Cisco Firepower 4100 Series

Enterprise Firewall

Next Generation Firewall

Next Generation IPS

Contents

Cisco Firepower 4100 Series appliances

The Cisco Firepower 4100 Series is a family of seven threat-focused NGFW security platforms. Their throughput range addresses data center and internet edge use cases. They deliver superior threat defense, at faster speeds, with a smaller footprint. Cisco Firepower 4100 Series supports flow-offloading, programmatic orchestration, and the management of security services with RESTful APIs. Network Equipment Building Standards (NEBS)-compliance is supported by the Cisco Firepower 4120 platform. The 4100 Series platforms can run either the Cisco Secure Firewall ASA or Cisco Secure Firewall Threat Defense (FTD) software.

Model overview

Cisco Firepower 4100 Series summary:

Model	Firewall	NGFW	IPS	Interfaces	Optional Interfaces
FPR-4110	35G	11G	15G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4112 (New)	40G	12.5G	15G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4115	80G	26G	27G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4120	60G	19G	27G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4125	80G	35G	41G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4140	70G	27G	38G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4145	80G	45G	55G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW
FPR-4150	75G	39G	52G	8 x SFP+ on-chassis	2 x NM's: 1/10/40G, FTW

Detailed performance specifications and feature highlights

Table 1. Performance specifications and feature highlights for Firepower 4100 with the Cisco Secure Firewall Threat Defense (TD) image

Features	4110	4112	4115	4120	4125	4140	4145	4150
Throughput: FW + AVC (1024B)	13 Gbps	14 Gbps	27 Gbps	22 Gbps	40 Gbps	32 Gbps	53 Gbps	45 Gbps
Throughput: FW + AVC + IPS (1024B)	11 Gbps	12.5 Gbps	26 Gbps	19 Gbps	35 Gbps	27 Gbps	45 Gbps	39 Gbps
Maximum concurrent sessions, with AVC	10 million	10 million	15 million	15 million	25 million	25 million	30 million	30 million
Maximum new connections per second, with AVC	64K	85K	200K	118K	265K	172K	350K	263K
TLS (Hardware Decryption)[1]	4.5 Gbps	4.5 Gbps	6.5 Gbps	7.1 Gbps	8 Gbps	7.3 Gbps	10 Gbps	7.5 Gbps
Throughput: NGIPS (1024B)	15 Gbps	15 Gbps	27 Gbps	27 Gbps	41 Gbps	38 Gbps	55 Gbps	52 Gbps
IPSec VPN Throughput (1024B TCP w/Fastpath)	6 Gbps	6.5 Gbps	8 Gbps	10 Gbps	14 Gbps	13 Gbps	18 Gbps	14 Gbps
Maximum VPN Peers	10,000	10,000	15,000	20,000	20,000	20,000	20,000	20,000
Multi-Instance Capable	Yes							
Centralized management	Centralized configuration, logging, monitoring, and reporting are performed by the Management Center or alternatively in the cloud with Cisco Defense Orchestrator							
Application Visibility and Control (AVC)	Standard, supporting more than 4000 applications, as well as geolocations, users, and websites							
AVC: OpenAppID support for custom, open source, application detectors	Standard							
Cisco Security Intelligence	Standard, with IP, URL, and DNS threat intelligence							
Cisco Secure IPS License	Available; can passively detect endpoints and infrastructure for threat correlation and Indicators of Compromise (IoC) intelligence							
Cisco Malware Defense for Networks	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 Secure Endpoint is also optionally available							
Cisco Malware Analytics sandboxing	Available							
URL filtering: number of categories	More than 80							
URL filtering: number of URLs categorized	More than 280 million							
Automated threat feed and IPS signature updates	Yes: Class-leading Collective Security Intelligence (CSI) from the Cisco Talos Group (https://www.cisco.com/c/en/us/products/security/talos.html)							
Third-party and open-source ecosystem	Open API for integrations with third-party products; Snort® and OpenAppID community resources for new and specific threats							
High availability and clustering	Active/standby. Cisco Firepower 4100 Series allows clustering of up to 6 chassis							
Cisco Trust Anchor Technologies	Firepower 4100 Series platforms include Trust Anchor Technologies for supply chain and software image assurance							

NOTE: 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.

[1] Throughput measured with 50% TLS 1.2 traffic with AES256-SHA with RSA 2048B keys.

Table 2. ASA Performance and capabilities on Firepower 4100 appliances

Features	4110	4112	4115	4120	4125	4140	4145	4150
Stateful inspection firewall throughput[1]	35 Gbps	40 Gbps	80 Gbps	60 Gbps	80 Gbps	70 Gbps	80 Gbps	75 Gbps
Stateful inspection firewall throughput (multiprotocol)[2]	15 Gbps	30 Gbps	40 Gbps	30 Gbps	45 Gbps	40 Gbps	50 Gbps	50 Gbps
Concurrent firewall connections	10 million	10 million	15 million	15 million	25 million	25 million	40 million	35 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	400,000	848K	250,000	1.1 million	350,000	1.5 million	800,000
IPsec VPN throughput (450B UDP L2L test)	8 Gbps	9 Gbps	15 Gbps	10 Gbps	19 Gbps	14 Gbps	23 Gbps	15 Gbps
Maximum VPN Peers	10,000	10,000	15,000	20,000	20,000	20,000	20,000	20,000
Security contexts (included; maximum)	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250	10; 250
High availability	Active/active and active/standby							
Clustering	Up to 16 appliances							
Scalability	VPN Load Balancing, Firewall Clustering							
Centralized management	Centralized configuration, logging, monitoring, and reporting are performed by Cisco Security Manager or alternatively in the cloud with Cisco Defense Orchestrator							
Adaptive Security Device Manager	Web-based, local management for small-scale deployments							

[1] Throughput measured with 1500B User Datagram Protocol (UDP) traffic measured under ideal test conditions.

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

[3] In unclustered configuration.

Hardware specifications

Table 3. Cisco Firepower 4100 Series hardware specifications

Features		4110	4112	4115	4120	4125	4140	4145	4150
Dimensions (H x W x D)		1.75 x 16.89 x 29.7 in. (4.4 x 42.9 x 75.4 cm)							
Form factor (rack units)		1RU							
Supervisor		Cisco Firepower 4000 Supervisor with 8 x 10 Gigabit Ethernet ports and 2 Network Module (NM) slots for I/O expansion							
Network modules		• 8 x 10 Gigabit Ethernet Enhanced Small Form-Factor Pluggable (SFP+) network modules • 4 x 40 Gigabit Ethernet Quad SFP+ network modules • 8-port 1Gbps copper, FTW (fail to wire) Network Module – 6-port 1 Gbps SX Fiber FTW (fail to wire) Network Module – 6-port 10Gbps SR Fiber FTW (fail to wire) Network Module – 6-port 10Gbps LR Fiber FTW (fail to wire) Network Module							
Maximum number of interfaces		Up to 24 x 10 Gigabit Ethernet (SFP+) interfaces; up to 8 x 40 Gigabit Ethernet (QSFP+) interfaces with 2 network modules							
Integrated network management ports		1 Gigabit Ethernet Supports 1-G fiber or copper SFPs							
Serial port		1 x RJ-45 console							
USB		1 x USB 2.0							
Storage		200 GB	400 GB	400 GB	200 GB	800 GB	400 GB	800 GB	400 GB
Power supplies	**Configuration**	Single 1100W AC, dual optional. Single/ dual 950W DC optional[1, 2]	Single 1100W AC, dual optional. Single/ dual 950W DC optional[1, 2]	Single 1100W AC, dual optional. Single/ dual 950W DC optional[1, 2]	Single 1100W AC, dual optional. Single/ dual 950W DC optional[1, 2]	Dual 1100W AC[1]	Dual 1100W AC[1]	Dual 1100W AC[1]	Dual 1100W AC[1]
	AC input voltage	100 to 240V AC							
	AC maximum input current	13A							
	AC maximum output power	1100W							
	AC frequency	50 to 60 Hz							
	AC efficiency	>92% at 50% load							
	DC input voltage	-40V to -60VDC							
	DC maximum input current	27A							
	DC maximum output power	950W							
	DC efficiency	>92.5% at 50% load							
	Redundancy	1+1							
Fans		6 hot-swappable fans							
Noise		78 dBA							
Rack mountable		Yes, mount rails included (4-post EIA-310-D rack)							

Features	4110	4112	4115	4120	4125	4140	4145	4150
Weight	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							
Temperature: Operating	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C) or NEBS operation (see below)	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	32 to 95°F (0 to 35°C), at sea level
Temperature: Nonoperating	-40 to 149°F (-40 to 65°C)							
Humidity: Operating	5 to 95% noncondensing							
Humidity: Nonoperating	5 to 95% noncondensing							
Altitude: Operating	10,000 ft (max)	10,000 ft (max)	10,000 ft (max)	10,000 ft (max) NEBS operation (see below)	10,000 ft (max)	10,000 ft (max)	10,000 ft (max)	10,000 ft (max)
Altitude: Nonoperating	40,000 ft (max)							
NEBS operation (FPR 4120 only)	Operating altitude: 0 to 13,000 ft (3960 m) Operating temperature: Long term: 0 to 45°C, up to 6,000 ft (1829 m) Long term: 0 to 35°C, 6,000 to 13,000 ft (1829 to 3964 m) Short term: -5 to 50°C, up to 6,000 ft (1829 m)							

[1] Dual power supplies are hot-swappable.

Table 4. Cisco Firepower 4100 Series NEBS, Regulatory, Safety, and EMC Compliance

Specification	Description
Regulatory compliance	Products comply with CE markings per directives 2004/108/EC and 2006/108/EC
Safety	• UL 60950-1 • CAN/CSA-C22.2 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950-1 • GB4943
EMC: Emissions	• 47CFR Part 15 (CFR 47) Class A (FCC Class A) • AS/NZS CISPR22 Class A • CISPR22 CLASS A • EN55022 Class A • ICES003 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • KN22 Class A • CNS13438 Class A • EN300386 • TCVN7189
EMC: Immunity	• EN55024 • CISPR24 • EN300386 • KN24 • TVCN 7317 • EN-61000-4-2, EN-61000-4-3, EN-61000-4-4, EN-61000-4-5, EN-61000-4-6, EN-61000-4-8, EN61000-4-11

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