



# Application Delivery Platform New Generation Server Load Balancer

# 64-bit



## AX Series Performance by Design



- ▶ **Twice the Performance at Half the Price**
- ▶ **Revolutionary New Architecture**
- ▶ **Innovative, Advanced Features**
- ▶ **All Features Included**

The AX Series Advanced Traffic Manager family from A10 Networks is designed to meet the growing demands of Web sites, carriers and enterprises. The AX offers intelligent Layer 4-7 application processing capabilities with industry-leading performance and scalability to meet critical business requirements at competitive prices.

The AX Series' unique Advanced Core Operating System (ACOS) offers true scalable performance. With rich Layer 7 features and its aFlex scripting language, the AX Series integrates into any data center to enable advanced Web application delivery solutions. The AX also includes the most comprehensive set of IPv6 and Network Address Translation (NAT) features of any server load balancer on the market today.

AX's advanced server load balancing and flexible health monitoring capabilities ensure application availability and reliability. With the AX Series' standard redundant components and high availability design, organizations ensure non-stop service availability for all types of applications. With the AX Series' line rate security defenses and secure email features, organizations can now deploy data center wide protection against network-level attacks to ensure business continuity for critical services.



# Key Benefits

## Industry-leading Application Price/Performance

- Superior performance by any measure – Layer 4 connections per second (CPS), Layer 7 CPS, SSL transactions per second, RAM Cache and Layer 4-7 throughput.
- The high-end AX 5200 offers over 3 million L4 CPS in a single 2U compact platform.
- Industry's best performance per watt, per dollar, and per rack unit.
- Advanced Core Operating System (ACOS) delivers multi-threaded performance and is tuned for multiple CPUs with multiple cores for future-proof scalability.
- Purpose-built hardware provides efficient packet buffer management,

TCP connection multiplexing, SSL acceleration, support for IPv4 and IPv6 and much more.

- 10/100/1000 Mb and 10 Gb interfaces.

## Application Availability, Scalability and Flexibility

- ACOS is designed to provide a scalable, flexible platform.
- Provides 99.999% reliability for applications.
- Scales server farm capacity with new-generation server load balancing.
- Flexibility to adapt to changing business requirements with aFleX scripting language.
- Supports both Transparent Mode

and Gateway Mode for flexibility in deployment.

- Supports Layer 2 Hot-Standby, Active-Active and Active-Standby.
- Delivers carrier-grade high availability (HA) for 100% uninterrupted service.

## Integrated Application Security

- Protects application servers from Denial of Service and protocol anomaly attacks.
- Ensures application availability for legitimate traffic during malicious attacks.
- Line-rate performance – AX 5200 supports over 50+ million SYN cookies per second with zero additional CPU utilization.

# Features

## » Application Delivery Features

- Comprehensive IPv4/IPv6 Support
- Advanced Layer 4/Layer 7 Server Load Balancing
  - ♦ Fast TCP, Fast UDP, Fast HTTP, Full HTTP Proxy
  - ♦ High-performance, template-based Layer 7 switching with header/url/domain manipulation
  - ♦ Comprehensive Layer 7 application persistence support
- Comprehensive load balancing methods
  - ♦ Round Robin, Least Connections, Weighted RR, Weighted LC, Fastest Response
- aFleX – allows deep packet inspection and transformation for customizable, application-aware switching
- Advanced Health Monitoring
  - ♦ Comprehensive Protocol Support - ICMP, TCP, UDP, HTTP, HTTPS, FTP, RTSP, SMTP, POP3, SNMP, DNS, RADIUS, LDAP
  - ♦ TCL Scriptable Health Check support
  - ♦ High Availability – Active-Active, Active-Standby configurations with sub-second failover
  - ♦ SIP Load Balancing for VoIP and other rich-media applications
  - ♦ Secure Email Support – STARTTLS, POPS, LDAPS, SMTPS, IMAPS
- Spam Filter Support – allows high-speed application of very large black/white lists

- Firewall Load Balancing (FWLB)
- Global Server Load Balancing (GSLB)
- Transparent and Gateway Mode Support
- Transparent Cache Switching (TCS)
- Link Load Balancing

## » Acceleration & Security Features

- HTTP Acceleration & Optimization
  - ♦ HTTP Connection Multiplexing
  - ♦ HTTP Caching
  - ♦ HTTP Compression (hardware based)
- SSL Acceleration
  - ♦ Hardware-based SSL Offload
  - ♦ Support for all TCP Protocols – SSL Termination, SSL Bridging (SSL Initiation)
- SSL Session ID Reuse
- Hardware-based SYN Cookies, IP Anomaly Detection
- Connection Rate Limiting/Connection Limiting
- DNS Application Firewall

## » High Performance, Scalable Platform

- ACOS Operating System
  - ♦ Multi-core, Multi-CPU Support
  - ♦ Linear Application Scaling
  - ♦ Linux on Control Plane
- ACOS on Data Plane

## » Networking

- Integrated Layer 2/Layer 3
- Transparent Mode/Gateway Mode

- Routing – RIP, OSPF, Static Routes
- VLAN
- Trunking
- Access Control Lists (ACLs)

## » Network Address Translation (NAT)

- Traditional IPv4-IPv4 NAT/NAPT
- Application Level Gateways (ALGs) for FTP, RTSP, MMS, SIP
- NAT-PT (Protocol Translation) (IPv4<->IPv6, IPv6<->IPv4)

## » Management

- Dedicated Management Interface (Console, SSH, Telnet, HTTPS)
- Web-based Graphical User Interface (GUI) with Language Localization
- Industry-standard Command Line Interface Support
- SNMP, Syslog, Alerting
- Port Mirroring
- Virtualization
  - ♦ Role Based Administration (RBA)
  - ♦ Partition Based Management
- REST-style XML API (aXAPI)

## » Carrier-grade Hardware

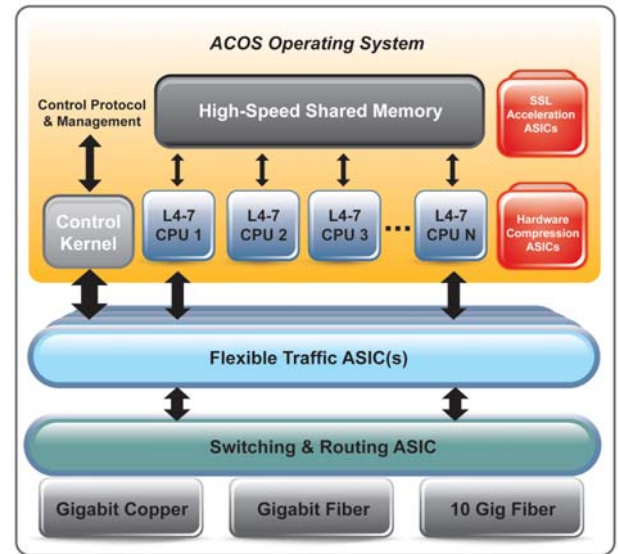
- Hot Swappable Redundant Power Supplies
- Removable Fan Tray
- Solid-state Drive (SSD) and Compact Flash
- Advanced Hardware Architecture
- High Port Density
- 10 Gb Ports

# Advanced Core Operating System (ACOS)

Designed for 64-bit processing, the AX Series integrates modern multi-core, multi-threaded OS technologies (ACOS) with A10's Flexible Traffic ASIC, switching/routing ASIC and SSL Acceleration ASIC to provide performance advantages. Leveraging Symmetric Multiprocessing (SMP) technologies used in super-computing, the AX uses a decoupled multi-CPU architecture with simultaneous high-speed memory access to process application traffic in true parallel fashion,

without the need to copy data or replicate computing instructions.

ACOS, standard in all AX models, provides true linear scalability of Layer 4-7 application features – for acceleration, availability, and security. The AX Series includes secure email services, Global Server Load Balancing (GSLB), comprehensive firewall load balancing, video/voice acceleration, IPv4 and IPv6 traffic management, and SSL and non-SSL server load balancing.



## Hardware Summary

The AX family includes a range of platforms that vary according to performance, price and hardware.



	AX 2500	AX 2600			AX 3000		AX 5100	AX 5200
<b>Model Option Code</b>		GC	GF	GCF	GC	GCF		
<b>Ethernet Interface</b>								
Gigabit Copper	8	24	0	16	16	8	0	0
Gigabit Fiber – SFP Mini GBIC	4	0	24	8	0	8	4	4
10 Gigabit Fiber - XFP	0	0	0	0	4*	4*	8	16
<b>Management Interface</b>	Yes	Yes			Yes		Yes	Yes
<b>Console Port</b>	Yes	Yes			Yes		Yes	Yes
<b>Hard Disks/Storage</b>	SSD	SSD			SSD		SSD	SSD
<b>Cooling Fan</b>	Hot Swap Smart Fan							
<b>Maximum Power Consumption</b>	250 W	291 W			308 W		660 W	680 W
<b>Power Supply</b>	Dual 400 W RPS	Dual 400 W RPS			Dual 400 W RPS		Dual 900 W RPS	Dual 900 W RPS
	100 to 240 VAC, Frequency 50 – 60 Hz							
<b>Hardware Acceleration</b>								
Linear Decoupled Architecture	Yes	Yes			Yes		Yes	Yes
Flexible Traffic ASIC	No	No			No		Yes x4	Yes x4
SSL Acceleration ASIC	Yes	Yes			Yes		Option	Option
Switching/Routing ASIC	No	No			No		Yes	Yes
Hardware Compression ASIC	Option	Option			Option		Option	Option
<b>Dimensions</b>	1.75 in (H), 17 in (W), 21.8 in (D)						3.5 in (H), 17 in (W), 29 in (D)	
<b>Rack Units (Mountable)</b>	1 U	1 U			1 U		2 U	2 U
<b>Unit Weight</b>	25 lbs	25 lbs			25 lbs		60 lbs	61 lbs
<b>Operating Ranges</b>	Temperature and Humidity 0° - 40° C 5% - 95%							
<b>Regulatory Certification</b>	FCC Class A, UL, CE, TUV, CB, VCCI							
<b>Standard Warranty</b>	90-day Hardware & Software							

\* 10 Gigabit Fiber-SFP+

## Application Solutions

The AX Series increases scalability, availability and security for enterprise applications. A10 has a variety of deployment guides and customer usage scenarios to assist with efficient enterprise deployments.



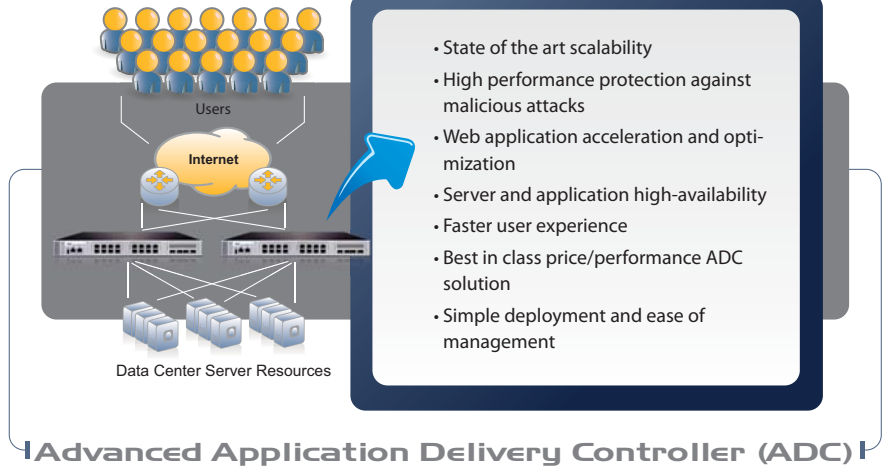
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## AX Series Benefits



- State of the art scalability
- High performance protection against malicious attacks
- Web application acceleration and optimization
- Server and application high-availability
- Faster user experience
- Best in class price/performance ADC solution
- Simple deployment and ease of management

Advanced Application Delivery Controller (ADC)

*The AX Series family includes platforms for all size enterprises, data centers and carriers/ISPs, in all verticals.*

## Advantage versus Competitors

- All inclusive pricing, no performance or feature licenses
- Most scalable appliances in the market with unique modern 64-bit ACOS Operating System; including solid-state drives (SSD) and multiple hardware acceleration ASICs
- Faster application inspection with aFlex TCL rules
- aXAPI for custom management

AX Series

## Performance by Design

To learn more about the AX Series Advanced Traffic Manager and how to improve application performance up to 8 times faster while enhancing reliability and security, visit A10 Networks' website at: [www.a10networks.com](http://www.a10networks.com)  
Or call and talk to an A10 sales representative

## About A10 Networks

A10 Networks was founded in 2004 with a mission to provide innovative networking and security solutions. A10 Networks makes high-performance products that help organizations accelerate, optimize and secure their applications. A10 Networks is headquartered in Silicon Valley with offices in the United States and centers of excellence around the globe. For more information, visit [www.a10networks.com](http://www.a10networks.com).

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