

A10

Data Sheet

Thunder SSLi

Real-Time Visibility Into Encrypted Traffic

The most comprehensive decryption solution, A10 Thunder® SSLi® (SSL Insight) decrypts traffic across all ports, enabling third-party security devices to analyze all enterprise traffic without compromising performance.

Eliminate the Blind Spot

Thunder SSLi eliminates the blind spot introduced by SSL encryption by offloading CPU-intensive SSL decryption and encryption functions from third-party security devices, while ensuring compliance with privacy standards.

While dedicated security devices provide in-depth inspection and analysis of network traffic, they are not designed to decrypt and encrypt traffic at high speeds. In fact, many security products do not have the ability to decrypt traffic at all.

Thunder SSLi boosts the performance of the security infrastructure by decrypting traffic and forwarding it to one or more third-party security devices, such as a firewall for deep packet inspection (DPI).

Thunder SSLi re-encrypts traffic and forwards it to the intended destination. Response traffic is also inspected in the same way.

Platforms



Thunder SSLi
Physical Appliance



Thunder SSLi
Virtual Appliance

Management



Harmony Controller
Centralized Analytics
and Management

Talk With A10

Web

a10networks.com/ssli

Benefits



Gain Full Visibility

Into The Blind Spot

Thunder SSLi decrypts traffic across all ports and multiple protocols, eliminating the encryption blind spot and enabling the security infrastructure to inspect previously invisible traffic, detect hidden threats and defend against them.



Decrypt Traffic

for All Security Devices

To truly secure an enterprise network, from both internal and external threats, organizations require the help of a variety of security devices.

Thunder SSLi works with the major security vendors, which may be deployed in a number of ways in the "secure decrypt zone", ensuring that the whole network is secure against encrypted threats. Thunder SSLi interoperates with:

- Firewalls
- Secure Web Gateways (SWG)
- Intrusion Prevention Systems (IPS)
- Unified Threat Management (UTM) platforms
- Data Loss Prevention (DLP) products
- Threat Prevention platforms
- Network Forensics and Web Monitoring tools



Secure

Key Storage

Storing encryption keys on many appliances in the network can introduce serious vulnerabilities. Threat actors can acquire keys from vulnerable points and use them for encrypted attacks or data extraction.

With FIPS 140-2 Level 3-validated internal and external Hardware Security Module (HSM) support, Thunder SSLi reduces decryption points so encryption keys are stored securely.



Validate

Certificate Status

Attackers can use invalid certificates to infiltrate networks. If these attacks are not blocked, users can be at risk of multiple attacks.

Thunder SSLi helps the system confirm the validity of certificates it receives from the server by supporting Certificate Revocation Lists (CRL) and Online Certificate Status Protocol (OCSP). These protocols help verify the origin certificate is valid.



Ensure

Compliance and Privacy

Thunder SSLi allows for selective decryption, making sure that organizations can keep up with industry, government and other compliance and privacy standards. For example, HIPAA compliance may forbid the decryption of private and sensitive healthcare information.



Reduce

Operational Costs

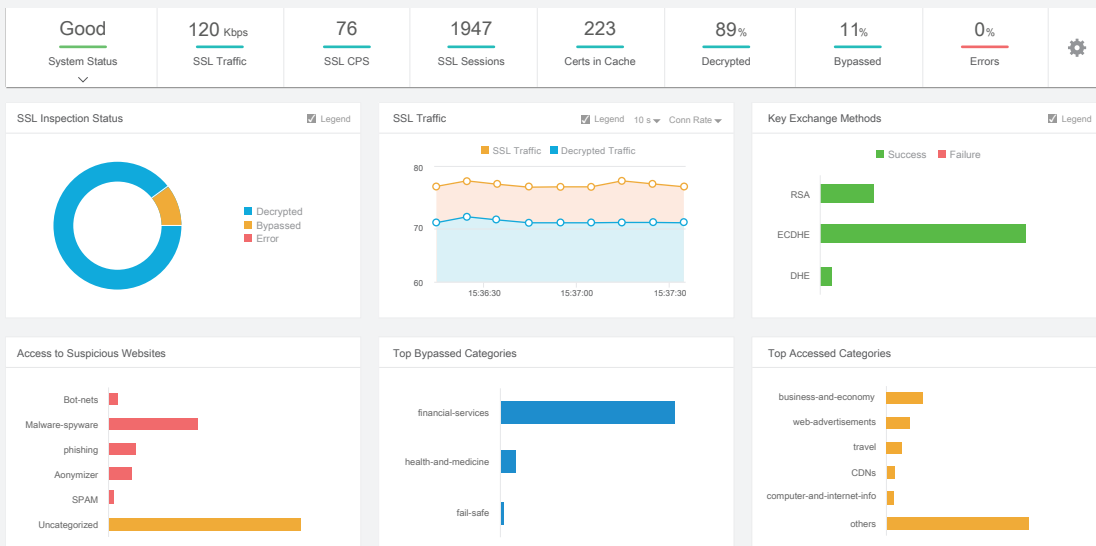
Thunder SSLi offers a centralized point to decrypt enterprise traffic, forwarding it to many inline and non-inline security devices. This eliminates the decryption overhead of each security device, improving performance while maintaining proper security diligence. It also eliminates the need to purchase bigger security devices just to support resource-exhausting decryption and encryption functions.



Simplify Operations

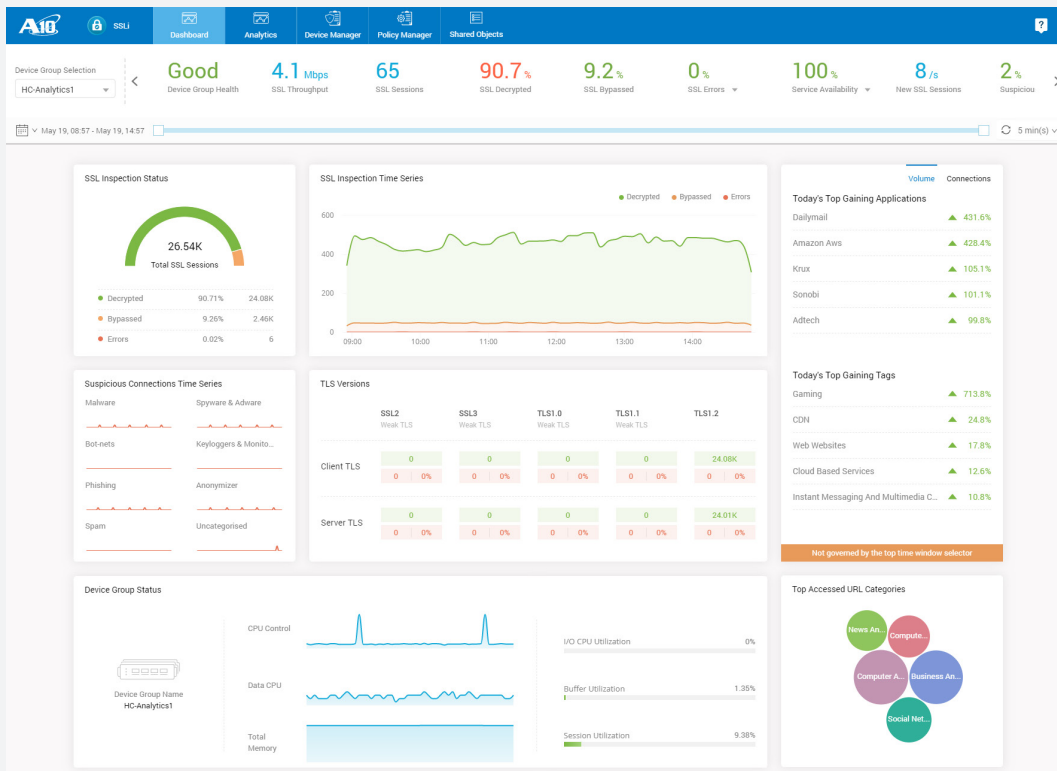
and Management

A wizard-based "on the box" configuration, deployment and management tool, AppCentric Templates make Thunder SSLi the easiest-to-use decryption solution in the industry. With informative dashboards, organizations can track their network with ease. Thunder SSLi also includes an industry-standard CLI, a web user interface and a RESTful API (aXAPI®), which integrates with third-party or custom management consoles.



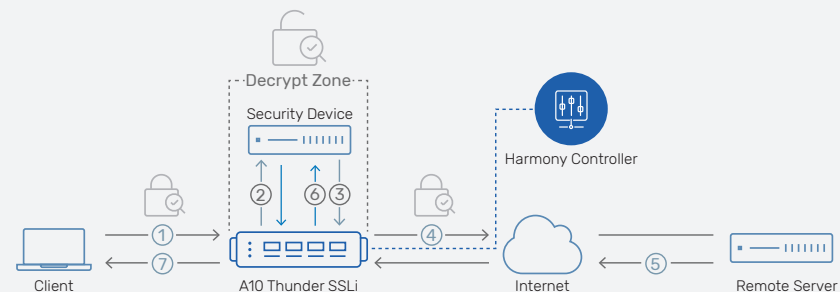
AppCentric Templates help users manage their encrypted traffic using a dashboard to visualize SSL traffic, decryption and encryption, bypassing, traffic management using categorization, and more.

A10 Harmony™ Controller provides centralized management and rich analytics for multiple Thunder devices from multiple branch offices into one centralized and condensed console. Distributed Thunder devices can be configured and managed through Harmony Controller from a central location. Harmony Controller can display either individual Thunder device statistics or as a aggregated into an intuitive dashboard for faster troubleshooting and rich analytics.



A10 Harmony Controller provides centralized management and analytics for complete visibility into all SSLi instances. Dashboard can be populated for each SSLi instance individually or in aggregated fashion providing a holistic view into traffic patterns.

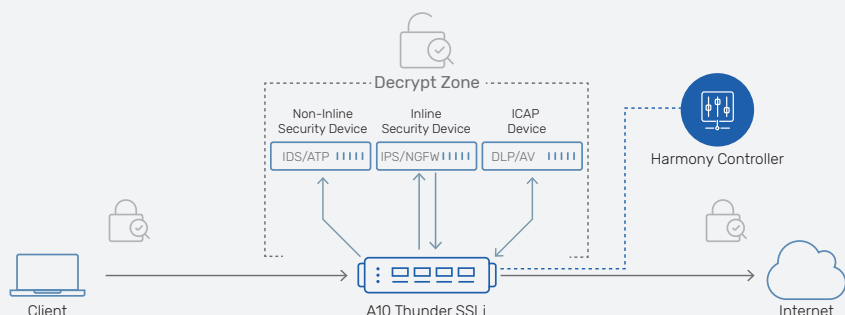
Reference Architectures



- 1 Encrypted traffic from the client is intercepted by Thunder SSLi and decrypted.
- 2 Thunder SSLi sends the decrypted traffic to a security device, which inspects it in clear-text.
- 3 The security device, after inspection, sends the traffic back to Thunder SSLi, which intercepts and re-encrypts it.
- 4 Thunder SSLi sends the re-encrypted traffic to the server.
- 5 The server processes the request and sends an encrypted response to Thunder SSLi.
- 6 Thunder SSLi decrypts the response traffic and forwards it to the same security device for inspection.
- 7 Thunder SSLi receives the traffic from the security device, re-encrypts it and sends it to the client.

Traffic Flow Through the Decrypt Zone

Thunder SSLi provides visibility via a logical decrypt zone where third-party security devices inspect traffic for threats. Thunder SSLi can be deployed in a one- or two-appliance configuration.



Multiple Deployment & Decryption Options

Thunder SSLi may be deployed inline, on the enterprise perimeter, and can decrypt traffic for a variety of security products simultaneously, including inline, non-inline (passive/TAP) and ICAP-enabled devices.

Thunder 7655S SSLi

by the Numbers

72 Gbps

SSLi Throughput

145 Gbps

SSL Bulk Throughput

4M

SSLi Concurrent Sessions

100

GbE Ports



RSA: 100K
ECDHE: 70K

SSLi CPS

Decrypted Traffic Solutions for any Security Device

Thunder SSLi decrypts traffic for security devices from the top vendors.

Firewalls

- Cisco ASA with FirePOWER
- Palo Alto Networks Next Generation Firewalls
- Check Point Next Generation Firewalls

Secure Web Gateways

- Symantec ProxySG
- Forcepoint Trusted Gateway System

Advanced Threat Protection

- FireEye Network Security
- Fidelis Network

Forensics and Security Systems

- RSA NetWitness
- IBM QRadar

Others

- OPSWAT MetaDefender
- Garland Technology NPB
- Bivio Networks Cybersecurity
- Trend Micro Deep Security
- Cyphort Advanced Threat Detection
- Vectra Networks Cybersecurity

Features



Decrypt

Across Multiple Ports and Protocols

Using Dynamic Port Inspection, Thunder SSLi decrypts traffic across all TCP ports. Decryption for protocols like STARTTLS, XMPP, SMTP and POP3 are also supported.

However, the decryption functionalities are not limited to only SSL/TLS, encrypted traffic and decryption for SSH traffic is supported as well.



Full-Proxy

Architecture

Thunder SSLi operates as a full-proxy, which enables adjusting of cipher suite selection for encryption. Thunder SSLi can re-negotiate to a different cipher suite of similar strength, making the solution future-proof against new ciphers or TLS versions that might be introduced to the network without notice. Thunder SSLi can ensure traffic is encrypted using the most secure ciphers, eliminating the use of compromised ciphers.



Multiple Ciphers

for PFS Support

With dedicated SSL acceleration hardware, Thunder SSLi delivers high performance with 2048-bit and 4096-bit key sizes, while supporting multiple cipher suites, including DHE and ECDHE, for perfect forward secrecy (PFS) support.



Secure HSM

for FIPS Compliance

Thunder SSLi supports both internal and external network HSMs to ensure private keys are securely stored. With industry-leading support for up to four internal HSMs (FIPS 140-2 Level 3-validated), Thunder SSLi provides high performance with better security. Thunder SSLi interoperates with existing external HSMs deployed in the network.



URL Classification

for Selective Decryption

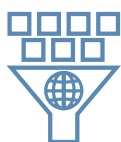
Thunder SSLi URL classification categorizes the traffic of more than 460 million domains, selectively bypassing traffic decryption to enforce privacy policies so private/sensitive data (e.g., medical or financial records) is not decrypted, in adherence to compliance standards like HIPAA.



Explicit

Proxy Support

In addition to the standard transparent proxy deployment, Thunder SSLi can also be deployed as an explicit proxy, giving more control over traffic management. Thunder SSLi can connect to multiple upstream proxy servers using proxy chaining.



URL Filtering

for Access Control

URL filtering is used to maximize employee productivity and reduce risks by blocking access to malicious websites, including malware, spam and phishing sources.



ICAP

Support

Data Loss Prevention (DLP) systems typically use ICAP to connect to the network and help prevent unauthorized data exfiltration. Thunder SSLi supports ICAP connectivity simultaneously with other decryption modes. This enables a network's existing DLP systems without the purchase of extra solutions.



Load Balance

Security Devices

With load-balancing support, Thunder SSLi dramatically increases performance of firewalls and other security devices. Easily add security capacity and extend the life of existing security devices. Flexible weighted traffic priorities can be assigned.



Granular

Traffic Control

Examine, update, modify or drop requests DPI using A10 aFleX® scripting. Fully control which traffic is intercepted and forwarded to a third-party security device, and which traffic should be sanitized before being sent to the intended destination.

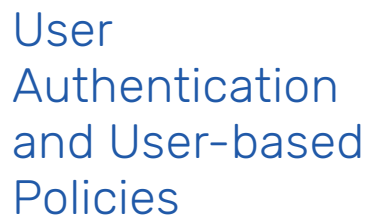


Selectively redirect traffic, based on application type, to different service chains with fine-grained policies. Thunder SSLi reduces latency and potential bottlenecks with the *Decrypt Once, Inspect Many Times* approach, consolidating decryption and encryption duties.



A10 Harmony Controller provides performance monitoring and faster troubleshooting with device health status, logs and traffic pattern analysis.

Deep insights into anomalies and threats enables enterprises to set adaptive controls and policy updates through behavior analysis.



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.



Explore the trustworthiness of websites, based on threat reputation and confidence scores. The Threat Investigator can be accessed as stand-alone AppCentric Templates as well as through the access logs.

Thunder SSLi Physical Appliances

Performance ¹	Thunder 940 SSLi	Thunder 1040-11 SSLi	Thunder 3040S SSLi	Thunder 3350S SSLi
SSLi Throughput	0.5 Gbps	1.5 Gbps	2.5 Gbps	5.5 Gbps
SSLi CPS	RSA: 500 ECDHE:300	RSA: 4K ECDHE: 3K	RSA: 8K ECDHE: 4.5K	RSA: 20K ECDHE: 10K
SSLi Concurrent Sessions	30K	100K	200K	300K
SSL Bulk Throughput ⁵	1 Gbps	7 Gbps	11 Gbps	30 Gbps
Network Interfaces				
1 GE (BASE-T)	5	1 + 4 (Bypass)	6	6
1 GE Fiber (SFP)	0	0	2	2
1/10 GE Fiber (SFP+)	4	4 ⁶	4	8 + 4 ⁶
1/10 GE Fiber (Fixed)	0	2 (Optical Bypass) ⁴	0	0
Management Ports	Ethernet Mgmt Port, RJ-45 Console Port			
Hardware Specifications				
Processor	Intel Communications Processor	Intel Communications Processor	Intel Xeon 4-core	Intel Xeon 14-core
Memory (ECC RAM)	8 GB	16 GB	16 GB	64 GB
Storage	SSD	SSD	SSD	SSD
Hardware Acceleration	Software	Software	Software	Software
TLS/SSL Security Acceleration	N/A	Hardware	Hardware	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 17.45 (D)	1.75 (H) x 17.5 (W) x 18(D)
Rack Units (Mountable)	1U	1U	1U	1U
Unit Weight	14 lbs 16 lbs (RPS)	15 lbs 17 lbs (RPS)	20.6 lbs	18 lbs
Power Supply (DC option available)	Single 750W ³	Single 750W ³	Dual 600W RPS	Dual 750W RPS
	80 Plus Platinum efficiency, 100 - 240 VAC, 50 - 60 Hz			
Power Consumption (Typical/Max) ²	60W / 80W	80W / 110W	180W / 240W	175W / 222W
Heat in BTU/Hour (Typical/Max) ²	205 / 273	273 / 376	615 / 819	598 / 758
Cooling Fan	Removable Fans	Removable Fans	Hot Swap Smart Fans	Hot Swap Smart Fans
Operating Ranges	Temperature 0° - 40° C Humidity 5% - 95%			
Regulatory Certifications	FCC Class A, UL, CE, GS, CB, VCCI, CCC, KCC, BSMI, RCM RoHS	FCC Class A, UL, CE, GS, CB, VCCI, CCC, KCC, BSMI RoHS	FCC Class A, UL, CE, GS, CB, VCCI, CCC, KCC, BSMI, RCM RoHS	FCC Class A, UL, CE, GS, CB, VCCI, CCC, KCC, BSMI, RCM RoHS
Standard Warranty	90-Day Hardware and Software			

Thunder SSLi Physical Appliances (Cont.)

Performance ^{*1}	Thunder 4440S SSLi	Thunder 5440S SSLi	Thunder 5840S SSLi
SSLi Throughput	8 Gbps	16 Gbps	20 Gbps
SSLi CPS	RSA: 22K ECDHE: 10K	RSA: 35K ECDHE: 20K	RSA: 50K ECDHE: 25K
SSLi Concurrent Sessions	400K	800K	1 Million
SSL Bulk Throughput ^{*5}	25 Gbps	45 Gbps	55 Gbps
Network Interfaces			
1/10 GE Fiber (SFP+)	24	24	24
40 GE Fiber (QSFP+)	4	4	4
Management Ports	Ethernet Mgmt Port, RJ-45 Console Port, Lights Out Management		
Hardware Specifications			
Processor	Intel Xeon 6-core	Intel Xeon 12-core	Intel Xeon 18-core
Memory (ECC RAM)	32 GB	64 GB	64 GB
Storage	SSD	SSD	SSD
Hardware Acceleration	2 x FTA-4	2 x FTA-4	2x FTA-4
TLS/SSL Security Acceleration	Hardware	Hardware	Hardware
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)
Rack Units (Mountable)	1U	1U	1U
Unit Weight	32.5 lbs	32.5 lbs	32.5 lbs
Power Supply (DC option available)	Dual 1100W RPS	Dual 1100W RPS	Dual 1100W RPS
	80 Plus Platinum efficiency, 100 – 240 VAC, 50 – 60 Hz		
Power Consumption (Typical/Max) ^{*2}	360W / 445W	360W / 445W	375W / 470W
Heat in BTU/Hour (Typical/Max) ^{*2}	1,229 / 1,519	1,229 / 1,519	1,280 / 1,604
Cooling Fan	Hot Swap Smart Fans		
Operating Ranges	Temperature 0° – 40° C Humidity 5% - 95%		
Regulatory Certifications	FCC Class A, UL, CE, CB, VCCI, CCC, KCC, BSMI, RCM RoHS	FCC Class A, UL, CE, CB, VCCI, CCC, KCC, BSMI, RCM RoHS	FCC Class A, UL, CE, CB, VCCI, CCC, KCC, BSMI, RCM RoHS
Standard Warranty	90-Day Hardware and Software		

Thunder SSLi Physical Appliances (Cont.)

Performance ^{*1}	Thunder 5840-11S SSLi	Thunder 7440S SSLi	Thunder 7440-11S SSLi	Thunder 7655S SSLi
SSLi Throughput	25 Gbps	25 Gbps	25 Gbps	72 Gbps
SSLi CPS	RSA: 50K ECDHE: 28K	RSA: 45K ECDHE: 20K	RSA: 45K ECDHE: 20K	RSA: 100K ECDHE: 70K
SSLi Concurrent Sessions	2 Million	2 Million	2 Million	4 Million
SSL Bulk Throughput ^{*5}	55 Gbps	75 Gbps	75 Gbps	145 Gbps
Network Interfaces				
1/10 GE Fiber (SFP+)	48	48	48	0
40 GE Fiber (QSFP+)	0	4	0	0
100 GE Fiber (QSFP28)	4	0	4	16
Management Ports	Ethernet Mgmt Port, RJ-45 Console Port, Lights Out Management			
Hardware Specifications				
Processor	Intel Xeon 18-core	2 x Intel Xeon 18-core	2 x Intel Xeon 18-core	2 x Intel Xeon 28-core
Memory (ECC RAM)	128 GB	128 GB	128 GB	384 GB
Storage	SSD	SSD	SSD	SSD
Hardware Acceleration	2x FTA-4	3 x FTA-4	3 x FTA-4	2 x FTA-5, SPE
TLS/SSL Security Acceleration	Hardware	Hardware	Hardware	Hardware
Dimensions (Inches)	17.5 (H) x 17.5 (W) x 30 (D)	17.5 (H) x 17.5 (W) x 30 (D)	17.5 (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	34.3 lbs	36 lbs	37 lbs	44.2 lbs
Power Supply (DC option available)	Dual 1500W RPS	Dual 1100W RPS	Dual 1500W RPS	Dual 1500W RPS
	80 Plus Platinum efficiency, 100 - 240 VAC, 50 - 60 Hz			
Power Consumption (Typical/Max) ^{*2}	550W / 760W	690W / 820W	820W / 950W	1,121W / 1,3001W
Heat in BTU/Hour (Typical/Max) ^{*2}	1,877 / 2,594	2,355 / 2,798	2,798 / 3,242	3,826 / 4,436
Cooling Fan	Hot Swap Smart Fans			
Operating Ranges	Temperature 0° - 40° C Humidity 5% - 95%			
Regulatory Certifications	FCC Class A, UL, CE, CB, VCCI, CCC, BSMI, RCM RoHS	FCC Class A, UL, CE, CB, VCCI, CCC, KCC, BSMI, RCM RoHS, FIPS 140-2 ^{1b}	FCC Class A, UL, CE, CB, VCCI, CCC, BSMI, RCM RoHS	FCC Class A, UL, CE, GS, CB, VCCI, CCC, 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 base model. Number varies by SSL model.

^{*3} Optional RPS available.

^{*4} Fixed SFP+ optical ports with dual rate (10GBASE-SR and 100GBASE-SX)

^{*5} Total SSL (transaction) capacity with maximum SSL option

^{*6} 10Gbps speed only

[^] Certification in process.

+ FIPS model must be purchased

Thunder SSLi Physical Appliances with HSM

Performance ^{*1,2}	Thunder 5440 SSLi with HSM	Thunder 5840 SSLi with HSM	Thunder 6630 SSLi with HSM
SSLi Throughput (RSA 2K keys)	15 Gbps	20 Gbps	40 Gbps
SSLi CPS (RSA 2K keys)	50K	65K	100K
Network Interfaces			
1/10 GE Fiber (SFP+)	24	24	12
40 GE Fiber (QSFP+)	4	4	0
100 GE Fiber (CXP)	0	0	4
Management Ports	Ethernet Mgmt Port, RJ-45 Console Port, Lights Out Management		
Hardware Specifications			
Processor	Intel Xeon 12-core	Intel Xeon 18-core	2 x Intel Xeon 12-core
Memory (ECC RAM)	64 GB	64 GB	128 GB
Storage	SSD	SSD	SSD
Hardware Acceleration	2 x FTA-4	2 x FTA-4	4 x FTA-3
Hardware Security Module (HSM)	1 or 2	1 or 2	1, 2 or 4
Dimensions (Inches)	1.75 (H) x 17.5 (W) x 30 (D)	1.75 (H) x 17.5 (W) x 30 (D)	5.3 (H) x 16.9 (W) x 30 (D)
Rack Units (Mountable)	1U	1U	3U
Unit Weight	32.5 lbs	32.5 lbs	74.5 lbs
Power Supply (DC option available)	Dual 1100W RPS	Dual 1100W RPS	2+2 1100W RPS
	80 Plus Platinum efficiency, 100 - 240 VAC, 50 - 60 Hz		
Power Consumption (Typical/Max) ^{*2}	360W / 445W	375W / 470W	995W / 1,150W
Heat in BTU/Hour (Typical/Max) ^{*2}	1,229 / 1,519	1,280 / 1,604	3,395 / 3,924
Cooling Fan	Hot Swap Smart Fans		
Operating Ranges	Temperature 0° - 40° C Humidity 5% - 95%		
Regulatory Certifications	FCC Class A, UL, CE, CB, VCCI, CCC, BSMI, RCM RoHS, FIPS 140-2 Level 3	FCC Class A, UL, CE, CB, VCCI, CCC, BSMI, RCM RoHS, FIPS 140-2 Level 3	FCC Class A, UL, CE, TUV, CB, VCCI, KCC*, EAC, FAC RoHS, FIPS 140-2 Level 3
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 with maximum HSM cards in two appliances SSLi deployment. Cipher "TLS_RSA_WITH_AES_128_CBC_SHA" with RSA 2K keys are used.

^{*2} With base model. Number varies by HSM card option.

[^] Certification in process.

A10 Thunder on Dell Technologies OEM Solution Bundle Specifications

Single Service Platform (SSP) Specifications

The SSP range consists of A10's cloud-ready software and purpose-built Dell Technologies hardware, with an inclusive license*² that has the capabilities of delivering Application Delivery Controller (ADC), SSL Insight (SSLi), and Carrier Grade Networking (CGN) solutions along with an expanded feature set of A10 capabilities.

Thunder SSLi Performance ^{*1}	Dell Technologies R640		Dell Technologies R740	
	10GE NIC Model	100GE NIC Model	10GE NIC Model	100GE NIC Model
SSL Insight Throughput	8.5 Gbps	12.5 Gbps	16.5 Gbps	30 Gbps
SSL Insight CPS (RSA / ECDHE)	28.5K / 13.5K	28.5K / 14.5K	30K / 18.5K	30K / 18.5K
SSL Insight Concurrent Sessions	3 Million	3 Million	3 Million	3 Million
Network Interfaces				
1 GE (BASE-T)	2	2	2	2
1/10 GE Fiber (SFP+)	6	2	10	10
100 GE Fiber (QSFP28)	0	2	0	4
Hardware Specifications				
Processor	2 x Intel Xeon 20-core		2 x Intel Xeon 20-core	
Memory	192 GB		192 GB	
Storage	2 x SSD		2 x SSD	
TLS/SSL Security Processor	2 x Security card (PCIe)		2 x Dual-chip security card (PCIe)	
Power Supply	Dual 750W Power Supply		Dual 2000W Power Supply	

Multi-tenant Virtual Platform (MVP) Specifications

A10 Thunder Multi-tenant Virtual Platform (MVP) on Dell Technologies is an advanced platform enabling multiple virtual instances or services on a single platform, with inclusive license*² that has the capabilities of delivering Application Delivery Controller (ADC), SSL Insight (SSLi), and Carrier Grade Networking (CGN) solutions along with an expanded feature set of A10 capabilities.

Performance with SSL Insight ^{*1,3}	Dell Technologies R640		Dell Technologies R740	
	10GE NIC Model	100GE NIC Model	10GE NIC Model	100GE NIC Model
SSL Insight Throughput	6.8 Gbps	15.5 Gbps	13.8 Gbps	32.5 Gbps
SSL Insight CPS (RSA / ECDHE)	12.5K / 7K	55K / 32K	27K / 14K	68.5K / 52.5K
SSL Insight Concurrent Sessions	58K	680K	118K	680K
Network Interfaces				
1 GE (BASE-T)	2	2	2	2
1/10 GE Fiber (SFP+)	6	2	10	10
100 GE Fiber (QSFP28)	0	2	0	4
Hardware Specifications				
Processor	2 x Intel Xeon 20-core		2 x Intel Xeon 20-core	
Memory	192 GB		192 GB	
Storage	2 x SSD		2 x SSD	
TLS/SSL Security Processor	2 x Security card (PCIe)		2 x Dual-chip security card (PCIe)	
Power Supply	Dual 750W Power Supply		Dual 2000W Power Supply	

*1 SSLi performance is tested in L3, dual-partition mode deployment, with RSA (2K keys) cipher "TLS_RSA_WITH_AES_128_CBC_SHA" and ECDSA (EC P-256) cipher "TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA"

*2 A10 Thunder on Dell Technologies OEM bundle solutions are licensed under the Convergent Firewall (CFW) license. Check with your A10 Networks sales representative for the latest information on full feature testing and validation.

*3 All Thunder MVP performance specifications are aggregate number that use the following VM profiles:

- R640 10GE NIC model is tested with 1 VM and R740 10GE NIC model is with 2 VMs. Each vThunder is assigned with 8 CPUs, 16 GB memory, 30 GB storage, 8 SSL VFs.
- Both R640 and R740 100GE NIC models are tested with 4-VM profile (16 vCPUs, 32 GB memory, 30 GB storage, 16 SSL VFs assigned on each vThunder)

Thunder SSLi Virtual Appliance

vThunder SSLi

Supported Hypervisors	VMware ESXi 5.5 or higher (VMXNET3, SR-IOV, PCI Passthrough) KVM QEMU 1.0 or higher (VirtIO, OvS with DPDK, SR-IOV, PCI Passthrough) Microsoft Hyper-V on Windows Server 2008 R2 or higher				
Hardware Requirements	See Installation Guide				
Standard Warranty	90-Day Software				
Bandwidth Licenses	Lab	200 Mbps	1 Gbps	4 Gbps	8 Gbps
VMware ESXi	●	●	●	●	●
KVM	●	●	●	●	●
Microsoft Hyper-V	●	●	●	●	● ⁺

+ 8 Gbps license not recommended for Microsoft Hyper-V

Detailed Feature List

Features may vary by appliance

Decryption

- High-performance SSL decryption and encryption as a forward proxy
- Full-proxy architecture
- Internet Content Adaption Protocol (ICAP) support with pre-filtering for data loss prevention (DLP) and antivirus solutions
- Dynamic port decryption to detect and intercept SSL or TLS traffic regardless of TCP port number
- Bi-directional inspection for protection against incoming web threats
- Forward proxy failsafe to bypass traffic when there is a handshake failure
- Decryption bypass based on hostname; bypass list scales up to 1 million Server Name Indication (SNI) values
- Multi-bypass list support
- Extensive cipher and protocol support
 - SSL 3.0, TLS 1.0/1.1/1.2
 - RSA/DHE/ECDHE ciphers with Perfect Forward Secrecy (PFS) support
 - SHA, SHA-2, MD5 Message Authentication Code (MAC) algorithms
 - IPv4 and IPv6
 - HTTP 1.1, HTTP/2
- Decryption of HTTPS, STARTTLS, SMTP, XMPP, POP3, SSH, SCP, sFTP
- Client certificate detection and optional bypass
- Untrusted/expired certificate handling using:

- Online Certificate Status Protocol (OCSP)
- Certificate Revocation Lists (CRL)
- Detailed user and session logging
- User authentication and authorization service for identity based access control
- SaaS local breakout and access control
- Next Hop Load Distribution (NHL) for internet traffic load distribution and optimization
- TLS alert logging to log flow information from SSLi events
- SSL session ID reuse
- aFlex scripting for customizable, application-aware switching
- High Availability: Active-Active, Active-Standby configurations
- Firewall Load-Balancing (FWLB)

Hardware Security Module (HSM)

- FIPS 140-2 Level 3-validated on-board HSM (Up to four cards on a single platform)**
- External network HSM with Thales nShield

URL Classification***

- URL Bypassing for web category-based selective decryption
- URL Filtering for blocking of known malicious or undesirable websites

Deployment

- Inline transparent proxy or explicit proxy deployment with non-inline third-party devices

- Inline transparent proxy or explicit proxy deployment with inline third-party devices
- Inline transparent proxy or explicit proxy deployment with ICAP-connected devices
- Inline transparent proxy or explicit proxy deployment with third-party transparent and explicit proxy devices using proxy chaining

Threat Investigator

- Rich and contextual analytics for object under investigation

Management

- Dedicated on-box management interface (GUI, CLI, SSH, Telnet)
- Web-based AppCentric Templates (ACT) support
- SNMP, syslog, email alerts
- RESTful API (aXAPI)
- LDAP, TACACS+, RADIUS support
- Configurable control CPUs
- Centralized management and analytics with Harmony Controller****

Virtualization

- vThunder virtual appliance for VMware vSphere ESXi, Microsoft Hyper-V and KVM
- A10 Thunder on Dell Technologies OEM Solution Bundle

* Features may vary by appliance.

** Available on select models.

*** URL Classification for URL Filtering and Bypassing subscriptions are available as an additional paid service, powered by Webroot.

****Harmony Controller required

Learn More

About A10 Networks

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