The high-performance F5 BIG-IP 10000-series ADC appliances have best-in-class L7 and SSL performance that can meet your increasing traffic management, security, and optimization needs. It enables large enterprises and service providers to support extremely high levels of traffic and integrate advanced DNS, optimization, and security capabilities while consolidating IT infrastructure. The BIG-IP 10200v also offers industry-first 40G ports in its price class, leading hardware compression, and the first ADC platform with 80 Plus Platinum power supplies.

- Up to 2M L7 RPS
- Up to 1M L4 CPS RPS
- Up to 42,000 TPS (2K keys) and 22 Gbps bulk encryption
- Up to 80M SYN cookies per second for large-scale DDoS protection
- Up to 6 vCMP instances included
- Ideal for maximum consolidation of application delivery services and migration to 40GbE infrastructure

Specifications

Intelligent Traffic Processing:

- L7 requests per second: 1M
- L4 connections per second: 500K
- L4 HTTP requests per second: 7M
Throughput: 80 Gbps/40 Gbps L4/L7

Hardware SSL: Included: 21,000 TPS (2K keys)

Maximum: 21,000 TPS (2K keys)

22 Gbps bulk encryption*

FIPS SSL: FIPS 140-2 Level 2 (option)

9,000 TPS (2K keys)

Hardware DDoS Protection: N/A

Hardware Compression: Included: 50 Mbps

Maximum: 16 Gbps

Software Compression: N/A

Software Architecture: 64-bit TMOS

On-Demand Upgradable: N/A

Processor: Dual CPU, hex core (12 processing cores)

Memory: 48 GB

Hard Drive: Two 600 GB drives, 10,000 RPM (RAID 1); Optional 4x 300 GB or 600 GB SSD

Gigabit Ethernet CU Ports: Optional SFP

Gigabit Fiber Ports (SFP): Optional SFP
10 Gigabit Fiber Ports (SFP+SR or LR (sold separately, 2 SR included))

40 Gigabit Fiber Ports (QSFP+):

- **Power Supply:** Dual 850W included, DC optional
- **Typical Consumption:** 440W (dual A/C power - 110V input)
- **Input Voltage:** 90–240 VAC +/- 10% auto switching, 50/60 Hz
- **Typical Heat Output:** 1501 BTU/hour (110V input)

- **Dimensions:** 5.2" (13.2 cm) H x 17.4" (44.2 cm) W x 21.4" (54.36 cm) D

3U industry standard rack-mount chassis

- **Weight:** 52 lbs. (23.6 kg) (dual power supply)
- **Operating Temperature:** 32° to 104° F (0° to 40° C)
- **Operational Relative Humidity:** 5% to 85% at 40° C


CSA C22.2 No. 60950-1-03

IEC 60950-1: 2005, 2nd Edition

EN 60950-1: 2005, 2nd Edition
Certifications/


FCC Part 15B Class A

VCCI Class A

**Deliver More Applications for More Users**

F5® BIG-IP® Application Delivery Controller (ADC) platforms can manage even the heaviest traffic loads at both layer 4 and layer 7. By merging high-performance switching fabric, specialized hardware, and advanced software, F5 provides the flexibility to make in-depth application decisions without introducing bottlenecks.

With the high performance you get from BIG-IP platforms, you can consolidate devices—saving management costs, electricity, space, and cooling—and still have room to grow.

**Key benefits**

**Consolidate your infrastructure with purpose-built hardware**

BIG-IP hardware platforms are designed specifically for application delivery performance and
scalability. One device can be configured for server load balancing, global data center load balancing, DNS services, web application firewall, access management, web performance optimization, and WAN optimization.

**Offload application servers**

BIG-IP platforms feature high-performance SSL and compression hardware, as well as advanced connection management, so that you can remove processing-intensive tasks from application servers, consolidate devices, and use these resources more efficiently.

**Secure your network**

Instantly add layer 3–7 protection with ICSA Certified BIG-IP platforms that provide default deny security, a full packet filter engine that limits access in a granular way, and an industry-leading web application firewall.

**Reduce your operating costs**

Spend less time on configuration, upgrades, and maintenance with the simple-to-manage BIG-IP hardware, featuring out-of-band management, front-panel management, warm upgrades, remote boot, and USB support. Lower power and cooling costs in your data center with 80 Plus Gold and Platinum certified high-efficiency power supplies.

**Maximize uptime**

Ensure your critical infrastructure is built on reliable hardware with hot-swappable components, redundant power supplies, redundant fans, compact flash, multi-boot support, and always-on management. Appliances can be deployed in traditional active/standby configuration or horizontal clusters (active/active) to achieve high availability and application-level failover.

**Intelligent Performance Where It Matters**

Performance traditionally has been measured in terms of throughput, but this doesn’t accurately represent the complex needs of application delivery. Connection capacity and L7 transactions per second are critical for an ADC to support the increasing needs of modern web applications and infrastructure. For instance, an ADC needs to be able to process high levels of layer 4 and layer 7 connections and make more decisions at the application layer, such as inspecting and removing sensitive information or transforming application-specific payloads. BIG-IP appliances have the intelligence and performance to deliver the maximum amount of application layer
decisions while securing your data and infrastructure.

**Simplify Your Network**

BIG-IP ADC appliances can help you simplify your network by offloading servers and consolidating devices, saving management costs as well as power, space, and cooling in the data center.

With the massive performance and scalability of the BIG-IP platform, you can reduce the number of Application Delivery Controllers you need to deliver even the most demanding applications. By offloading computationally intense processes, you can significantly reduce the number of application servers needed.

**BIG-IP hardware includes:**

- SSL hardware acceleration—Offload costly SSL processing and accelerate key exchange and bulk encryption with best-in-market SSL performance.
- Hardware compression—Cost-effectively offload traffic compression processing from your servers to improve page load times and reduce bandwidth utilization.
- OneConnect™ connection pooling—Aggregate millions of TCP requests into hundreds of server-side connections. Increase server capacity and ensure requests are handled efficiently.

- Embedded Packet Velocity Acceleration (ePVA)—Provide high-performance L4 throughput and denial-of-service (DoS) protection. ePVA uses field-programmable gate array (FPGA) technology tightly integrated with TMOS and software to deliver:
  - High performance interconnect between Ethernet ports and processors.
  - L4 offload, enabling leading throughput and reduced load on software.
  - Hardware-accelerated SYN flood protection.
  - More than 20 DoS attacks detected and mitigated in hardware.
  - Predictable performance for low latency protocols such as Financial Information eXchange (FIX).

**The Advantages of F5 BIG-IP Technology**

Unique architecture and patented hardware and software innovations from F5 offer unmatched capabilities, including:

**F5 ScaleN architecture**
F5 BIG-IP 10000

ScaleN enables you to scale performance on demand, virtualize, or horizontally cluster multiple BIG-IP devices, creating an elastic Application Delivery Networking infrastructure that can efficiently adapt as your business needs change.

- On-demand scaling—Increase capacity and performance with on-demand scaling, where you can simply add more power to your existing infrastructure instead of adding more devices. The latest BIG-IP appliance models can be upgraded to the higher performance model within each series through on-demand software licensing. On-demand licensing enables organizations to right-size application delivery services and support growth without requiring new hardware.

- Operational scaling—F5 can virtualize Application Delivery Controller (ADC) services with a multi-tenant architecture that supports a variety of BIG-IP versions and product modules on a single device. Multi-tenant device virtualization is provided by F5’s unique Virtual Clustered Multiprocessing (vCMP®) technology, which enables select hardware platforms to run multiple BIG-IP guest instances. Each BIG-IP guest instance looks and acts like a physical BIG-IP device, with a dedicated allocation of CPU, memory, and other resources.

You can further divide each vCMP guest using multi-tenant features such as partitions and route domains, which can isolate configuration and networks on a per-virtual-domain basis. Within each virtual domain, you can further isolate and secure configuration and policies by using a role-based access system for greater administrative control. When combining both route domains/partitions with vCMP guests, F5 provides the highest density multi-tenant virtualization solution that can scale to hundreds of virtual ADC (vADC) instances.

This ability to virtualize BIG-IP ADC services means service providers and enterprise users can isolate based on BIG-IP version, enabling departmental or project-based tenancy as well as performance guarantees, while benefiting from managing a single, consolidated application delivery platform and increased utilization.

- Application scaling—Increase capacity by adding BIG-IP resources through an all-active approach. With application scaling, you can scale beyond the traditional device pair to eliminate the need for idle and costly standby resources. Application scaling achieves this through two forms of horizontal scale: Application Service Clustering, which focuses on application scalability and high availability, and Device Service Clustering, designed to efficiently and seamlessly scale BIG-IP application delivery services.
Application Service Clustering delivers sub-second failover and comprehensive connection mirroring for a highly available cluster of up to eight devices at the application layer, providing highly available multi-tenant deployments. Workloads can be moved across a cluster of devices or virtual instances without interrupting other services and can be scaled to meet the business demand.

Device Service Clustering can synchronize full device configurations in an all-active deployment model, enabling consistent policy deployment and enforcement across devices—up to 32 active nodes. This ensures a consistent device configuration that simplifies operations.

**F5 TMOS platform**

At the heart of BIG-IP appliances is TMOS®, the F5 operating system that provides a unified system for optimal application delivery, giving you total visibility, flexibility, and control across all services. With TMOS, you can intelligently adapt to the diverse and evolving requirements of applications and networks.

**F5 SYN Check**

F5 uses a collaborative software SYN cache and hardware SYN cookie approach to protect against large scale SYN flood DDoS attacks. This capability is available on all TMOS platforms in software and utilizes the embedded Packet Velocity Acceleration (ePVA) field-programmable gate array (FPGA) on select hardware platforms to provide improved performance (up to 80 million SYN cookies per second on the BIG-IP 10200v appliance). When a SYN flood is detected, the ePVA turns on the SYN Check™ feature to prevent invalid sessions from getting to the servers or exhausting the BIG-IP device resources. SYN Check is unique in that it can be applied on a per-virtual-IP/application basis, meaning if one application is under attack, the others are not affected. F5 is the only ADC that implements hardware-based SYN cookies in L4 and full proxy L7 mode.

**Next-Generation ADC Appliances**

With the introduction of the new BIG-IP 2000, 4000, 5000, 7000, and 10000 series appliances, F5 continues to invest and innovate in hardware development to ensure that even the most demanding web applications are available, secure, and fast. The new BIG-IP hardware offers industry-leading performance in application decisions per second, SSL processing, and hardware compression for each class of ADC. Enterprises and service providers can deploy multiple application delivery services, offload SSL processing, and efficiently consolidate on a single, unified platform. In addition, with the capability to upgrade from a base appliance to a
higher capacity model in that series through a software license, F5 provides on-demand flexibility to match changing business needs.