



## FortiADC™ D-Series 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 SSL offload 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.

### SSL and Server Offloading

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.

### 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

### *High-performance, Secure Application Delivery*

- Intelligent traffic management for optimized application delivery and availability.
- Server offloading for improved application acceleration, scale and TCO.
- SSL offload for accelerating application performance.
- Comprehensive server load balancing for 99.999% application uptime.
- Global Server Load Balancing for geographic resilience.
- Optimize WAN connectivity and ensure business continuity with Link Load Balancing.
- Prioritize applications and manage bandwidth using Quality of Service (QoS) policies.
- Accelerate content delivery with on the fly compression.
- Browser-based Web user interface for ease of management.
- Appliance and virtual machine form factor for greatest deployment flexibility.



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 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.

## 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.

## 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 IP Reputation Service

Attackers use many methods to infect and control devices to launch automated phishing, spamming, and DDoS attacks. The FortiGuard IP Reputation Service aggregates security data from around the world to provide up-to-date information about threatening sources. With feeds from distributed network gateways combined with world-class research done by FortiGuard Labs, organizations can stay up to date and proactively block attacks.

FortiGuard's IP Reputation Service categorizes and blocks threats from sources associated with:

- DoS and DDoS attacks
- Phishing attacks or hosted Phishing web sites
- Anonymous traffic arriving from paid or anonymous proxies used to disguise real client identity
- Malicious software
- Spammers
- Command and control communication

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## Key Features & Benefits

Policy-Based Rules	Intuitive L7 policy-based routing to dynamically rewrite content to support complex applications and server configurations.
SSL Offloading	Hardware and software-based SSL offloading reduces the performance impact on your server infrastructure.
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.
Quality of Service (QoS)	Prioritize traffic based on business needs or ensure optimal delivery of time-sensitive content like voice and video with Quality of Service.

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# 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, hash IP/port, hash header, persistent cookie, hash cookie
- RADIUS, DNS servers support

### Layer 7 Application Load Balancing

- HTTP/HTTPS/FTP/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 datacenter DNS based failover of web applications
- Delivers local and global load balancing between multi-site SSL VPN deployments

## Deployment Modes

- Configurable proxy (NAT) or transparent (direct) mode per VIP
- X-Forwarded for configuration in proxy mode

## High Availability

- Active/Passive Failover

## Application Acceleration

### SSL Offloading and Acceleration

- Offloads HTTPS processing while securing sensitive data
- Full certificate management features

### TCP Acceleration

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

## Networking

- NAT for maximum flexibility and scalability
- VLAN and port trunking support

## IPv6 Support

- IPv6 routing
- IPv6 firewall rules

## Security

- IPv4 and 6 firewall rules
- Granular policy-based connection limiting
- Syn Cookie Protection
- IP Reputation (subscription required)

## Management

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

# SPECIFICATIONS

	FORTIADC-200D	FORTIADC-1500D	FORTIADC-2000D	FORTIADC-4000D
<b>Hardware Specifications</b>				
L4 Throughput	2.7 Gbps	20.0 Gbps	30.0 Gbps	50.0 Gbps
L7 TPS	100,000	800,000	1,200,000	1,600,000
L7 Throughput	1.5 Gbps	18 Gbps	25 Gbps	35 Gbps
SSL CPS	900	14,500	31,000	31,000
Memory	4 GB	16 GB	16 GB	32 GB
Virtual Domains	—	10	10	25
Network Interfaces	4x GE RJ45	4x 10 GbE SFP+ slots, 8x GE ports	4x 10 GbE SFP+ slots, 16x GE ports	8x 10 GbE SFP+ slots, 16x GE ports
10/100/1000 Management Interface	—	1	1	1
Storage	1 TB Hard Disk	120 GB SSD	120 GB SSD	480 GB SSD
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP			
Power Supply	Single	Dual	Dual	Dual
<b>Environment</b>				
Form Factor	1U Appliance	1U Appliance	1U Appliance	2U Appliance
Input Voltage	90–264V AC, 47–63 Hz	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz
Power Consumption (AVG)	60 W	288 W	300 W	450 W
Power Consumption (MAX)	72 W	345 W	360 W	540 W
Maximum Current	115V/6A, 230V/3A	120V/6A, 240V/3A	120V/6A, 240V/3A	120V/9A, 240V/4A
Heat Dissipation	205 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
<b>Compliance</b>				
Regulatory Compliance	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/c	FCC Part 15 Class A, C-tick, VCCI, CE, UL/c	FCC Part 15 Class A, C-tick, VCCI, CE, UL/c	FCC Part 15 Class A, C-tick, VCCI, CE, UL/c
Safety	CSA, C/US, CE, UL			
<b>Dimensions</b>				
Height x Width x Length (in)	1.75 x 17.05 x 13.86	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)	45 x 433 x 352	44 x 438 x 580	44 x 438 x 580	88 x 445 x 602
Weight	17.2 lbs (7.8 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
<b>Hardware Specifications</b>				
Hypervisor Support	VMware ESXi / ESX 5.0 / 5.1			
vCPU Support (Min / Max)	1	2	4	8
Memory Support (Min / Max)	512 MB / 2 GB	512 MB / 4 GB	512 MB / 8 GB	512 MB / 16 GB
Network Interface Support (Min / Max)	10	10	10	10
Storage Support (Min / Max)	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			

\*\* Indicative figures based on testing with licensed number of vCore CPU on host system running Intel Core i7-2600K CPU @ 3.4 GHz and maximum licensed RAM.

## ORDER INFORMATION

Product	SKU	Description
FortiADC-200D	FAD-200D	FortiADC-200D, 4x GE ports, 1x 1 TB storage.
FortiADC-1500D	FAD-1500D	FortiADC-1500D, 4x 10 GbE SFP+ slots, 8x GE ports, 1x 120 GB SSD onboard storage, dual AC power supplies.
FortiADC-2000D	FAD-2000D	FortiADC-2000D, 4x 10 GbE SFP+ slots, 16x GE ports, 1x 480 GB SSD onboard storage, dual AC power supplies.
FortiADC-4000D	FAD-4000D	FortiADC-4000D, 8x 10 GbE 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.

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