Thunder CGN Physical Appliance Specifications

	Thunder 1060S CGN		Thunder 3350-E CGN
Modular License	10 Gbps	25 Gbps	-
Performance			
Throughput	10 Gbps	25 Gbps	30 Gbps
Full TCP Connections per Second	300K	600K	500K
Concurrent Sessions	32 Million	96 Million	64 Million
Network Interfaces			
1 GE Copper	7	7	6
1 GE Fiber (SFP)	0	0	2
10/1 GE Fiber (SFP+/SFP)	4	4	8 + 4[*4]
25/10 GE Fiber (SFP28/SFP+)	2	2	0
40 GE Fiber (QSFP+)	0	0	0
100/40 GE Fiber (QSFP28/QSFP+)	0	0	0
Management Ports	Ethernet mgmt. port, RJ-45 console port		
Hardware Specifications			
Processor	Intel communications processor 20-core [9-core active]	Intel communications processor 20-core	Intel Xeon 8-core
Memory (ECC RAM)	32 GB [24 GB active]	32 GB	16 GB
Storage	SSD	SSD	SSD
Hardware Acceleration	Software	Software	Software
Dimensions (inches)	1.75 (H) x 17.5 (W) x 17 (D)	1.75 (H) x 17.5 (W) x 17 (D)	1.75 (H) x 17.5 (W) x 18(D)
Rack Units (mountable)	1U	1U	1U
Unit Weight	12 lbs	12 lbs	18 lbs
Power Supply (DC option available)	Dual 300W RPS	Dual 300W RPS	Dual 750W RPS
	80 Plus Gold efficiency, 100 - 240 VAC, 50 – 60 Hz		
Power Consumption (typical/max)[*1]	112W / 127W	112W / 127W	151W / 205W
Heat in BTU/Hour (typical/max)[*1]	383 / 434	383 / 434	516 / 700
Cooling Fan (front-to-back airflow)	Removable fans	Removable fans	Hot swap smart fans
Operating Ranges	Temperature 0° - 40° C │ Humidity 5% - 95%		
Regulatory Certifications	FCC Class A, UL, ICES, CE, UKCA, CB, VCCI, BSMI, RCM │ RoHS	FCC Class A, UL, ICES, CE, UKCA, CB, VCCI, BSM, RCM │ RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM, MTCTE^ │ RoHS
Standard Warranty	90-day hardware and software		

Thunder CGN Physical Appliance (cont.)

	Thunder 3350 CGN	Thunder 3350S CGN	Thunder 4440 CGN
Modular License	-	50 Gbps	-
Performance			
Throughput	40 Gbps	50 Gbps	78 Gbps
Full TCP Connections per Second	900K	1.5 Million	1.5 Million
Concurrent Sessions	96 Million	128 Million	128 Million
Network Interfaces			
1 GE Copper	6	6	0
1 GE Fiber (SFP)	2	2	0
10/1 GE Fiber (SFP+/SFP)	4*4	8 + 4*4	24
25/10 GE Fiber (SFP28/SFP+)	4	0	0
40 GE Fiber (QSFP+)	4	0	4
100/40 GE Fiber (QSFP28/QSFP+)	0	0	0
Management Ports	Ethernet mgmt. port, RJ-45 console port		Ethernet mgmt. port, RJ-45 console port, Lights out management
Hardware Specifications			
Processor	Intel Xeon 8-core	Intel Xeon 14-core	Intel Xeon 6-core
Memory (ECC RAM)	32 GB	64 GB	32 GB
Storage	SSD	SSD	SSD
Hardware Acceleration	Software	Software	2 x FTA-4
Dimensions (inches)	1.75 (H) x 17.5 (W) x 18(D)	1.75 (H) x 17.5 (W) x 18(D)	1.75 (H) x 17.5 (W) x 30 (D)
Rack Units (mountable)	1U	1U	1U
Unit Weight	18 lbs	18 lbs	32.5 lbs
Power Supply (DC option available)	Dual 750W RPS	Dual 750W RPS	Dual 1100W RPS
	80 Plus Platinum Efficiency, 100 - 240 VAC, 50 – 60 Hz		
Power Consumption (typical/max)*1	165W / 238W	175W / 222W	360W / 445W
Heat in BTU/Hour (typical/max)*1	564 / 831	598 / 758	1,229 / 1,519
Cooling Fan (front-to-back airflow)	Hot swap smart fans		
Operating Ranges	Temperature 0° - 40° C │ Humidity 5% - 95%		
Regulatory Certifications	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTEˆ │ RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTEˆ │ RoHS, FIPS 140-2*3	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTEˆ │ RoHS
Standard Warranty	90-day hardware and software		

Thunder CGN Physical Appliance (cont.)

	Thunder 5440 CGN	Thunder 5840 CGN	Thunder 5840-11 CGN	Thunder 5960 CGN
Modular License	-	-	-	100/200/300 Gbps
Performance				
Throughput	100 Gbps	115 Gbps	115 Gbps	300 Gbps[5]
Full TCP Connections per Second	2 milion	3 Million	3 Million	2.3 Million
Concurrent Sessions	256 Million	256 Million	256 Million	256 Million
Network Interfaces				
1 GE Copper	0	0	0	0
1 GE Fiber (SFP)	0	0	0	0
10/1 GE Fiber (SFP+/SFP)	24	24	48	0
25/10 GE Fiber (SFP28/SFP+)	0	0	0	4
40 GE Fiber (QSFP+)	4	4	0	0
100/40 GE Fiber (QSFP28/QSFP+)	0	0	4	4
Management Ports	Ethernet mgmt. port, RJ-45 console port, Lights out management			Ethernet mgmt. port, RJ-45 console port
Hardware Specifications				
Processor	Intel Xeon 12-core	Intel Xeon 18-core	Intel Xeon 18-core	Intel Xeon 36-core
Memory (ECC RAM)	64 GB	64 GB	64 GB	128 GB
Storage	SSD	SSD	SSD	SSD
Hardware Acceleration	2 x FTA-4	2x FTA-4	2x FTA-4	Software
Dimensions (inches)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17 (W) x 24 (D)
Rack Units (mountable)	1U	1U	1U	1U
Unit Weight	32.5 lbs	32.5 lbs	34.3 lbs	25.1 lbs
Power Supply (DC option available)	Dual 1100W RPS	Dual 1100W RPS	Dual 1500W RPS	Dual 550W RPS
	80 Plus Platinum Efficiency, 100 - 240 VAC, 50 – 60 Hz			
Power Consumption (typical/max)[1]	360W / 445W	375W / 470W	550W /760W	361W / 451W
Heat in BTU/Hour (typical/max)[1]	1,229 / 1,519	1,280 / 1,604	1,877 / 2,594	1,232 / 1,539
Cooling Fan (front-to-back airflow)	Hot swap smart fans			
Operating Ranges	Temperature 0° - 40° C	Humidity 5% - 95%			
Regulatory Certifications	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTEˆ	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTEˆ	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM, MTCTEˆ	RoHS	FCC Class A, UL, ICES, CE, UKCA, CB, VCCI, BSMI, RCM, MTCTEˆ	RoHS
Standard Warranty	90-day hardware and software			

Thunder CGN Physical Appliance (cont.)

	Thunder 6440 CGN	Thunder 7440 CGN	Thunder 7440-11 CGN	Thunder 7650 CGN
Modular License	-	-	-	-
Performance				
Throughput	150 Gbps	220 Gbps	220 Gbps	370 Gbps
Full TCP Connections per Second	3 Million	5 Million	5 Million	8 Million
Concurrent Sessions	256 Million	256 Million	256 Million	384 Million
Network Interfaces				
1 GE Copper	0	0	0	0
1 GE Fiber (SFP)	0	0	0	0
10/1 GE Fiber (SFP+/SFP)	48	48	48	0
25/10 GE Fiber (SFP28/SFP+)	0	0	0	0
40 GE Fiber (QSFP+)	4	4	0	0
100/40 GE Fiber (QSFP28/QSFP+)	0	0	4	16
Management Ports	Ethernet mgmt. port, RJ-45 console port, Lights out management			
Hardware Specifications				
Processor	2 x Intel Xeon 10-core	2 x Intel Xeon 18-core	2 x Intel Xeon 18-core	2 x Intel Xeon 24-core
Memory (ECC RAM)	128 GB	128 GB	128 GB	192 GB
Storage	SSD	SSD	SSD	SSD
Hardware Acceleration	3 x FTA-4	3 x FTA-4	3 x FTA-4	2 x FTA-5
Dimensions (inches)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	2.625 (H) x 17.5 (W) x 30 (D)
Rack Units (mountable)	1U	1U	1U	1.5U
Unit Weight	36 lbs	35.7 lbs	35.7 lbs	41.5 lbs
Power Supply (DC option available)	Dual 1100W RPS	Dual 1100W RPS	Dual 1500W RPS	Dual 1500W RPS
	80 Plus Platinum Efficiency, 100 - 240 VAC, 50 – 60 Hz			
Power Consumption (typical/max)*1	480W / 550W	690W / 820W	784W / 950W	864W / 1,091W
Heat in BTU/Hour (typical/max)*1	1,638 / 1,877	2,355 / 2,798	2,676 / 3,242	2,949 / 3,722
Cooling Fan (front-to-back airflow)	Hot swap smart fans			
Operating Ranges	Temperature 0° - 40° C	Humidity 5% - 95%			
Regulatory Certifications	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTE^	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTE^	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM	RoHS, FIPS 140-2*3	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM, MTCTE^	RoHS
Standard Warranty	90-day hardware and software			

Hardware specifications and performance numbers are subject to change without notice, and may vary depending on configuration and environmental conditions.
As for network interface, it's highly recommended to use A10 Networks qualified optics/transceivers to ensure network reliability and stability.

All CGN products are also available in CFW license. For firewall and hierarchical traffic control use cases, CFW-CGN product line is required.

*1 With base model. Number varies by SSL model | *2 Optional RPS | *3 FIPS model must be purchased | *4 10 Gbps speed only | *5 Maximum throughput varies based on the modular license associated with | ^ Certification in process

Thunder CGN SPE Physical Appliance Specifications

	Thunder 5845 CGN	Thunder 7445 CGN	Thunder 7655S CGN	Thunder 8665S CGN
Modular License	-	75/100/150/200/220 Gbps	-	-
Performance				
Throughput	115 Gbps	220 Gbps*3	370 Gbps	550 Gbps
Full TCP Connections per Second	3 Million	5 Million	8 Million	8.5 Million
Concurrent Sessions	256 Million	256 Million	384 Million*2	800 Million
Selective Dynamic Filter Rate [PPS]^	166 Million	332 Million	500 Million	740 Million
Selective Dynamic Filter Hardware Entries (IPv4/IPv6)	256K / 128K	256K / 128K	512K / 256K	256K / 128K
Network Interfaces				
10/1 GE Fiber (SFP+/SFP)	48	48	0	0
100/40 GE Fiber (QSFP28/QSFP+)	4	4	16	0
400 GE Fibre (QSFP-DD)	0	0	0	12
Management Ports	Ethernet mgmt. port, RJ-45 console port, Lights out management			2 x Ethernet mgmt. port, RJ-45 console port
Hardware Specifications				
Processor (Intel Xeon)	18-core	2 x 18-core	2 x 28-core	2 x 36-core
Memory (ECC RAM)	64 GB	128 GB	384 GB	512 GB
Storage	SSD	SSD	SSD	SSD
Hardware Acceleration	2 x FTA-4, SPE	3 x FTA-4, SPE	2 x FTA-5, SPE	3 x FTA-6, SPE
Dimensions (inches)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	2.625 (H) x 17.5 (W) x 30 (D)	2.625 (H) x 17.5 (W) x 30 (D)
Rack Units (mountable)	1U	1U	1.5U	1.5U
Unit Weight	34.3 lbs	35.7 lbs	44.2 lbs	44.9 lbs
Power Supply (DC option available)	Dual 1500W RPS	Dual 1500W RPS	Dual 1500W RPS	Dual 2500W RPS
	80 Plus Platinum Efficiency, 100 - 240 VAC, 50 – 60 Hz			
Power Consumption (typical/max)*	585W / 921W	784W / 1,078W	1,121W / 1,300W	1,491W / 1,720W
Heat in BTU/Hour (typical/max)*	1,997 / 3,143	2,676 / 3,679	3,826 / 4,436	5,088 / 5,869
Cooling Fan (front-to-back airflow)	Hot swap smart fans			
Operating Ranges	Temperature 0° - 40° C	Humidity 5% - 95%			
Regulatory Certifications	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM	RoHS	FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM	RoHS, FIPS 140-2*1	FCC Class A, UL, ICES, CE, UKCA, CB, VCCI, RCM	RoHS
Standard Warranty	90-day hardware and software			

Thunder CGN SPE Physical Appliance Specifications (cont.)

	Thunder 7465 CGN		
Modular License	100/150 Gbps	200 Gbps	270 Gbps
Performance			
Throughput	150 Gbps*3	200 Gbps	270 Gbps
Full TCP Connections per Second	2.8 Million	3.4 Million	5.7 Million
Concurrent Sessions	256 Million	256 Million	256 Million
Selective Dynamic Filter Rate [PPS]^	200 Million	200 Million	200 Million
Selective Dynamic Filter Hardware Entries (IPv4/IPv6)	256K / 128K	256K / 128K	256K / 128K
Network Interfaces			
10/1 GE Fiber (SFP+/SFP)	0		
25/10 GE Fiber (SFP28/SFP+)	24		
100/40 GE Fiber (QSFP28/QSFP+)	8		
400 GE Fiber (QSFP-DD)	0		
Management Ports	Ethernet mgmt. port, RJ-45 console port		
Hardware Specifications			
Processor (Intel Xeon)	36-core [20-core active]	36-core [28-core active]	36-core
Memory (ECC RAM)	256 GB [192 GB active]	256 GB [192 GB active]	256 GB
Storage	SSD		
Hardware Acceleration	1 x FTA-6		
Dimensions (inches)	1.75 (H) x 17.5 (W) x 30 (D)		
Rack Units (mountable)	1U		
Unit Weight	38.5 lbs		
Power Supply (DC option available)	Dual 1500W RPS		
	80 Plus Platinum efficiency, 100 - 240 VAC, 50 – 60 Hz		
Power Consumption (typical/max)*	680W / 770W		
Heat in BTU/Hour (typical/max)*	2,321 / 2,628		
Cooling Fan (front-to-back airflow)	Hot swap smart fans		
Operating Ranges	Temperature 0° - 40° C	Humidity 5% - 95%		
Regulatory Certifications	FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI^, RCM, MTCTE^, ANATEL^	RoHS		
Standard Warranty	90-day hardware and software		

Hardware specifications and performance numbers are subject to change without notice, and may vary depending on configuration and environmental conditions. As for network interface, it's highly recommended to use A10 Networks qualified optics/transceivers to ensure network reliability and stability.

^ Packets per second. Hardware-based selective dynamic filtering feature is available on Thunder CGN SPE family |
* With base model. Number varies by SSL model | + Certification in process *1 FIPS model must be purchased |
*2 Capacity can be increased (doubled) from ACOS 5.2.1-P7/ 6.0.1 onward | *3 Maximum throughput varies based on the modular license associated with

Thunder CGN Software Appliance Specifications

vThunder CGN	
Supported Hypervisors	VMware ESXi (VMXNET3, SR-IOV, DirectPath I/O), KVM QEMU (VirtIO, OvS with DPDK, SR-IOV, PCI Passthrough)
Hardware Requirements	See installation guide
Licenses[3]	30-day trial license Bandwidth license: Lab, 200 Mbps, 1 Gbps, 4 Gbps, 8 Gbps, 10 Gbps[1], 20 Gbps[1][2], 50 Gbps[1][2], 100 Gbps[2] FlexPool license
Standard Warranty	90-day software

Thunder CGN for Bare Metal	
System Requirements	See installation guide
Reference Platforms	Dell PowerEdge R760, Supermicro X13
Bandwidth Licenses[4]	10 Gbps (4 cores), 20 Gbps (8 cores), 40 Gbps (14 cores) , 60 Gbps (24 cores) and 100 Gbps (40 cores) FlexPool (Up to 100 Gbps per Thunder CGN)
Standard Warranty	90-day software

Thunder CGN Container	
Image Format	Open Container Initiative (OCI) compliant
Operating System	RedHat OpenShift Container Platform (OCP) (Version 4.16)
System Requirements	• Minimum 4 vCPU and 16 GB memory • One or more data interfaces • SR-IOV support using NVIDIA or Intel NICs
Licenses	BYOL bandwidth license FlexPool license
Standard Warranty	90-day software

[1] SR-IOV | [2] PCI Passthrough | [3] Actual throughput varies depending on the system configuration and solutions in use. Bandwidth license is available with a choice of perpetual or term-based licenses. | [4] Licenses are tied to the maximum number of cores that can be allocated to ACOS

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