# Thunder NSI

Gateway

Secure. Reliable. Networking

Gateway to the Cloud

Thunder NSI Gateway integrates cyber-security, high reliability SD-WAN, and network intelligence technologies to bridge organizations to cloud. At its core, Thunder integrates its proprietary DNS technologies with next generation hardware to provide an optimized Internet experience.

Gateway devices are designed to be deployed on-premise at an organizations branch locations and managed through Thunder's cloud hybrid architecture. The cloud hybrid not only enables simple cloud management but also keeps data secure and private via a local orchestrator.

All Gateway hardware devices integrate next generation multi-layered cyber security and support multiple Internet (WAN) connections to provide secure, reliable, networks.
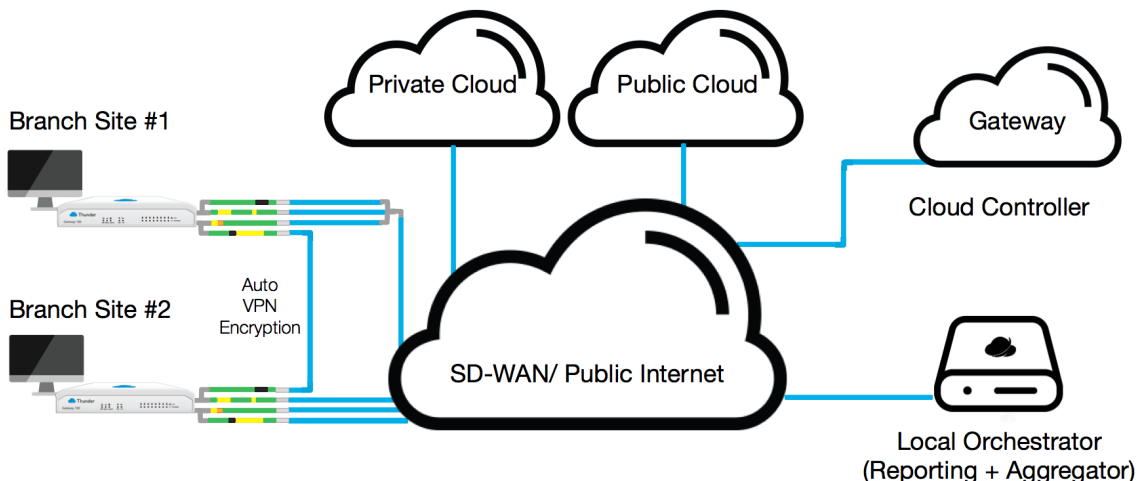
Feature Overview

World Class Security

Managed Stateful Firewall
Threat Detection & Prevention
Real-Time Security Updates
Custom Content Filtering
Automatic VPN Encryption

Reliable Connectivity

Multi Internet Virtualization (SD-WAN)
Native Ethernet, Fiber, & LTE support
Gateway Cloud Management
On-going WAN Monitoring
Local Reporting Server
Out of Band Management (optional)

Intelligent Networking

Software Defined Application Based Routing
Centralized Management
Plug and Play Deployment
Optimization for Cloud Services
Virtual Edge

Edge Client Quick Selection

Gateway 20	Gateway 100	Gateway X - VM
Small or Home Office	Medium or Large Office	Corporate HQ or Custom
Up to 20 Users	Up to 100 Users	Up to 2000 Users
200 Mbps Internet Circuit	1000 Mbps Internet Circuit	10 Gbps Internet Circuit
4 Port	8 Port	Virtual Appliance

Gateway 20

Performance

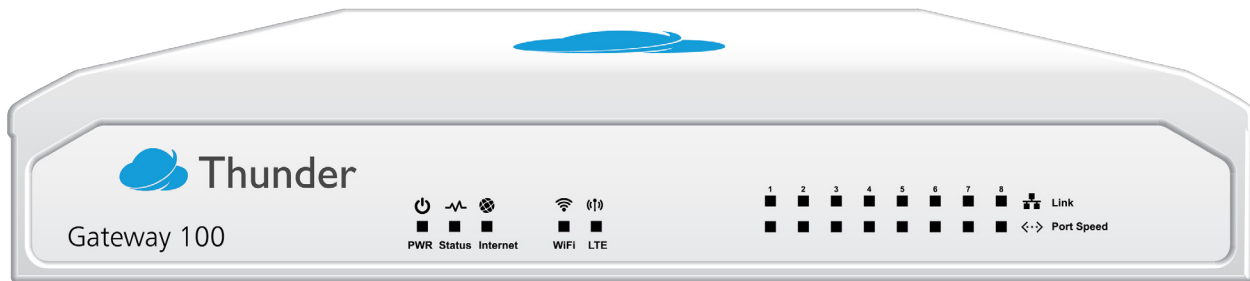|	
Encrypted Routing Throughput	Up to 2 Gbps
Packets Per Second	250,000
Security Throughput	Up to 200 Mbps
Encrypted Tunnels	Up to 10

I/Os & Features

Interfaces	4 ports (WAN or LAN configurable) 10/100/1000, 1 SFP cage
Expansion Interfaces	Internal LTE (mPCIe), External LTE (USB), Wi-Fi (mPCIe)
Internal LTE - 3G, 4G capable	Supports up to 150 Mbps (CAT 4 module)
External LTE - 3G, 4G capable	Supports up to 150 Mbps USB dongle
Wi-Fi	Supports up to 867 Mbps (802.11b/g/n/ac module)
SFP Cage	Supports Fiber SFP Module
Physical Management	Factory Reset Included
SD-WAN Routing	Aggregation, Failover, Load Balance, Private/Public Cloud Tunneling
Network Routing	OSPF, BGP, MPLS Client
Network Function Virtualization	Supports up to 1 Edge VM

Physical & Environment

Enclosure	Fan-less 18cm(W) x 11cm(D) x 3cm(H); 7in(W) x 4.4in(D) x 1.5in(H)
Weight	0.3 kg (.66 lbs)
Max Power Consumption	30W (~10W Average)
Operating Temperature	0 - 40 C (32 - 104 F)
Operating Humidity	0 - 95% Condensing
Power Adapter	110 - 240V AC Power Adapter Included
Certifications	FCC, CE
Warranty	1 Year Limited Warranty

Gateway 100

Performance

Encrypted Routing Throughput	Up to 8 Gbps
Packets Per Second	1,000,000+
Security Throughput	Up to 1000 Mbps
Encrypted Tunnels	Up to 20

I/Os & Features

Interfaces	8 ports (WAN or LAN configurable) 10/100/1000
Expansion Interfaces	Internal LTE (M.2), External LTE (USB), Wi-Fi (mPCIe), Storage (M.2)
Internal LTE - 4G, 5G capable	Supports up to 1 Gbps (CAT 6-20 module)
External LTE - 3G, 4G capable	Supports up to 150 Mbps USB dongle
Wi-Fi	Supports up to 867 Mbps (802.11b/g/n/ac module)
Storage	Supports SATA 3 Storage (SSD or HDD)
Physical Management	Console & Factory Reset Included
SD-WAN Routing	Aggregation, Failover, Load Balance, Private/Public Cloud Tunneling
Network Routing	OSPF, BGP, MPLS Client
Network Function Virtualization	Supports up to 2 Edge VM's

Physical & Environment

Enclosure	Fan-less 232mm(W) x 178mm(D) x 44m(H)
Weight	0.76 kg (1.67 lbs)
Max Power Consumption	40W (~20W Average)
Operating Temperature	0 - 40 C (32 - 104 F)
Operating Humidity	0 - 95% Condensing
Power Adapter	110 - 240V AC Power Adapter Included
Certifications	FCC, CE
Warranty	1 Year Limited Warranty

Gateway X - Virtual Appliance (VM)

Minimum Server Requirements

Bare Metal Server	Required with Hardware Virtualization Enabled
CPU	Quad Core 2+ GHz
RAM	8 GB
Storage	20 GB

Gateway X Server Sizing Recommendations

Throughput	Estimated Users	CPU Cores 2+ GHz	RAM	Storage
500 Mbps	100	4 Core	8 GB	20 GB
1 Gbps	500	8 Core	16 GB	50 GB
5 Gbps	1000	32 Core	64 GB	50 GB
10 Gbps	2000	64 Core	128 GB	50 GB

Gateway Local Orchestrator - VM

Minimum Server Requirements*

Bare Metal Server	Required with Hardware Virtualization Enabled
CPU	Quad Core 2+ GHz
RAM	2 GB
Storage**	20 GB
Bandwidth	20 Mbps

* WAN Aggregation features require additional CPU, RAM, and Bandwidth resources
** Additional storage capabilities are required to increase data retention and reporting

Local Orchestrator Server Sizing Recommendations*

Devices	CPU Cores 2+ GHz	RAM	Storage	Bandwidth
Up to 10	4 Core	2 GB	20 GB	20 Mbps
Up to 100	4 Core	4 GB	50 GB	25 Mbps
Up to 1000	8 Core	8 GB	100 GB	100 Mbps
Up to 5000	8 Core	16 GB	200 GB	500 Mbps

* Assumes no WAN aggregation and standard data retention policy