

# Thunder CFW

## Consolidated Firewall, CGN, ADC, VPN and Secure Web Gateway

A10 Thunder® Convergent Firewall (CFW) is a high performance consolidated security solution for service providers, cloud providers and large enterprises that includes integrated application delivery and security solutions in a single, standalone product.

### High-performance Security

Modern service providers, web giants, enterprises and cloud platform providers aim to defend global networks, ensure high availability and low latency, secure infrastructure, encrypt data and protect customers.

A high-performance, all-inclusive security product, A10 Thunder Convergent Firewall (CFW) is a cost-effective approach for strengthening security postures and protecting network perimeters without the need for disparate point products.

A10 Thunder CFW features a carrier-class firewall for mobile infrastructure security, carrier-grade networking, secure application delivery, data center firewall, DNS security, IPsec VPN, and secure web gateway for enterprises, mobile network operators and other service providers.

Thunder CFW includes all Thunder ADC, CGN and SSLi features.

Thunder CFW is built on A10's market-proven ACOS® platform that delivers scalable form factors and cost structures that make economic sense. Offering unmatched performance and scalability with the industry's best data center footprint for integrated security and application networking needs, Thunder CFW reduces an organization's total cost of ownership (TCO).

### Platforms



Physical Appliance



Virtual Appliance



Container

### Management



Harmony Controller  
Centralized Analytics and  
Management



Flexpool  
Capacity Pooling  
License



## Carrier-class Firewall

Protect subscribers and shield mobile core infrastructure from cyber attacks and signaling storms at the Gi/SGi, GTP/roaming and RAN to ensure uninterrupted operations. Built on A10's proven Thunder CGN technology, the firewall combines the security of a carrier-grade firewall with integrated DDoS protection features to serve as a carrier-grade networking solution for mobile network operators.



## Secure Web Gateway

Eliminate the SSL blind spot in corporate defenses, restrict access to undesirable websites, and identify malicious traffic with our secure web gateway. This feature combines A10's SSL Insight® technology, URL filtering, and a multi-layered security approach to protect users from modern, encrypted cyberthreats.



## Data Center Firewall

Unite application delivery control and security on a single platform to reduce hardware and operating costs. The high-performance data center firewall includes a Layer 4 firewall with integrated DDoS protection and advanced server load-balancing to protect data center assets from the inside out. It also includes DNS security features to secure and consolidate DNS infrastructure.



## IPsec VPN

Encrypt data at a massive scale – including in the cloud – with this high-speed, site-to-site IPsec VPN designed for enterprises and service providers. In mobile networks, it can be deployed as a security gateway to enable secure backhaul between the RAN nodes and the core network.

The policy-based IPsec VPN also enables high-capacity client-to-site VPN deployment to support remote access clients in enterprise network.

### CERTIFICATIONS



[SEE ALL CERTIFICATIONS](#)

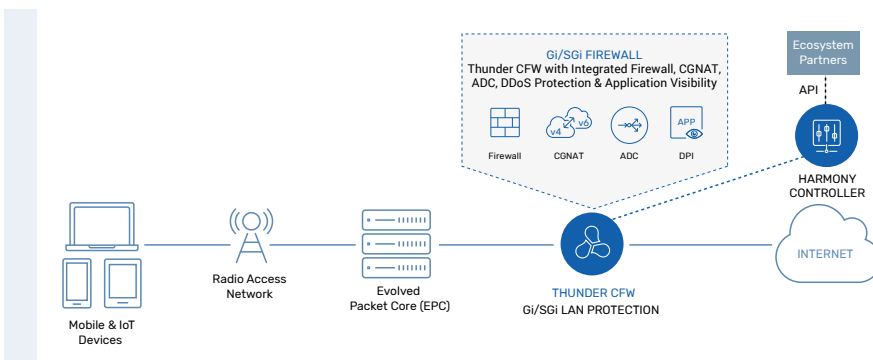
# Features and Benefits

Designed for enterprises, service providers and mobile network operators, A10 Thunder CFW offers the performance and versatility needed to safeguard applications, users and infrastructure.



## Comprehensive Mobile Core Protection

Granular control over network resources allows mobile network operators to block network and DDoS attacks that may arise from a variety of intrusion points at the Gi/SGi, GTP/roaming and RAN in 3G-4G, 5G SA, 5G NSA and MEC architectures. Thunder CFW offers Gi LAN services consolidation to combine L4-L7 functions, including CGNAT, stateful firewall, and application-aware firewall and visibility to integrate greater efficiencies on the Gi LAN. It protects subscribers and shields 3G/4G data and control plane services, including the Gateway GPRS Support Node (GGSN) and Packet Gateway (PGW) in the Evolved Packet Core (EPC), from a wide array of threats. It also defends the mobile core against GTP-based attacks coming in from access networks and roaming partners to support uninterrupted operations. Thunder CFW can secure its own resources, such as NAT IP pools, to ensure that operational functions are not compromised.



### A10 Gi/SGi Firewall for the GiLAN

In this scenario, a mobile network operator deploys the Gi/SGi firewall to secure communication between the EPC and the internet to protect the mobile core infrastructure. Integrated carrier-grade NAT enables carriers to manage communication with both IPv4 and IPv6 address protocols. Built-in DDoS protection safeguards the NAT IP pools to avoid service interruption. A10 Harmony® Controller provides centralized management and analytics.

## IPv4 Preservation and IPv6 Transition

Integrated carrier-grade networking functionality includes CGNAT to preserve investments in existing IPv4-based infrastructure and comprehensive IPv6 transition options to facilitate a smooth transition to IPv6. This ensures seamless subscriber experiences and sustainable subscriber growth. Integrated application layer gateways (ALGs) ensure that applications remain addressable and operate transparently through address translation.

## Granular Visibility and Reporting

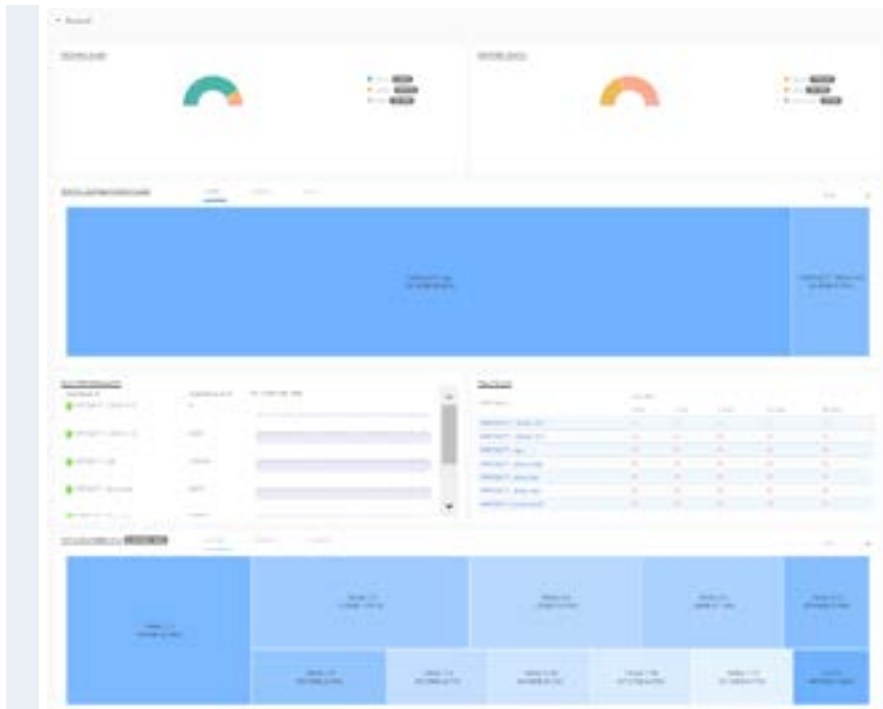
DPI-based application visibility with comprehensive subscriber awareness provides granular insights into network traffic. Understanding network and application traffic trends allows for effective network planning, deeper business intelligence, tighter security controls, enhanced law enforcement agency compliance and service monetization.

## High-performance, Scalable Firewall

Thunder CFW carrier-class firewall enables mobile network operators to achieve exceptionally high firewall connection rates, throughput, and higher NAT session capacity to meet service providers' current and future traffic requirements. Simplify operational tasks and reduce CAPEX and OPEX by integrating CGNAT, stateful firewall, and DDoS protection capabilities.

## Agile Management and Analytics-driven

Gain application and network services visibility with the A10 Harmony Controller for Thunder CFW. Centrally configure and manage policies across services in a multi-cloud environment. Get customizable drill-down views for analysis and actionable insights for faster troubleshooting.



### Agile Management and Analytics-driven Dashboard

Gain application and network services visibility with the A10Harmony Controller for Thunder CFW. Centrally configure and manage policies across services in a multi-cloud environment. Get real-time actionable insights on firewall performance, critical CGN services such as mapping distribution, NAT IP pool utilization and more, and application visibility including application distribution by category, bytes consumed by application category.



## Secure Web Gateway

### Decrypt Once, Inspect Multiple Times

Leverage A10's SSL Insight technology to decrypt SSL traffic and forward it to third-party security devices for inspection. Maximize uptime and increase security infrastructure capacity with integrated load balancing. Unburden firewalls and other security devices from computationally intensive SSL decryption, enabling them to detect and stop attacks.

### Gain Superior Control with URL Filtering

Maximize employee productivity and reduce risks by blocking access to malicious websites, including malware, spam and phishing sources. The A10 URL Classification categorizes more than 460 million domains and 13 billion URLs into 83 categories to block undesirable sites and shield users from threats.

### Block Known Web Threats

Identify and block traffic going out to and coming in from known bad IP addresses on the internet with threat intelligence feeds.

### Prevent Data Exfiltration

Integrate with third-party Data Loss Prevention (DLP) solutions via the industry-standard ICAP. Send decrypted traffic to DLP servers for inspection before forwarding intercepted traffic to a client or a server.

### Enforce Authentication and User-based Policies

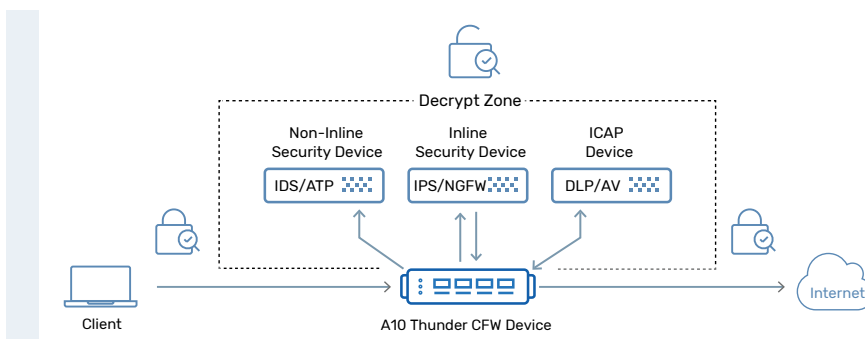
Create security policies for users, making sure no unauthorized access is allowed, with the identity and access management feature. This also enables you to define user-ID-based traffic and inspection policies to maintain granular control.

### Ensure Compliance

Leverage the SWG's high-speed logging capabilities to keep track of all session activities, per-rule statistics for SIEM integration, and authenticated session logging.

### Gain Superior Visibility and Control into Application Traffic

Identify and categorize traffic on the application level, allowing for more granular controls and policies to be defined, with application visibility and control. This DPI-based service provides application visibility with comprehensive user and group awareness, providing deep insights into network traffic. Understanding application traffic trends in enterprise networks allows for effective security planning and sanctioning of allowed business applications.



### Secure Web Gateway Protects the Enterprise Perimeter

Deploy Thunder CFW, with integrated SSL Insight technology, to decrypt traffic for a variety of security products, including inline, non-inline (passive/TAP) and ICAP-enabled devices.



## Data Center Firewall

### Achieve Unprecedented Firewall Performance

Powered by A10's Advanced Core Operating System (ACOS®), Thunder CFW provides high performance in a compact appliance, allowing organizations to stop emerging threats at scale.

The Thunder CFW data center firewall offers exceptionally high firewall connection rates – 370 Gbps of throughput – in a 1.5 rack-unit appliance that provides enough capacity to support up to 768 million concurrent sessions. Eliminate traditional performance bottlenecks while protecting your data center assets.

### Secure and Simplify DNS Infrastructure

Improve security and performance of DNS infrastructure by consolidating multiple DNS security solutions such as DNS load balancing, DNS firewall (RPZ), DNS over HTTPS (DoH)/DNS over TLS (DoT), DNSSEC and DNS caching.

### Consolidate Application Delivery and Security

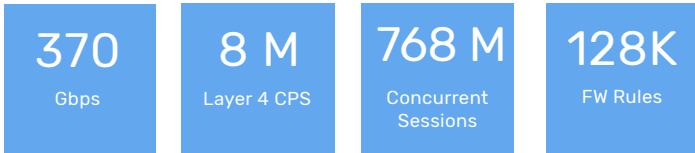
Eliminate single-purpose devices from data centers by consolidating security and application delivery controller (ADC) features on one platform to reduce hardware and operating costs. Optimize the delivery and security for potentially hundreds of apps in a given data center.

### Protect Multi-tenant Environments

Leverage the A10 Harmony Controller architecture to deliver completely programmable security for the data center. A10 Harmony Controller unifies policy control across multiple clouds, offering unprecedented telemetry as well as 100 percent RESTful API coverage. The product supports multi-tenancy features like application delivery partitions (ADP) for segmentation.

## Thunder 7650 CFW

by the Numbers





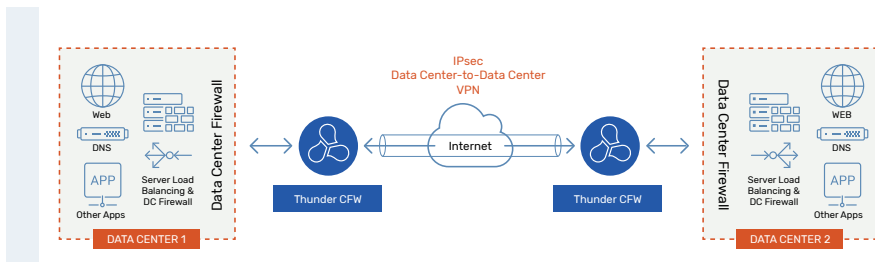
## Encrypt Data at Unparalleled Speeds

Securely interconnect remote sites over the internet using high capacity and massive scale IPsec VPN. Thunder CFW features a broad array of encryption algorithms and data integrity methods for securing communications in mobile networks and/or between hybrid cloud workloads.

Select Thunder CFW platform provides hardware-based IPsec cryptographic security, supporting unprecedented IPsec throughput levels and large number of IPsec VPN tunnels.

## Consolidate IPsec VPN, Firewall and Application Delivery

Thunder CFW unifies firewall and IPsec VPN capabilities on a single platform to improve agility through consolidation. Whether used to support secure interconnection between data centers, high speed VPN connections in the cloud, or secure connection between mobile network RAN nodes and core, Thunder CFW provides a comprehensive networking and security platform that reduces data center footprints and operating costs.



### Data Center Firewall and IPsec VPN

By unifying IPsec VPN, firewall and application delivery controller (ADC) capabilities, organizations are able to both load-balance traffic and protect the data center, services and related applications from DDoS attacks and other threats.

## Flexible Deployment Options

Thunder CFW provides industry-leading high performance as a physical, virtual or containerized solution. The physical appliance with hardware acceleration supports scalable and high-performance on-premises deployments. For NFVi and private cloud deployments, the virtual appliance works with leading hypervisors such as VMware ESXi, KVM and Microsoft Hyper-V, and integrates with leading NFV-MANO solutions including Ericsson Cloud Manager, NEC Netcracker HOM, Cisco NSO and Red Hat OpenStack and

more. For flexible and efficient cloud native deployments such as Docker and Kubernetes, the container option can be used.

All Thunder CFW options run on A10's ACOS software, providing feature parity, regardless of form factor, which helps simplify and consolidate operations in any deployment environment.



# Thunder CFW Physical Appliance Specifications

| Performance   | Thunder 940 CFW  | Thunder 1040 CFW  | Thunder 3350-E CFW                                    |
|---|--|---|---|
| Throughput  | 5 Gbps   | 20 Gbps   | 30 Gbps   |
| Layer 4 CPS   | 240K   | 450K  | 550K  |
| Concurrent Sessions                                   | 8 Million  | 24 Million  | 32 Million  |
| FW Rules  | 8K   | 12K   | 16K   |
| <b>Secure Web Gateway Performance<sup>**1,2</sup></b> |  |   |   |
| SSLi Throughput                                       | 0.5 Gbps   | 1.5 Gbps  | 3 Gbps  |
| SSLi CPS  | RSA: 500<br>ECDHE: 300                                     | RSA: 4K<br>ECDHE: 3K  | RSA: 8K<br>ECDHE: 4.5K                                |
| <b>IPsec VPN Performance<sup>**2</sup></b>            |  |   |   |
| IPsec Throughput                                      | 3 Gbps   | 8 Gbps  | 10 Gbps   |
| IPsec Tunnels   | 2K   | 2K / 5K <sup>2</sup>  | 5K  |
| IKE Gateways  | 2K   | 2K / 5K <sup>2</sup>  | 5K  |
| <b>Network Interfaces</b>                             |  |   |   |
|   |  |   | <b>Hardware Bypass Model</b>                          |
| 1 GE (BASE-T)   | 5  | 5   | 1 + 4 (Bypass)  |
| 1 GE Fiber (SFP)                                      | 0  | 0   | 0   |
| 1/10 GE Fiber (SFP+)                                  | 4 <sup>15</sup>  | 4 <sup>15</sup>   | 4 <sup>15</sup> + 2 (Bypass) <sup>16</sup>            |
| 25 GE Fiber (SFP28)                                   | 0  | 0   | 0   |
| 40 GE Fiber (QSFP+)                                   | 0  | 0   | 0   |
| 100 GE Fiber (QSFP28)                                 | 0  | 0   | 0   |
| Management Ports                                      | Ethernet Mgmt Port, RJ-45 Console Port                     |   |   |
| <b>Hardware Specifications</b>                        |  |   |   |
| Processor   | Intel Communications Processor                             | Intel Communications Processor  | Intel Xeon 8-core                                     |
| Memory (ECC RAM)                                      | 8 GB   | 8 GB <sup>13</sup> / 16 GB  | 16 GB   |
| Storage   | SSD  | SSD   | SSD   |
| Hardware Acceleration                                 | Software   | Software  | Software  |
| TLS/SSL Security Acceleration                         | Software   | Hardware on S models (2 options) <sup>17</sup>  | Hardware  |
| Dimensions (inches)                                   | 1.75 (H) x 17.5 (W) x 17.25 (D)                            | 1.75 (H) x 17.5 (W) x 17.25 (D)   | 1.75 (H) x 17.5 (W) x 18(D)                           |
| Rack Units (mountable)                                | 1U   | 1U  | 1U  |
| Unit Weight   | 14 lbs / 16lbs (RPS)                                       | 15 lbs / 17 lbs (RPS)   | 18 lbs  |
| Power Supply (DC option available)                    | Single 750W <sup>4</sup>                                   | Single 750W <sup>4</sup>  | Dual 750W RPS   |
|   | 80 Plus Platinum Efficiency, 100 - 240 VAC, 50 - 60 Hz     |   |   |
| Power Consumption (typical/max) <sup>13</sup>         | 60W / 80W  | 80W / 110W  | 151W / 205W   |
| Heat in BTU/hour (typical/max) <sup>13</sup>          | 205 / 273  | 205 / 273   | 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, CE, UKCA, CB, VCCI, KCC, BSMI, RCM   RoHS | FCC Class A, UL, CE, UKCA, CB, VCCI, KCC <sup>7</sup> , BSMI, RCM <sup>7</sup>   RoHS, FIPS 140-2 <sup>14</sup> | FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM   RoHS |
| Standard Warranty                                     | 90-day Hardware and Software                               |   |   |



## Thunder CFW Physical Appliance Specifications (cont.)

| Performance   | Thunder 3350 CFW   | Thunder 3350S CFW   | Thunder 4440 CFW  | Thunder 5440 CFW  |
|---|--|---|---|---|
| Throughput  | 40 Gbps  | 50 Gbps   | 70 Gbps   | 90 Gbps   |
| Layer 4 CPS   | 750K   | 1.4 Million   | 1.5 Million   | 2 Million   |
| Concurrent Sessions                                 | 40 Million   | 64 Million  | 64 Million  | 128 Million   |
| FW Rules  | 32K  | 64K   | 32K   | 64K   |
| <b>Secure Web Gateway Performance<sup>1†2</sup></b> |  |   |   |   |
| SSLi Throughput                                     | 3 Gbps   | 5.5 Gbps  | 8 Gbps  | 15 Gbps   |
| SSLi CPS  | RSA: 8K<br>ECDHE: 4.5K                                     | RSA: 20K<br>ECDHE: 10K  | RSA: 22K<br>ECDHE: 10K  | RSA: 35K<br>ECDHE: 20K  |
| <b>IPsec VPN Performance<sup>2</sup></b>            |  |   |   |   |
| IPsec Throughput                                    | 15 Gbps  | 24 Gbps   | 30 Gbps   | 35 Gbps   |
| IPsec Tunnels                                       | 10K  | 20K   | 10K   | 20K   |
| IKE Gateways  | 10K  | 20K   | 10K   | 20K   |
| <b>Network Interfaces</b>                           |  |   |   |   |
| 1 GE (BASE-T)                                       | 6  | 6   | 0   | 0   |
| 1 GE Fiber (SFP)                                    | 2  | 2   | 0   | 0   |
| 1/10 GE Fiber (SFP+)                                | 4 <sup>5</sup>   | 8 + 4 <sup>5</sup>  | 24  | 24  |
| 25 GE Fiber (SFP28)                                 | 4  | 0   | 0   | 0   |
| 40 GE Fiber (QSFP+)                                 | 4  | 0   | 4   | 4   |
| 100 GE Fiber (QSFP28)                               | 0  | 0   | 0   | 0   |
| Management Ports                                    | Ethernet Mgmt Port, RJ-45 Console Port                     |   | Ethernet Mgmt Port, RJ-45 Console Port, Lights Out Management |   |
| <b>Hardware Specifications</b>                      |  |   |   |   |
| Processor   | Intel Xeon 8-core  | Intel Xeon 14-core  | Intel Xeon 6-core   | Intel Xeon 12-core  |
| Memory (ECC RAM)                                    | 32 GB  | 64 GB   | 32 GB   | 64 GB   |
| Storage   | SSD  | SSD   | SSD   | SSD   |
| Hardware Acceleration                               | Software   | Software  | 2 x FTA-4   | 2 x FTA-4   |
| TLS/SSL Security Acceleration                       | Hardware   | Hardware  | Hardware on S model   | Hardware on S model   |
| 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)                                  | 1.75 (H) x 17.5 (W) x 30 (D)  |
| Rack Units (mountable)                              | 1U   | 1U  | 1U  | 1U  |
| Unit Weight   | 18 lbs   | 18 lbs  | 32.5 lbs  | 32.5 lbs  |
| Power Supply (DC option available)                  | Dual 750W RPS  | Dual 750W RPS   | Dual 1100W RPS  | Dual 1100W RPS  |
|   | 80 Plus Platinum Efficiency, 100 - 240 VAC, 50 - 60 Hz     |   |   |   |
| Power Consumption (typical/max) <sup>3</sup>        | 165W / 238W  | 175W / 222W   | 360W / 445W   | 360W / 445W   |
| Heat in BTU/hour (typical/max) <sup>3</sup>         | 564 / 831  | 598 / 758   | 1,229 / 1,519   | 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   RoHS | FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM   RoHS, FIPS 140-2 <sup>†</sup> | FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM   RoHS    | FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM   RoHS, FIPS 140-2 <sup>†</sup> |
| Standard Warranty                                   | 90-day Hardware and Software                               |   |   |   |

## Thunder CFW Physical Appliance Specifications (cont.)

| Performance  | Thunder<br>5840 <sub>CFW</sub>  | Thunder<br>5840-11 <sub>CFW</sub>                        | Thunder<br>5960 <sub>CFW</sub>  | Thunder<br>6440 <sub>CFW</sub>                                      |
|--|---|--|---|---|
| Throughput   | 100 Gbps  | 100 Gbps   | 300 Gbps  | 150 Gbps  |
| Layer 4 CPS  | 3 Million   | 3 Million  | 1.9 Million   | 3 Million   |
| Concurrent Sessions                                  | 128 Million   | 128 Million  | 256 Million   | 256 Million   |
| FW Rules   | 64K   | 64K / 128K <sup>2</sup>                                  | 128K  | 128K  |
| <b>Secure Web Gateway Performance<sup>11,2</sup></b> |   |  |   |   |
| SSLi Throughput                                      | 20 Gbps   | 25 Gbps  | - <sup>9</sup>  | 22 Gbps   |
| SSLi CPS   | RSA: 50K<br>ECDHE: 25K  | RSA: 50K<br>ECDHE: 28K                                   | - <sup>9</sup>  | RSA: 40K<br>ECDHE: 15K  |
| <b>IPsec VPN Performance<sup>2</sup></b>             |   |  |   |   |
| IPsec Throughput                                     | 50 Gbps   | 55 Gbps  | - <sup>9</sup>  | 65 Gbps   |
| IPsec Tunnels  | 20K   | 20K / 64K <sup>2</sup>                                   | - <sup>9</sup>  | 64K   |
| IKE Gateways   | 20K   | 20K / 64K <sup>2</sup>                                   | - <sup>9</sup>  | 64K   |
| <b>Network Interfaces</b>                            |   |  |   |   |
| 1 GE (BASE-T)  | 0   | 0  | 0   | 0   |
| 1 GE Fiber (SFP)                                     | 0   | 0  | 0   | 0   |
| 1/10 GE Fiber (SFP+)                                 | 24  | 48   | 0   | 48  |
| 25 GE Fiber (SFP28)                                  | 0   | 0  | 4   | 0   |
| 40 GE Fiber (QSFP+)                                  | 4   | 0  | 0   | 4   |
| 100 GE Fiber (QSFP28)                                | 0   | 4  | 4   | 0   |
| Management Ports                                     | Ethernet Mgmt Port, RJ-45<br>Console Port, Lights Out Management                          |  | Ethernet Mgmt Port,<br>RJ-45 Console Port                                 | Ethernet Mgmt Port, RJ-45<br>Console Port, Lights<br>Out Management |
| <b>Hardware Specifications</b>                       |   |  |   |   |
| Processor  | Intel Xeon<br>18-core   | Intel Xeon<br>18-core                                    | Intel Xeon<br>36-core   | 2 x Intel Xeon<br>10-core   |
| Memory (ECC RAM)                                     | 64 GB   | 64 GB / 128 GB <sup>2</sup>                              | 128 GB  | 128 GB  |
| Storage  | SSD   | SSD  | SSD   | SSD   |
| Hardware Acceleration                                | 2 x FTA-4   | 2 x FTA-4  | Software  | 3 x FTA-4   |
| TLS/SSL Security Acceleration                        | Hardware on S model   | Hardware on S model                                      | Hardware  | Hardware on S model   |
| 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 (W) x 24 (D)  | 1.75 (H) x 17.5 (W) x 30 (D)  |
| Rack Units (mountable)                               | 1U  | 1U   | 1U  | 1U  |
| Unit Weight  | 32.5 lbs  | 34.3 lbs   | 25.1 lbs  | 36 lbs  |
| Power Supply (DC option available)                   | Dual 1100W RPS  | Dual 1500W RPS   | Dual 550W RPS   | Dual 1100W RPS  |
|  | 80 Plus Platinum Efficiency, 100 - 240 VAC, 50 - 60 Hz                                    |  |   |   |
| Power Consumption (typical/max) <sup>13</sup>        | 375W / 470W   | 550W / 760W  | 361W / 451W   | 480W / 550W   |
| Heat in BTU/hour (typical/max) <sup>13</sup>         | 1,280 / 1,604   | 1,877 / 2,594  | 1,232 / 1,539   | 1,638 / 1,877   |
| 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,<br>CB, VCCI, KCC, BSMI, RCM  <br>RoHS, FIPS 140-2 <sup>4</sup> | FCC Class A, UL, CE, UKCA,<br>CB, VCCI, BSMI, RCM   RoHS | FCC Class A, UL, CE, UKCA,<br>CB, VCCI, BSMI <sup>1</sup> , RCM  <br>RoHS | FCC Class A, UL, CE, UKCA,<br>CB, VCCI, KCC, BSMI, RCM<br>  RoHS    |
| Standard Warranty                                    | 90-day Hardware and Software  |  |   |   |

## Thunder CFW Physical Appliance Specifications (cont.)

| Performance  | Thunder 7440 <sup>CFW</sup>                                   | Thunder 7440-11 <sup>CFW</sup>                                     | Thunder 7650 <sup>CFW</sup>                                |
|--|---|--|--|
| Throughput   | 220 Gbps  | 220 Gbps   | 370 Gbps   |
| Layer 4 CPS  | 5 Million   | 5 Million  | 8 Million  |
| Concurrent Sessions                                  | 256 Million   | 256 Million  | 768 Million <sup>*8</sup>                                  |
| FW Rules   | 128K  | 128K   | 128K   |
| <b>Secure Web Gateway Performance<sup>*1,2</sup></b> |   |  |  |
| SSLi Throughput                                      | 25 Gbps   | 25 Gbps  | - <sup>*9</sup>  |
| SSLi CPS   | RSA: 45K<br>ECDHE: 20K  | RSA: 45K<br>ECDHE: 20K   | - <sup>*9</sup>  |
| <b>IPsec VPN Performance<sup>*2</sup></b>            |   |  |  |
| IPsec Throughput                                     | 70 Gbps   | 70 Gbps  | - <sup>*9</sup>  |
| IPsec Tunnels  | 64K   | 64K  | - <sup>*9</sup>  |
| IKE Gateways   | 64K   | 64K  | - <sup>*9</sup>  |
| <b>Network Interfaces</b>                            |   |  |  |
| 1 GE (BASE-T)  | 0   | 0  | 0  |
| 1 GE Fiber (SFP)                                     | 0   | 0  | 0  |
| 1/10 GE Fiber (SFP+)                                 | 48  | 48   | 0  |
| 25 GE Fiber (SFP28)                                  | 0   | 0  | 0  |
| 40 GE Fiber (QSFP+)                                  | 4   | 0  | 0  |
| 100 GE Fiber (QSFP28)                                | 0   | 4  | 16   |
| Management Ports                                     | Ethernet Mgmt Port, RJ-45 Console Port, Lights Out Management |  |  |
| <b>Hardware Specifications</b>                       |   |  |  |
| Processor  | Intel Xeon 18-core  | Intel Xeon 18-core   | 2 x Intel Xeon 24-core                                     |
| Memory (ECC RAM)                                     | 128 GB  | 128 GB   | 192 GB   |
| Storage  | SSD   | SSD  | SSD  |
| Hardware Acceleration                                | 3 x FTA-4   | 3 x FTA-4  | 2 x FTA-5  |
| TLS/SSL Security Acceleration                        | Hardware on S model   | Hardware on S model  | No   |
| 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)                              |
| Rack Units (mountable)                               | 1U  | 1U   | 1.5U   |
| Unit Weight  | 35.7 lbs  | 35.7 lbs   | 41.5 lbs   |
| Power Supply (DC option available)                   | Dual 1100W RPS  | Dual 1500W RPS   | Dual 1500W RPS   |
|  | 80 Plus Platinum Efficiency, 100 - 240 VAC, 50 - 60 Hz        |  |  |
| Power Consumption (typical/max) <sup>*3</sup>        | 690W / 820W   | 784W / 950W  | 864W / 1,091W  |
| Heat in BTU/hour (typical/max) <sup>*3</sup>         | 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   RoHS    | FCC Class A, UL, CE, UKCA, CB, VCCI, BSMI, RCM   RoHS, FIPS 140-2* | FCC Class A, UL, CE, UKCA, CB, VCCI, KCC, BSMI, RCM   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.

\*1 Tested in single appliance SSLi deployment with maximum SSL option. Cipher "TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA" with RSA 2K keys are used for RSA cases, "TLS ECDHE\_RSA\_WITH\_AES\_128\_CBC\_SHA256" with EC P-256 and RSA 2K keys are used for PFS case. | \*2 With maximum SSL | \*3 With base model | \*4 Optional RPS available | \*5 10Gbps speed only | \*6 Fixed SFP+ optical ports with dual rate (10GBASE-SR and 1000BASE-SX) | \*7 Hardware Bypass model comes equipped with the hardware TLS acceleration | ^ Certification in process | + FIPS model must be purchased | \*8 Doubled the capacity from ACOS 5.2.1-P7/ 6.0.1 onward | \*9 Not supported on non-S models

# Thunder CFW SPE Physical Appliance Specifications

| Performance  | Thunder<br>5845 CFW  | Thunder<br>7445 CFW                                   | Thunder<br>7655S CFW   | Thunder<br>14045 CFW<br>Dual Modules                            |
|--|--|---|--|---|
| Throughput   | 100 Gbps   | 220 Gbps  | 370 Gbps   | 300 Gbps  |
| Layer 4 CPS  | 3 Million  | 5 Million   | 8 Million  | 8 Million   |
| Concurrent Sessions                                  | 128 Million  | 256 Million   | 768 Million <sup>*4</sup>  | 512 Million   |
| FW Rules   | 64K / 128K <sup>*2</sup>   | 128K  | 128K   | 128K  |
| <b>Secure Web Gateway Performance<sup>*1/2</sup></b> |  |   |  |   |
| SSLi Throughput                                      | - <sup>*5</sup>  | - <sup>*5</sup>                                       | 72 Gbps  | - <sup>*5</sup>   |
| SSLi CPS   | - <sup>*5</sup>  | - <sup>*5</sup>                                       | RSA: 100K<br>ECDHE: 70K  | - <sup>*5</sup>   |
| <b>IPsec VPN Performance<sup>*2</sup></b>            |  |   |  |   |
| IPsec Throughput                                     | - <sup>*5</sup>  | - <sup>*5</sup>                                       | 100 Gbps   | - <sup>*5</sup>   |
| IPsec Tunnels  | - <sup>*5</sup>  | - <sup>*5</sup>                                       | 100K   | - <sup>*5</sup>   |
| IKE Gateways   | - <sup>*5</sup>  | - <sup>*5</sup>                                       | 100K   | - <sup>*5</sup>   |
| <b>Network Interfaces</b>                            |  |   |  |   |
| 1/10 GE Fiber (SFP+)                                 | 48   | 48  | 0  | 0   |
| 40 GE Fiber (QSFP+)                                  | 0  | 0   | 0  | 4   |
| 100 GE Fiber   | 4 (QSFP28)   | 4 (QSFP28)  | 16 (QSFP28)  | 4 (CFP2 or QSFP28)  |
| Management Ports                                     | Ethernet Mgmt Port, RJ-45 Console Port <sup>**</sup> , Lights Out Management |   |  |   |
| <b>Hardware Specifications</b>                       |  |   |  |   |
| Processor  | Intel Xeon 18-core   | 2 x Intel Xeon 18-core                                | 2 x Intel Xeon 28-core   | 4 x Intel Xeon 18-core  |
| Memory (ECC RAM)                                     | 64 GB / 128GB <sup>*2</sup>  | 128 GB  | 384 GB   | 512 GB  |
| Storage  | SSD  | SSD   | SSD  | Yes   |
| Hardware Acceleration                                | 2 x FTA-4, SPE   | 3 x FTA-4, SPE  | 2 x FTA-5, SPE   | 8 x FTA-3, SPE  |
| TLS/SSL Security Acceleration                        | Software   | Software  | Hardware   | Software  |
| 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)  | 5.3 (H) x 16.9 (W) x 30 (D)                                     |
| Rack Units (mountable)                               | 1U   | 1U  | 1.5U   | 3U  |
| Unit Weight  | 34.3 lbs   | 35.7 lbs  | 44.2 lbs   | 102 lb  |
| Power Supply (DC option available)                   | Dual 1500W RPS   | Dual 1500W RPS  | Dual 1500W RPS   | 2+2 1100W RPS   |
|  | 80 Plus Platinum Efficiency, 100 - 240 VAC, 50 - 60 Hz                       |   |  |   |
| Power Consumption (typical/max) <sup>*3</sup>        | 585W / 921W  | 784W / 1,078W   | 1,121W / 1,300W  | 1,700W / 2,000W   |
| Heat in BTU/hour (typical/max) <sup>*3</sup>         | 1,997 / 3,143  | 2,676 / 3,679   | 3,826 / 4,436  | 5,801 / 6,825   |
| 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, KCC, BSMI, RCM   RoHS, FIPS 140-2 <sup>1+</sup> | FCC Class A, UL, CE, UKCA, CB, VCCI, CQC, KCC, BSMI, RCM   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.

\*1 Tested in single appliance SSLi deployment with maximum SSL option. Cipher "TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA256" with RSA 2K keys are used for RSA cases, "TLS\_ECDHE\_RSA\_WITH\_AES\_128\_CBC\_SHA256" with EC P-256 and RSA 2K keys are used for ECDHE case. | \*2 With maximum SSL | \*3 With base model. Number varies by SSL model | \*4 Doubled the capacity from ACOS 5.2.1-P7/ 6.0.1 onward | \*5 Not supported on non-S models

\*\* Thunder 14045 comes with a splitter cable for console to provide access to both modules. | + Certification in process | + FIPS model must be purchased

# Thunder CFW Software Appliance Specifications

| vThunder CFW                       |   |          |        |        |        |         |                 |                     |                 |          |
|------------------------------------|---|----------|--------|--------|--------|---------|-----------------|---------------------|-----------------|----------|
| Supported Hypervisors              | VMware ESXi (VMXNET3, SR-IOV, PCI Passthrough), KVM QEMU (VirtIO, OvS with DPDK, SR-IOV, PCI Passthrough), Microsoft Hyper-V <sup>3</sup> |          |        |        |        |         |                 |                     |                 |          |
| Hardware Requirements              | See Installation Guide  |          |        |        |        |         |                 |                     |                 |          |
| Standard Warranty                  | 90-day Software   |          |        |        |        |         |                 |                     |                 |          |
| Bandwidth Licenses                 | Lab   | 200 Mbps | 1 Gbps | 4 Gbps | 8 Gbps | 10 Gbps | 20 Gbps         | 40 Gbps             | 100 Gbps        | FlexPool |
| VMware ESXi                        | ●   | ●        | ●      | ●      | ●      | ●       | ● <sup>*1</sup> | ● <sup>*1, *2</sup> | ● <sup>*2</sup> | ●        |
| KVM                                | ●   | ●        | ●      | ●      | ●      | ●       | ● <sup>*1</sup> | ● <sup>*1, *2</sup> | ● <sup>*2</sup> | ●        |
| Microsoft Hyper-V <sup>3</sup>     | ●   | ●        | ●      | ●      | ●      |         |                 |                     |                 | ●        |
| Feature basis Throughput Guideline | ADC/CGN/FW: 200 Mbps-100 Gbps<br>IPsec/SSL Insight (SWG) without hardware SSL/TLS acceleration: 200 Mbps – 8 Gbps                         |          |        |        |        |         |                 |                     |                 |          |

\*1 SR-IOV | \*2 PCI Passthrough | \*3 Hyper-V is supported in ACOS 4.x and 5.x release. 8 Gbps license is not recommended.

| Thunder CFW Containers* |   |
|-------------------------|---|
| Image Format            | Docker  |
| Operating System        | Reference Operating System:<br>- Ubuntu 16.04.3 LTS (Xenial Xerus)<br>- RedHat Enterprise Linux version 7.6                                 |
| System Requirements     | Minimum requirement:<br>- 1 or more data interface<br>- 1 vCPU and 4GB memory   |
| Licenses                | BYOL Bandwidth License<br>FlexPool License  |
| Performance Reference** | Maximum throughput on a single Thunder container (24 vCPUs, shared polling mode off)<br>1510B: 180 Gbps<br>512B: 103 Gbps<br>IMIX : 75 Gbps |
| Standard Warranty       | 90-day Software   |

\* Carrier-class firewall along with CGNAT and data-center firewall with ADC are the common use cases. SSL Insight (SWG) and IPsec are not adequate use cases.

\*\* Supermicro 7049GP-TRT with Intel Xeon Platinum 8160 CPU @ 2.10GHz and 2x NVIDIA Mellanox Connect X-5 NICs. Tested with UDP traffic for CGNAT use case.

# Detailed Feature List

Features may vary by appliance.

## Carrier Class Firewall

### Firewall

- Stateful Layer 4 network firewall
- L7 application-aware firewall and visibility\*\*
- L4-L7 services consolidation
- Gi/SGi firewall
- GTP firewall with granular SCTP filtering
- Application layer gateways (DNS, ESP, FTP, ICMP, PPTP, RTSP, SIP, TFTP)

### DDoS Protection

- Integrated DDoS protection for NAT IP pools
- IP anomaly detection
- DDoS protection for Gi/SGi firewall

### IPv4 Preservation (CGNAT)

- Carrier-grade NAT (CGN/CGNAT), Large-scale NAT (LSN), NAT444, NAT44

### IPv6 Migration

- Dual-stack support, full-native IPv6 management and features
- SLB-PT (protocol translation), SLB-64 (IPv4<->IPv6, IPv6<->IPv4)
- NAT64/DNS64, NAT46, DS-Lite, 6rd, LW4o6, MAP-T, MAP-E

### Visibility and Analytics with Harmony Controller

- CGNAT
  - Subscriber session insights
  - Session opening and closing rates
  - TopN flow consuming subscribers
  - TopN bandwidth consuming subscribers
  - Subscriber user quota alerts
  - CGN resource tracking
  - Mapping distribution per protocol and per technology
  - NAT IP pool utilization
  - Session distribution per NAT technology
- Firewall
  - Firewall rule performance and rule distribution by protocol
  - Top firewall rules by state
  - GTP traffic insights, roam-in/out view and policy violation analytics
  - Comprehensive transduction log with source/destination IP, port, protocol, application, application category, and firewall actions for better visibility and faster troubleshooting
- Application
  - Application distribution by category
  - Top destination IP by application distribution
  - Bytes consumed by application category

## Secure Web Gateway (SWG)

### SSL Insight

- High-performance SSL decryption and encryption as a forward proxy
- Internet content adaptation protocol (ICAP) support for data loss prevention
- Dynamic port decryption to detect and intercept SSL or TLS traffic regardless of TCP port number
- Forward proxy failsafe to bypass traffic when there is a handshake failure
- SSL Insight bypass based on hostname; bypass list scales up to 1 million server name indication (SNI) values
- Multi-bypass list support
- Decryption of HTTPS, STARTTLS, SMTP, XMPP
- Client certificate detection and optional bypass
- Untrusted certificate handling using the online certificate status protocol (OCSP)
- TLS alert logging to log flow information from SSL Insight events
- SSL session ID reuse
- Firewall load-balancing (FWLB)

### URL Filtering\*\*

- URL classification service powered by Webroot to selectively bypass trusted websites for SSL decryption
- Optional monitoring and blocking of malicious or undesirable websites

### Application-aware Firewall\*\*

- Recognition of thousands protocol signatures with identification of service types within applications
- Support custom rules that run real-time

### IP Threat Intelligence\*\*

- Prevents malicious traffic from entering your network, based on customizable risk score and tolerance

### Threat Investigator\*\*

- Rich and contextual analytics for object under investigation

### Operation Modes

- Transparent forward proxy
- Explicit forward proxy
- Proxy chaining

### Centralized Management and Analytics with Harmony Controller

- Device and configuration management across multiple sites
- Deployment wizard with guided configuration
- Centralized security policy management and enforcement
- Rich TLS/SSL traffic and decryption analytics for traffic insight, application insight, URL insight, source and destination insight and more
- Threat investigator view
- Session log drill-down
- Troubleshooting tools

## Detailed Feature List (Cont.)

### Data Center Firewall

#### Firewall

- Stateful L4 network firewall
- Application layer gateways (DNS, ESP, FTP, ICMP, PPTP, RTSP, SIP, TFTP)

#### DDoS Protection

- Flood attack protection: SYN cookies, TCP/UDP/ICMP flood protection, DNS/HTTP flood protection
- Protocol attack protection: invalid packets, anomalous TCP flag combinations, packet size validation (ping of death)
- Resource attack protection: slowloris, slow POST, sockstress, fragmentation
- Rate-limiting: IP-based connection, HTTP, DNS request, DNS query, ICMP rate-limiting

#### Application Access Management (AAM)

- Authentication methods: HTTP Basic, NTLM over HTTP, form-based, OCSP, TDS SQL Logon and SAML
- Authentication servers: LDAP, Active Directory, RADIUS, OCSP Responder, NTLM, Kerberos, RSA Secure ID, Entrust IdentityGuard and SAML Identity Provider (IdP)
- Authentication relay: Kerberos, form-based, LDAP, WS-Federation, and Microsoft SharePoint and Outlook Web Access
- Extensive logging for audit

#### A10 Next-Gen WAF (powered by Fastly)\*\*

- Comprehensive OWASP top attacks protection
- Account takeover (ATO) protection
- Advanced rate limiting
- Network learning exchange
- Virtual patching for CVEs
- Streamlined management and extensive visibility on application attacks and anomalies
- Compliance
- Explicit proxy deployment support

#### ADC

- Advanced L4/L7 server load-balancing
  - Full HTTP proxy, Fast HTTP, HTTP/2, FIX, SIP, RADIUS, FTP, TCP, UDP and more
  - High-performance, template-based L7 switching with header/URL/domain manipulation
  - Comprehensive L7 application persistence support
- DNS load balancing
  - Layer 4 (TCP, UDP) and Layer 7 (DNS-UDP, DNS-TCP)
- Global Server Load Balancing (GSLB)
- Comprehensive IPv4/IPv6 support
- aFlex® TCL-based scripting: deep packet inspection and transformation for customizable, application-aware switching
- HTTP acceleration: HTTP connection multiplexing (TCP connection reuse),
- RAM caching, HTTP compression
- SSL acceleration: Hardware SSL, TLS 1.2, TLS 1.3 support, Elliptic Curve Diffie-Hellman Exchange (ECDHE) and other PFS ciphers
- ACME client support for automating TLS certificate renewal with Let's Encrypt, Sectigo and else

#### DNS Security

- DNS over HTTPS (DoH), DNS over TLS (DoT)
- Recursive DNS
- DNS cache
- DNS firewall/RPZ
- DNS application firewall (DAF)
- DNSSEC

### IPsec VPN

- Route-based VPN
- Policy-based VPN
- Keying methods: IKEv1, IKEv2, IKE-CP
- Authentication methods: RSA signature, pre-shared key, public key infrastructure (PKI)
- Key exchange Diffie-Hellman groups: 1, 2, 5, 14, 15, 16, 18
- Encryption algorithms: DES, 3DES, AES-128, AES-192, AES-256
- Data integrity: MD5, SHA1 and SHA-256
- OSPF, BGP and bidirectional forwarding detection (BFD) over IPsec tunnel
- IPv4 and IPv6 support
- Equal cost multipath (ECMP) support
- NAT traversal
- IPsec logging with log filter
- Certificate management protocol version 2 (CMPv2)
- Perfect forward secrecy (PFS) support
- Life bytes and time rekey
- PKI support with simple certificate enrollment protocol (SCEP), online certificate status protocol (OCSP) and certificate revocation list (CRL) distribution points

### Common Features

#### A10 Threat Intelligence Service\*\*

- Dynamically updated threat intelligence feed
- Millions of IP addresses that are vulnerable and weaponized for DDoS attacks, including IoT DDoS botnets, DDoS drones, exploitable open reflectors

#### Scalable, High-performance Platform

- Advanced Core Operating System (ACOS)
  - Multi-core CPU support
  - Linear application scaling with scalable symmetrical multi-processing (SSMP) architecture
  - ACOS on data plane
- Linux on control plane
- IPv6 feature parity
- Flexible traffic acceleration (FTA) for scalable flow distribution, common attack mitigation
  - Hardware FTA utilizing FPGAs
- Scale-out cluster

#### Networking

- Integrated Layer 2/Layer 3
- Transparent mode/gateway mode
- Virtual wire interface support
- Routing – static routes, IS-IS (v4/v6), RIPv2/ng, OSPF v2/v3, BGP4+
- L2 protocols (STP, RSTP, MSTP)
- VLAN (802.1Q)
- Link aggregation (802.1AX), LACP
- Access control lists (ACLs)
- Traditional IPv4 NAT/NAPT
- IPv6 NAPT
- Jumbo frame support\*
- Hardware-accelerated VXLAN\*
- NVGRE



# Detailed Feature List (Cont.)

## Common Features (Cont.)

### Management

- Dedicated on-box management interface (GUI, CLI, SSH, Telnet)
- Web-based AppCentric templates (ACT) intuitive guided configuration tool
- SNMP, syslog, email alerts, NetFlow v9 and v10 (IPFIX), sFlow
- RESTful API (aXAPI)
- LDAP, TACACS+, RADIUS support
- Configurable control CPUs
- Interoperable with A10 Harmony Controller for centralized management, configuration and analytics
- Plug-in available for VMware vRealize Orchestrator deployments

### Virtualization

- Thunder virtual appliance for VMware vSphere ESXi, Microsoft Hyper-V and KVM
- Thunder ADC for Amazon Web Services (AWS), Microsoft Azure, Google Cloud and Oracle Cloud
- Thunder ADC for Bare Metal
- Thunder ADC for containers
- Networking acceleration (SR-IOV, DPDK) and management integration
- A10 Thunder on Dell Technologies OEM solution bundle

### Extensibility

- aVCS (virtual chassis system)
- Multi-tenancy with application delivery partitions (ADP) with L3-7 separation
- L3 virtualization

### DevOps Tools and Integration

- Ansible modules and playbooks
- Terraform Thunder provider
- HashiCorp's Consul and Network Infrastructure Automation (NIA) integration
- Thunder Kubernetes Connector (TKC)
- Microsoft Azure ARM templates
- AWS CloudFormation templates
- OpenStack Octavia driver
- Cloud-init support for auto-configuration on
  - OpenStack
  - OCI
  - AWS
  - Azure
- Prometheus integration for visibility and analytics monitoring
- Automatic certificate renewal with Sectigo, Let's Encrypt, Venafi and more
- Thunder Observability Agent (TOA) for publishing Thunder metrics and logs to
  - AWS CloudWatch
  - Azure Application Insights / Log Analytics
  - VMware vRealize Operations (vROps) / Log Insights (vRLI)

### Carrier-grade Hardware\*

- Advanced hardware architecture
- Hot-swap redundant power supplies (AC and DC)
- Smart fans (hot swap)
- Solid-state drive (SSD)
- Tamper detection
- Lights out management (LOM/IPMI)
- 25 GbE ports, 40 GbE ports, 100 GbE ports
- High-performance security processor option

### Security and Capability Assurance Certifications\*

- ICSA Labs certification
- Common Criteria EAL 2+
- FIPS 140-2 Level 2
- Joint Interoperability Test Command (JITC)
- Network Equipment Building System (NEBS) compliance

\* Features and certifications may vary by appliance.

\*\* Additional subscription or service is required.

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