



# Cisco ASA 5500 Series Adaptive Security Appliances

## Cisco ASA 5500 Series Overview

A key component of the Cisco® Secure Borderless Network, the Cisco ASA 5500 Series Adaptive Security Appliances delivers superior scalability, a broad span of technology and solutions, and effective, always-on security designed to meet the needs of an array of deployments. By integrating the world's most proven firewall, a comprehensive, highly effective intrusion prevention system (IPS) with Cisco Global Correlation and guaranteed coverage; and a high-performance VPN, the Cisco ASA 5500 Series helps organizations provide secure, high performance connectivity and protects critical assets for maximum productivity.

Offering seamless client and clientless access for a broad spectrum of desktop and mobile platforms, the Cisco ASA 5500 Series delivers versatile, always-on secure mobility integrated with web security and IPS for a comprehensive solution. Unlike most security providers that force you to choose between a high-quality firewall and an effective intrusion prevention system (IPS), Cisco combines the world's most proven firewall with the industry's most comprehensive, effective IPS for a powerful security solution.

Figure 1. Cisco ASA 5500 Series



The Cisco ASA 5500 Series delivers superior real-time protection: Integrating innovative IPS with Global Correlation, firewall, and VPN technology, the Cisco ASA 5500 Series delivers highly effective intrusion prevention capabilities using hardware-accelerated IPS modules. And Cisco guaranteed coverage delivers peace of mind.

**Site-to-site VPN:** Using the hardware-accelerated site-to-site IPsec VPN capabilities provided by the Cisco ASA 5500 Series, businesses can securely augment or even replace legacy WANs by using low-cost Internet connections and IPsec VPN tunnels to connect to business partners and to remote and satellite offices worldwide.

**Secure mobility:** The Cisco ASA 5500 Series offers flexible technologies that deliver tailored solutions to suit connectivity and secure mobility requirements for company-managed assets such as desktops, laptops and smartphones, as well as unmanaged devices such as Internet kiosks or employee-owned desktops, laptops and handhelds. The Cisco ASA 5500 Series delivers both clientless and SSL/DTLS/IPsec VPN secure mobility client options.

**Secure unified communications:** The Cisco ASA 5500 Series provides extensive protocol support, signaling and media inspection, remote office and mobile user support, and simple provisioning to enable a secure, integrated voice and data network.

## Top 5 Reasons to Purchase Cisco ASA 5500 Series Adaptive Security Appliances

1. Advanced intrusion prevention services with guaranteed coverage  
With real-time reputation technology, the Cisco ASA 5500 Series IPS with Global Correlation is twice as effective as legacy IPS and includes guaranteed coverage for greater peace of mind. It protects against a wide range of threats, including worms, application-layer attacks, operating-system-level attacks, rootkits, spyware, peer-to-peer file sharing, and instant messaging for both IPv6 and IPv4 networks.
2. Industry-leading content security services  
With the Cisco ASA 5500 Series, customers have their choice of on-box threat protection and content control based on Trend Micro technology, or a proven off-box solution with the Cisco IronPort Web Security Appliance. Both solutions provide comprehensive antivirus, antispayware, file blocking, antispam, antiphishing, URL blocking and filtering, and content filtering services.

3. Secure mobility  
The Cisco AnyConnect Secure Mobility solution provides business employees and partners with ubiquitous, highly secure access to enable employee mobility, enhance collaboration and improve productivity, while protecting the company's resources and data from web-based threats and data leakage by enforcing acceptable use policies.
4. Unified communications  
The Cisco ASA 5500 Series delivers secure access by enabling protection for voice, video, and multimedia traffic. Businesses can securely take advantage of the improved productivity and lower operational costs of a Cisco Unified Communications solution.
5. Comprehensive management and monitoring services  
Several elements round out a rich complement of management options: with Cisco Adaptive Security Device Manager (ASDM), a comprehensive CLI, verbose syslog, and support for Simple Network Management Protocol (SNMP). Cisco Security Manager supports distributed deployments of up to 500 devices.

Figure 2. Market-Leading Application/IPS/Content Security Services

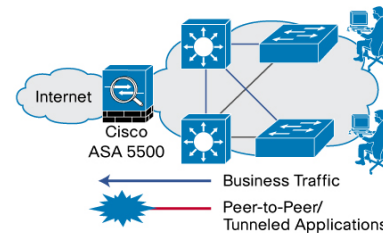


Figure 3. Secure Unified Communications

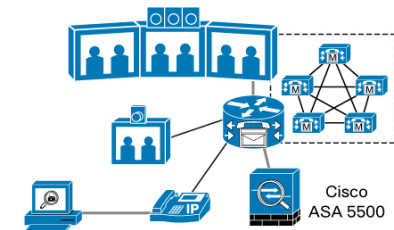


Figure 4. Threat-Protected SSL and IPsec VPN Services

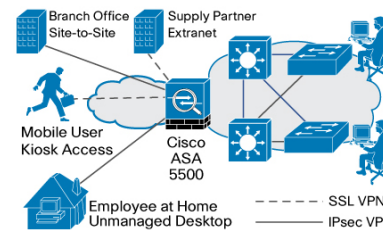
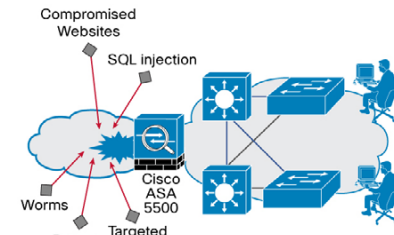


Figure 5. Industry-Leading IPS/Content Security Service



## Acronyms

SSC: Security Services Card; SSM: Security Services Module; SSM: Security Services Module; CSC SSM: Content Security and Control Security Services Module; 4GE SSM: 4 Gigabit Ethernet Security Services Module; SSP: Security Services Processor; IPS SSP: IPS Security Services Processor; IEC: Interface Expansion Card.



# Cisco ASA 5500 Series Adaptive Security Appliances

At-A-Glance

**Table 1.** Cisco ASA 5505, 5510, 5520, 5540, 5550 Product Comparison

| Cisco ASA 5500 Series Model/License  | Cisco ASA 5505 Base / Security Plus <sup>1</sup>      | Cisco ASA 5510 Base / Security Plus <sup>1</sup> | Cisco ASA 5520  | Cisco ASA 5540                             | Cisco ASA 5550                    |
|--|---|--|---|--|-----------------------------------|
| Market   | Branch Office/Small Business, Enterprise Teleworker   | SMB and Small Enterprise                         | Small Enterprise  | Medium-Sized Enterprise                    | Large Enterprise                  |
| <b>Performance Summary</b>   |   |  |   |  |                                   |
| Maximum Firewall Throughput (Mbps)   | 150   | 300  | 450   | 650  | 1200                              |
| Maximum 3DES/AES VPN Throughput (Mbps) <sup>2</sup>  | 100   | 170  | 225   | 325  | 425                               |
| Maximum Site-to-Site and Remote-Access VPN User Sessions   | 10/25   | 250  | 750   | 5000                                       | 5000                              |
| Maximum SSL VPN User Sessions  | 25  | 250  | 750   | 2500                                       | 5000                              |
| Maximum Connections  | 10,000/25,000   | 50,000/130,000                                   | 280,000   | 400,000                                    | 650,000                           |
| Maximum Connections/Second   | 4000  | 9000   | 12,000  | 25,000                                     | 36,000                            |
| Packets per Second (64 byte)   | 85,000  | 190,000  | 320,000   | 500,000                                    | 600,000                           |
| <b>Technical Summary</b>   |   |  |   |  |                                   |
| Minimum Memory   | 256 MB  | 256 MB   | 512 MB  | 1 GB                                       | 4 GB                              |
| Minimum System Flash   | 64 MB   | 64 MB  | 64 MB   | 64 MB                                      | 64 MB                             |
| Integrated Ports   | 8 port 10/100 switch with 2 Power over Ethernet ports | 5-10/100, 2-10/100/1000, 3-10/100                | 4-10/100/1000, 1-10/100   | 4-10/100/1000, 1-10/100                    | 8-10/100/1000, 4-GE SFP, 1-10/100 |
| Maximum Virtual Interfaces (VLANs)   | 3 (trunking disabled)/20 (trunking enabled)           | 50/100   | 150   | 200  | 250                               |
| SSP/SSM/SSC/IEC Expansion Slot   | Yes (1-SSC)   | Yes (1-SSM)                                      | Yes (1-SSM)   | Yes (1-SSM)                                | Not Available                     |
| <b>SSC/SSM/IEC Capabilities</b>  |   |  |   |  |                                   |
| SSP/SSM/SSC/IEC Supported  | AIP SSC   | CSC SSM, AIP SSM, 4GE SSM                        | CSC SSM, AIP SSM, 4GE SSM                                       | CSC SSM, AIP SSM, 4GE SSM                  | Not Available                     |
| Intrusion Prevention   | Yes (with AIP SSC)                                    | Yes (with AIP SSM)                               | Yes (with AIP SSM)  | Yes (with AIP SSM)                         | Not Available                     |
| Maximum Firewall and IPS Throughput (Mbps)   | 75 (with AIP SSC-5)                                   | 150 (with AIP SSM-10)300 (with AIP SSM-20)       | 225 (with AIP SSM-10)375 (with AIP SSM-20)450 (with AIP SSM-40) | 500 (with AIP SSM-20)650 (with AIP SSM-40) | Not Available                     |
| Content Security (Antivirus, Anti-Spyware, File Blocking, Anti-Spam, Anti-Phishing, and URL Filtering) | Not Available   | Yes (with CSC SSM)                               | Yes (with CSC SSM)  | Yes (with CSC SSM)                         | Not Available                     |
| Maximum Number of Users for Antivirus, Anti-Spyware, File Blocking (CSC-SSM Only)                      | Not Available   | 500 (CSC SSM-10) 1000 (CSC SSM-20)               | 500 (CSC SSM-10) 1000 (CSC SSM-20)                              | 500 (CSC SSM-10) 1000 (CSC SSM-20)         | Not Available                     |
| CSC SSM Plus License Features  | Not Available   | Anti-spam, Anti-phishing, URL filtering          | Anti-spam, Anti-phishing, URL filtering                         | Anti-spam, Anti-phishing, URL filtering    | Not Available                     |
| <b>Features</b>  |   |  |   |  |                                   |
| Application-Layer Security   | Yes   | Yes  | Yes   | Yes  | Yes                               |
| Layer 2 Transparent Firewalling  | Yes   | Yes  | Yes   | Yes  | Yes                               |
| Security Contexts (Included/ Maximum <sup>1</sup> )  | 0/0   | 0/0/2/5  | 2/20  | 2/50                                       | 2/50                              |
| GTP/GPRS Inspection <sup>1</sup>   | Not Available   | Not Available                                    | Yes   | Yes  | Yes                               |
| High-Availability Support <sup>3</sup>   | Not Available/Stateless A/S                           | Not Available/A/A and A/S                        | A/A and A/S   | A/A and A/S                                | A/A and A/S                       |
| VPN Clustering and Load Balancing  | Not Available   | Not Available/Yes                                | Yes   | Yes  | Yes                               |

<sup>1</sup> Licensed features

<sup>2</sup> VPN throughput and sessions count depend on the ASA device configuration and VPN traffic patterns. These elements should be taken in to consideration as part of your capacity planning

<sup>3</sup> A/S = Active/Standby; A/A = Active/Active



# Cisco ASA 5500 Series Adaptive Security Appliances

At-A-Glance

**Table 2.** Cisco ASA 5580 and ASA 5585-X Product Comparison

| Cisco ASA 5500 Series Model/License                      | Cisco ASA 5580-20                       | Cisco ASA 5580-40                       | Cisco ASA 5585-X SSP-10  | Cisco ASA 5585-X SSP-20   | Cisco ASA 5585-X SSP-40  | Cisco ASA 5585-X SSP-60  |
|--|---|---|--|---|--|--|
| Market   | Large Enterprise,Data Center            | Large Enterprise,Data Center            | Large Enterprise   | Large Enterprise,Data Center  | Large Enterprise,Data Center   | Large Enterprise,Data Center   |
| <b>Performance Summary</b>                               |   |   |  |   |  |  |
| Firewall Throughput (max <sup>1</sup> )                  | 10 Gbps                                 | 20 Gbs                                  | 4 Gbps   | 10 Gbps   | 20 Gbps  | 35 Gbps  |
| Firewall Throughput                                      | 5 Gbps (real-world HTTP)                | 10 Gbps (real-world HTTP)               | 2 Gbps (multi-protocol)  | 5 Gbps (multi-protocol)   | 10 Gbps (multi-protocol)   | 20 Gbps (multi-protocol)   |
| Maximum 3DES/AES VPN2 Throughput <sup>2</sup>            | 1 Gbps                                  | 1 Gbps                                  | 1 Gbps   | 2 Gbps  | 3 Gbps   | 5 Gbps   |
| Maximum Site-to-Site and Remote-Access VPN User Sessions | 10,000                                  | 10,000                                  | 5000   | 10,000  | 10,000   | 10,000   |
| Maximum SSL VPN User Sessions                            | 10,000                                  | 10,000                                  | 5000   | 10,000  | 10,000   | 10,000   |
| Maximum Connections                                      | 1,000,000                               | 2,000,000                               | 750,000  | 1,000,000   | 2,000,000  | 2,000,000  |
| Maximum Connections/Second                               | 90,000                                  | 150,000                                 | 50,000   | 125,000   | 200,000  | 350,000  |
| Packets per Second (64 byte)                             | 2,500,000                               | 4,000,000                               | 1,500,000  | 3,000,000   | 5,000,000  | 9,000,000  |
| <b>Technical Summary</b>                                 |   |   |  |   |  |  |
| Minimum Memory   | 8 GB                                    | 12 GB                                   | 6 GB   | 12 GB   | 12 GB  | 24 GB  |
| Minimum System Flash                                     | 1 GB                                    | 1 GB                                    | 2 GB   | 2 GB  | 2 GB   | 2 GB   |
| Integrated Ports   | 2-10/100/1000 Mgmt                      | 2-10/100/1000 Mgmt                      | 8-10/100/1000, 2-10GE <sup>3</sup> (SSP-10)<br>16-10/100/1000, 4-10GE <sup>3</sup> (SSP-10 and IPS SSP-10) | 8- 10/100/1000, 2-10GE <sup>3</sup> SFP+(SSP-20)<br>16-10/100/1000, 4-10GE <sup>3</sup> SFP+(SSP-20 and IPS SSP-20) | 6- 10/100/10 00, 4-10GE SFP+(SSP-40)<br>12-10/100/1000, 8-10GE SFP+(SSP-40 and IPS SSP-40) | 6-10/100/1000, 4-10GE SFP+(SSP-60)<br>12-10/100/1000, 8-10GE SFP+(SSP-60 and IPS SSP-60) |
| Maximum Virtual Interfaces (VLANs)                       | 250                                     | 250                                     | 250  | 250   | 250  | 250  |
| SSP/IEC Expansion Slot                                   | Yes (6-IEC)                             | Yes (6-IEC)                             | Yes (1-IPS-SSP)  | Yes (1-IPS-SSP)   | Yes (1-IPS-SSP)  | Yes (1-IPS-SSP)  |
| <b>SSP/IEC Capabilities</b>                              |   |   |  |   |  |  |
| SSP/IEC Supported  | 4-10/100/1000, 4-GE SR LC, 2-10GE SR LC | 4-10/100/1000, 4-GE SR LC, 2-10GE SR LC | SSP, IPS SSP   | SSP, IPS SSP  | SSP, IPS SSP   | SSP, IPS SSP   |
| Intrusion Prevention                                     | Not Available                           | Not Available                           | Yes (with IPS SSP)   | Yes (with IPS SSP)  | Yes (with IPS SSP)   | Yes (with IPS SSP)   |
| Maximum Firewall and IPS Throughput                      | Not Available                           | Not Available                           | 2 Gbps (with IPS SSP-10)   | 3 Gbps (with IPS SSP-20)  | 5 Gbps (with IPS SSP-40)   | 10 Gbps (with IPS SSP-60)  |
| <b>Features</b>  |   |   |  |   |  |  |
| Application-Layer Security                               | Yes                                     | Yes                                     | Yes  | Yes   | Yes  | Yes  |
| Layer 2 Transparent Firewalling                          | Yes                                     | Yes                                     | Yes  | Yes   | Yes  | Yes  |
| Security Contexts (Included/ Maximum) <sup>3</sup>       | 2/50                                    | 2/50                                    | 2/50   | 2/50  | 2/50   | 2/50   |
| GTP/GPRS Inspection <sup>3</sup>                         | Yes                                     | Yes                                     | Yes  | Yes   | Yes  | Yes  |
| High-Availability Support <sup>4</sup>                   | A/A and A/S                             | A/A and A/S                             | A/A and A/S  | A/A and A/S   | A/A and A/S  | A/A and A/S  |
| VPN Clustering and Load Balancing                        | Yes                                     | Yes                                     | Yes  | Yes   | Yes  | Yes  |

<sup>1</sup> Max firewall throughput measured under ideal test conditions

<sup>2</sup> VPN throughput and sessions count depend on the ASA device configuration and VPN traffic patterns. These elements should be taken in to consideration as part of your capacity planning

<sup>3</sup> Licensed features

<sup>4</sup> A/S = Active/Standby; A/A = Active/Active

Note: Performance numbers tested and validated with the ASA 7.2 Software Release for ASA 5505 through ASA 5550, ASA 8.1 software for ASA 5580, and ASA 8.2 software for ASA 5585-X.