BIG-IP System
HARDWARE DATASHEET

What's Inside

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 specific application delivery optimizations, support for low latency and tunneling protocols, 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 65 types of DoS attacks detected and mitigated in hardware.
  - Native network overlay (VXLAN/NVGRE) support.

*Available on select BIG-IP platforms

The Advantages of F5 BIG-IP Technology

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

F5 ScaleN architecture

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 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. vCMP offers per-guest rate limiting for bandwidth and SSL, enabling customers to achieve different performance levels for each guest.

  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 thousands 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. SYN flood mitigation is available on all TMOS platforms in software. Select hardware platforms (5000, 7000, 10000, and 12000 series appliances and VIPRION blades) utilize the embedded Packet Velocity Acceleration (ePVA) field-programmable gate array (FPGA) to provide significantly 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, 10000, and 12000 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.

Specifications	12250v	11050
Intelligent Traffic Processing:	L7 RPS: 4M L4 CPS: 1.5M L4 HTTP RPS: 14M Maximum L4 concurrent connections: 80M Throughput: 84 Gbps/40 Gbps L4/L7	L7 requests per second: 2.5M L4 connections per second: 1M Maximum L4 concurrent connections: 24M Throughput: 42 Gbps/40 Gbps L4/L7
Hardware SSL:	Included: 240K TPS (2K keys) Maximum: 240K TPS (2K keys) 40 Gbps bulk encryption*	Included: 500 TPS Maximum: 20,000 TPS (2K keys) 15 Gbps bulk encryption*
FIPS SSL:	N/A	FIPS 140-2 Level 2 (option) 9,000 TPS (2K keys) 15 Gbps bulk encryption*
Hardware DDoS Protection:	80 M SYN-Cookies Per Second	N/A
Hardware Compression:	Included: 40 Gbps, Maximum: 40 Gbps	N/A
Software Compression:	N/A	Included: 50 Mbps Maximum: 12 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	N/A
Virtualization (Maximum Number of vCMP Guests):	24	N/A
Processor:	One twelve core Intel Xeon processor (total 24 hyperthreaded logical processor cores)	Dual CPU, hex core (12 processing cores)
Memory:	128 GB	32 GB
Hard Drive:	800 GB SSD	Two 600 GB drives, 10,000 RPM (RAID 1)
Gigabit Ethernet CU Ports:	Optional SFP	Optional SFP
Gigabit Fiber Ports (SFP):	Optional SFP (SX or LX)	Optional SFP (SX or LX)
10 Gigabit Fiber Ports (SFP+):	16 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach	10 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	2 SR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10 gigabit ports) Note: Only optics provided by F5 are supported.	N/A
Power Supply:	Dual 850W included (80+ Platinum efficiency), DC option	Dual 850W included, DC optional
Typical Consumption:	330W (dual supply, 110V input)**	440W (dual A/C power - 110V input)
Input Voltage:	90–240 VAC +/- 10% auto switching, 50/60hz	90–240 VAC +/- 10% auto switching, 50/60 hz
Typical Heat Output:	1125 BTU/hour (dual supply, 110V input)**	1501 BTU/hour (110V input)
Dimensions:	3.45” (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis	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:	43 lbs. (19.5 kg) (Dual power supply)	52 lbs. (23.6 kg) (dual power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	10 to 90% @ 40° C	5 to 85% at 40° C
Safety Agency Approval:	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries	UL 60950-1:2001, 1st Edition CSA C22.2 No. 60950-1-03 IEC 60950-1: 2005, 2nd Edition EN 60950-1: 2005, 2nd Edition
Certifications/ Susceptibility Standards:	EEN 300 386 V1.5.1 (2010-10) EN 55022:2006 + A1:2007 EN 61000-3-2:2006 EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010 USA FCC Class A VCCI Class A	EN 55022:2006 + C1:2006 EN 55024:1998 + A1: 2001 + A2:2003 FCC Part 15B Class A VCCI Class A NEBS compliant (option)

*Maximum throughput.
**Please refer to the Platform Guide: 12000 Series for the latest power ratings for your specific configurations (SSL, highline input voltage, DC, etc.)
Note: Performance-related numbers are based on local traffic management services only.

Specifications	11000	10350v-N
Intelligent Traffic Processing:	L7 requests per second: 2.5M L4 connections per second: 1M Maximum L4 concurrent connections: 30M Throughput: 24 Gbps L4/L7	L7 RPS: 3M L4 CPS: 1.2M L4 HTTP RPS: 14M Maximum L4 concurrent connections: 80M Throughput: 84 Gbps/40 Gbps L4/L7
Hardware SSL:	Included: 500 TPS Maximum: 20,000 TPS (2K keys) 15 Gbps bulk encryption*	Included: 42K TPS (2K keys) Maximum: 42K TPS (2K keys) 24 Gbps bulk encryption
FIPS SSL:	FIPS 140-2 Level 2 (option) 9,000 TPS (2K keys) 15 Gbps bulk encryption*	N/A
Hardware DDoS Protection:	N/A	80 M SYN-Cookies Per Second
Hardware Compression:	Included: 50 Mbps Maximum: 16 Gbps	Included: 24 Gbps Maximum: 24 Gbps
Software Compression:	N/A	N/A
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	N/A
Virtualization (Maximum Number of vCMP Guests):	N/A	20
Processor:	Dual CPU, hex core (12 processing cores)	One ten core Intel Xeon processor (total 20 hyperthreaded logical processor cores
Memory:	48 GB	128 GB
Hard Drive:	Two 600 GB drives, 10,000 RPM (RAID 1)	800 GB SSD
Gigabit Ethernet CU Ports:	Optional SFP	Optional SFP
Gigabit Fiber Ports (SFP):	Optional SFP (SX or LX)	Optional SFP (SX or LX)
10 Gigabit Fiber Ports (SFP+):	10 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach	16 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	N/A	2 SR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10 gigabit ports) Note: Only optics provided by F5 are supported.
Power Supply:	Dual 850W included, DC optional	Dual 850W included (80+ Platinum efficiency), DC-only.
Typical Consumption:	440W (dual A/C power - 110V input)	320W (dual supply, 48VDC input)**
Input Voltage:	90–240 VAC +/- 10% auto switching, 50/60 hz	Operating range: 44 to 72 VDC Minimum start up voltage: 44 VDC
Typical Heat Output:	1501 BTU/hour (110V input)	1092 BTU/hour (dual supply, 48V 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	3.45“ (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis
Weight:	52 lbs. (23.6 kg) (dual power supply)	43 lbs. (19.5 kg) (Dual power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% at 40° C	10 to 90% @ 40° C
Safety Agency Approval:	UL 60950-1:2001, 1st Edition CSA C22.2 No. 60950-1-03 IEC 60950-1: 2005, 2nd Edition EN 60950-1: 2005, 2nd Edition	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries
Certifications/ Susceptibility Standards:	EN 55022:2006 + C1:2006 EN 55024:1998 + A1: 2001 + A2:2003 FCC Part 15B Class A VCCI Class A	EEN 300 386 V1.5.1 (2010-10) EN 55022:2006 + A1:2007 EN 61000-3-2:2006 EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010 USA FCC Class A NEBS compliant VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 10000 Series for the latest power ratings for your specific configurations (SSL, SSD, highline input voltage, DC, etc.)
Note: Performance-related numbers are based on local traffic management services only.

Specifications	10255v/10250v/10200v-SSL	10055s/10050s/10000s
Intelligent Traffic Processing:	L7 requests per second: 2M L4 connections per second: 1M L4 HTTP requests per second: 14M Maximum L4 concurrent connections: 36M Throughput: 80 Gbps/40 Gbps L4/L7	L7 requests per second: 1M L4 connections per second: 500K L4 HTTP requests per second: 7M Maximum L4 concurrent connections: 36M Throughput: 80 Gbps/40 Gbps L4/L7
Hardware SSL:	Included: 42,000 TPS (2K keys) Max for 10200v: 42,000 TPS (2K keys) Max for 10200v-SSL: 75,000 TPS (2K keys) 22 Gbps bulk encryption* for 10200v 33 Gbps bulk encryption* for 10200v-SSL	Included: 21,000 TPS (2K keys) Maximum: 21,000 TPS (2K keys) 22 Gbps bulk encryption*
FIPS SSL:	FIPS 140-2 Level 2 (10200v option)*** 9,000 TPS (2K keys), 22 Gbps bulk encryption*	N/A
Hardware DDoS Protection:	80M SYN cookies per second	40M SYN cookies per second
Hardware Compression:	Included: 24 Gbps , Maximum: 24 Gbps	N/A
Software Compression:	N/A	Included: 12 Gbps Maximum: 12 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	Yes
Virtualization (Maximum Number of vCMP Guests):	12 (10250v); 6 (10200v)	N/A
Processor:	Intel hex core (total 12 hyperthreaded logical processor cores)	Intel hex core (total 12 hyperthreaded logical processor cores)
Memory:	48 GB	48 GB
Hard Drive:	Two 1 TB drives (RAID 1) (10200v) 400 GB solid state drive (10250v) Two 400 GB solid state drive (RAID1) (10255v)	Two 1 TB drives (RAID 1) (10000s) 400 GB solid state drive (10050s) Two 400 GB solid state drive (RAID1) (10055s)
Gigabit Ethernet CU Ports:	Optional SFP	Optional SFP
Gigabit Fiber Ports (SFP):	Optional SFP (SX or LX)	Optional SFP (SX or LX)
10 Gigabit Fiber Ports (SFP+):	16 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach	16 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	2 SR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10 gigabit ports) *Note: Only optics provided by F5 are supported.*	2 SR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10 gigabit ports) *Note: Only optics provided by F5 are supported.*
Power Supply:	Dual 850W included (80+ Platinum efficiency), DC optional	Dual 850W included (80 Plus Platinum efficiency), DC optional
Typical Consumption:	320W (dual supply, 110V input)**	320W (dual supply, 110V input)**
Input Voltage:	90–240 VAC +/- 10% auto switching, 50/60hz	90–240 VAC +/- 10% auto switching, 50/60hz
Typical Heat Output:	1090 BTU/hour (dual supply, 110V input)**	1090 BTU/hour (dual supply, 110V input)**
Dimensions:	3.45” (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis	3.45” (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis
Weight:	43 lbs. (19.5 kg) (dual power supply)	43 lbs. (19.5 kg) (dual power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% at 40° C	5 to 85% at 40° C
Safety Agency Approval:	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries
Certifications/ Susceptibility Standards:	EEN 300 386 V1.5.1 (2010-10); EN 55022:2006 + A1:2007 EN 61000-3-2:2006; EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010; USA FCC Class A VCCI Class A	EEN 300 386 V1.5.1 (2010-10); EN 55022:2006 + A1:2007 EN 61000-3-2:2006; EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010; USA FCC Class A VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 10000 Series for the latest power ratings for your specific configurations (SSL, SSD, highline input voltage, DC, etc.)
*** vCMP guest access to FIPS resources not supported.
Note: Performance-related numbers are based on local traffic management services only.

Specifications	7255v/7250v/7200v-SSL	7055s/7050s/7000s
Intelligent Traffic Processing:	L7 requests per second: 1.6M L4 connections per second: 775K L4 HTTP requests per second: 7M Maximum L4 concurrent connections: 24M Throughput: 40 Gbps/20 Gbps L4/L7	L7 requests per second: 800K L4 connections per second: 390K L4 HTTP requests per second: 3.5M Maximum L4 concurrent connections: 24M Throughput: 40 Gbps/20 Gbps L4/L7
Hardware SSL:	Included: 25,000 TPS (2K keys) Maximum for 7200v: 25,000 TPS (2K keys) Maximum for 7200v-SSL: 60,000 TPS (2K keys) 18 Gbps bulk encryption for 7200v 19 Gbps bulk encryption* for 7200v-SSL	Included: 15,000 TPS (2K keys) Maximum: 15,000 TPS (2K keys) 18 Gbps bulk encryption*
FIPS SSL:	FIPS 140-2 Level 2 (7200v option)*** 9,000 TPS (2K keys); 18 Gbps bulk encryption*	N/A
Hardware DDoS Protection:	40M SYN cookies per second	20M SYN cookies per second
Hardware Compression:	Included: 18 Gbps, Maximum: 18 Gbps	N/A
Software Compression:	N/A	Included: 9 Gbps, Maximum: 9 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	Yes
Virtualization (Maximum Number of vCMP Guests):	8 (7250v), 4 (7200v)	N/A
Processor:	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)
Memory:	32 GB	32 GB
Hard Drive:	Two 1 TB (RAID 1) (7200v) 400 GB solid state drive (7250v) Two 400 GB solid state drive (RAID1) (7255v)	Two 1 TB (RAID 1) (7000s) 400 GB solid state drive (7050s) Two 400 GB solid state drive (RAID1) (7055s)
Gigabit Ethernet CU Ports:	4	4
Gigabit Fiber Ports (SFP):	Optional SFP (SX, LX, or copper)	Optional SFP (SX, LX, or copper)
10 Gigabit Fiber Ports (SFP+):	8 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach	8 SR or LR (sold separately, 2 SR included); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	N/A	N/A
Power Supply:	Two 400 W included (80 Plus Gold Efficiency), DC optional	Two 400 W included (80 Plus Gold Efficiency), DC optional
Typical Consumption:	205W (dual supply, 110V input)**	205W (dual supply, 110V input)**
Input Voltage:	90-240 VAC +/- 10% auto switching, 50/60hz	90-240 VAC +/- 10% auto switching, 50/60hz
Typical Heat Output:	700 BTU/hour (dual supply, 110V input)**	700 BTU/hour (dual supply, 110V input)**
Dimensions:	3.45” (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis	3.45” (8.76 cm) H x 17.3” (43.94 cm) W x 21.4” (54.36 cm) D 2U industry standard rack-mount chassis
Weight:	43 lbs. (19.5 kg) (dual power supply)	43 lbs. (19.5 kg) (dual power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% @ 40° C	5 to 85% @ 40° C
Safety Agency Approval:	ANSI/UL 60950-1-2011 CSA 60950-1-07, including Amendment 1:2011 Low Voltage Directive 2006/95/EC CB Scheme EN 60950-1:2006+A11:2009+A1:2010+A12:2011 IEC 60950-1:2005, A1:2009	ANSI/UL 60950-1-2011 CSA 60950-1-07, including Amendment 1:2011 Low Voltage Directive 2006/95/EC CB Scheme EN 60950-1:2006+A11:2009+A1:2010+A12:2011 IEC 60950-1:2005, A1:2009
Certifications/ Susceptibility Standards:	EN 300 386 V1.5.1 (2010-10); EN 55022:2010 EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-3-3:2008 EN 55024:2010; EN 55022:2010; EN 61000-3-3:2008 EN 55024:2010; USA FCC Class A VCCI Class A	EN 300 386 V1.5.1 (2010-10); EN 55022:2010 EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-3-3:2008 EN 55024:2010; EN 55022:2010; EN 61000-3-3:2008 EN 55024:2010; USA FCC Class A VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 7000 Series for the latest power ratings for your specific configurations (SSL, SSD, highline input voltage, DC, etc.).
*** vCMP guest access to FIPS resources not supported.
Note: Performance-related numbers are based on local traffic management services only.

Specifications	5250v/5200v	5050s/5000s
Intelligent Traffic Processing:	L7 requests per second: 1.5M L4 connections per second: 700K Maximum L4 concurrent connections: 24M L4 HTTP requests per second: 7M Throughput: 30 Gbps/15 Gbps L4/L7	L7 requests per second: 750K L4 connections per second: 350K L4 HTTP requests per second: 3.5M Maximum L4 concurrent connections: 24M Throughput: 30 Gbps/15 Gbps L4/L7
Hardware SSL:	Included: 21,000 TPS (2K keys) Maximum: 21,000 TPS (2K keys) 12 Gbps bulk encryption*	Included: 10,000 TPS (2K keys) Maximum: 10,000 TPS (2K keys) 12 Gbps bulk encryption*
FIPS SSL:	FIPS 140-2 Level 2 (5250v option)*** 5,000 TPS (2K keys); 12 Gbps bulk encryption*	N/A
Hardware DDoS Protection:	40M SYN cookies per second	20M SYN cookies per second
Hardware Compression:	Included: 12 Gbps, Maximum: 12 Gbps	N/A
Software Compression:	N/A	Included: 6 Gbps Maximum: 6 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	Yes
Virtualization (Maximum Number of vCMP Guests)	8 (5250v), 4 (5200v)	N/A
Processor:	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)
Memory:	32 GB	32 GB
Hard Drive:	1 TB (5200v); 400 GB solid state drive (5250v)	1 TB (5000s) 400 GB solid state drive (5050s)
Gigabit Ethernet CU Ports:	4	4
Gigabit Fiber Ports (SFP):	Optional SFP (SX, LX, or copper)	Optional SFP (SX, LX, or copper)
10 Gigabit Fiber Ports (SFP+):	8 SR or LR (sold separately); Optional 10G copper direct attach	8 SR or LR (sold separately); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	N/A	N/A
Power Supply:	One 400 W included (80 Plus Gold Efficiency), dual power and DC options	One 400 W included (80 Plus Gold Efficiency), dual power and DC options
Typical Consumption:	165W (single supply, 110V input)**	165W (single supply, 110V input)**
Input Voltage:	90-240 VAC +/- 10% auto switching, 50/60hz	90-240 VAC +/- 10% auto switching, 50/60hz
Typical Heat Output:	564 BTU/hour (single supply, 110V input)**	564 BTU/hour (single supply, 110V input)**
Dimensions:	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis
Weight:	21 lbs. (9.53 kg) (one power supply)	21 lbs. (9.53 kg) (one power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% at 40° C	5 to 85% at 40° C
Safety Agency Approval:	ANSI/UL 60950-1-2011 CSA 60950-1-07, including Amendment 1:2011 Low Voltage Directive 2006/95/EC CB Scheme EN 60950-1:2006+A11:2009+A1:2010+A12:2011 IEC 60950-1:2005, A1:2009	ANSI/UL 60950-1-2011 CSA 60950-1-07, including Amendment 1:2011 Low Voltage Directive 2006/95/EC CB Scheme EN 60950-1:2006+A11:2009+A1:2010+A12:2011 IEC 60950-1:2005, A1:200
Certifications/ Susceptibility Standards:	EN 300 386 V1.5.1 (2010-10); EN 55022:2010 EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-3-3:2008 EN 55024:2010; EN 55022:2010; EN 61000-3-3:2008 EN 55024:2010; USA FCC Class A VCCI Class A	EN 300 386 V1.5.1 (2010-10); EN 55022:2010 EN 61000-3-2:2006+A1:2009+A2:2009; EN 61000-3-3:2008 EN 55024:2010; EN 55022:2010; EN 61000-3-3:2008 EN 55024:2010; USA FCC Class A VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 5000 Series for the latest power ratings for your specific configurations (dual power supplies, SSD, highline input voltage, DC, etc.).
*** vCMP guest access to FIPS resources not supported.
Note: Performance-related numbers are based on local traffic management services only.

Specifications	4200v	4000s
Intelligent Traffic Processing:	L7 requests per second: 850K L4 connections per second: 300K L4 HTTP requests per second: 2.5M Maximum L4 concurrent connections: 10M Throughput: 10 Gbps L4/L7	L7 requests per second: 425K L4 connections per second: 150K L4 HTTP requests per second: 1.25M Maximum L4 concurrent connections: 10M Throughput: 10 Gbps L4/L7
Hardware SSL:	Included: 9,000 TPS (2K keys) Maximum: 9,000 TPS (2K keys) 8 Gbps bulk encryption*	Included: 4,500 TPS (2K keys) Maximum: 4,500 TPS (2K keys) 8 Gbps bulk encryption*
FIPS SSL:	N/A	N/A
Hardware DDoS Protection:	N/A	N/A
Hardware Compression:	Included: 8 Gbps Maximum: 8 Gbps	N/A
Software Compression:	N/A	Included: 4 Gbps Maximum: 4 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	Yes
Processor:	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)	1 quad core Intel Xeon processor (total 8 hyperthreaded logical processing cores)
Memory:	16 GB	16 GB
Hard Drive:	500 GB	500 GB
Gigabit Ethernet CU Ports:	8	8
Gigabit Fiber Ports (SFP):	Optional SFP (SX, LX, or copper)	Optional SFP (SX, LX, or copper)
10 Gigabit Fiber Ports (SFP+):	2 SR or LR (sold separately); Optional 10G copper direct attach	2 SR or LR (sold separately); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	N/A	N/A
Power Supply:	One 400W included (80 Plus Platinum efficiency), dual power and DC options	One 400W included (80 Plus Platinum efficiency), dual power and DC options
Typical Consumption:	95W (single supply, 110V input)**	95W (single supply, 110V input)**
Input Voltage:	90-240 VAC +/- 10% auto switching, 50/60hz	90-240 VAC +/- 10% auto switching, 50/60hz
Typical Heat Output:	324 BTU/hour (single supply, 110V input)**	324 BTU/hour (single supply, 110V input)**
Dimensions:	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis
Weight:	20 lbs. (9.1 kg) (one power supply)	20 lbs. (9.1 kg) (one power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% at 40° C	5 to 85% at 40° C
Safety Agency Approval:	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries	EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07
Certifications/ Susceptibility Standards:	EN 300 386 V1.5.1 (2010-10); EN 55022:2006 + A1:2007 EN 61000-3-2:2006; EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024:2010; USA-FCC Class A VCCI Class A	EN 300 386 V1.5.1 (2010-10) EN 55022:2006 + A1:2007 EN 61000-3-2:2006 EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010 USA FCC Class A VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 4000 Series for the latest power ratings for your specific configurations (dual power supplies, highline input voltage, DC, etc.).
Note: Performance-related numbers are based on local traffic management services only.

Specifications	2200s	2000s
Intelligent Traffic Processing:	L7 requests per second: 425K L4 connections per second: 150K L4 HTTP requests per second: 1.1M Maximum L4 concurrent connections: 5M Throughput: 5 Gbps L4/L7	L7 requests per second: 212K L4 connections per second: 75K L4 HTTP requests per second: 550K Maximum L4 concurrent connections: 5M Throughput: 5 Gbps L4/L7
Hardware SSL:	Included: 4,000 TPS (2K keys) Maximum: 4,000 TPS (2K keys) 4 Gbps bulk encryption*	Included: 2,000 TPS (2K keys) Maximum: 2,000 TPS (2K keys) 4 Gbps bulk encryption*
FIPS SSL:	N/A	N/A
Hardware DDoS Protection:	N/A	N/A
Hardware Compression:	Included: 4 Gbps Maximum: 4 Gbps	N/A
Software Compression:	N/A	Included: 2.5 Gbps Maximum: 2.5 Gbps
Software Architecture:	64-bit TMOS	64-bit TMOS
On-Demand Upgradable:	N/A	Yes
Processor:	Intel dual core (total 4 hyperthreaded logical processing cores)	Intel dual core (total 4 hyperthreaded logical processing cores)
Memory:	8 GB	8 GB
Hard Drive:	500 GB	500 GB
Gigabit Ethernet CU Ports:	8	8
Gigabit Fiber Ports (SFP):	Optional SFP (SX, LX, or copper)	Optional SFP (SX, LX, or copper)
10 Gigabit Fiber Ports (SFP+):	2 SR or LR (sold separately); Optional 10G copper direct attach	2 SR or LR (sold separately); Optional 10G copper direct attach
40 Gigabit Fiber Ports (QSFP+):	N/A	N/A
Power Supply:	One 400W included (80+ Platinum efficiency), dual power and DC options	One 400W included (80+ Platinum efficiency), dual power and DC options
Typical Consumption:	74W (single supply, 110V input)**	74W (single supply, 110V input)**
Input Voltage:	90–240 VAC +/- 10% auto switching, 50/60hz	90–240 VAC +/- 10% auto switching, 50/60hz
Typical Heat Output:	252 BTU/hour (single supply, 110V input)**	252 BTU/hour (single supply, 110V input)**
Dimensions:	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis	1.75” (4.45 cm) H x 17” (43.18 cm) W x 21” (53.34 cm) D 1U industry standard rack-mount chassis
Weight:	20 lbs. (9.1 kg) (one power supply)	20 lbs. (9.1 kg) (one power supply)
Operating Temperature:	32° to 104° F (0° to 40° C)	32° to 104° F (0° to 40° C)
Operational Relative Humidity:	5 to 85% at 40° C	5 to 85% at 40° C
Safety Agency Approval:	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries	UL 60950-1 2nd Edition CAN/CSA C22.2 No. 60950-1-07 EN 60950-1:2006, 2nd Edition IEC 60950-1:2006, 2nd Edition Evaluated to all CB Countries
Certifications/ Susceptibility Standards:	EN 300 386 V1.5.1 (2010-10) EN 55022:2006 + A1:2007 EN 61000-3-2:2006 EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010 USA FCC Class A VCCI Class A	EN 300 386 V1.5.1 (2010-10) EN 55022:2006 + A1:2007 EN 61000-3-2:2006 EN 61000-3-3:1995 + A1:2000 + A2:2005 EN 55024: 2010 USA FCC Class A VCCI Class A

*Maximum throughput.
**Please refer to the Platform Guide: 2000 Series for the latest power ratings for your specific configurations (dual power supplies, highline input voltage, DC, etc.)
Note: Performance-related numbers are based on local traffic management services only.

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