SonicWall Network Security appliance (NS*a*) series

Industry-validated security effectiveness and performance for mid-sized networks and distributed enterprises

The SonicWall Network Security appliance (NS*a*) series provides mid-sized networks, branch offices and distributed enterprises with advanced threat prevention in a high-performance security platform. Utilizing innovative deep learning technologies in the SonicWall Capture Cloud Platform, the NS*a* series delivers the automated real-time breach detection and prevention organizations need.

Cutting-edge threat prevention with superior performance

Today's network threats are highly evasive and increasingly difficult to identify using traditional methods of detection. Staying ahead of sophisticated attacks requires a more modern approach that heavily leverages security intelligence in the cloud. Without that cloud intelligence, gateway security solutions can't keep pace with today's complex threats. NS*a* series next-generation firewalls (NGFWs) integrate two advanced security technologies to deliver cutting-edge threat prevention that keeps your network one step ahead. Enhancing SonicWall's multi-engine Capture Advanced Threat Protection (ATP) service is our patent-pending Real-Time Deep Memory Inspection (RTDMI™) technology. The RTDMI engine proactively detects and blocks mass market, zero-day threats and unknown malware by inspecting directly in memory. Because of the real-time architecture, SonicWall RTDMI technology is precise, minimizes false positives, and identifies and mitigates sophisticated attacks where the malware's weaponry is exposed for less than 100 nanoseconds. In combination, SonicWall's patented* single-pass Reassembly-Free Deep Packet Inspection (RFDPI) engine examines every byte of every packet, inspecting both inbound and outbound traffic simultaneously on the firewall. By leveraging the SonicWall Capture Cloud Platform in addition to on-box capabilities including intrusion prevention, anti-malware and web/URL filtering, the NS*a* series blocks even the most insidious threats at the gateway.

Further, SonicWall firewalls provide complete protection by performing full decryption and inspection of TLS/SSL and SSH encrypted connections as well as non-proxyable applications regardless of transport or protocol. The firewall looks deep inside every packet (the header and data) searching for protocol non-compliance, threats, zero-days, intrusions, and even defined criteria. The deep packet inspection engine detects and prevents hidden attacks that leverage cryptography, blocks encrypted malware downloads, ceases the spread of infections, and thwarts command and control (C&C) communications and data exfiltration. Inclusion and exclusion rules allow total control to customize which traffic is subjected to decryption and inspection based on specific organizational compliance and/or legal requirements.

When organizations activate deep packet inspection functions such as IPS, anti-virus, anti-spyware, TLS/SSL decryption/inspection and others on their firewalls,

U.S. Patents 7,310,815; 7,600,257; 7,738,380; 7,835,361; 7,991,723

Benefits:

Superior threat prevention and performance

- Patent pending real-time deep memory inspection technology
- Patented reassembly-free deep packet inspection technology
- On-box and cloud-based threat prevention
- TLS/SSL decryption and inspection
- Industry-validated security effectiveness
- Multi-core hardware architecture
- Dedicated Capture Labs threat research team

Network control and flexibility

- Powerful SonicOS operating system
- Application intelligence and control
- Network segmentation with VLANs
- High-speed wireless security

Easy deployment, setup and ongoing management

- Tightly integrated solution
- Centralized management
- Scalability through multiple hardware platforms
- Low total cost of ownership

network performance often slows down, sometimes dramatically. NS*a* series firewalls, however, feature a multi-core hardware architecture that utilizes specialized security microprocessors. Combined with our RTDMI and RFDPI engines, this unique design eliminates the performance degradation networks experience with other firewalls.

Network control and flexibility

At the core of the NS*a* series is SonicOS, SonicWall's feature-rich operating system. SonicOS provides organizations with the network control and flexibility they require through application intelligence and control, real-time visualization, an intrusion prevention system (IPS) featuring sophisticated anti-evasion technology, high-speed virtual private networking (VPN) and other robust security features.

Using application intelligence and control, network administrators can identify and categorize productive applications from those that are unproductive or potentially dangerous, and control that traffic through powerful application-level policies on both a per-user and a per-group basis (along with schedules and exception lists). Business-critical applications can be prioritized and allocated more bandwidth while non-essential applications are bandwidth-limited. Real-time monitoring and visualization provides a graphical representation of applications, users and bandwidth usage for granular insight into traffic across the network.

For organizations requiring advanced flexibility in their network design, SonicOS offers the tools to segment the network through the use of virtual LANs (VLANs). This enables network administrators to create a virtual LAN interface that allows for network separation into one or more logical groups. Administrators create rules that determine the level of communication with devices on other VLANs.

Built into every NS*a* series firewall is a wireless access controller that enables organizations to extend the network perimeter securely through the use of wireless technology. Together, SonicWall firewalls and SonicWave 802.11ac Wave 2 wireless access points create a wireless network security solution that combines industry-leading next-generation firewall technology with high-speed wireless for enterprise-class network security and performance across the wireless network.

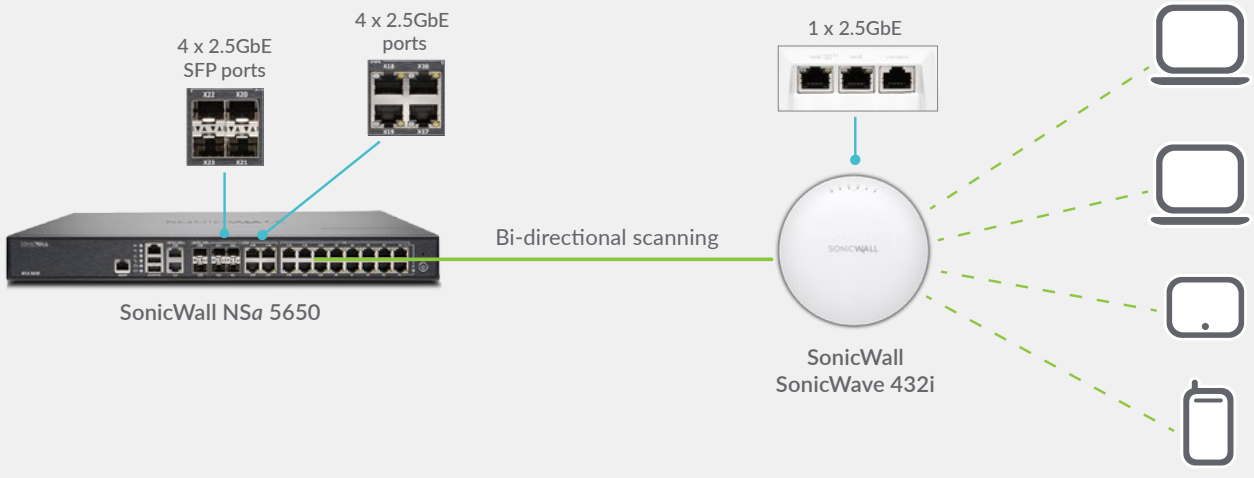
Easy deployment, setup and ongoing management

Like all SonicWall firewalls, the NS*a* series tightly integrates key security, connectivity and flexibility technologies into a single, comprehensive solution. This includes SonicWave wireless access points and the SonicWall WAN Acceleration Appliance (WXA) series, both of which are automatically detected and provisioned by the managing NS*a* firewall. Consolidating multiple capabilities eliminates the need to purchase and install point products that don't always work well together. This reduces the effort it takes to deploy the solution into the network and configure it, saving both time and money.

Ongoing management, monitoring and reporting of network security are handled centrally through the firewall or through the SonicWall Capture Security Center, providing network administrators with a single pane of glass from which to manage all aspects of the network. Together, the simplified deployment and setup along with the ease of management enable organizations to lower their total cost of ownership and realize a high return on investment.

Secure, High-speed Wireless

Combine an NS*a* series next-generation firewall with a SonicWall SonicWave 802.11ac Wave 2 wireless access point to create a high-speed wireless network security solution. NS*a* series firewalls and SonicWave access points both feature 2.5 GbE ports that enable multi-gigabit wireless throughput offered in Wave 2 wireless technology. The firewall scans all wireless traffic coming into and going out of the network using deep packet inspection technology and then removes harmful threats such as malware and intrusions, even over encrypted connections. Additional security and control capabilities such as content filtering, application control and intelligence and Capture Advanced Threat Protection can be run on the wireless network to provide added layers of protection.



Capture Cloud Platform

SonicWall's Capture Cloud Platform delivers cloud-based threat prevention and network management plus reporting and analytics for organizations of any size. The platform consolidates threat intelligence gathered from multiple sources including our award-winning multi-engine network sandboxing service, Capture Advanced Threat Protection, as well as more than 1 million SonicWall sensors located around the globe.

If data coming into the network is found to contain previously-unseen malicious code, SonicWall's dedicated, in-house Capture Labs threat research team develops signatures that are stored in the Capture Cloud Platform database and deployed to customer firewalls for up-to-date protection. New updates take effect immediately without reboots or interruptions. The signatures resident on the appliance protect against wide classes of attacks, covering tens of thousands of individual threats with a single signature.

In addition to the countermeasures on the appliance, NS*a* firewalls also have continuous access to the Capture Cloud Platform database which extends the onboard signature intelligence with tens of millions of signatures.

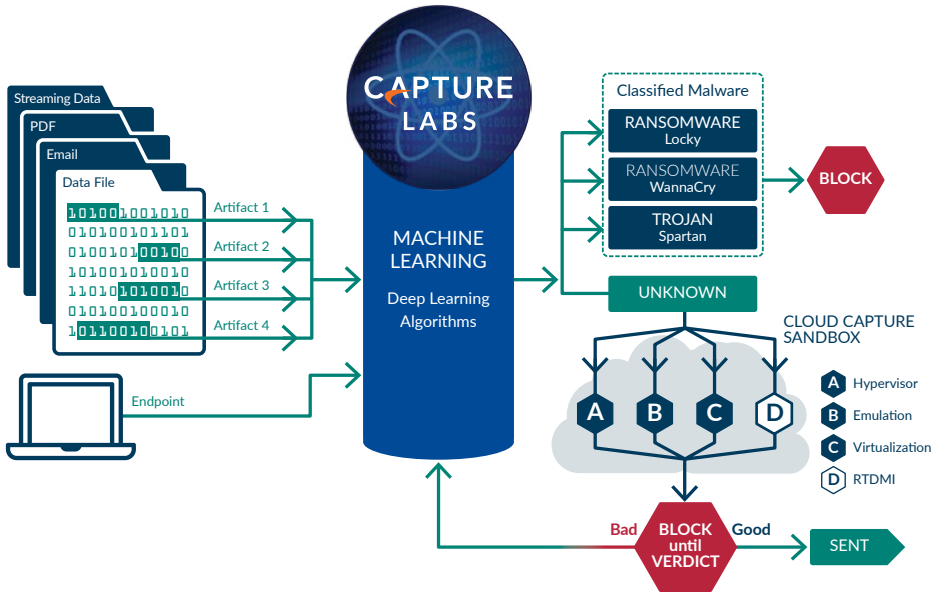
In addition to providing threat prevention, the Capture Cloud Platform offers single pane of glass management and administrators can easily create both real-time and historical reports on network activity.

Advanced threat protection

At the center of SonicWall automated, real-time breach prevention is SonicWall Capture Advanced Threat Protection service, a cloud-based multi-engine sandbox that extends firewall threat protection to detect and prevent zero-day threats. Suspicious files are sent to the cloud where they are analyzed using deep learning algorithms with the option to hold them at the gateway until a verdict is determined. The multi-engine sandbox platform, which includes Real-Time Deep Memory Inspection, virtualized sandboxing, full system emulation and hypervisor level analysis technology, executes suspicious code and analyzes behavior. When a file is identified as malicious, it is blocked and a hash is immediately created within Capture ATP. Soon after, a signature is sent to firewalls to prevent follow-on attacks.

The service analyzes a broad range of operating systems and file types, including executable programs, DLL, PDFs, MS Office documents, archives, JAR and APK.

For complete endpoint protection, the SonicWall Capture Client combines next-generation anti-virus technology with SonicWall's cloud-based multi-engine sandbox.



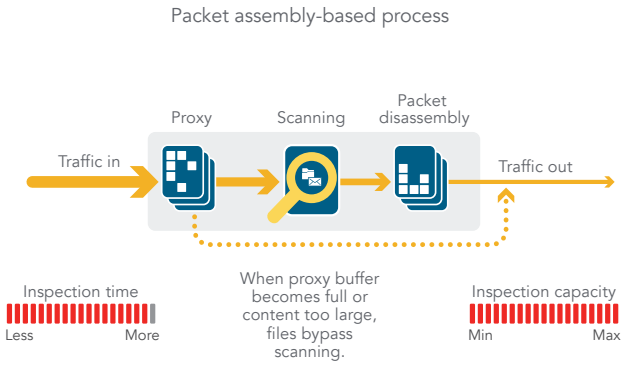
SONICWALL

Reassembly-Free Deep Packet Inspection engine

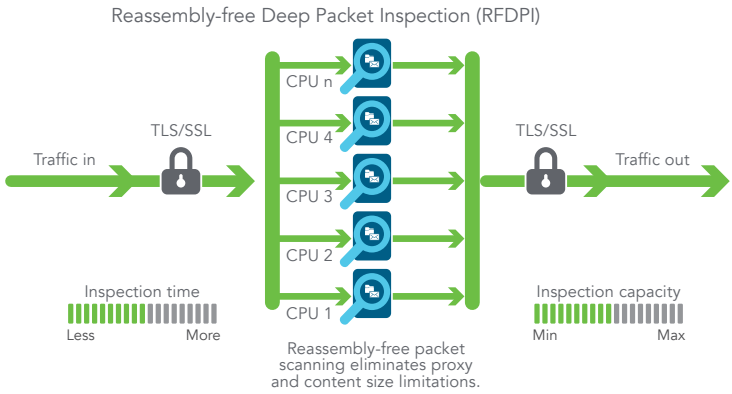
The SonicWall Reassembly-Free Deep Packet Inspection (RFDPI) is a single-pass, low latency inspection system that performs stream-based, bi-directional traffic analysis at high speed without proxying or buffering to effectively uncover intrusion attempts and malware downloads while identifying application traffic regardless of port and protocol. This proprietary engine relies on streaming traffic payload inspection to detect threats at Layers 3-7, and takes network streams through extensive and repeated normalization and decryption in order to neutralize advanced evasion techniques that seek to confuse detection engines and sneak malicious code into the network.

Once a packet undergoes the necessary pre-processing, including TLS/SSL decryption, it is analyzed against a single, proprietary memory representation of three signature databases: intrusion attacks, malware and applications. The connection state is then advanced to represent the position of the stream relative to these databases until it encounters a state of attack, or other "match" event, at which point a pre-set action is taken.

In most cases, the connection is terminated and proper logging and notification events are created. However, the engine can also be configured for inspection only or, in case of application detection, to provide Layer 7 bandwidth management services for the remainder of the application stream as soon as the application is identified.



Competitive proxy-based architecture



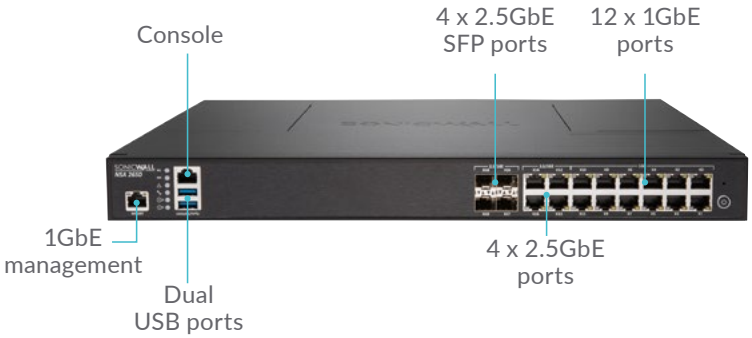
SonicWall stream-based architecture

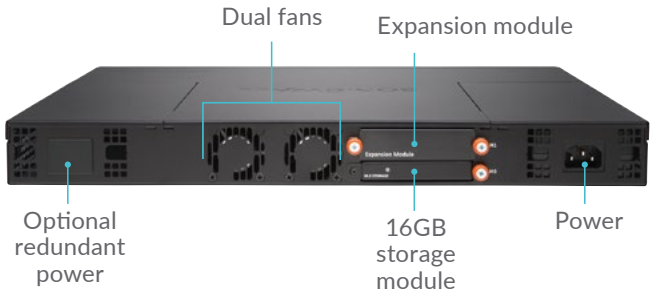
Global management and reporting

For highly regulated organizations wanting to achieve a fully coordinated security governance, compliance and risk management strategy, SonicWall provides administrators a unified, secure and extensible platform to manage SonicWall firewalls, wireless access points and Dell X-Series switches through a correlated and auditable workstream process. Enterprises can easily consolidate the management of security appliances, reduce administrative and troubleshooting complexities, and govern all operational aspects of the security infrastructure, including centralized policy management and enforcement; real-time event monitoring; user activities; application identifications; flow analytics and forensics; compliance and audit reporting; and more. In addition, enterprises meet the firewall's change management requirements through workflow automation which provides the agility and confidence to deploy the right firewall policies at the right time and in conformance with compliance regulations. Available on premises as SonicWall Global Management System and in the cloud as Capture Security Center, SonicWall management and reporting solutions provide a coherent way to manage network security by business processes and service levels, dramatically simplifying lifecycle management of your overall security environments compared to managing on a device-by-device basis.

Network Security appliance NS*a* 2650

The NS*a* 2650 delivers high-speed threat prevention over thousands of encrypted and even more unencrypted connections to mid-sized organizations and distributed enterprises.

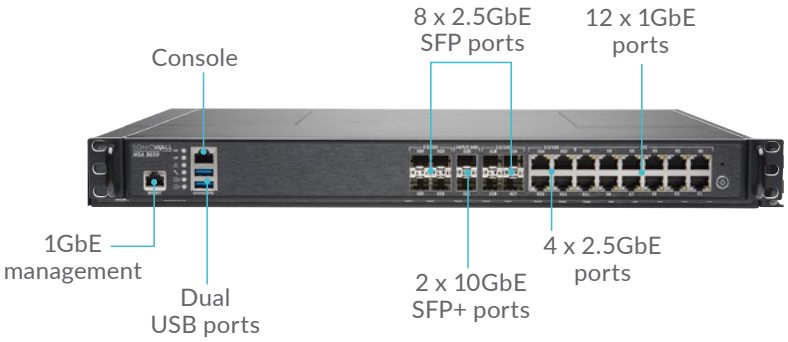


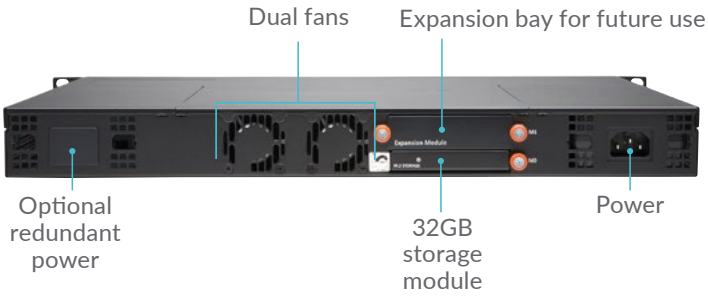


Firewall	NS*a* 2650
Firewall throughput	3.0 Gbps
IPS throughput	1.4 Gbps
Anti-malware throughput	600 Mbps
Full DPI throughput	600 Mbps
IMIX throughput	700 Mbps
Maximum DPI connections	500,000
New connections/sec	14,000/sec
Description	**SKU**
NS*a* 2650 firewall only	01-SSC-1936
NS*a* 2650 TotalSecure Advanced (1-year)	01-SSC-1988

Network Security appliance NS*a* 3650

The SonicWall NS*a* 3650 is ideal for branch office and small- to medium-sized corporate environments concerned about throughput capacity and performance.

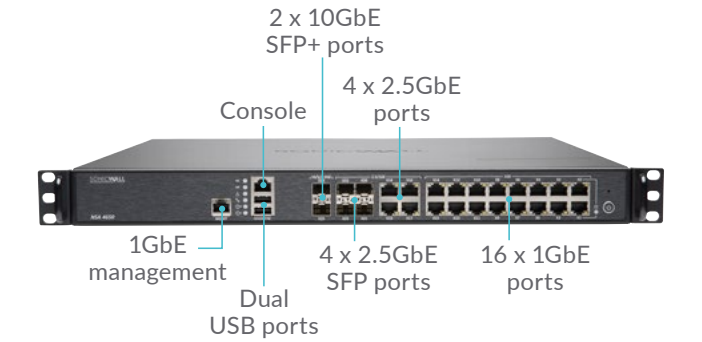


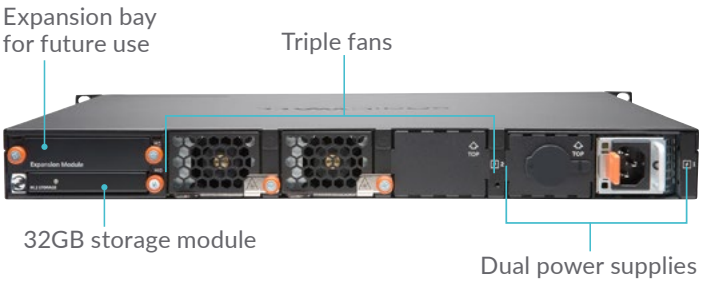


Firewall	NS*a* 3650
Firewall throughput	3.75 Gbps
IPS throughput	1.8 Gbps
Anti-malware throughput	800 Mbps
Full DPI throughput	730 Mbps
IMIX throughput	900 Mbps
Maximum DPI connections	750,000
New connections/sec	14,000/sec
Description	**SKU**
NS*a* 3650 firewall only	01-SSC-1937
NS*a* 3650 TotalSecure Advanced (1-year)	01-SSC-4081

Network Security appliance NS*a* 4650

The SonicWall NS*a* 4650 secures growing medium-sized organizations and branch office locations with enterprise-class features and uncompromising performance.

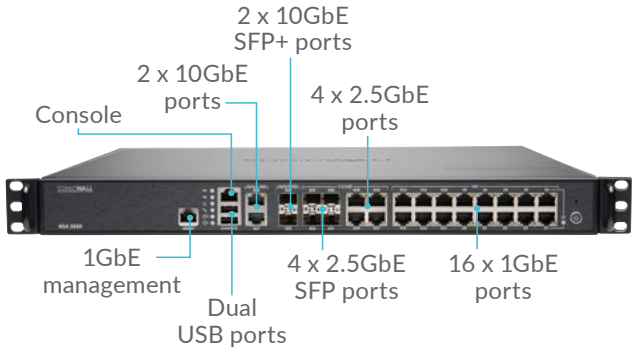


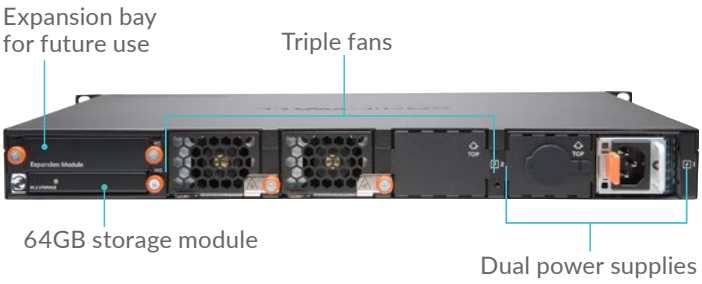


Firewall	NS*a* 4650
Firewall throughput	6.0 Gbps
IPS throughput	2.3 Gbps
Anti-malware throughput	1.25 Gbps
Full DPI throughput	1.2 Gbps
IMIX throughput	1.3 Gbps
Maximum DPI connections	1,000,000
New connections/sec	40,000/sec
Description	**SKU**
NS*a* 4650 firewall only	01-SSC-1938
NS*a* 4650 TotalSecure Advanced (1-year)	01-SSC-4094

Network Security appliance NS*a* 5650

The SonicWall NS*a* 5650 is ideal for distributed, branch office and corporate environments needing significant throughput and high port density.





Firewall	NS*a* 5650
Firewall throughput	6.25 Gbps
IPS throughput	3.4 Gbps
Anti-malware throughput	1.7 Gbps
Full DPI throughput	1.7 Gbps
IMIX throughput	1.45 Gbps
Maximum DPI connections	1,500,000
New connections/sec	40,000/sec
Description	**SKU**
NS*a* 5650 firewall only	01-SSC-1939
NS*a* 5650 TotalSecure Advanced (1-year)	01-SSC-4342

SONICWALL

Features

RFDPI engine	
Feature	Description
Reassembly-Free Deep Packet Inspection (RFDPI)	This high-performance, proprietary and patented inspection engine performs stream-based, bi-directional traffic analysis, without proxying or buffering, to uncover intrusion attempts and malware and to identify application traffic regardless of port.
Bi-directional inspection	Scans for threats in both inbound and outbound traffic simultaneously to ensure that the network is not used to distribute malware and does not become a launch platform for attacks in case an infected machine is brought inside.
Stream-based inspection	Proxy-less and non-buffering inspection technology provides ultra-low latency performance for DPI of millions of simultaneous network streams without introducing file and stream size limitations, and can be applied on common protocols as well as raw TCP streams.
Highly parallel and scalable	The unique design of the RFDPI engine works with the multi-core architecture to provide high DPI throughput and extremely high new session establishment rates to deal with traffic spikes in demanding networks.
Single-pass inspection	A single-pass DPI architecture simultaneously scans for malware, intrusions and application identification, drastically reducing DPI latency and ensuring that all threat information is correlated in a single architecture.
Firewall and networking	
Feature	Description
REST APIs	All the firewall to receive and leverage any and all proprietary, original equipment manufacturer and third-party intelligence feeds to combat advanced threats such as zero-day, malicious insider, compromised credentials, ransomware and advanced persistent threats.
Stateful packet inspection	All network traffic is inspected, analyzed and brought into compliance with firewall access policies.
High availability/clustering	The NS*a* series supports Active/Passive (A/P) with state synchronization, Active/Active (A/A) DPI and Active/Active clustering high availability modes. Active/Active DPI offloads the deep packet inspection load to cores on the passive appliance to boost throughput.
DDoS/DoS attack protection	SYN flood protection provides a defense against DoS attacks using both Layer 3 SYN proxy and Layer 2 SYN blacklisting technologies. Additionally, it protects against DoS/DDoS through UDP/ICMP flood protection and connection rate limiting.
IPv6 support	Internet Protocol version 6 (IPv6) is in its early stages to replace IPv4. With SonicOS, the hardware will support filtering and wire mode implementations.
Flexible deployment options	The NS*a* series can be deployed in traditional NAT, Layer 2 bridge, wire and network tap modes.
WAN load balancing	Load-balances multiple WAN interfaces using Round Robin, Spillover or Percentage methods.
Advanced quality of service (QoS)	Guarantees critical communications with 802.1p, DSCP tagging, and remapping of VoIP traffic on the network.
H.323 gatekeeper and SIP proxy support	Blocks spam calls by requiring that all incoming calls are authorized and authenticated by H.323 gatekeeper or SIP proxy.
Single and cascaded Dell X-Series switch management	Manage security settings of additional ports, including Portshield, HA, PoE and PoE+, under a single pane of glass using the firewall management dashboard for Dell's X-Series network switch.
Biometric authentication	Supports mobile device authentication such as fingerprint recognition that cannot be easily duplicated or shared to securely authenticate the user identity for network access.
Open authentication and social login	Enable guest users to use their credentials from social networking services such as Facebook, Twitter, or Google+ to sign in and access the Internet and other guest services through a host's wireless, LAN or DMZ zones using pass-through authentication.
Management and reporting	
Feature	Description
Global Management System (GMS)	SonicWall GMS monitor, configure and report on multiple SonicWall appliances through a single management console with an intuitive interface, reducing management costs and complexity.
Powerful single device management	An intuitive web-based interface allows quick and convenient configuration, in addition to a comprehensive command-line interface and support for SNMPv2/3.
IPFIX/NetFlow application flow reporting	Exports application traffic analytics and usage data through IPFIX or NetFlow protocols for real-time and historical monitoring and reporting with tools such as SonicWall Scrutinizer or other tools that support IPFIX and NetFlow with extensions.
Virtual private networking (VPN)	
Feature	Description
Auto-provision VPN	Simplifies and reduces complex distributed firewall deployment down to a trivial effort by automating the initial site-to-site VPN gateway provisioning between SonicWall firewalls while security and connectivity occurs instantly and automatically.
IPSec VPN for site-to-site connectivity	High-performance IPSec VPN allows the NS*a* series to act as a VPN concentrator for thousands of other large sites, branch offices or home offices.
SSL VPN or IPSec client remote access	Utilizes clientless SSL VPN technology or an easy-to-manage IPSec client for easy access to email, files, computers, intranet sites and applications from a variety of platforms.
Redundant VPN gateway	When using multiple WANs, a primary and secondary VPN can be configured to allow seamless, automatic failover and failback of all VPN sessions.
Route-based VPN	The ability to perform dynamic routing over VPN links ensures continuous uptime in the event of a temporary VPN tunnel failure, by seamlessly re-routing traffic between endpoints through alternate routes.

Content/context awareness	
Feature	Description
User activity tracking	User identification and activity are made available through seamless AD/LDAP/Citrix1/Terminal Services1 SSO integration combined with extensive information obtained through DPI.
GeoIP country traffic identification	Identifies and controls network traffic going to or coming from specific countries to either protect against attacks from known or suspected origins of threat activity, or to investigate suspicious traffic originating from the network. Ability to create custom country and Botnet lists to override an incorrect country or Botnet tag associated with an IP address. Eliminates unwanted filtering of IP addresses due to misclassification.
Regular expression DPI filtering	Prevents data leakage by identifying and controlling content crossing the network through regular expression matching. Provides the ability to create custom country and Botnet lists to override an incorrect country or Botnet tag associated with an IP address.

Breach prevention subscription services

Capture Advanced Threat Protection	
Feature	Description
Multi-engine sandboxing	The multi-engine sandbox platform, which includes virtualized sandboxing, full system emulation, and hypervisor level analysis technology, executes suspicious code and analyzes behavior, providing comprehensive visibility to malicious activity.
Real-Time Deep Memory Inspection (RTDMI)	This patent-pending cloud-based technology detects and blocks malware that does not exhibit any malicious behavior and hides its weaponry via encryption. By forcing malware to reveal its weaponry into memory, the RTDMI engine proactively detects and blocks mass-market, zero-day threats and unknown malware.
Block until verdict	To prevent potentially malicious files from entering the network, files sent to the cloud for analysis can be held at the gateway until a verdict is determined.
Broad file type and size analysis	Supports analysis of a broad range of file types, including executable programs (PE), DLL, PDFs, MS Office documents, archives, JAR, and APK plus multiple operating systems including Windows, Android, Mac OS X and multi-browser environments.
Rapid deployment of signatures	When a file is identified as malicious, a signature is immediately deployed to firewalls with SonicWall Capture ATP subscriptions and Gateway Anti-Virus and IPS signature databases and the URL, IP and domain reputation databases within 48 hours.
Capture Client	Capture Client is a unified client platform that delivers multiple endpoint protection capabilities, including advanced malware protection and support for visibility into encrypted traffic. It leverages layered protection technologies, comprehensive reporting and endpoint protection enforcement.
Encrypted threat prevention	
Feature	Description
TLS/SSL decryption and inspection	Decrypts and inspects TLS/SSL encrypted traffic on the fly, without proxying, for malware, intrusions and data leakage, and applies application, URL and content control policies in order to protect against threats hidden in encrypted traffic Included with security subscriptions for all NS*a* series models.
SSH inspection	Deep packet inspection of SSH (DPI-SSH) decrypts and inspect data traversing over SSH tunnel to prevent attacks that leverage SSH.
Intrusion prevention	
Feature	Description
Countermeasure-based protection	Tightly integrated intrusion prevention system (IPS) leverages signatures and other countermeasures to scan packet payloads for vulnerabilities and exploits, covering a broad spectrum of attacks and vulnerabilities.
Automatic signature updates	The SonicWall Threat Research Team continuously researches and deploys updates to an extensive list of IPS countermeasures that covers more than 50 attack categories. The new updates take immediate effect without any reboot or service interruption required.
Intra-zone IPS protection	Bolsters internal security by segmenting the network into multiple security zones with intrusion prevention, preventing threats from propagating across the zone boundaries.
Botnet command and control (CnC) detection and blocking	Identifies and blocks command and control traffic originating from bots on the local network to IPs and domains that are identified as propagating malware or are known CnC points.
Protocol abuse/anomaly	Identifies and blocks attacks that abuse protocols in an attempt to sneak past the IPS.
Zero-day protection	Protects the network against zero-day attacks with constant updates against the latest exploit methods and techniques that cover thousands of individual exploits.
Anti-evasion technology	Extensive stream normalization, decoding and other techniques ensure that threats do not enter the network undetected by utilizing evasion techniques in Layers 2-7.
Threat prevention	
Feature	Description
Gateway anti-malware	The RFDPI engine scans all inbound, outbound and intra-zone traffic for viruses, Trojans, key loggers and other malware in files of unlimited length and size across all ports and TCP streams.
Capture Cloud malware protection	A continuously updated database of tens of millions of threat signatures resides in the SonicWall cloud servers and is referenced to augment the capabilities of the onboard signature database, providing RFDPI with extensive coverage of threats.
Around-the-clock security updates	New threat updates are automatically pushed to firewalls in the field with active security services, and take effect immediately without reboots or interruptions.
Bi-directional raw TCP inspection	The RFDPI engine is capable of scanning raw TCP streams on any port bi-directionally preventing attacks that they to sneak by outdated security systems that focus on securing a few well-known ports.
Extensive protocol support	Identifies common protocols such as HTTP/S, FTP, SMTP, SMBv1/v2 and others, which do not send data in raw TCP, and decodes payloads for malware inspection, even if they do not run on standard, well-known ports.

Application intelligence and control	
Feature	Description
Application control	Control applications, or individual application features, that are identified by the RFDPI engine against a continuously expanding database of over thousands of application signatures, to increase network security and enhance network productivity.
Custom application identification	Control custom applications by creating signatures based on specific parameters or patterns unique to an application in its network communications, in order to gain further control over the network.
Application bandwidth management	Granularly allocate and regulate available bandwidth for critical applications or application categories while inhibiting nonessential application traffic.
Granular control	Control applications, or specific components of an application, based on schedules, user groups, exclusion lists and a range of actions with full SSO user identification through LDAP/AD/Terminal Services/Citrix integration.
Content filtering	
Feature	Description
Inside/outside content filtering	Enforce acceptable use policies and block access to websites containing information or images that are objectionable or unproductive with Content Filtering Service.
Enforced Content Filtering Client	Extend policy enforcement to block internet content for Windows, Mac OS, Android and Chrome devices located outside the firewall perimeter.
Granular controls	Block content using the predefined categories or any combination of categories. Filtering can be scheduled by time of day, such as during school or business hours, and applied to individual users or groups.
Web caching	URL ratings are cached locally on the SonicWall firewall so that the response time for subsequent access to frequently visited sites is only a fraction of a second.
Enforced antivirus and anti-spyware	
Feature	Description
Multi-layered protection	Utilize the firewall capabilities as the first layer of defense at the perimeter, coupled with endpoint protection to block, viruses entering network through laptops, thumb drives and other unprotected systems.
Automated enforcement option	Ensure every computer accessing the network has the appropriate antivirus software and/or DPI-SSL certificate installed and active, eliminating the costs commonly associated with desktop antivirus management.
Automated deployment and installation option	Machine-by-machine deployment and installation of antivirus and anti-spyware clients is automatic across the network, minimizing administrative overhead.
Next-generation antivirus	Capture Client uses a static artificial intelligence (AI) engine to determine threats before they can execute and roll back to a previous uninfected state.
Spyware protection	Powerful spyware protection scans and blocks the installation of a comprehensive array of spyware programs on desktops and laptops before they transmit confidential data, providing greater desktop security and performance.

SonicOS feature summary

Firewall

- Stateful packet inspection
- Reassembly-Free Deep Packet Inspection
- DDoS attack protection (UDP/ICMP/SYN flood)
- IPv4/IPv6
- Biometric authentication for remote access
- DNS proxy
- REST APIs

TLS/SSL/SSH decryption and inspection[1]

- Deep packet inspection for TLS/SSL/SSH
- Inclusion/exclusion of objects, groups or hostnames
- TLS/SSL control

Capture advanced threat protection[1]

- Real-Time Deep Memory Inspection
- Cloud-based multi-engine analysis
- Virtualized sandboxing
- Hypervisor level analysis
- Full system emulation
- Broad file type examination
- Automated and manual submission
- Real-time threat intelligence updates
- Block until verdict
- Capture Client

Intrusion prevention[1]

- Signature-based scanning
- Automatic signature updates
- Bi-directional inspection
- Granular IPS rule capability
- GeoIP enforcement
- Botnet filtering with dynamic list
- Regular expression matching

Anti-malware[1]

- Stream-based malware scanning
- Gateway anti-virus
- Gateway anti-spyware
- Bi-directional inspection
- No file size limitation
- Cloud malware database

Application identification[1]

- Application control
- Application bandwidth management
- Custom application signature creation
- Data leakage prevention
- Application reporting over NetFlow/IPFIX
- Comprehensive application signature database

Traffic visualization and analytics

- User activity
- Application usage
- Cloud-based analytics

Web content filtering[1]

- URL filtering
- Anti-proxy technology
- Keyword blocking
- HTTP header insertion
- Bandwidth manage CFS rating categories
- Unified policy model with app control
- Content Filtering Client

VPN

- Auto-provision VPN
- IPSec VPN for site-to-site connectivity
- SSL VPN and IPSec client remote access
- Redundant VPN gateway
- Mobile Connect for iOS, Mac OS X, Windows, Chrome, Android and Kindle Fire
- Route-based VPN (OSPF, RIP, BGP)

Networking

- PortShield
- Jumbo frames
- Enhanced logging
- VLAN trunking
- RSTP (Rapid Spanning Tree Protocol)
- Port mirroring
- Layer-2 QoS
- Port security
- Dynamic routing (RIP/OSPF/BGP)
- SonicWall wireless controller
- Policy-based routing (ToS/metric and ECMP)
- NAT
- DNS/DNS proxy
- DHCP server
- Bandwidth management
- Link aggregation (static and dynamic)
- Port redundancy
- A/P high availability with state sync
- A/A clustering
- Inbound/outbound load balancing
- L2 bridge, wire/virtual wire mode, tap mode
- 3G/4G WAN failover
- Asymmetric routing
- Common Access Card (CAC) support

Wireless

- WIDS/WIPS
- RF spectrum analysis
- Rogue AP prevention
- Floor plan view
- Topology view
- Band steering
- Beamforming
- AirTime fairness
- MiFi extender
- Guest cyclic quota
- LHM guest portal

VoIP

- Granular QoS control
- Bandwidth management
- SIP and H.323 transformations per access rule
- H.323 gatekeeper and SIP proxy support

Management and monitoring

- Capture Security Center, GMS, Web UI, CLI, REST APIs, SNMPv2/v3
- Logging
- Netflow/IPFix exporting
- Cloud-based configuration backup
- BlueCoat Security Analytics Platform
- SonicWall access point management
- Dell X-Series switch management including cascaded switches

[1]Requires added subscription

SONICWALL

NS*a* series system specifications

Firewall general	NS*a* 2650	NS*a* 3650	NS*a* 4650	NS*a* 5650
Operating system	SonicOS 6.5.1			
Security processing cores	4	4	10	10
Interfaces	4 x 2.5-GbE SFP, 4 x 2.5-GbE, 12 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 8 x 2.5-GbE SFP, 4 x 2.5-GbE, 12 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 4 x 2.5-GbE SFP, 4 x 2.5-GbE, 16 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 2 x 10-GbE, 4 x 2.5-GbE SFP, 4 x 2.5-GbE, 16 x 1-GbE, 1 GbE Management, 1 Console
Expansion	1 Expansion Slot (Rear)*			
Built-in storage	16 GB	32 GB	32 GB	64 GB
Management	CLI, SSH, Web UI, Capture Security Center, GMS, REST APIs			
SSO users	40,000	50,000	60,000	70,000
Maximum access points supported	48	96	128	192
Logging	Analyzer, Local Log, Syslog			

Firewall/VPN Performance	NS*a* 2650	NS*a* 3650	NS*a* 4650	NS*a* 5650
Firewall inspection throughput[1]	3.0 Gbps	3.75 Gbps	6.0 Gbps	6.25 Gbps
Full DPI throughput[2]	600 Mbps	730 Mbps	1.2 Gbps	1.7 Gbps
Application inspection throughput[2]	1.4 Gbps	2.1 Gbps	3.0 Gbps	4.25 Gbps
IPS throughput[2]	1.4 Gbps	1.8 Gbps	2.3 Gbps	3.4 Gbps
Anti-malware inspection throughput[2]	600 Mbps	800 Mbps	1.25 Gbps	1.7 Gbps
IMIX throughput	700 Mbps	900 Mbps	1.3 Gbps	1.45 Gbps
TLS/SSL decryption and inspection throughput (DPI SSL)[2]	250 Mbps	300 Mbps	500 Mbps	800 Mbps
VPN throughput[3]	1.3 Gbps	1.5 Gbps	3.0 Gbps	3.5 Gbps
Connections per second	14,000/sec	14,000/sec	40,000/sec	40,000/sec
Maximum connections (SPI)	1,000,000	2,000,000	3,000,000	4,000,000
Maximum connections (DPI)	500,000	750,000	1,000,000	1,500,000
Maximum connections (DPI SSL)	18,000	24,000	30,000	37,000
Default connections (DPI/DPI SSL)[4]	500,000/12,000	625,000/15,000	750,000/18,000	1,000,000/19,000

VPN	NS*a* 2650	NS*a* 3650	NS*a* 4650	NS*a* 5650
Site-to-site tunnels	1,000	3,000	4,000	6,000
IPSec VPN clients (max)	50 (1,000)	500 (3,000)	2,000 (4,000)	2,000 (6,000)
SSL VPN NetExtender clients (max)	2 (350)	2 (500)	2 (1,000)	2 (1,500)
Encryption/Authentication	DES, 3DES, AES (128, 192, 256-bit)/MD5, SHA-1, Suite B Cryptography			
Key exchange	Diffie Hellman Groups 1, 2, 5, 14v			
Route-based VPN	RIP, OSPF, BGP			

Networking	NS*a* 2650	NS*a* 3650	NS*a* 4650	NS*a* 5650
IP address assignment	Static (DHCP, PPPoE, L2TP and PPTP client), Internal DHCP server, DHCP Relay			
NAT modes	1:1, many:1, 1:many, flexible NAT (overlapping IPS), PAT, transparent mode			
VLAN interfaces	256	256	400	500
Routing protocols	BGP, OSPF, RIPv1/v2, static routes, policy-based routing			
QoS	Bandwidth priority, max bandwidth, guaranteed bandwidth, DSCP marking, 802.1p			
Authentication	LDAP (multiple domains), XAUTH/RADIUS, SSO, Novell, internal user database, Terminal Services, Citrix, Common Access Card (CAC)			
VoIP	Full H323-v1-5, SIP			
Standards	TCP/IP, ICMP, HTTP, HTTPS, IPSec, ISAKMP/IKE, SNMP, DHCP, PPPoE, L2TP, PPTP, RADIUS, IEEE 802.3			
Certifications (in progress)	ICSA Firewall, ICSA Anti-Virus, FIPS 140-2, Common Criteria NDPP (Firewall and IPS), UC APL, USGv6, CsFC			
High availability	Active/Passive with State Sync	Active/Passive with State Sync Active/Active Clustering		Active/Passive with State Sync, Active/Active DPI with State Sync, Active/Active Clustering

Hardware	NS*a* 2650	NS*a* 3650	NS*a* 4650	NS*a* 5650
Power supply	Dual, redundant 120W (one included)		Dual, redundant 350W (one included)	
Fans	Dual, Fixed		Triple, Removable	
Input power	100-240 VAC, 60-50 Hz			
Maximum power consumption (W)	37.2	46.0	93.6	103.6
MTBF @25°C in hours	162,231	156,681	154,529	153,243
MTBF @25°C in years	18.5	17.9	17.6	17.5
Form factor	1U Rack Mountable			
Dimensions	16.9 x 12.8 x 1.8 in (43 x 32.5 x 4.5 cm)		16.9 x 16.3 x 1.8 in (43 x 41.5 x 4.5 cm)	
Weight	11.5 lb (5.2 kg)	11.7 lb (5.3 kg)	15.2 lb (6.9 kg)	15.2 lb (6.9 kg)
WEEE weight	12.1 lb (5.5 kg)	12.3 lb (5.6 kg)	19.6 lb (8.9 kg)	19.6 lb (8.9 kg)
Shipping weight	17.0 lb (7.7 kg)	17.2 lb (7.8 kg)	24.9 lb (11.3 kg)	24.9 lb (11.3 kg)
Major regulatory	FCC Class A, CE (EMC, LVD, RoHS), C-Tick, VCCI Class A, MSIP/KCC Class A, UL, cUL, TUV/GS, CB, Mexico CoC by UL, WEEE , REACH, ANATEL, BSMI			
Environment (Operating/Storage)	32°-105° F (0°-40° C)/-40° to 158° F (-40° to 70° C)			
Humidity	10-90% non-condensing			

[1] Testing Methodologies: Maximum performance based on RFC 2544 (for firewall). Actual performance may vary depending on network conditions and activated services.
[2] Full DPI/GatewayAV/Anti-Spyware/IPS throughput measured using industry standard Spirent WebAvalanche HTTP performance test and Ixia test tools. Testing done with multiple flows through multiple port pairs. DPI SSL performance measured on HTTPS traffic with IPS enabled.
[3] VPN throughput measured using UDP traffic at 1280 byte packet size adhering to RFC 2544. All specifications, features and availability are subject to change.
[4] For every 125,000 DPI connections reduced, the number of available DPI SSL connections increases by 3,000.
**Future use. All specifications, features and availability are subject to change.*

SONICWALL®

NSA series system specifications (legacy)

Firewall general	NSA 2600	NSA 3600	NSA 4600	NSA 5600	NSA 6600
Operating system	SonicOS 6.5.1				
Security processing cores	4	6	8	10	24
Interfaces	8 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 4 x 1-GbE SFP, 12 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 4 x 1-GbE SFP, 12 x 1-GbE, 1 GbE Management, 1 Console	2 x 10-GbE SFP+, 4 x 1-GbE SFP, 12 x 1-GbE, 1 GbE Management, 1 Console	4 x 10-GbE SFP+, 8 x 1-GbE SFP, 8 x 1-GbE, 1 GbE Management, 1 Console
Expansion	1 Expansion Slot (Rear)*, SD Card*				
Management	CLI, SSH, Web UI, Capture Security Center, GMS, REST APIs				
SSO users	30,000	40,000	50,000	60,000	70,000
Maximum access points supported	32	48	64	96	128
Logging	Analyzer, Local Log, Syslog				
Firewall/VPN Performance	**NSA 2600**	**NSA 3600**	**NSA 4600**	**NSA 5600**	**NSA 6600**
Firewall inspection throughput[1]	1.9 Gbps	3.4 Gbps	6.0 Gbps	9.0 Gbps	12.0 Gbps
Full DPI throughput[2]	300 Mbps	500 Mbps	800 Mbps	1.6 Gbps	3.0 Gbps
Application inspection throughput[2]	700 Mbps	1.1 Gbps	2.0 Gbps	3.0 Gbps	4.5 Gbps
IPS throughput[2]	700 Mbps	1.1 Gbps	2.0 Gbps	3.0 Gbps	4.5 Gbps
Anti-malware inspection throughput[2]	400 Mbps	600 Mbps	1.1 Gbps	1.7 Gbps	3.0 Gbps
IMIX throughput	600 Mbps	900 Mbps	1.6 Gbps	2.4 Gbps	3.5 Gbps
TLS/SSL decryption and inspection (DPI SSL)[2]	200 Mbps	300 Mbps	500 Mbps	800 Mbps	1.3 Gbps
VPN throughput[3]	1.1 Gbps	1.5 Gbps	3.0 Gbps	4.5 Gbps	5.0 Gbps
Connections per second	15,000/sec	20,000/sec	40,000/sec	60,000/sec	90,000/sec
Maximum connections (SPI)	500,000	750,000	1,000,000	1,500,000	1,500,000
Maximum connections (DPI)[4]	250,000	375,000	500,000	1,000,000	1,000,000
Default/Maximum connections (DPI SSL)[4]	1,000/1,000	2,000/2,750	3,000/4,500	4,000/8,500	6,000/10,500
VPN	**NSA 2600**	**NSA 3600**	**NSA 4600**	**NSA 5600**	**NSA 6600**
Site-to-site VPN tunnels	250	1,000	3,000	4,000	6,000
IPSec VPN clients (max)	10 (250)	50 (1,000)	500 (3,000)	2,000 (4,000)	2,000 (6,000)
SSL VPN NetExtender clients (max)	2 (250)	2 (350)	2 (500)	2 (1,000)	2 (1,500)
Encryption/Authentication	DES, 3DES, AES (128, 192, 256-bit)/MD5, SHA-1, Suite B Cryptography				
Key exchange	Diffie Hellman Groups 1, 2, 5, 14v				
Route-based VPN	RIP, OSPF, BGP				
Networking	**NSA 2600**	**NSA 3600**	**NSA 4600**	**NSA 5600**	**NSA 6600**
IP address assignment	Static (DHCP, PPPoE, L2TP and PPTP client), Internal DHCP server, DHCP Relay				
NAT modes	1:1, many:1, 1:many, flexible NAT (overlapping IPS), PAT, transparent mode				
VLAN interfaces	256	256	256	400	500
Routing protocols	BGP, OSPF, RIPv1/v2, static routes, policy-based routing				
QoS	Bandwidth priority, max bandwidth, guaranteed bandwidth, DSCP marking, 802.1p				
Authentication	LDAP (multiple domains), XAUTH/RADIUS, SSO, Novell, internal user database, Terminal Services, Citrix, Common Access Card (CAC)				
VoIP	Full H323-v1-5, SIP				
Standards	TCP/IP, ICMP, HTTP, HTTPS, IPSec, ISAKMP/IKE, SNMP, DHCP, PPPoE, L2TP, PPTP, RADIUS, IEEE 802.3				
Certifications	ICSA Firewall, ICSA Anti-Virus, FIPS 140-2, Common Criteria NDPP (Firewall and IPS), UC APL				
High availability	Active/Passive with State Sync	Active/Passive with State Sync, Active/Active Clustering		Active/Passive with State Sync, Active/Active DPI with State Sync, Active/Active Clustering	
Hardware	**NSA 2600**	**NSA 3600**	**NSA 4600**	**NSA 5600**	**NSA 6600**
Power supply	Single, Fixed 200W	Single, Fixed 250W			
Fans	Dual, Fixed				Dual, redundant, hot swappable
Input power	100-240 VAC, 60-50 Hz				
Maximum power consumption (W)	49.4	74.3	86.7	90.9	113.1
MTBF @25°C in hours	176,540	146,789	139,783	134,900	116,477
MTBF @25°C in years	20.15	16.76	15.96	15.40	13.30
Form factor	1U Rack Mountable				
Dimensions	1.75 x 10.25 x 17 in (4.5 x 26 x 43 cm)	1.75 x 19.1 x 17 in (4.5 x 48.5 x 43 cm)			
Weight	10.1 lb (4.6 kg)	13.56 lb (6.15 kg)			14.93 lb (6.77 kg)
WEEE weight	11.0 lb (5.0 kg)	14.24 lb (6.46 kg)			19.78 lb (8.97 kg)
Shipping weight	14.3 lb (6.5 kg)	20.79lb (9.43 kg)			26.12 lb (11.85 kg)
Major regulatory	FCC Class A, CE (EMC, LVD, RoHS), C-Tick, VCCI Class A, MSIP/KCC Class A, UL, cUL, TUV/GS, CB, Mexico CoC by UL, WEEE , REACH, ANATEL, BSMI, CU				
Environment (Operating/Storage)	32°-105° F (0°-40° C)/-40° to 158° F (-40° to 70° C)				
Humidity	10-90% non-condensing				

[1] Testing Methodologies: Maximum performance based on RFC 2544 (for firewall). Actual performance may vary depending on network conditions and activated services.
[2] Full DPI/GatewayAV/Anti-Spyware/IPS throughput measured using industry standard Spirent WebAvalanche HTTP performance test and Ixia test tools. Testing done with multiple flows through multiple port pairs.
[3] VPN throughput measured using UDP traffic at 1280 byte packet size adhering to RFC 2544. All specifications, features and availability are subject to change.
[4] For every 125,000 DPI connections reduced, the number of available DPI SSL connections increases by 750.
**Future use. All specifications, features and availability are subject to change.*

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NS*a* series ordering information

NS*a* 2650	SKU
NS*a* 2650 TotalSecure Advanced Edition (1-year)	01-SSC-1988
Advanced Gateway Security Suite – Capture ATP, Threat Prevention, Content Filtering and 24x7 Support for NS*a* 2650 (1-year)	01-SSC-1783
Capture Advanced Threat Protection for NS*a* 2650 (1-year)	01-SSC-1935
Threat Prevention–Intrusion Prevention, Gateway Anti-Virus, Gateway Anti-Spyware, Cloud Anti-Virus for NS*a* 2650 (1-year)	01-SSC-1976
24x7 Support for NS*a* 2650 (1-year)	01-SSC-1541
Content Filtering Service for NS*a* 2650 (1-year)	01-SSC-1970
Enforced Client Anti-Virus & Anti-Spyware	Based on user count
Comprehensive Anti-Spam Service for NS*a* 2650 (1-year)	01-SSC-2001
NS*a* 3650	**SKU**
NS*a* 3650 TotalSecure Advanced Edition (1-year)	01-SSC-4081
Advanced Gateway Security Suite – Capture ATP, Threat Prevention, Content Filtering and 24x7 Support for NS*a* 3650 (1-year)	01-SSC-3451
Capture Advanced Threat Protection for NS*a* 3650 (1-year)	01-SSC-3457
Threat Prevention–Intrusion Prevention, Gateway Anti-Virus, Gateway Anti-Spyware, Cloud Anti-Virus for NS*a* 3650 (1-year)	01-SSC-3632
24x7 Support for NS*a* 3650 (1-year)	01-SSC-3439
Content Filtering Service for NS*a* 3650 (1-year)	01-SSC-3469
Enforced Client Anti-Virus & Anti-Spyware	Based on user count
Comprehensive Anti-Spam Service for NS*a* 3650 (1-year)	01-SSC-4030
NS*a* 4650	**SKU**
NS*a* 4650 TotalSecure Advanced Edition (1-year)	01-SSC-4094
Advanced Gateway Security Suite – Capture ATP, Threat Prevention, Content Filtering and 24x7 Support for NS*a* 4650 (1-year)	01-SSC-3493
Capture Advanced Threat Protection for NS*a* 4650 (1-year)	01-SSC-3499
Threat Prevention–Intrusion Prevention, Gateway Anti-Virus, Gateway Anti-Spyware, Cloud Anti-Virus for NS*a* 4650 (1-year)	01-SSC-3589
24x7 Support for NS*a* 4650 (1-year)	01-SSC-3487
Content Filtering Service for NS*a* 4650 (1-year)	01-SSC-3583
Enforced Client Anti-Virus & Anti-Spyware	Based on user count
Comprehensive Anti-Spam Service for NS*a* 4650 (1-year)	01-SSC-4062
NS*a* 5650	**SKU**
NS*a* 5650 TotalSecure Advanced Edition (1-year)	01-SSC-4342
Advanced Gateway Security Suite – Capture ATP, Threat Prevention, Content Filtering and 24x7 Support for NS*a* 5650 (1-year)	01-SSC-3674
Capture Advanced Threat Protection for NS*a* 5650 (1-year)	01-SSC-3680
Threat Prevention – Intrusion Prevention, Gateway Anti-Virus, Gateway Anti-Spyware, Cloud Anti-Virus for NS*a* 5650 (1-year)	01-SSC-3698
24x7 Support for NS*a* 5650 (1-year)	01-SSC-3660
Content Filtering Service for NS*a* 5650 (1-year)	01-SSC-3692
Enforced Client Anti-Virus & Anti-Spyware	Based on user count
Comprehensive Anti-Spam Service for NS*a* 5650 (1-year)	01-SSC-4068
Modules and accessories*	**SKU**
10GBASE-SR SFP+ Short Reach Module	01-SSC-9785
10GBASE-LR SFP+ Long Reach Module	01-SSC-9786
10GBASE SFP+ 1M Twinax Cable	01-SSC-9787
10GBASE SFP+ 3M Twinax Cable	01-SSC-9788
1000BASE-SX SFP Short Haul Module	01-SSC-9789
1000BASE-LX SFP Long Haul Module	01-SSC-9790
1000BASE-T SFP Copper Module	01-SSC-9791

**Please consult with your local SonicWall reseller for a complete list of supported SFP and SFP+ modules*

Regulatory model numbers:

NS*a* 2650 - 1RK38-0C8
NS*a* 3650 - 1RK38-0C7
NS*a* 4650 - 1RK39-0C9
NS*a* 5650 - 1RK39-0CA

About Us

SonicWall has been fighting the cyber-criminal industry for over 25 years, defending small, medium size businesses and enterprises worldwide. Our combination of products and partners has enabled a real-time cyber defense solution tuned to the specific needs of the more than 500,000 businesses in over 150 countries, so you can do more business with less fear.

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Refer to our website for additional information.
www.sonicwall.com

Datasheet-NetworkSecurityAppliance-US-KJ-MKTG1745

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