

Cisco ASA 5500 Series

Enterprise Firewall
Next Generation Firewall

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Cisco ASA 5500 Series appliances

The Cisco Firepower 5500 Series is a family of six threat-focused NGFW security platforms that deliver business resiliency through superior threat defense. It offers exceptional sustained performance when advanced threat functions are enabled. The ASA 5500 series' throughput range addresses use cases from the SOHO/ROBO to the internet edge. The ASA 5500 Series platforms can run either the Cisco ASA Firewall or Cisco Firepower Threat Defense (FTD).

Model overview



Cisco ASA 5500 Series summary:

Model	Firewall	NGFW	NGIPS	Interfaces
ASA-5506	750 Mbps	125 Mbps	125 Mbps	8 x RJ45
ASA-5508	1 Gbps	250 Mbps	250 Mbps	8 x RJ45
ASA-5516	1.8 Gbps	450 Mbps	450 Mbps	8 x RJ45
ASA-5525	2 Gbps	650 Mbps	650 Mbps	8 x RJ45, optional 6 x GE
ASA-5545	3 Gbps	1 Gbps	1 Gbps	8 x RJ45, optional 6 x GE
ASA-5555	4 Gbps	1.2 Gbps	1.2 Gbps	8 x RJ45, optional 6 x GE

Detailed performance specifications and feature highlights

Table 1. Performance specifications and feature highlights for ASA 5500 with the Cisco Firepower Threat defense image

Features	5506	5508	5516	5525	5545	5555
Throughput: FW + AVC (1024B)	250 Mbps	450 Mbps	850 Mbps	1.1 Gbps	1.5 Gbps	1.7 Gbps
Throughput: FW + AVC + IPS (1024B)	125 Mbps	250 Mbps	450 Mbps	650 Mbps	1 Gbps	1.2 Gbps
Throughput: FW + AVC (450B)	100 Mbps	175 Mbps	275 Mbps	350 Mbps	500 Mbps	600 Mbps
Throughput: FW + AVC + IPS (450B)	75 Mbps	125 Mbps	200 Mbps	250 Mbps	350 Mbps	420 Mbps

Features	5506	5508	5516	5525	5545	5555
Maximum concurrent sessions, with AVC	50K	100K	250K	500K	750K	1 Million
Maximum new connections per second, with AVC	3K	7.5K	11 K	11.5K	19K	22K
TLS	-	250 Mbps	285 Mbps	270 Mbps	290 Mbps	370 Mbps
Throughput: NGIPS (1024B)	125 Mbps	250 Mbps	450 Mbps	650 Mbps	1 Gbps	1.2 Gbps
Throughput: NGIPS (450B)	75 Mbps	125 Mbps	200 Mbps	250 Mbps	350 Mbps	420 Mbps
IPSec VPN Throughput (1024B TCP w/Fastpath)	100 Mbps	175 Mbps	250 Mbps	300 Mbps	400 Mbps	700 Mbps
Cisco Firepower Device Manager (local management)	Yes	Yes	Yes	Yes	Yes	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 Firepower NGIPS	Available; can passively detect endpoints and infrastructure for threat correlation and Indicators of Compromise (IoC) intelligence					
Cisco AMP 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 AMP for Endpoints is also optionally available					
Cisco AMP Threat Grid 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					

Features	*5506	5508	5516	5525	5545	5555
High availability and clustering	Active/standby					
Cisco Trust Anchor Technologies	ASA 5500 Series platforms include Trust Anchor Technologies for supply chain and software image assurance. Please see the section below for additional details					

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.

*ASA-5506 tested with FTD version 6.2.3.

Table 2. ASA Performance and capabilities on ASA 5500 appliances

Features	5506	5508	5516	5525	5545	5555
Stateful inspection firewall throughput¹	750 Mbps	1 Gbps	1.8 Gbps	2 Gbps	3Gbps	4 Gbps
Stateful inspection firewall throughput (multiprotocol)²	300 Mbps	500 Mbps	900 Mbps	1 Gbps	1.5 Gbps	2 Gbps
Concurrent firewall connections	50K	100K	250K	500K	750K	1 million
New connections per second	5K	10K	20K	20K	30K	50K
IPsec VPN throughput (450B UDP L2L test)	100 Mbps	175 Mbps	250 Mbps	300 Mbps	400 Mbps	700 Mbps
Security contexts (included; maximum)	N/A	2; 5	2; 5	2; 20	2; 50	2; 100
High availability	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
Scalability	VPN Load Balancing					
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.

Performance testing methodologies [LINK](#)

Hardware specifications

Table 3. Cisco ASA 5500-X series next-generation firewalls

Feature	Cisco ASA 5506-X	Cisco ASA 5506H-X	Cisco ASA 5508-X	Cisco ASA 5516-X	Cisco ASA 5525-X	Cisco ASA 5545-X	Cisco ASA 5555-X
Form factor	Desktop, rack mountable	Desktop, rack mountable, wall mountable, DIN-Rail	1 rack unit (RU), 19-in. rack-mountable	1 rack unit (RU), 19-in. rack-mountable	1RU, 19-in. rack-mountable	1RU, 19-in. rack-mountable	1RU, 19-in. rack-mountable
Dimensions	1.72 x 7.871 x 9.23 in.	2.72 x 9.05 x 9.05 in.	1.72 x 17.2 x 11.288 in.	1.72 x 17.2 x 11.288 in.	1.75 x 17.5 x 14.25 in.	1.67 x 16.7 x 19.1 in.	1.67 x 16.7 x 19.1 in.
(H x W x D)	(4.369 x 19.992 x 23.444 cm)	(6.9 x 23.0 x 23.0 cm)	(4.369 x 43.688 x 28.672 cm)	(4.369 x 43.688 x 28.672 cm)	(4.45 x 20.04 x 36.20 cm)	(4.24 x 42.9 x 48.4 cm)	(4.24 x 42.9 x 48.4 cm)
Integrated I/O	8 x 1GE	4 x 1GE	8 x 1GE	8 x 1GE	8 x 1GE	8 x 1GE	8 x 1GE
Expansion I/O	N/A	N/A	N/A	N/A	6 GE copper or 6 GE SFP	6 GE copper or 6 GE SFP	6 GE copper or 6 GE SFP
Expansion slot	N/A	N/A	N/A	N/A	1 interface card	1 interface card	1 interface card
Dedicated management port	Yes (Shared)	Yes (Shared)	Yes (Shared)	Yes (Shared)	Yes (1 GE)	Yes (1 GE)	Yes (1 GE)
Serial ports	1 RJ-45 and Mini USB console	1 RJ-45 and Mini USB console	1 RJ-45 and Mini USB console	1 RJ-45 and Mini USB console	1 RJ-45 console	1 RJ-45 console	1 RJ-45 console
Solid-state drive	50 GB mSata ⁶	50 GB mSata tested for heat	80 GB mSata ⁶	100 GB mSata ⁶	1 slot, 120 GB MLC SED	2 slots, RAID 1, 120 GB MLC SED	2 slots, RAID 1, 120 GB MLC SED
USB 2.0 ports	USB port type 'A', High Speed 2.0	USB port type 'A', High Speed 2.0	USB port type 'A', High Speed 2.0	USB port type 'A', High Speed 2.0	2	2	2
Operating parameters							
Temperature	32 to 104°F (0 to 40 °C)	-4 to 140°F (-20 to 60 °C)	32 to 104°F (0 to 40 °C)	32 to 104°F (0 to 40 °C)	23 to 104°F (-5 to 40°C)	23 to 104°F (-5 to 40°C)	23 to 104°F (-5 to 40°C)
Relative humidity	90 percent non-condensing	95 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent non-condensing
Altitude	Designed and tested for 0 to	Designed and tested	Designed and tested for 0 to	Designed and tested	Designed and tested for 0 to	Designed and tested for 0 to	Designed and tested

Feature	Cisco ASA 5506-X	Cisco ASA 5506H-X	Cisco ASA 5508-X	Cisco ASA 5516-X	Cisco ASA 5525-X	Cisco ASA 5545-X	Cisco ASA 5555-X
	10,000 ft (3048 m)	for 0 to 10,000 ft (3050 m)	10,000 ft (3048 m)	for 0 to 10,000 ft (3048 m)	10,000 ft (3050 m)	10,000 ft (3050 m)	for 0 to 10,000 ft (3050 m)
Acoustic noise	Fanless 0 dBA	Fanless 0 dBA	41.6 A-weighted decibels (dBA) type. 67.2 dBA max	41.6 dBA type 67.2 dBA max	64.2 dBA max	67.9 dBA max	67.9 dBA max
Non-operating parameters							
Temperature¹	-13 to 158°F (-25 to 70°C)	-40 to 185°F (-40 to 85°C)	-13 to 158°F (-25 to 70°C)	-13 to 158°F (-25 to 70°C)	-13 to 158°F (-25 to 70°C)	-13 to 158°F (-25 to 70°C)	-13 to 158°F (-25 to 70°C)
Relative humidity	10 to 90 percent non-condensing	10 to 95 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent non-condensing	10 to 90 percent	10 to 90 percent	10 to 90 percent
Altitude	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)	Designed and tested for 0 to 15,000 ft (4572 m)
Power input (per power supply)							
AC range line voltage	External, 90 to 240 volts alternating current (VAC)	External, 90 to 240 volts alternating current (VAC)	External, 90 to 240 volts alternating current (VAC)	External, 90 to 240 volts alternating current (VAC)	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
AC normal line voltage	90 to 240 VAC	90 to 240 VAC	91 to 240 VAC	92 to 240 VAC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
AC current	N/A	N/A	0.25AC amps	0.25AC amps	4.85A	5A, 100 to 120V 2.5A, 200 to 240V	5A, 100 to 120V 2.5A, 200 to 240V
AC frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Dual-power supplies	None	None	None	None	None	Yes	Yes
DC domestic line voltage	N/A	N/A	N/A	N/A	-40.5 to 56 VDC (-48 VDC nominal)	-40.5 to 56 VDC (-48 VDC nominal)	-40.5 to 56 VDC (-48 VDC nominal)
DC international line voltage	N/A	N/A	N/A	N/A	-55 to -72 VDC (-60 VDC)	-55 to -72 VDC (-60 VDC)	-55 to -72 VDC (-60 VDC)

Feature	Cisco ASA 5506-X	Cisco ASA 5506H-X	Cisco ASA 5508-X	Cisco ASA 5516-X	Cisco ASA 5525-X	Cisco ASA 5545-X	Cisco ASA 5555-X
					nominal)	nominal)	nominal)
DC current	N/A	N/A	N/A	N/A	15A (maximum input)	15A (maximum input)	15A (maximum input)

Feature	Cisco ASA 5506-X	Cisco ASA 5506H-X	Cisco ASA 5508-X	Cisco ASA 5516-X	Cisco ASA 5525-X	Cisco ASA 5545-X	Cisco ASA 5555-X
Output							
Steady state	12V @2.5A	5V @3.6A	12V @ 3.0A	12V @ 3.0A	75W	86W	90W
Maximum peak	12V @ 5A	5V @4.4A	12V @ 5.0A	12V @ 5.0A	108W	125W	134W
Maximum heat dissipation	205 Btu/hr	75 Btu/hr	205 Btu/hr	205 Btu/hr	369 Btu/hr	427 Btu/hr	458 Btu/hr
Weight (with AC power supply)	4 lb (1.82 kg)	7 lb (3.18 kg)	8 lb (3 kg)	8 lb (3 kg)	22.0 lb (10 kg)	16.82 lb (7.63 kg) with single power supply 18.86 lb (8.61 kg) with dual power supply	16.82 lb (7.63 kg) with single power supply 18.86 lb (8.61 kg) with dual power supply

¹ Derate the maximum operating temperature 1.5°C per 1000 ft above sea level.

Table 4. Cisco ASA 5500 Series 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 style="list-style-type: none"> • UL 60950-1 • CAN/CSA-C22.2 No. 60950-1 • EN 60950-1 • IEC 60950-1 • AS/NZS 60950-1 • GB4943
EMC: Emissions	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • EN55024 • CISPR24

Specification	Description
	<ul style="list-style-type: none"> • 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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