

USG Series Next-Generation Firewalls

Model	USG6305	USG6305-W	USG6310S	USG6310S-W	USG6310S-WL-OVS	USG6320
IPv4 Firewall Throughput ¹ (1518/512/64-byte, UDP)	0.8/0.8/0.12 Gbit/s	0.8/0.8/0.12 Gbit/s	1.2/1/0.12 Gbit/s	1.2/1/0.12 Gbit/s	1.2/1/0.12 Gbit/s	2/2/0.4 Gbit/s
IPv6 Firewall Throughput ¹ (1518/512/84-byte, UDP)	0.8/0.8/0.15 Gbit/s	0.8/0.8/0.15 Gbit/s	1.2/1/0.15 Gbit/s	1.2/1/0.15 Gbit/s	1.2/1/0.15 Gbit/s	2/2/0.4 Gbit/s
Firewall Throughput (Packets Per Second)	0.18 Mpps	0.18 Mpps	0.18 Mpps	0.18 Mpps	0.18 Mpps	0.6 Mpps
Firewall Latency (64-byte, UDP)	100 µs	100 µs	100 µs	100 µs	100 µs	35 µs
FW + SA* Throughput ²	300 Mbit/s	300 Mbit/s	400 Mbit/s	400 Mbit/s	400 Mbit/s	1.2 Gbit/s
FW + SA + IPS Throughput ²	150 Mbit/s	150 Mbit/s	200 Mbit/s	200 Mbit/s	200 Mbit/s	700 Mbit/s
FW + SA + Antivirus Throughput ²	100 Mbit/s	100 Mbit/s	150 Mbit/s	150 Mbit/s	150 Mbit/s	700 Mbit/s
FW + SA + IPS + Antivirus + URL Throughput ²	100 Mbit/s	100 Mbit/s	150 Mbit/s	150 Mbit/s	150 Mbit/s	500 Mbit/s
FW + SA + IPS + Antivirus Throughput (Realworld) ³	80 Mbit/s	80 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s	400 Mbit/s
Concurrent Sessions (HTTP1.1) ¹	200,000	200,000	250,000	250,000	250,000	500,000
New Sessions/Second (HTTP1.1) ¹	4,000	4,000	6,000	6,000	6,000	20,000
IPsec VPN Throughput ¹ (AES-128 + SHA1, 1420-byte)	300 Mbit/s	300 Mbit/s	400 Mbit/s	400 Mbit/s	400 Mbit/s	600 Mbit/s
Maximum IPsec VPN Tunnels (GW to GW)	500	500	1,000	1,000	1,000	2,000
Maximum IPsec VPN Tunnels (Client to GW)	500	500	1,000	1,000	1,000	2,000
SSL Inspection Throughput ⁴	13 Mbit/s	13 Mbit/s	16 Mbit/s	16 Mbit/s	16 Mbit/s	16 Mbit/s
SSL VPN Throughput ⁵	20 Mbit/s	20 Mbit/s	25 Mbit/s	25 Mbit/s	25 Mbit/s	40 Mbit/s
Concurrent SSL VPN Users (Default/Maximum)	100/100	100/100	100/100	100/100	100/100	100/200
Security Policies (Maximum)	1,000	1,000	1,000	1,000	1,000	3,000
Virtual Firewalls (Default/Maximum)	10/10	10/10	10/10	10/10	10/10	10/20
Form Factor/Height	Desktop	Desktop	Desktop	Desktop	Desktop	Desktop
Fixed Interfaces	4 x GE (RJ45), 1 x USB 2.0	4 x GE (RJ45), 1 x USB 2.0, WLAN	8 x GE (RJ45), 1 x USB 2.0	8 x GE (RJ45), 1 x USB 2.0, WLAN	8 x GE (RJ45), 1 x USB 2.0, WLAN, 3G4G	8 x GE (RJ45), 1 x USB 2.0
Local Storage	Optional 64 GB micro-SD cards for expansion					-
Power Supplies	External Power Adapters					
Model	USG6330	USG6350	USG6360	USG6370	USG6380	USG6390
IPv4 Firewall Throughput ¹ (1518/512/64-byte, UDP)	1/1/0.4 Gbit/s	2/2/0.4 Gbit/s	3/2.5/0.4 Gbit/s	4/4/1.2 Gbit/s	6/6/1.2 Gbit/s	8/8/1.2 Gbit/s
IPv6 Firewall Throughput ¹ (1518/512/84-byte, UDP)	1/1/0.5 Gbit/s	2/2/0.5 Gbit/s	3/3/0.5 Gbit/s	4/4/1.6 Gbit/s	6/6/1.6 Gbit/s	8/8/1.6 Gbit/s
Firewall Throughput (Packets Per Second)	0.6 Mpps	0.6 Mpps	0.6 Mpps	1.8 Mpps	1.8 Mpps	1.8 Mpps
Firewall Latency (64-byte, UDP)	40 µs	40 µs	40 µs	25 µs	25 µs	25µs
FW + SA* Throughput ²	1 Gbit/s	1.2 Gbit/s	1.4 Gbit/s	4 Gbit/s	5 Gbit/s	6 Gbit/s
FW + SA + IPS Throughput ²	500 Mbit/s	950 Mbit/s	1.1 Gbit/s	2 Gbit/s	2 Gbit/s	2 Gbit/s
FW + SA + Antivirus Throughput ²	500 Mbit/s	950 Mbit/s	1.1 Gbit/s	2 Gbit/s	2 Gbit/s	2 Gbit/s
FW + SA + IPS + Antivirus + URL Throughput ²	300 Mbit/s	400 Mbit/s	500 Mbit/s	1.4 Gbit/s	1.6 Gbit/s	1.8 Gbit/s
FW + SA + IPS + Antivirus Throughput (Realworld) ³	300 Mbit/s	350 Mbit/s	400 Mbit/s	1 Gbit/s	1.2 Gbit/s	1.4 Gbit/s
Concurrent Sessions (HTTP1.1) ¹	1,500,000	2,000,000	3,000,000	4,000,000	4,000,000	4,000,000
New Sessions/Second (HTTP1.1) ¹	30,000	30,000	30,000	60,000	70,000	80,000
IPsec VPN Throughput ¹ (AES-128 + SHA1, 1420-byte)	700 Mbit/s	800 Mbit/s	900 Mbit/s	3 Gbit/s	3 Gbit/s	3 Gbit/s
Maximum IPsec VPN Tunnels (GW to GW)	4,000	4,000	4,000	4,000	4,000	4,000
Maximum IPsec VPN Tunnels (Client to GW)	4,000	4,000	4,000	4,000	4,000	4,000
SSL Inspection Throughput ⁴	40 Mbit/s	40 Mbit/s	40 Mbit/s	120 Mbit/s	120 Mbit/s	120 Mbit/s
SSL VPN Throughput ⁵	50 Mbit/s	50 Mbit/s	50 Mbit/s	200 Mbit/s	200 Mbit/s	200 Mbit/s
Concurrent SSL VPN Users (Default/Maximum)	100/500	100/500	100/500	100/1,000	100/1,000	100/1,000
Security Policies (Maximum)	15,000	15,000	15,000	15,000	15,000	15,000
Virtual Firewalls (Default/Maximum)	10/50	10/50	10/50	10/100	10/100	10/100
Form Factor/Height	1U	1U	1U	1U	1U	1U
Fixed Interfaces	4 x GE (RJ45) + 2 x GE (Combo), 1 x USB 2.0			8 x GE (RJ45) + 4 x GE (SFP), 2 x USB 2.0		
Expansion Slots	2 WSIC*					
	WSIC: 2 x 10 GE (SFP+) + 8 x GE (RJ45), 8 x GE (RJ45), 8 x GE (SFP), 4 x GE (RJ45) BYPASS					
Maximum Number of Interfaces	22 x GE (RJ45) + 4 x 10 GE (SFP+) or 18 x GE (SFP) + 4 x GE (RJ45)			24 x GE (RJ45) + 4 x GE (SFP) + 4 x 10 GE (SFP+) or 20 x GE (SFP) + 8 x GE (RJ45)		
Local Storage	Optional, supports single 300 GB, 600 GB or 1200 GB hard disks (hot-swappable)					
Power Supplies	Single AC power supply; optional dual AC power supplies			Single AC power supply; optional dual AC power supplies		

Model	USG6620	USG6630	USG6650	USG6660	USG6670	USG6680
IPv4 Firewall Throughput ¹ (1518/512/64-byte, UDP)	12/12/5.5 Gbit/s	16/16/5.5 Gbit/s	20/20/8 Gbit/s	25/25/8 Gbit/s	35/35/8 Gbit/s	40/35/8 Gbit/s
IPv6 Firewall Throughput ¹ (1518/512/84-byte, UDP)	12/12/6 Gbit/s	16/16/6 Gbit/s	20/20/8 Gbit/s	25/25/8 Gbit/s	35/35/8 Gbit/s	40/35/8 Gbit/s
Firewall Throughput (Packets Per Second)	8 Mpps	8 Mpps	12 Mpps	12 Mpps	12 Mpps	12 Mpps
Firewall Latency (64-byte, UDP)	16 μs	16 μs	16 μs	16 μs	16 μs	16 μs
FW + SA* Throughput ²	10 Gbit/s	12 Gbit/s	15 Gbit/s	18 Gbit/s	19 Gbit/s	20 Gbit/s
FW + SA + IPS Throughput ²	5.8 Gbit/s	5.8 Gbit/s	8.8 Gbit/s	8.8 Gbit/s	8.8 Gbit/s	15 Gbit/s
FW + SA + Antivirus Throughput ²	5 Gbit/s	5 Gbit/s	8 Gbit/s	8 Gbit/s	8 Gbit/s	13 Gbit/s
FW + SA + IPS + Antivirus + URL Throughput ²	4 Gbit/s	5 Gbit/s	6 Gbit/s	7 Gbit/s	8 Gbit/s	13 Gbit/s
FW + SA + IPS + Antivirus Throughput (Realworld) ³	3 Gbit/s	4 Gbit/s	5 Gbit/s	5.5 Gbit/s	6 Gbit/s	11 Gbit/s
Concurrent Sessions (HTTP1.1) ¹	6,000,000	6,000,000	8,000,000	10,000,000	10,000,000	12,000,000
New Sessions/Second (HTTP1.1) ¹	200,000	250,000	300,000	350,000	400,000	400,000
IPsec VPN Throughput ¹ (AES-128 + SHA1, 1420-byte)	9 Gbit/s	12 Gbit/s	15 Gbit/s	18 Gbit/s	18 Gbit/s	18 Gbit/s
Maximum IPsec VPN Tunnels (GW to GW)	15,000	15,000	15,000	15,000	15,000	15,000
Maximum IPsec VPN Tunnels (Client to GW)	15,000	15,000	15,000	15,000	15,000	15,000
SSL Inspection Throughput ⁴	200 Mbps	200 Mbps	711 Mbps	800 Mbps	800 Mbit/s	1.5 Gbit/s
SSL VPN Throughput ⁵	1 Gbit/s	1.2 Gbit/s	1.5 Gbit/s	1.5 Gbit/s	1.6 Gbit/s	1.6 Gbit/s
Concurrent SSL VPN Users (Default/Maximum)	100/2,000	100/2,000	100/5,000	100/5,000	100/5,000	100/5,000
Security Policies (Maximum)	40,000	40,000	40,000	40,000	40,000	40,000
Virtual Firewalls (Default/Maximum)	10/200	10/200	10/500	10/500	10/500	10/1,000
Form Factor/Height	1U	1U	3U	3U	3U	3U
Fixed Interfaces	8 x GE (RJ45) + 4 x GE (SFP), 2 x USB 2.0		2 x 10 GE (SFP+) + 8 x GE (RJ45) + 8 x GE (SFP), 2 x USB 2.0		4 x 10 GE (SFP+) + 16 x GE (RJ45) + 8 x GE (SFP), 2 x USB 2.0	
Expansion Slots	2 WSIC		6 WSIC		5 WSIC	AC: 5 WSIC; DC: 3 WSIC ⁶
	WSIC: 2 x 10 GE (SFP+) + 8 x GE (RJ45), 8 x GE (RJ45), 8 x GE (SFP), 4 x GE (RJ45) BYPASS					
Maximum Number of Interfaces	24 x GE (RJ45) + 4 x GE (SFP) + 4 x 10 GE (SFP+) or 20 x GE (SFP) + 8 x GE (RJ45)		56 x GE (RJ45) + 14 x 10 GE (SFP+) + 8 x GE (SFP) or 56 x GE (SFP) + 2 x 10 GE (SFP+) + 8 x GE (RJ45)		56 x GE (RJ45) + 14 x 10 GE (SFP+) + 8 x GE (SFP) or 48 x GE (SFP) + 4 x 10 GE (SFP+) + 16 x GE (RJ45) ⁷	
Local Storage	Optional, supports single 300 GB, 600 GB or 1200 GB hard disk (hot-swappable)		Optional, supports 300 GB, 600 GB ⁸ or 1200 GB ⁸ hard disks (RAID1 and hot-swappable)			
Power Supplies	Single AC power supply; optional dual AC power supplies		Dual AC power supplies	Dual AC or dual DC power supplies		

1. Performance is tested under ideal conditions based on RFC2544, 3511. The actual result may vary with deployment environments.

2. Antivirus, IPS, and SA performances are measured using 100 KB HTTP files.

3. Throughput is measured with the Enterprise Traffic Model.

4. SSL inspection throughput is measured with IPS-enabled and HTTPS traffic using TLS v1.2 with AES256-SHA.

5. SSL VPN throughput is measured using TLS v1.2 with AES128-SHA.

6. With DC power input, the USG6680 supports up to three WSICs without 2XG8GE or two WSICs with 2XG8GE.

7. USG6680 (DC): 40 x GE (RJ45) + 4 x 10 GE (SFP+) + 8 x GE (SFP) or 32 x GE (SFP) + 4 x 10 GE (SFP+) + 16 x GE (RJ45).

8. The DC USG6680 does not support 600GB or 1200GB hard disks.

*SA: Service Awareness.

*WSIC is not hot-swappable.

Note: All data in this document is based on USG V500R001.

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