



# Web Application Delivery New-generation Server Load Balancer



## 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 and Triple-Play Services (data, voice and video). The AX offers intelligent Layer 4-7 application processing capabilities with industry-leading performance and scalability to meet critical business requirements at competitive prices, resulting in the industry's best price/performance solution.

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. And 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.



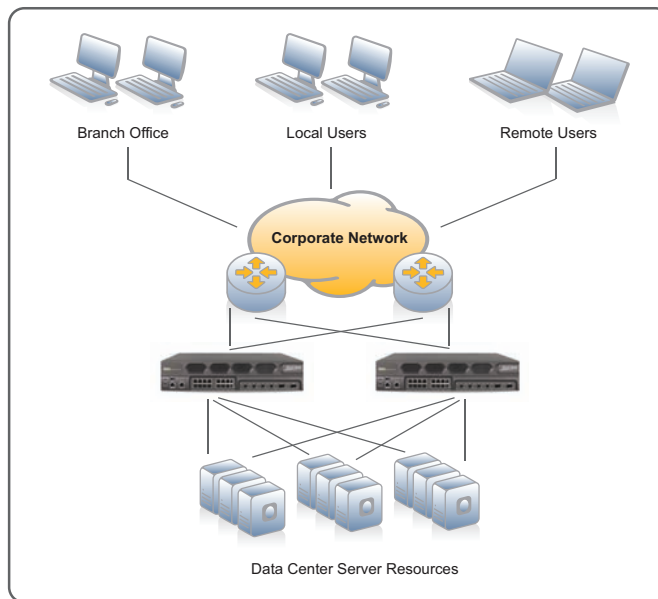
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## AX Series Key Benefits

### ► Industry-leading Application Price/Performance\*

- Industry's first Layer 7 appliance to deliver over 1 million transactions per second.\*
- 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.
- 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.



## AX Series

Maximize application availability, scalability & performance

Increase infrastructure efficiency

Enhance end user experience

### ► 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% uninterruptible service.

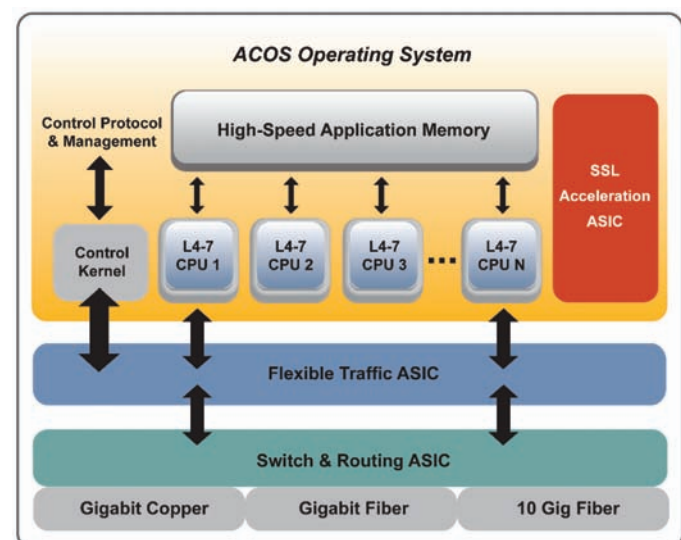
### ► Integrated Application Security

- Protects application servers from Denial of Service and protocol anomaly attacks.
- Ensures application availability for legitimate traffic during malicious attacks.
- Near line-rate performance – AX 3200 supports over 9 million SYN cookies per second with zero CPU utilization.

## Advanced Core Operating System (ACOS)

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.



\* Based on January 2008 Tolly Report.

## AX Series 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

### » 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
- Virtualized Management
  - ♦ Role Based Administration (RBA)
  - ♦ Partition Based Management
- REST-style XML API (aXAPI)

### » Carrier-grade Hardware

- Hot Swappable Redundant Power Supplies
- Removable Fan Tray
- Dual Hard Disks with RAID 1 Support, Compact Flash
- Advanced Hardware Architecture
- High Port Density

## AX Series Hardware Summary

	AX2000	AX2100	AX2200	AX3100	AX3200
<b>Ethernet Interface</b>					
Gigabit Copper	8	8	16	16	16
Gigabit Fiber – SFP Mini GBIC	2	4	4	4	4
10 Gigabit Fiber - XFP	0	0	0	2	2
<b>Management Interface</b>	Yes	Yes	Yes	Yes	Yes
<b>Console Port</b>	Yes	Yes	Yes	Yes	Yes
<b>Hard Disks</b>	Single	Dual	Dual	Dual	Dual
<b>Cooling Fan</b>	Hot Swap Smart Fan	Hot Swap Smart Fan	Hot Swap Smart Fan	Hot Swap Smart Fan	Hot Swap Smart Fan
<b>Maximum Power Consumption</b>	265 W	280 W	335 W	345 W	390 W
<b>Power Supply</b>	Dual 460 W RPS	Dual 460 W RPS	Dual 600 W RPS	Dual 600 W RPS	Dual 600 W RPS
	100 to 240 VAC, Frequency 50 – 60 Hz, Redundant, Hot Swap				
<b>Hardware Acceleration</b>					
Linear Decoupled Architecture	Yes	Yes	Yes	Yes	Yes
Flexible Traffic ASIC	No	No	Yes	Yes	Yes
SSL Acceleration ASIC	Yes	Yes	Yes	Yes	Yes
Switching/Routing ASIC	No	No	Yes	Yes	Yes
Hardware Compression ASIC	No	Option	Option	Option	Option
<b>Dimensions</b>	3.5 in (H), 17 in (W), 24 in (D) 2 U Rack Mountable				
<b>Unit Weight</b>	34 lb	35 lb	37.5 lb	36 lb	36 lb
<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				



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### 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).

#### 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)

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