Alteon Application Switch 10000

Sheer Performance, Carrier Grade ATCA-Compliant ADC Platform

Alteon Application Switch 10000 provides superior performance, ADC virtualization, advanced application acceleration capabilities and OnDemand scalability to effectively meet contemporary network and business needs. Specifically designed for carriers, service providers and large enterprise data centers, the Alteon 10000 provides up to 80Gbps of application delivery capacity and 256 virtual ADC instances for unparalleled scalability, availability, agility and performance.

Breakthrough Performance Delivering Best Quality of Experience

Carriers and Internet service providers experience massive growth of Internet, video and mobile data traffic. The Alteon 10000 is designed to meet these challenging capacity growths while delivering significant business benefits for carriers, mobile data mega-pops, Internet service providers and large enterprises data centers that require a high-end ADC solution.

Powered by a state-of-the-art, custom-designed hardware platform, the Alteon 10000 ensures best user experience and fastest response time for mission-critical applications, resulting in effective, continuous business operation. The Alteon 10000 provides up to 80Gbps of scalable throughput capacity while delivering breakthrough performance including 1.4M Layer 4 Connections per Second, 800K Layer 7 Connections per Second and 44M concurrent connections[1].

ATCA Chassis and Carrier-Grade Reliability

The Alteon 10000 is built upon Advanced Telecommunications Computing Architecture (ATCA) chassis to meet the most demanding requirements and regulations. With 15 ports of 10GE / GE (SFP+ pluggable optics) and additional 8 ports of 1GE (copper), the Alteon 10000 provides extensive ports offering and wide set of connectivity alternatives. The 6-slots chassis of Alteon 10000 accommodates 4 payload blades, each providing 20Gbps of throughput, up to a total of 80Gbps. All chassis blades are hot swappable, allowing blades replacements without stopping the entire chassis. In addition, the Alteon 10000 chassis includes fabric switch blades for internal communication, as well as a shelf manager module which monitors and controls low-level aspects of the platform's blades and components, including temperature monitoring, fan-speed control, alarm I/O, and power management.

[1] The performance figures are subject to change

The Alteon 10000 delivers carrier-grade reliability required by the most demanding carrier application environments. It features reliable, custom-made hardware coupled with embedded components providing high MTBF with three AC/DC load sharing, hot-swappable power supplies and two hot-swappable fan trays. It is NEBS 3 compliant, complies with the strictest regulations, and is certified by the most up-to-date hardware and networking standards.

ADC Virtualization with ADC-VX™

The latest addition to Alteon OS capabilities is ADC-VX, the industry's first ADC hypervisor built on a unique architecture that virtualizes the resources of the Alteon Application Switch, allowing up to 256 virtual ADC (vADC) instances running on the same, consolidated platform with full instance isolation. This unique industry capability is achieved through complete resource virtualization and reservation including CPU, memory, network and acceleration resources. This specialized hypervisor runs fully-functional virtual ADC instances where each delivers full ADC functionality just like a dedicated physical Alteon device. Each virtual ADC instance contains a complete and separated environment of resources, configurations and management.

ADC-VX is designed from the ground up to enable organizations to consolidate their ADC hardware devices without compromising resiliency or performance predictability of their ADC services – resulting in significant savings of hardware costs and operational expenses. Additionally, ADC-VX provides the agility and the simplicity that is required in the virtualized data center, driving faster deployment of new services and better alignment of ADC services with frequent configuration changes. To learn more about ADC-VX, please visit ADC-VX page.

Best-in-Class Cloud ADC Service Hub

The Alteon 10000 leverages Radware's ADC-VX technology to deliver the first ever, best-in-class Cloud ADC service hub. Tailored for service providers, hosting providers or cloud providers, the Alteon 10000 allows servicing and ensuring high SLA for up to 256 hosted customers using a single chassis, where each is represented by a fully-isolated vADC instance. Radware's Cloud ADC service hub provides the following key benefits:

- Unmatched ADC virtualization resiliency, through innovative vADC self-healing and automatic vADC recovery capabilities
- Guarantee best SLA for hosted customers through automatic vADC services redistribution across separate computing blades or complete blade systems
- Fastest and simplest vADC provisioning, through automatic vADC placement based on best performing blade or blade system

Integrated Application Acceleration Capabilities

Radware's Alteon 10000 delivers a wide set of advanced application acceleration capabilities including SSL offloading (for both 1024-bit and 2048-bit SSL keys), web compression, caching, HTTP multiplexing and TCP optimization. These capabilities are designed to offload servers, address server performance issues and enhance response-time for best users' quality of experience. By offloading processor intensive operations such as SSL decryption and encryption from the applications servers, Alteon 10000 frees the servers' CPUs to handle additional requests. This results in reduced application servers hardware and lower CAPEX. When the Alteon 10000 is deployed with mission critical applications users, partners and employees benefit from best quality of experience and fastest response time of the applications, resulting in improved productivity and increased revenues.

Intelligently Embedding Radware's 'OnDemand' Infrastructure Approach

By embracing Radware's OnDemand approach, you only pay for the exact capacity currently required by your network, which prevents over-spending on the initial solution. Additional processing blades, throughput capacity, acceleration capabilities, application-aware services and more vADC instances can be added on demand to meet new business requirements – with no forklift upgrade of the device or restart. The OnDemand approach enables you to overcome capacity planning challenges and reduces the risk associated with data center growth for best investment protection as capacity and services can be added when needed.
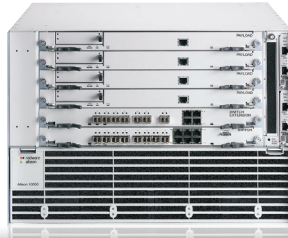
Powered by Alteon OS

The Alteon 10000 utilizes the Alteon OS, enabling you to leverage its solid, powerful capabilities including CLI, traffic policies, configuration and more. As a result, you can immediately enjoy Alteon's renowned ease of operation and stability – by reducing operational hassle and costs related to network integration, operation scripts, network topology considerations and management – while at the same time, obtaining new benefits.

5-Year Longevity Guarantee Coupled with World-Class Support

Radware exclusively provides Alteon 10000 customers with a 5-year platform longevity guarantee. This enables extending the application delivery project lifetime, which directly translates into reduced TCO and higher ROI.

Chassis Technical Specifications

Features	Alteon 10000 Chassis
Available Throughput	Up to 4 ATCA-compliant, payload blades - delivering 20Gbps, 40Gbps, 60Gbps and 80Gbps scalable throughput capacity
Non-blocking Switch Fabric	480 Gbps
Layer 2 Switching	Wire-speed
Simultaneous Sessions	Up to 44M
Routing Protocols	OSPF, RIP, BGP
Gigabit/Fiber Ports	• 15 X 10 Gigabit or 1 Gigabit Fiber Ports (depending on SFP/SFP+ pluggable optics) • 8 X Gigabit Ethernet Ports (Copper)
Pluggable Optics Operating Distance	Fiber ports deliver the following interfaces depending on pluggable optics: • Short reach SFP, 1000BASE-SX 850nm, multi-mode; distance .2-275m with 62.5/125μm MMF; distance .5-550m with 50/125μm MMF • Long reach SFP, 1000BASE-LX 1310nm single-mode; distance up to 10km with 9/125μm SMF • Short reach SFP+, 10GBASE-SR 850nm multi-mode; distance up to 300m with 50/125μm MMF • Long reach SFP+, 10GBASE-LR 1310nm single-mode; distance up to 10km with 9/125μm SMF
Serial Management Console	• RS-232C port
Shelf Manager (ShMC)	• Front, redundant, hot-swappable IPMI v1.5 Shelf Manager • Nine, high-brightness LEDs indicating Critical, Major, Minor alarms, Power Good, shelf Active, H/S and ShMM status indicator • Telco Alarm – Alarm relays capable of carrying 60VDC, or 1.0A, with a maximum rating of 30VDC • Full IPMB support, IPM controller sensor entries – fan speeds monitors, local temperatures, predicted failure alerts, input voltage • Shelf temperature sensors (inlet, outlet)
Dimensions	• Height: 7U / 309.88 mm (12.2 in) • Width: 482.6 mm (19 in) • Depth: 581.66 mm (22.9 in) • EIA Rack or Standalone: 482 mm (19 in) • EMI gaskets and hardware spacing to support FCC part B
Weight	• 43.27 kg (95.4 lbs)
Environmental	• Operating temperature: -5 to 55 °C (23 to 131 °F) • Humidity: 5% to 85% non-condensing

Power (chassis only without payload blades)	• AC power supply
	  • Auto-range: 100-240 V, 47-63 Hz
	  • Power consumption (typical / maximal): 577 W / 722 W
	  • Heat dissipation (typical / maximal): 1969 BTU/h / 2462 BTU/h
	• DC power supply
	  • Auto-range: -48~-60 V
	  • Power consumption (typical / maximal): 480 W / 600 W
	  • Heat dissipation (typical / maximal): 1636 BTU/h / 2046 BTU/h
	• Up to four load sharing, self cooled, hot-swappable integral power supplies
	• Redundant PEM modules, redundant EMC filtered power feeds

Cooling	• Front to back cooling • Three rear, hot pluggable high-performance fans • Push-pull, N+2 i.e. any two fans can fail with no service degradation • Front, washable, field-replaceable, NEBS GR63 air filer • Variable speed under Shelf Manager control
Certifications	• Safety: UL, CE compliant • EMC: CE & FCC part 15 subpart B, VCCI class A • NEBS level-3 compliant • RoHS 6 compliant

Payload Blade Technical Specifications

Features	Alteon 10000 Payload Blade	Alteon 10000 Payload Blade VX
Available Throughput	20Gbps	20Gbps
ADC-VX specialized ADC Hypervisor running virtual ADC instances	32 vADCs	64 vADCs
SSL CPS	for 1Kbit key: up to 36,000 CPS for 2Kbit key: up to 11,000 CPS	for 1Kbit key: up to 37,500 CPS for 2Kbit key: up to 10,500 CPS
Compression	3 Gbps	5 Gbps
Simultaneous Sessions	Up to 11M	Up to 32M
Processor	6-core Intel® Xeon® processor L5638 2.0 GHz	2 X 6-core Intel® Xeon® processor L5638 2.0 GHz
Memory	48GB	96GB
Dimensions	• 8U single-slot ATCA format • Width: 322.5 mm (12.7 in) • Depth: 280 mm (11.02 in)	• 8U single-slot ATCA format • Width: 322.5 mm (12.7 in) • Depth: 280 mm (11.02 in)
Weight	• 3.2 kg (7.05 lbs)	• 4 kg (8.8 lbs)

Environmental	• Operating temperature:
	  -5 to 55 °C (23 to 131 °F)
	• Humidity: 5% to 85% non-condensing
		• Operating temperature:
		  -5 to 55 °C (23 to 131 °F)
		• Humidity: 5% to 85% non-condensing

Power	• AC power supply
	  • Auto-range: 100-240 V, 47-63 Hz
	  • Power consumption: 192 W
	  • Heat dissipation: 654 BTU/h
	• DC power supply
	  • Auto-range: -48~-60 V
	  • Power consumption: 160 W
	  • Heat dissipation: 545 BTU/h
		• AC power supply
		  • Auto-range: 100-240 V, 47-63 Hz
		  • Power consumption: 313 W
		  • Heat dissipation: 1067 BTU/h
		• DC power supply
		  • Auto-range: -48~-60 V
		  • Power consumption: 260 W
		  • Heat dissipation: 887 BTU/h

Certifications	• Safety: cTUVus 60950-1, EN 60950-1, IEC 60950-1 CB scheme • EMC: CE & FCC part 15 subpart B, VCCI class A • NEBS level-3 compliant • RoHS 6 compliant	• Safety: cTUVus 60950-1, EN 60950-1, IEC 60950-1 CB scheme • EMC: CE & FCC part 15 subpart B, VCCI class A • NEBS level-3 compliant • RoHS 6 compliant

About Radware

Radware (NASDAQ: RDWR), is a global leader of application delivery and application security solutions for virtual and cloud data centers. Its award-winning solutions portfolio delivers full resilience for business-critical applications, maximum IT efficiency, and complete business agility. Radware's solutions empower more than 10,000 enterprise and carrier customers worldwide to adapt to market challenges quickly, maintain business continuity and achieve maximum productivity while keeping costs down. For more information, please visit www.radware.com.

Certainty Support

Radware offers technical support for all of its products through the Certainty Support Program. Each level of the Certainty Support Program consists of four elements – phone support, software updates, hardware maintenance, and on-site support. Radware also has dedicated engineering staff that can assist customers on a professional services basis for advanced project deployments.

Learn More

To learn more about how Radware's integrated application delivery solutions can enable you to get the most of your business and IT investments, email us at info@radware.com or go to www.radware.com.