

Alteon 180 Series

SELECTABLE 10/100/1000 MBPS ETHERNET WEB SWITCHES

Alteon WebSystems' award-winning Alteon 180 line of Ethernet Web switches are the first to provide per port selectable 10/100/1000 Mbps Ethernet connectivity on every port, giving users the utmost in flexibility and investment protection. With nine gigabit ports, the Alteon 180 is ideal for high-performance Web server farms and the aggregation of 10/100 Mbps Ethernet ports.

With Alteon's Web OS traffic control software (see Web OS datasheet), the Alteon 180 delivers the ultimate in high-performance traffic management functions within a single platform including local and global server load balancing, application redirection, filtering and content-intelligent Layer 7 switching such as cookie parsing and URL load balancing.

FEATURES

- Eight gigabit aggregate switch capacity
- Eight selectable 10/100/1000 Mbps Ethernet ports and one 1000 Mbps uplink
- Physical redundancy on 10/100/1000 Mbps ports
- Simultaneous Layer-2, 3 ,4 - 7 switching
- Simultaneous support for local and global server load balancing
- Full inspection of URLs, cookies and host headers, up to 4,500 bytes across multiple packets (A180e/A184)
- Support for URL-based redirection and load balancing
- Up to 224 packet filtering rules per switch for flexibility and control of all IP traffic
- Support for server load balancing and application redirection with optional Web OS Internet traffic control software
- Support for 802.1Q VLAN tagging, with 256 network-wide VLANs per port
- Standard or Jumbo Ethernet frame sizes on both 100 Mbps and 1000 Mbps ports
- Support for 802.1d spanning tree, 802.3z auto-negotiation, 802.3x flow control
- SNMP, port mirroring and per port RMON
- EtherChannel™ compatible trunk groups
- Supports L3/L4 active-active redundancy configurations (A180e/A184)
- Content-intelligent bandwidth management (A180e/A184)
- Persistent connections using source IP addresses, HTTP cookies and SSL IDs (A180e/A184)
- TCP, UDP and IP load balancing, including HTTP (persistent and non-persistent), HTTPS, FTP and passive FTP, SMTP, POP3, IMAP, SSL, DNS, Radius, Telnet and NNTP

www.alteonwebsystems.com

High Performance

With eight Gigabits of switching capacity, the Alteon 180 family is a line of wire-speed Layer 2/3 Ethernet switches. But that's only the start. Alteon 180 Web switches process entire Web sessions at blazing speeds using Layer 4 through 7 information such as TCP port numbers, URLs, HTTP headers and HTTP cookies. Up to 336,000 Web connections can be processed every second on any given port through the use of Alteon's next-generation network processing ASICs – the WebIC™. Alteon WebICs, deployed across every switch port, incorporate dual 32-bit RISC network processors for linear processing scalability of Web sessions.

Jumbo Frames to Accelerate Data Transfer

The Alteon 180 automatically forwards Ethernet frames of all sizes, including jumbo frames of up to 9,018 bytes. Used in conjunction with Alteon WebSystems' ACEnic adapters, jumbo frames can reduce packet processing on servers by as much as 85 percent and increase throughput on CPU-bound systems by over 100 percent – ideal for server backup, data replication, and communications between front-ends and NFS servers.

IP Switching

IP switching in the Alteon 180 provides complete topological flexibility. The Alteon 180 supports RIP v1, static routes, and two default routes with health checking. Routing updates are enabled on a per port basis to avoid sending unnecessary broadcast traffic. The Alteon 180 also learns and caches up to 8000 IP addresses, providing direct IP switching for locally attached networks. It can route between VLANs or IP subnets within the switched network without an external router.

Dual-Speed Ports Deliver the Ultimate in Flexibility

The Alteon 180 series supports eight selectable 10/100-TX/ 1000-SX ports plus one 1000-SX uplink (A184 comes with 100 or 1000 Mbps uplink). Each dual-speed port is equipped with an RJ-45 connector (10/100-TX) and an SC connector (1000-SX). The Web switch automatically detects and uses the highest speed port for each interface.

Content-Awareness

New URL-based Web cache redirection and server load balancing (A180e/A184) optimizes cache server farms and Web farms by sending requests with specific URLs or URL "sub-string" matches to designated cache or Web servers. Content rules can be applied per Web switch allowing server tuning by separating static and dynamic content requests via URL parsing.

Built-In Redundancy at Every Level

Besides the physical redundancy possible with dual connector ports, the Alteon 180 can also provide resilience based on Layer 2, Layer 3 and Layer 4 operation. Alteon 180 Web switches operate in active/active and active/standby modes to ensure non-stop operations while providing parallel processing of Web traffic.

EtherChannel Trunk Groups

The Alteon supports Layer 2, 3 and 4 EtherChannel-compatible trunk groups enabling link level redundancy and load-sharing with Cisco routers and switches as well as other EtherChannel-compatible devices. If a link within a trunk group fails, traffic is redirected over the remaining trunks in less than a second.



Alteon 180,180+,180e,184

SELECTABLE 10/100/1000 MBPS ETHERNET WEB SWITCHES

Part #	Product	Description
700104	Alteon 180	10/100/1000 Mbps Web Switch
700112	Alteon 180+	Includes Web OS pre-enabled
700107	Alteon 180e	Includes Web OS pre-enabled and 2 MB memory per port
700116	Alteon 184	Includes Web OS pre-enabled and 4 MB memory per port

Flexible Filtering

Filtering on the Alteon 180 delivers unprecedented levels of network traffic control. Administrators can forward or drop packets based on application type, protocol and IP source and destination addresses. Up to 224 filtering rules can be created per switch with any or all rules applied to each port.

Web OS for Internet Traffic Control

With the addition of Web OS software, the Alteon 180 tracks and load balances application sessions across multiple servers for any TCP, UDP or IP-based application. Server load balancing enables virtually unbounded server capacity within a single site and across multiple, geographically dispersed sites, with linearly increasing performance as more servers are added. By monitoring the health of individual servers and applications, it also assures high service availability. Application redirection on the Alteon 180 enables the use of transparent Web caches and allows load balancing of devices such as firewalls and routers.

Multiple VLANs/IP Subnets on a Physical Port

Using IEEE 802.1Q frame tagging, the Alteon 180 supports up to 256 network-wide VLANs per port. This allows traffic from multiple VLANs or IP subnets to share a single 10/100 or 1000 Mbps switch connection to another Alteon or to an ACEnic-equipped server. The Alteon 180 provides automatic frame tag insertion and removal to interoperate transparently with non-802.1Q devices.

Bandwidth Management and QoS

With Alteon's 180e and 184 users can meter, control and account for bandwidth use – by client, server farm, virtual service, application, user class, content type and many other traffic classes – using a variety of Layer 2 through 7 attributes. Bandwidth policies composed of three bandwidth rates can be assigned to each traffic classification. These rates include a *Committed Information Rate* which is the guaranteed minimum bandwidth, a *Soft Limit* which is the metered rate used when bandwidth is available, and a *Hard Limit* which is the maximum burst rate.

Adaptive Network Management

Network managers can configure and monitor all switch functions via standard Web browsers, SNMP applications and CLI from the console port or via Telnet. The Alteon 180 family supports a private MIB and four groups of RMON on every port. Port mirroring capability provides for switch and server performance analysis. The Alteon 180 management interface is integrated with HP OpenView 5.0 under UNIX (HPUX, Solaris) and Windows NT.

SPECIFICATIONS

Standards

Spanning Tree (IEEE 802.1d), Logical Link Control (IEEE 802.2), 10BASE-T/100BASE-TX (IEEE 802.3, 802.3u), Flow Control (IEEE 802.3x), RMON (RFC 1757), SNMP (1213 MIB-II, 1643 Ethernet, 1493 Bridge), 1000BASE-SX (IEEE 802.3z), IP, RIPv1, TFTP (RFC 783), BootP (RFC 1542), BootP (RFC 951), Telnet(RFC 854)

1000BASE-SX Ports

Full-duplex Gigabit Ethernet SC fiber connectors

10BASE-T/100BASE-TX Ports

10/100 full or half-duplex (auto-negotiation) with RJ-45 connections for UTP ports

Layer 2/3 Support

802.1Q (256 VLANs), Jumbo Frames (all ports), EtherChannel-compatible trunking, 802.1dSpanning Tree, 4K MAC addresses per port, 8K per switch, IP switching, 256 IP interfaces, four default routes supported by load balancing, health checking and automatic failover, IP-based trunking

RS-232C Console

DB-9 serial connection, female DCE interface for out-of-band management

Dimensions

Width: 17.00 inches
Depth: 18.00 inches
Height: 3.47 inches
(Standard 19" EIA rack or wall mountable)

Environmental

Operating
– Temperature 0 to 40° C
– Humidity 5% to 85% (non-condensing)
Power
– Auto-ranging supply: 90-265 VAC@ 47-65 Hz
– Power consumption: 92W

1000BASE-SX Operating Distance

Shortwave (850 nm)
62.5 micron MM fiber
– 2 to 275 meters
50 micron MM fiber
– 2 to 550 meters

Certifications

Emissions: FCC, CFR 47 Part 15, Subpart A ANSI C63.4D11.4 1991, VCCI Class 1, FCC OST 55, CISPR 16, CISPR 22, CSA C108.8-M1983 (R1989), EN55022, CE, EN6100-3-2, EN60555-2
Safety: UL 1950, CUL, DIN/VDE 0805, CSA 22.2 , No. 950-93, IEC 950 EN 60950, TUV EMKO-TSE (74-SEC) 207/94 Nordic Deviations to EN 60950

Networking Industry Awards Winner

DataComm Magazine Hot Products January 1998

PC Magazine Editors' Choice April 2000

Alteon WebSystems
Web Speed for e-Business

50 Great Oaks Boulevard, San Jose, CA 95119
Tel:408-360-5500 Fax:408-360-5501

© 1999 Alteon WebSystems, Inc. All rights reserved. Specifications subject to change without notice. All terms are subject to Alteon WebSystems' terms and conditions of sale. Alteon WebSystems, ACEswitch, and ACEnic are trademarks of Alteon WebSystems, Inc. All other brand or product names are trademarks or registered trademarks of their respective holders.

DS-0005B-US 06/2000