Gbps	80 Gbps	80 Gbps	234 Gbps	750 Mbps	750 Mbps	750 Mbps	1 Gbps	1.8 Gbps	2 Gbps	3 Gbps	4 Gbps
Throughput FW + AVC (Firepower Threat Defense) <sup>1</sup>	12 Gbps	20 Gbps	25 Gbps	30 Gbps	30 Gbps	42 Gbps	54 Gbps	135 Gbps	250 Mbps	250 Mbps	250 Mbps	450 Mbps	850 Mbps	1100 Mbps	1500 Mbps	1750 Mbps
Throughput: FW + AVC + NGIPS (Firepower Threat Defense) <sup>1</sup>	10 Gbps	15 Gbps	20 Gbps	24 Gbps	24 Gbps	34 Gbps	53 Gbps	133 Gbps	125 Mbps	125 Mbps	125 Mbps	250 Mbps	450 Mbps	650 Mbps	1000 Mbps	1250 Mbps

<sup>1</sup> HTTP sessions with an average packet size of 1024 bytes.

**Note:** NGFW performance varies depending on network and traffic characteristics. Consult your Cisco representative for detailed sizing guidance. Performance is subject to change with new software releases.



**Cisco Firepower 4100 Series:**  
The industry's first 1RU NGFWs with 40-Gbps interfaces



**Cisco Firepower 9300:**  
Ultra-high-performance NGFW, expandable as your needs grow



**Cisco ASA 5500-X Series:**  
Models for branch offices, industrial applications, and the Internet edge

## Platform Support

The Cisco Firepower NGFW includes Application Visibility and Control (AVC), optional Firepower next-gen IPS (NGIPS), Cisco Advanced Malware Protection (AMP) for Networks, and URL Filtering. The Cisco Firepower 4100 Series and Cisco Firepower 9300 NGFW appliances use the Cisco Firepower Threat Defense software image. Alternatively, these appliances can support the Cisco Adaptive Security Appliance (ASA) software image. The Cisco Firepower Management Center (formerly FireSIGHT) provides unified management of the Cisco Firepower NGFW, as well as Cisco Firepower NGIPS and Cisco AMP for Networks. Also available, on select Cisco Firepower appliances, and direct from Cisco, is the Radware Virtual DefensePro (vDP) distributed denial of service (DDoS) mitigation capability.

### Cisco Firepower 4100 Series Appliances

The Cisco Firepower 4100 Series is a family of four threat-focused NGFW security platforms. Their maximum throughput ranges from 35 to 75 Gbps, addressing use cases from the Internet edge to the data center. They deliver superior threat defense, at faster speeds, with a smaller footprint.

### Cisco Firepower 9300 Security Appliance

The Cisco Firepower 9300 is a scalable (beyond 1 Tbps when clustered), carrier-grade, modular platform designed for service providers, high-performance computing centers, data centers, campuses, high-frequency trading environments, and other environments that require low (less than 5-microsecond offload) latency and exceptional throughput. Cisco Firepower 9300 supports flow-offloading, programmatic orchestration, and the management of security services with RESTful APIs. It is also available in Network Equipment Building Standards (NEBS)-compliant configurations.

### Cisco ASA 5500-FTD-X Series Appliances

The Cisco ASA 5500-FTD-X Series is a family of eight threat-focused NGFW security platforms. Their maximum throughput ranges from 750 Mbps to 4 Gbps, addressing use cases from the small or branch office to the Internet edge. They deliver superior threat defense in a cost-effective footprint.

## Performance Specifications and Feature Highlights

Table 2 summarizes the capabilities of the Cisco Firepower NGFW 4100 Series and 9300 appliances and the Cisco ASA 5500-FTD-X appliances when running the Cisco Firepower Threat Defense image.

**Table 2.** Performance<sup>2</sup> Specifications and Feature Highlights with the Firepower Threat Defense Image

Features	Cisco Firepower Model								Cisco ASA 5500-FTD-X Model							
	4110	4120	4140	4150	9300 with 1 SM-24 Module	9300 with 1 SM-36 Module	9300 with 1 SM-44 Module	9300 with 3 Clustered SM-44 Modules	5506-FTD-X	5506W-FTD-X	5506H-FTD-X	5508-FTD-X	5516-FTD-X	5525-FTD-X	5545-FTD-X	5555-FTD-X
<b>Throughput: FW + AVC<sup>1</sup></b>	12 Gbps	20 Gbps	25 Gbps	30 Gbps	30 Gbps	42 Gbps	54 Gbps	135 Gbps	250 Mbps	250 Mbps	250 Mbps	450 Mbps	850 Mbps	1100 Mbps	1500 Mbps	1750 Mbps
<b>Throughput: AVC + IPS<sup>1</sup></b>	10 Gbps	15 Gbps	20 Gbps	24 Gbps	24 Gbps	34 Gbps	53 Gbps	133 Gbps	125 Mbps	125 Mbps	125 Mbps	250 Mbps	450 Mbps	650 Mbps	1000 Mbps	1250 Mbps
<b>Maximum concurrent sessions, with AVC</b>	9 million	15 million	25 million	30 million	30 million	30 million	30 million	60 million	50000	50000	50000	100,000	250,000	500,000	750,000	1,000,000
<b>Maximum new connections per second, with AVC</b>	68,000	120,000	160,000	200,000	120,000	160,000	300,000	900,000	5,000	5,000	5,000	10,000	20,000	20,000	30,000	50,000
<b>Application Visibility and Control (AVC)</b>	Standard, supporting more than 4000 applications, as well as geolocations, users, and websites															
<b>AVC: OpenAppID support for custom, open source, application detectors</b>	Standard															
<b>Cisco Security Intelligence</b>	Standard, with IP, URL, and DNS threat intelligence															
<b>Cisco Firepower NGIPS</b>	Available; can passively detect endpoints and infrastructure for threat correlation and indicators of compromise (IoC) intelligence															
<b>Cisco AMP for Networks</b>	Available; enables detection, blocking, tracking, analysis, and containment of targeted and persistent malware, addressing the attack continuum both during and after attacks. Integrated threat correlation with Cisco AMP for Endpoints is also optionally available															
<b>Cisco AMP Threat Grid sandboxing</b>	Available															
<b>URL Filtering: number of categories</b>	More than 80															
<b>URL Filtering: number of URLs categorized</b>	More than 280 million															
<b>Automated threat feed and IPS signature updates</b>	Yes: class-leading Collective Security Intelligence (CSI) from the Cisco Talos Group ( <a href="http://www.cisco.com/c/en/us/products/security/talos.html">http://www.cisco.com/c/en/us/products/security/talos.html</a> )															
<b>Third-party and open-source ecosystem</b>	Open API for integrations with third-party products; Snort® and OpenAppID community resources for new and specific threats															
<b>Centralized management</b>	Centralized configuration, logging, monitoring, and reporting is performed by the Firepower Management Center															

Features	Cisco Firepower Model								Cisco ASA 5500-FTD-X Model							
	4110	4120	4140	4150	9300 with 1 SM-24 Module	9300 with 1 SM-36 Module	9300 with 1 SM-44 Module	9300 with 3 Clustered SM-44 Modules	5506-FTD-X	5506W-FTD-X	5506H-FTD-X	5508-FTD-X	5516-FTD-X	5525-FTD-X	5545-FTD-X	5555-FTD-X
High availability and clustering	Active/standby; with Cisco Firepower 9300 intrachassis clustering is also supported															
VLANs - maximum	1024															
Cisco Trust Anchor Technologies	ASA 5506-X, 5508-X, and 5516-X appliances and Firepower 4100 Series and 9300 platforms include Trust Anchor Technologies for supply chain and software image assurance. Please see the section below for additional details.															

<sup>1</sup> HTTP sessions with an average packet size of 1024 bytes.

<sup>2</sup> Performance will vary depending on features activated and network traffic protocol mix and packet size characteristics. Performance is subject to change with new software releases. Consult your Cisco representative for detailed sizing guidance.

Table 3 summarizes the performance and capabilities of the Cisco Firepower 4100 Series and 9300 appliances when running the ASA image. For Cisco ASA 5500-X Series performance specifications with the ASA image, please visit the [Cisco ASA with FirePOWER Services data sheet](#).

**Table 3.** ASA Performance and Capabilities

Features	Cisco Firepower Model							
	4110	4120	4140	4150	9300 with 1 SM-24 Module	9300 with 1 SM-36 Module	9300 with 1 SM-44 Module	9300 with 3 SM-44 Modules
Stateful inspection firewall throughput <sup>1</sup>	35 Gbps	60 Gbps	70 Gbps	75 Gbps	75 Gbps	80 Gbps	80 Gbps	234 Gbps
Stateful inspection firewall throughput (multiprotocol) <sup>2</sup>	15 Gbps	30 Gbps	40 Gbps	50 Gbps	50 Gbps	60 Gbps	60 Gbps	130 Gbps
Concurrent firewall connections	10 million	15 million	25 million	35 million	55 million	60 million	60 million	70 million
Firewall latency (UDP 64b, microseconds)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
New connections per second	150,000	250,000	350,000	800,000	800,000	1.2 million	1.8 million	4 million
Security contexts <sup>3</sup>	250	250	250	250	250	250	250	250
Virtual interfaces	1024	1024	1024	1024	1024	1024	1024	1024
IPsec VPN throughput	8 Gbps	10 Gbps	14 Gbps	15 Gbps	15 Gbps	18 Gbps	20 Gbps	60 Gbps <sup>4</sup>

Features	Cisco Firepower Model							
	4110	4120	4140	4150	9300 with 1 SM-24 Module	9300 with 1 SM-36 Module	9300 with 1 SM-44 Module	9300 with 3 SM-44 Modules
<b>IPsec/Cisco AnyConnect/Any site-to-site VPN peers</b>	10,000	15,000	20,000	20,000	20,000	20,000	20,000	60,000 <sup>4</sup>
<b>Maximum number of VLANs</b>	1024	1024	1024	1024	1024	1024	1024	1024
<b>Security contexts (included; maximum)</b>	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250
<b>High availability</b>	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby	Active/active and active/standby
<b>Clustering</b>	Up to 16 appliances	Up to 16 appliances	Up to 16 appliances	Up to 16 appliances	Up to 5 appliances with 3 security modules each	Up to 5 appliances with three security modules each	Up to 5 appliances with three security modules each	Up to 5 appliances with 3 security modules each
<b>Scalability</b>	VPN clustering and load balancing, interchassis clustering	VPN clustering and load balancing, interchassis clustering	VPN clustering and load balancing, interchassis clustering	VPN clustering and load balancing, interchassis clustering	VPN clustering and load balancing, intrachassis clustering, interchassis clustering	VPN clustering and load balancing, intrachassis clustering, interchassis clustering	VPN clustering and load balancing, interchassis clustering	VPN clustering and load balancing, intrachassis clustering, interchassis clustering

<sup>1</sup> Throughput measured with User Datagram Protocol (UDP) traffic measured under ideal test conditions.

<sup>2</sup> "Multiprotocol" refers to a traffic profile consisting primarily of TCP-based protocols and applications like HTTP, SMTP, FTP, IMAPv4, BitTorrent, and DNS.

<sup>3</sup> Available for the firewall feature set.

<sup>4</sup> In unclustered configuration.

## Hardware Specifications

Tables 4 and 5 summarize the hardware specifications for the 4100 Series and 9300, respectively. Table 6 summarizes regulatory standards compliance. For Cisco ASA 5500-X series hardware specifications, please visit the [Cisco ASA with FirePOWER Services data sheet](#).

**Table 4.** Cisco Firepower 4100 Series Hardware Specifications

Features	Cisco Firepower Model			
	4110	4120	4140	4150
<b>Dimensions (H x W x D)</b>	1.75 x 16.89 x 29.7 in. (4.4 x 42.9 x 75.4 cm)			
<b>Form factor (rack units)</b>	1RU			
<b>Security module slots</b>	-			
<b>I/O module slots</b>	2			
<b>Supervisor</b>	Cisco Firepower 4000 Supervisor with 8 x 10 Gigabit Ethernet ports and 2 network module (NM) slots for I/O expansion			

Features		Cisco Firepower Model			
		4110	4120	4140	4150
<b>Network modules</b>		<ul style="list-style-type: none"> <li>8 x 10 Gigabit Ethernet Enhanced Small Form-Factor Pluggable (SFP+) network modules</li> <li>4 x 40 Gigabit Ethernet Quad SFP+ network modules</li> <li><b>Note:</b> Firepower 4100 Series appliances may also be deployed as dedicated threat sensors, with fail-to-wire network modules. Please contact your Cisco representative for details.</li> </ul>			
<b>Maximum number of interfaces</b>		Up to 24 x 10 Gigabit Ethernet (SFP+) interfaces; up to 8 x 40 Gigabit Ethernet (QSFP+) interfaces with 2 network modules			
<b>Integrated network management ports</b>		1 x Gigabit Ethernet copper port			
<b>Serial port</b>		1 x RJ-45 console			
<b>USB</b>		1 x USB 2.0			
<b>Storage</b>		200 GB	200 GB	400 GB	400 GB
<b>Power supplies</b>	<b>Configuration</b>	Single 1100W AC, dual optional. Single/dual 950W DC optional <sup>1, 2</sup>	Single 1100W AC, dual optional. Single/dual 950W DC optional <sup>1, 2</sup>	Dual 1100W AC <sup>1</sup>	Dual 1100W AC <sup>1</sup>
	<b>AC input voltage</b>	100 to 240V AC			
	<b>AC maximum input current</b>	13A			
	<b>AC maximum output power</b>	1100W			
	<b>AC frequency</b>	50 to 60 Hz			
	<b>AC efficiency</b>	>92% at 50% load			
	<b>DC input voltage</b>	-40V to -60VDC			
	<b>DC maximum input current</b>	27A			
	<b>DC maximum output power</b>	950W			
	<b>DC efficiency</b>	>92.5% at 50% load			
<b>Fans</b>		6 hot-swappable fans			
<b>Noise</b>		78 dBA			
<b>Rack mountable</b>		Yes, mount rails included (4-post EIA-310-D rack)			
<b>Weight</b>		36 lb (16 kg): 2 x power supplies, 2 x NMs, 6x fans; 30 lb (13.6 kg): no power supplies, no NMs, no fans			
<b>Temperature: operating</b>		32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 95°F (0 to 35°C), at sea level	32 to 95°F (0 to 35°C), at sea level
<b>Temperature: nonoperating</b>		-40 to 149°F (-40 to 65°C)			
<b>Humidity: operating</b>		5 to 95% noncondensing			
<b>Humidity: nonoperating</b>		5 to 95% noncondensing			
<b>Altitude: operating</b>		10,000 ft (max)		10,000 ft (max)	
<b>Altitude: nonoperating</b>		40,000 ft (max)			

<sup>1</sup> Dual power supplies are hot-swappable.

<sup>2</sup> DC power option is expected on Cisco Firepower 4110 and 4120 in the second half of 2016.

**Table 5.** Cisco Firepower 9300 Hardware Specifications

Specification	Description
<b>Dimensions (H x W x D)</b>	5.25 x 17.5 x 32 in. (13.3 x 44.5 x 81.3 cm)
<b>Form factor</b>	3 rack units (3RU), fits standard 19-in. (48.3-cm) square-hole rack
<b>Security module slots</b>	3
<b>Network module slots</b>	2 (within supervisor)

Specification	Description																					
<b>Supervisor</b>	Cisco Firepower 9000 Supervisor with 8 x 10 Gigabit Ethernet ports and 2 network module slots for I/O expansion																					
<b>Security modules</b>	<ul style="list-style-type: none"> <li>• Cisco Firepower 9000 Security Module 24 with 2 x SSDs in RAID-1 configuration</li> <li>• Cisco Firepower 9000 Security Module 36 with 2 x SSDs in RAID-1 configuration</li> </ul>																					
<b>Network modules</b>	<ul style="list-style-type: none"> <li>• 8 x 10 Gigabit Ethernet Enhanced Small Form-Factor Pluggable (SFP+) network modules</li> <li>• 4 x 40 Gigabit Ethernet Quad SFP+ network modules</li> <li>• 2 x 100 Gigabit Ethernet Quad SFP28 network modules (double-wide, occupies both network module bays)</li> <li>• <b>Note:</b> Firepower 9300 may also be deployed as a dedicated threat sensor, with fail-to-wire network modules. Please contact your Cisco representative for details.</li> </ul>																					
<b>Maximum number of interfaces</b>	Up to 24 x 10 Gigabit Ethernet (SFP+) interfaces; up to 8 x 40 Gigabit Ethernet (QSFP+) interfaces with 2 network modules																					
<b>Integrated network management ports</b>	1 x Gigabit Ethernet copper port (on supervisor)																					
<b>Serial port</b>	1 x RJ-45 console																					
<b>USB</b>	1 x USB 2.0																					
<b>Storage</b>	Up to 2.4 TB per chassis (800 GB per security module in RAID-1 configuration)																					
<b>Power supplies</b>	<table border="1"> <tr> <td></td> <td>AC power supply</td> <td>-48V DC power supply</td> </tr> <tr> <td><b>Input voltage</b></td> <td>200 to 240V AC</td> <td>-40V to -60V DC<sup>*</sup></td> </tr> <tr> <td><b>Maximum input current</b></td> <td>15.5A to 12.9A</td> <td>69A to 42A</td> </tr> <tr> <td><b>Maximum output power</b></td> <td>2500W</td> <td>2500W</td> </tr> <tr> <td><b>Frequency</b></td> <td>50 to 60 Hz</td> <td>-</td> </tr> <tr> <td><b>Efficiency (at 50% load)</b></td> <td>92%</td> <td>92%</td> </tr> <tr> <td><b>Redundancy</b></td> <td colspan="2">1+1</td> </tr> </table>		AC power supply	-48V DC power supply	<b>Input voltage</b>	200 to 240V AC	-40V to -60V DC <sup>*</sup>	<b>Maximum input current</b>	15.5A to 12.9A	69A to 42A	<b>Maximum output power</b>	2500W	2500W	<b>Frequency</b>	50 to 60 Hz	-	<b>Efficiency (at 50% load)</b>	92%	92%	<b>Redundancy</b>	1+1	
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<b>Frequency</b>	50 to 60 Hz	-																				
<b>Efficiency (at 50% load)</b>	92%	92%																				
<b>Redundancy</b>	1+1																					
<b>Fans</b>	4 hot-swappable fans																					
<b>Noise</b>	75.5 dBA at maximum fan speed																					
<b>Rack mountable</b>	Yes, mount rails included (4-post EIA-310-D rack)																					
<b>Weight</b>	105 lb (47.7 kg) with one security module; 135 lb (61.2 kg) fully configured																					
<b>Temperature: Standard Operating</b>	Up to 10,000 ft (3000 M): 32 to 104°F (0 to 40°C) for SM-24 module 32 to 88°F (0 to 35°C) for SM-36 module at sea-level Altitude adjustment notes: For SM-36, maximum temp is 35°C, for every 1000 feet above sea level subtract 1°C																					
<b>Temperature: NEBS Operating</b>	Long term: 0 to 45°C up to 6,000 ft (1829 m) Long term: 0 to 35°C, 6000-13,000 ft (1829-3964 m) Short term: -5 to 55°C, up to 6,000 ft (1829 m) <b>Note:</b> Firepower 9300 NEBS Compliance applies only to SM-24 configurations																					
<b>Temperature: nonoperating</b>	-40 to 149°F (-40 to 65°C); maximum altitude is 40,000 ft																					
<b>Humidity: operating</b>	5 to 95% noncondensing																					
<b>Humidity: nonoperating</b>	5 to 95% noncondensing																					
<b>Altitude: operating</b>	SM-24: 0 to 13,000 ft (3962 m) SM-36: 0 to 10,000 ft (3048 m); please see above Operating Temperature section for temperature adjustment notes																					
<b>Altitude: nonoperating</b>	40,000 ft (12,192 m)																					

<sup>\*</sup> Minimum turn-on voltage is -44V DC

**Table 6.** Cisco Firepower 4100 Series and Cisco Firepower 9300 NEBS, Regulatory, Safety, and EMC Compliance

Specification	Description
<b>NEBS</b>	Cisco Firepower 9300 is NEBS compliant with SM-24 Security Modules
<b>Regulatory Compliance</b>	Products comply with CE markings per directives 2004/108/EC and 2006/108/EC
<b>Safety</b>	<ul style="list-style-type: none"> <li>• UL 60950-1</li> <li>• CAN/CSA-C22.2 No. 60950-1</li> <li>• EN 60950-1</li> <li>• IEC 60950-1</li> <li>• AS/NZS 60950-1</li> <li>• GB4943</li> </ul>
<b>EMC: Emissions</b>	<ul style="list-style-type: none"> <li>• 47CFR Part 15 (CFR 47) Class A (FCC Class A)</li> <li>• AS/NZS CISPR22 Class A</li> <li>• CISPR22 CLASS A</li> <li>• EN55022 Class A</li> <li>• ICES003 Class A</li> <li>• VCCI Class A</li> <li>• EN61000-3-2</li> <li>• EN61000-3-3</li> <li>• KN22 Class A</li> <li>• CNS13438 Class A</li> <li>• EN300386</li> <li>• TCVN7189</li> </ul>
<b>EMC: Immunity</b>	<ul style="list-style-type: none"> <li>• EN55024</li> <li>• CISPR24</li> <li>• EN300386</li> <li>• KN24</li> <li>• TVCN 7317</li> </ul>

## Cisco Trust Anchor Technologies

Cisco Trust Anchor Technologies provide a highly secure foundation for certain Cisco products. They enable hardware and software authenticity assurance for supply chain trust and strong mitigation against a man-in-the-middle compromise of software and firmware.

Trust Anchor capabilities include:

- **Image signing:** Cryptographically signed images provide assurance that the firmware, BIOS, and other software are authentic and unmodified. As the system boots, the system's software signatures are checked for integrity.
- **Secure Boot:** Secure Boot anchors the boot sequence chain of trust to immutable hardware, mitigating threats against a system's foundational state and the software that is to be loaded, regardless of a user's privilege level. It provides layered protection against the persistence of illicitly modified firmware.
- **Trust Anchor module:** A tamper-resistant, strong-cryptographic, single-chip solution provides hardware authenticity assurance to uniquely identify the product so that its origin can be confirmed to Cisco, providing assurance that the product is genuine.



## Radware Virtual DefensePro DDoS Mitigation

Radware Virtual DefensePro (vDP) DDoS Mitigation is available and supported directly from Cisco on the Cisco Firepower 4120, 4140, 4150 and 9300 with the ASA software image. Plans are to make it available on these platforms with the Firepower Threat Defense software image in the future. Radware's DefensePro DDoS mitigation capability is an award-winning, real-time, perimeter attack mitigation solution that protects organizations against emerging network and application threats. It protects the application infrastructure against network and application downtime (or slow time), helping organizations win the ongoing security battle against availability attacks.

### Radware DDoS Mitigation: Protection Set

Radware DDoS mitigation consists of patent-protected, adaptive, behavioral-based real-time signature technology that detects and mitigates zero-day network and application DDoS attacks in real time. It eliminates the need for human intervention and does not block legitimate user traffic when under attack.

The following attacks are detected and mitigated:

- SYN flood attacks
- Network DDoS attacks, including IP floods, ICMP floods, TCP floods, UDP floods, and IGMP floods
- Application DDoS attacks, including HTTP floods and DNS query floods
- Anomalous flood attacks, such as nonstandard and malformed packet attacks

### Performance

The performance figures in Table 7 are for Cisco Firepower 9300 with a single (SM-24 or SM-36) Security Module.

**Table 7.** Key DDoS Performance Metrics with Cisco Firepower 9300

Parameter	Value
Maximum mitigation capacity/throughput	10 Gbps (30 Gbps with three Security Modules)
Maximum legitimate concurrent sessions	140,000 connections per second (CPS)
Maximum DDoS flood attack prevention rate	1,200,000 packets per second (PPS)

## Ordering Information

### Cisco Smart Licensing

The Cisco Firepower NGFW is sold with Cisco Smart Licensing. Cisco understands that purchasing, deploying, managing, and tracking software licenses is complex. As a result, we are introducing Cisco Smart Software Licensing, a standardized licensing platform that helps customers understand how Cisco software is used across their network, thereby reducing administrative overhead and operating expenses.

With Smart Licensing, you have a complete view of software, licenses, and devices from one portal. Licenses are easily registered and activated and can be shifted between like hardware platforms. Additional information is available here: <http://www.cisco.com/web/ordering/smart-software-licensing/index.html>. Related information, on Smart Licensing Smart Accounts, is available here: <http://www.cisco.com/web/ordering/smart-software-manager/smart-accounts.html>.

## Cisco Smart Net Total Care Support: Move Quickly with Anytime Access to Cisco Expertise and Resources

Cisco Smart Net Total Care™ is an award-winning technical support service that gives your IT staff direct anytime access to Technical Assistance Center (TAC) engineers and Cisco.com resources. You receive the fast, expert response and the dedicated accountability you require to resolve critical network issues.

Smart Net Total Care provides the following device-level support:

- Global access 24 hours a day, 365 days a year to specialized engineers in the Cisco TAC
- Anytime access to the extensive Cisco.com online knowledge base, resources, and tools
- Hardware replacement options include 2-hour, 4-hour, next-business-day (NDB) advance replacement, as well as return for repair (RFR)
- Ongoing operating system software updates, including both minor and major releases within your licensed feature set
- Proactive diagnostics and real-time alerts on select devices with Smart Call Home

In addition, with the optional Cisco Smart Net Total Care Onsite Service, a field engineer installs replacement parts at your location and helps ensure that your network operates optimally. For more information on Smart Net Total Care please visit: <http://www.cisco.com/c/en/us/services/portfolio/product-technical-support/smart-net-total-care.html>.

## Select Part Numbers

Tables 8 and 9 provide details on part numbers for Cisco Firepower NGFW solutions. Please consult the Ordering Guide for additional configuration options and accessories.

**Table 8.** Cisco Firepower 4100 Series: Select Product Components

Part Number (Appliance Master Bundle)	Description
FPR4110-BUN	Cisco Firepower 4110 Master Bundle, for ASA or Cisco Firepower Threat Defense Image
FPR4120-BUN	Cisco Firepower 4120 Master Bundle, for ASA or Cisco Firepower Threat Defense Image
FPR4140-BUN	Cisco Firepower 4140 Master Bundle, for ASA or Cisco Firepower Threat Defense Image
FPR4150-BUN	Cisco Firepower 4150 Master Bundle, for ASA or Cisco Firepower Threat Defense Image
Part Number (Spare Network Module)	Description
FPR4K-NM-8X10G=	Spare Cisco Firepower 8-port SFP+ network module
FPR4K-NM-4X40G=	Spare Cisco Firepower 4-port QSFP+ network module
Hardware Accessories	
Please consult the ordering guide for accessories including rack mounts, spare fans, power supplies, and solid-state drives (SSDs)	
Optional ASA Software Licenses	Description
L-F4K-ASA-CAR	License to add Carrier Security Features to ASA
L-FPR4K-ENCR-K9	License to enable strong encryption for ASA on Cisco Firepower 4100 Series
L-FPR4K-ASASC-10	Cisco Firepower 4100 Add-on 10 Licenses
Cisco Firepower 4100 Series NGFW Select Licenses	
L-FPR4110T-TMC=	Cisco Firepower 4110 Threat Defense Threat, Malware, and URL License
L-FPR4120T-TMC=	Cisco Firepower 4120 Threat Defense Threat, Malware, and URL License
L-FPR4140T-TMC=	Cisco Firepower 4140 Threat Defense Threat, Malware, and URL License
L-FPR4150T-TMC=	Cisco Firepower 4150 Threat Defense Threat, Malware, and URL License
<b>Note:</b> These optional security services licenses can be ordered with 1-, 3-, or 5-year subscriptions.	

**Table 9.** Cisco Firepower 9300: Select Product Components

Part Number (Chassis)	Description
FPR-C9300-AC	Cisco Firepower 9300 AC Chassis (3RU; accommodates up to three security modules)
FPR-C9300-DC	Cisco Firepower 9300 DC Chassis (3RU; accommodates up to three security modules)
Part Number (Security Module)	Description
FPR9K-SM-24	24 Physical Core Security Module (NEBS Ready)
FPR9K-SM-36	36 Physical Core Security Module
FPR9K-SM-44	44 Physical Core Security Module
ASA Software Licenses for Cisco Firepower 9300	Description
L-F9K-ASA-CAR	License to add Carrier Security Features to ASA
L-F9K-ASA-CAR=	License to add Carrier Security Features to ASA
L-F9K-ASA-SC-10	License to add 10 Security Contexts to ASA in Cisco Firepower 9000
L-F9K-ASA-SC-10=	License to add 10 Security Contexts to ASA in Cisco Firepower 9000
L-F9K-ASA	License to run Standard ASA on a Cisco Firepower 9300 module
L-F9K-ASA=	License to run Standard ASA on a Cisco Firepower 9300 module
L-F9K-ASA-ENCR-K9	License to enable strong encryption in ASA running on Cisco Firepower 9000
Cisco Firepower 9300 NGFW Threat Defense Software Licenses	Description
FPR9K-TD-BASE	Cisco Firepower Threat Defense Base License for Cisco Firepower 9300 NGFW
L-FPR9K-SM24-TMC=	Cisco Firepower 9000 SM-24 Threat Defense Threat, Malware, and URL License
L-FPR9K-SM24-TMC-3Y	Cisco Firepower 9000 SM-24 Threat Defense Threat, Malware, and URL 3Yr Svc
L-FPR9K-SM36-TMC=	Cisco Firepower 9000 SM-36 Threat Defense Threat, Malware, and URL License
L-FPR9K-SM36-TMC-3Y	Cisco Firepower 9000 SM-36 Threat Defense Threat, Malware, and URL 3Yr Svc
L-FPR9K-SM44-TMC=	Cisco Firepower 9000 SM-44 Threat Defense Threat, Malware, and URL License
L-FPR9K-SM44-TMC-3Y	Cisco Firepower 9000 SM-44 Threat Defense Threat, Malware, and URL 3Yr Svc

**Note:** Firepower 9300 may also be deployed as a dedicated threat sensor, with fail-to-wire network modules. Please contact your Cisco representative for details.

## Warranty Information

Find warranty information on cisco.com at the [Product Warranties](#) page.

## Cisco Services

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### **More Information for Service Providers**

For information about Cisco Firepower in service provider environments, please visit:

- <http://www.cisco.com/c/en/us/solutions/enterprise-networks/service-provider-security-solutions/>

### **More Information about Firepower NGFWs**

For further information about Cisco Firepower NGFWs, please visit:

- <http://www.cisco.com/go/ngfw>

### **More Information about Cisco AnyConnect**

- Cisco AnyConnect Secure Mobility Client  
<http://www.cisco.com/go/anyconnect>
- Cisco AnyConnect Ordering Guide  
<http://www.cisco.com/c/dam/en/us/products/security/anyconnect-og.pdf>



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