



FortiADC™ D-Series
Application Delivery Controllers



FortiADC D-Series

FortiADC 100F, 200D, 300D, 400D, 700D, 1500D, 2000D, 4000D and VM

Application Delivery Controllers

The FortiADC D-series of Application Delivery Controllers (ADC) optimizes the availability, user experience, performance and scalability of Enterprise Application Delivery. The FortiADC D-series family of physical appliances delivers fast, secure and intelligent acceleration and distribution of demanding applications in the enterprise.

Enterprise Application Acceleration and Performance

FortiADC appliances utilize multi-core processor technology, combined with hardware-based SSL offloading to accelerate application performance. Using QoS policies, they are able to optimize and handle heavy Layer 4 through 7 traffic loads while delivering Latency Sensitive Applications for small, medium and large enterprises.

Application Availability

FortiADC appliances deliver 99.999% uptime for enterprise application services with intelligent local and global server load balancing. The appliances provide application layer health check mechanisms for automatic failover of application services and use Link Load Balancing to optimize WAN connectivity. This results in 24x7 application availability while reducing business continuity risks.

Application Aware Intelligence and Control

FortiADC application-aware appliances eliminate performance bottlenecks, reduce application deployment complexity and seamless application integration. Fully aware of Layers 4 through 7 application traffic, connections, transactions, and content, they enable IT organizations to create event-driven policies for intelligent distribution of application traffic across web and application servers, and eliminates the need to replicate content across multiple servers. Content awareness is extended to the ability to create complex rules to dynamically rewrite content on the fly using built-in tools or you can write your own custom rules with FortiADC's scripting language.

High-performance, Secure Application Delivery

- Comprehensive server load balancing for 99.999% application uptime
- Server offloading for improved application acceleration, scale and TCO
- Intelligent traffic management for optimized application delivery and availability
- Hardware-based SSL offloading and Forward Proxy
- Authentication Offloading
- Included Global Server Load Balancing
- Included Link Load Balancing
- Web Application Firewall with automatic updates
- Scripting for custom load balancing and content rewriting
- FortiGuard Web Filtering and IP Reputation
- Accelerate content delivery with dynamic compression
- Prioritize applications and manage bandwidth using Quality of Service (QoS) policies



Hardware-Based SSL Offloading and SSL Inspection

FortiADC offloads server-intensive SSL processing with support for 4096-bit keys, TCP connection management, data compression and HTTP request processing from servers. This speeds up response times, reduces load on the backend servers, allowing them to serve more users.

SSL Forward Proxy utilizes FortiADC's high-capacity decryption and encryption to allow other devices, such as a FortiGate firewall, to easily inspect traffic for threats. An inline pair of FortiADCs at the front end and back end of a firewall remove all encryption so that the firewall isn't taxed with the additional load of SSL processing. FortiADC ensures seamless re-encryption with certificates intact with no user disruptions.

Disaster Recovery with Global Server Load Balancing

FortiADC's included Global Server Load Balancing (GSLB) makes your network reliable and available by scaling applications across multiple data centers for disaster recovery or to improve application response times. Administrators can set up rules that direct traffic based on site availability, data center performance and network latency.

Link Load Balancing

Built-in Link Load Balancing (LLB) gives you the option to connect your FortiADC to two or more WAN links to reduce the risk of outages or to add additional bandwidth to relieve traffic congestion. FortiADC supports inbound and outbound Link Load Balancing to manage traffic leaving or entering the device. Using policy routing, FortiADC can support complex NAT and routing requirements to address almost any network LLB architecture. With Tunnel Routing you get high-speed, reliable site-to-site connectivity without the need to lease expensive WAN links. It aggregates multiple links to create a virtual tunnel to a remote data center that ensures availability especially for applications that are time sensitive and require large single-session bandwidth such as video conferencing.

HTTP Caching

Reduce server overload, bandwidth saturation, high latency, and network performance issues with intelligent caching. FortiADC dynamically stores popular application content such as images, videos, HTML files and other file types to alleviate server resources and accelerate overall application performance.

Key Features & Benefits

Policy-Based Rules	Intuitive L7 policy-based routing to dynamically rewrite content to support complex applications and server configurations.
SSL Offloading and Forward Proxy	Hardware and software-based SSL offloading reduces the performance impact on your server infrastructure. Also provides SSL decryption and re-encryption for FortiGate to easily inspect traffic for threats.
Global Server Load Balancing	Included Global Server Load Balancing distributes traffic across multiple geographical locations for disaster recovery or to improve user response times.
Link Load Balancing	Link Load Balancing distributes traffic over multiple ISPs to increase resilience and reduce the need for costly bandwidth upgrades.
IP Reputation	IP Reputation Service protects your applications against automated web attacks by identifying access from botnets and other malicious sources.
Web Application Firewall	Protect applications with Web Application Attack signatures and HTTP RFC compliance.

HTTP Compression

Accelerate application performance and reduce overall bandwidth requirements with HTTP compression. FortiADC intelligently compresses HTTP and HTTPS traffic. By reducing server reply content size it accelerates performance and improves response times. FortiADC supports both industry standard GZIP and DEFLATE algorithms for many content types used by today's latest web-based applications.

Virtual Domains (VDOMs)

Managed service provider and enterprise data center administrators can divide a FortiADC into two or more virtual FortiADC devices, each operating as an independent application delivery controller. Each VDOM can provide completely separate ADC services, such as server load balancing, SSL offloading, and traffic routing policies. A multi-VDOM FortiADC can be centrally managed or can be assigned to a VDOM administrator to manage their own virtual ADC.

Enhanced Protection with FortiGuard WAF, Web Filtering and IP Reputation Services

Web applications can be an easy target for hackers. FortiADC offers you multiple levels of protection to defend against attacks that target your applications. In addition to its stateful firewall feature, built in to every FortiADC D-series is a Web Application Firewall that can detect known threats using FortiGuard WAF Security Services for layer 7 attack signatures (subscription required) and checks that requests haven't been tampered with using its HTTP RFC compliance constraints. FortiGuard Web Filtering works with FortiADC's SSL Forward Proxy feature to simplify the process of managing exceptions for secure traffic inspection. Instead of manually configuring single URLs, Web Filtering gives administrators the ability to choose websites by category type to enable or disable SSL traffic inspection as a group instead of on a site by site basis. FortiADC also supports our FortiGuard IP Reputation service (subscription required) that protects you from sources associated with DoS/ DDoS attacks, phishing schemes, spammers, malicious software and botnets.

Scripting to Extend Built-in Features

FortiADC's Lua-based scripting language gives you the flexibility to create custom, event-driven rules using predefined commands, variables and operators. Using easy-to-create scripts, you get the flexibility you need to extend your FortiADC with specialized business rules that give you almost unlimited possibilities for server load balancing and content rewriting to meet the needs of your organization.

FEATURES

Application Availability

Intelligent and easy to configure Layer 4/7 policy and group management

- Virtual service definition with inherited persistence, load balancing method and pool members
- Static, default and backup policies and groups
- Layer 4/7 application routing policy
- Layer 4/7 server persistence
- Application load balancing based on round robin, weighted round robin, least connections, shortest response
- Granular real server control including warm up rate limiting and maintenance mode with session ramp down

Layer 4 Application Load Balancing

- TCP, UDP protocols supported
- Round robin, weighted round robin, least connections, shortest response
- Persistent IP, has IP/port, hash header, persistent cookie, hash cookie, destination IP hash, URI hash, full URI hash, host hash, host domain hash
- RADIUS, DNS servers support

Layer 7 Application Load Balancing

- HTTP/HTTPS/FTP/SIP/RDP/RADIUS supported
- L7 content switching
 - HTTP Host, HTTP Request URL, HTTP Referrer
 - Source IP Address
- URL redirect, HTTP request/response rewrite
- 403 Forbidden Rewrite
- Content rewriting

Link Load Balancing

- Inbound and outbound LLB
- Support for Policy Route and SNAT
- Multiple health check target support
- Configurable intervals, retries and timeouts
- Tunnel Routing

Global Server Load Balancing (GSLB)

- Global data center DNS-based failover of web applications
- Delivers local and global load balancing between multi-site SSL VPN deployments
- DNSSEC
- DNS Access Control Lists

Deployment Modes

- Configurable proxy (NAT) or transparent (direct) mode per VIP
- X-Forwarded for configuration in proxy mode
- High Availability
- Active/Passive Failover
- Active/Active Failover

Application Acceleration

SSL Offloading and Acceleration

- Offloads HTTPS and TCPS processing while securing sensitive data
- Full certificate management features
- SSL Forward Proxy for secure traffic inspection

TCP Acceleration

- 100x acceleration by off-loading TCP processing
- Connection pooling and multiplexing for HTTP and HTTPS
- TCP buffering
- Client connection persistence
- HTTP Compression
- HTTP Caching
- Bandwidth allocation with Quality of Service (QoS)
- HTTP and Layer 4 Rate Limiting

Authentication Offloading

- Local
- LDAP
- RADIUS

Networking

- NAT for maximum flexibility and scalability
- VLAN and port trunking support
- BGP and OSPF Support
- IPv6 Support
- IPv6 routing
- IPv6 firewall rules

Security

- Web Application Firewall
- GEO IP security and logs
- Stateful firewall
- Web Filtering (subscription required)
- IP Reputation (subscription required)
- IPv4 and 6 firewall rules
- Granular policy-based connection limiting
- Syn Cookie Protection

Management

- Single point of cluster management
- CLI Interface for configuration and monitoring
- Secure SSH remote network management
- Secure Web UI access
- RESTful API
- Custom Scripting for SLB and Content Rewriting
- SNMP with private MIBs with threshold-based traps
- Real-time Data Analytics
- Syslog support
- Role-based administration
- In-build diagnostic utilities
- Real-time monitoring graphs
- Virtual Domains (VDOMs)

SPECIFICATIONS

	FORTIADC 100F	FORTIADC 200D	FORTIADC 300D	FORTIADC 400D
Hardware Specifications				
L4 Throughput	1.5 Gbps	3 Gbps	5.0 Gbps	10.0 Gbps
L7 TPS	70,000	100,000	242,000	345,000
L7 Throughput	1.3 Gbps	2.5 Gbps	4.0 Gbps	8.0 Gbps
SSL CPS 2048 Key	500	900	1,500	6,000
Compression Throughput	750 Mbps	1.5 Gbps	3.5 Gbps	5.5 Gbps
Memory	4 GB	4 GB	8 GB	8 GB
Virtual Domains	—	—	10	20
Network Interfaces	6x GE RJ45	4x GE RJ45	4x GE RJ45, 4x GE SFP	2x 10 GE SFP+ slots, 4x GE SFP ports, 4x GE ports
10/100/1000 Management Interface	—	—	—	—
Storage	64 GB SSD	1 TB Hard Disk	128 GB SSD	128 GB SSD
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP
Power Supply	Single	Single	Single	Single (optional Dual)
Environment				
Form Factor	1U Appliance	1U Appliance	1U Appliance	1U Appliance
Input Voltage	100–240V, 50–60 Hz	90–264V AC, 47–63 Hz	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz
Power Consumption (Average / Maximum)	40 W / 60 W	60 W / 72 W	96 W / 115 W	109 W / 130.8 W
Maximum Current	100V/1.5A, 240V/0.6A	115V/6A, 230V/3A	100V/4A, 240V/2A	100V/5A, 240V/3A
Heat Dissipation	132–163 BTU/h	205 BTU/h	392.4 BTU/h	446.3 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	–4–167°F (-20–75°C)	–13–158°F (-25–70°C)	–13–158°F (-25–70°C)	–13–158°F (-25–70°C)
Humidity	10–85% relative humidity, non-operating, non-condensing	5–95% non-condensing	5–95% non-condensing	5–95% non-condensing
Compliance				
Regulatory Compliance	FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/c			
Safety	CSA, C/US, CE, UL			
Dimensions				
Height x Width x Length (inches)	1.75 x 17.3 x 10.55	1.75 x 17.05 x 13.86	1.73 x 17.24 x 16.38	1.73 x 17.24 x 16.38
Height x Width x Length (mm)	44 x 440 x 268	45 x 433 x 352	44 x 438 x 416	44 x 438 x 416
Weight	9.9 lbs (4.5 kg)	17.2 lbs (7.8 kg)	20 lbs (9.07 kg)	22 lbs (9.97 kg)



FortiADC 100F



FortiADC 200D



FortiADC 300D



FortiADC 400D

SPECIFICATIONS

	FORTIADC 700D	FORTIADC 1500D	FORTIADC 2000D	FORTIADC 4000D
Hardware Specifications				
L4 Throughput	15.0 Gbps	20.0 Gbps	30.0 Gbps	50.0 Gbps
L7 TPS	600,000	800,000	1,200,000	1,600,000
L7 Throughput	12 Gbps	18 Gbps	25 Gbps	35 Gbps
SSL CPS 2048 Key	12,000	14,500	31,000	31,000
Compression Throughput	8 Gbps	10 Gbps	13 Gbps	16 Gbps
Memory	16 GB	16 GB	16 GB	32 GB
Virtual Domains	30	45	60	90
Network Interfaces	4x 10 GE SFP+ slots, 4x GE SFP ports, 4x GE ports	4x 10 GE SFP+ slots, 8x GE ports	4x 10 GE SFP+ slots, 16x GE ports	8x 10 GE SFP+ slots, 16x GE ports
10/100/1000 Management Interface	—	1	1	1
Storage	128 GB SSD	120 GB SSD	120 GB SSD	480 GB SSD
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP
Power Supply	Single (optional Dual)	Dual	Dual	Dual
Environment				
Form Factor	1U Appliance	1U Appliance	1U Appliance	2U Appliance
Input Voltage	100–240V, AC 50–60 Hz	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz
Power Consumption (Average / Maximum)	135 W / 162 W	288 W / 345 W	300 W / 360 W	450 W / 540 W
Maximum Current	100V/5A, 240V/3A	120V/6A, 240V/3A	120V/6A, 240V/3A	120V/9A, 240V/4A
Heat Dissipation	508.68 BTU/h	1177 BTU/h	1228 BTU/h	1843 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)
Humidity	5–95% non-condensing	5–95% non-condensing	5–95% non-condensing	5–95% non-condensing
Compliance				
Regulatory Compliance		FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/c		
Safety		CSA, C/US, CE, UL		
Dimensions				
Height x Width x Length (inches)	1.73 x 17.24 x 16.38	1.73 x 17.24 x 22.83	1.73 x 17.24 x 22.83	3.46 x 17.52 x 23.70
Height x Width x Length (mm)	44 x 438 x 416	44 x 438 x 580	44 x 438 x 580	88 x 445 x 602
Weight	22 lbs (10 kg)	23.94 lbs (10.86 kg)	24.23 lbs (11.08 kg)	36.11 lbs (16.38 kg)

	FORTIADC-VM01	FORTIADC-VM02	FORTIADC-VM04	FORTIADC-VM08
Hardware Specifications				
Hypervisor Support	VMware ESX/ESXi, Citrix XenServer, Open Source Xen, Microsoft Hyper-V, KVM. Please see the FortiADC-VM Install Guide for the latest hypervisor versions supported.			
L4 Throughput*	1 Gbps	2 Gbps	4 Gbps	10 Gbps
Virtual Domains	0	0	5	10
vCPU Support (Minimum / Maximum)	1	2	4	8
Memory Support (Minimum / Maximum)	512 MB / 2 GB	512 MB / 4 GB	512 MB / 8 GB	512 MB / 16 GB
Network Interface Support (Minimum / Maximum)	10	10	10	10
Storage Support (Minimum / Maximum)	50 MB / 1 TB	50 MB / 1 TB	50 MB / 1 TB	50 MB / 1 TB
Throughput	Hardware Dependent	Hardware Dependent	Hardware Dependent	Hardware Dependent
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP			

* Actual performance values may vary depending on the network traffic and system configuration. Performance results were observed using an appliance with an Intel CPU E5-1650 v2 @ 3.50 GHz running VMware ESXi 5.5.



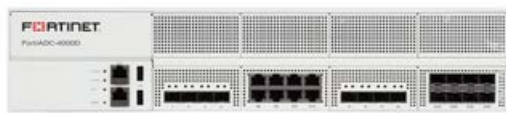
FortiADC 700D



FortiADC 1500D



FortiADC 2000D



FortiADC 4000D

ORDER INFORMATION

Product	SKU	Description
FortiADC 100F	FAD-200D	FortiADC-100F, 6x GE ports, 1x 64 GB SSD onboard storage.
FortiADC 200D	FAD-200D	FortiADC-200D, 4x GE ports, 1x 1 TB storage.
FortiADC 300D	FAD-300D	FortiADC-300D, 8x GE ports, 1x 128 GB SSD onboard storage.
FortiADC 400D	FAD-400D	FortiADC-400D, 2x 10 GE SFP+ slots, 8x GE ports, 1x 128 GB SSD onboard storage, optional dual AC power supplies.
FortiADC 700D	FAD-700D	FortiADC-700D, 4x 10 GE SFP+ slots, 8x GE ports, 1x 128 GB SSD onboard storage, optional dual AC power supplies.
FortiADC 1500D	FAD-1500D	FortiADC-1500D, 4x 10 GE SFP+ slots, 8x GE ports, 1x 120 GB SSD onboard storage, dual AC power supplies.
FortiADC 2000D	FAD-2000D	FortiADC-2000D, 4x 10 GE SFP+ slots, 16x GE ports, 1x 480 GB SSD onboard storage, dual AC power supplies.
FortiADC 4000D	FAD-4000D	FortiADC-4000D, 8x 10 GE SFP+ slots, 16x GE ports, 1x 480 GB SSD onboard storage, dual AC power supplies.
FortiADC-VM01	FAD-VM01	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 1x vCPU core, 2 GB.
FortiADC-VM02	FAD-VM02	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 2x vCPU core, 4 GB.
FortiADC-VM04	FAD-VM04	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 4x vCPU core, 8 GB.
FortiADC-VM08	FAD-VM08	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 8x vCPU core, 16 GB.
Optional Accessory		
AC Power Supply	SP-FAD700-PS	AC power supply for FAD-700D, FML-400E, FDB-500D AND FWN-1000B.



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