

Engineered for speed. Built for the future.

The next generation of high-performance crypto-agile security.

Security should empower, not slow you down. As networks evolve and cyber threats grow more sophisticated, traditional encryption introduces latency, inefficiency, and future security risks. The SAFE Series by Sitehop is designed to change that. Built on hardware-accelerated encryption, our solutions deliver sub-microsecond security, protecting data in motion without compromising performance.

Hardware that outperforms software.

Unlike legacy, software-based encryption, SAFE Series solutions leverage FPGA-powered technology, purpose-built to handle high-speed, high-volume network traffic. This hardware-first approach eliminates encryption bottlenecks, ensuring:

Ultra-Low Latency Encryption

Secure critical data with deterministic low latency, that outperforms software-based solutions.

Enhance Network Performance

Enhance SD-WAN, NGFW, Zero Trust and SASE. Boost network throughput and preserve existing investments without costly upgrades.

Seamless Transition to PQC

Effortlessly migrate to quantum-safe encryption with equipment that supports both legacy and PQC protocols.

sitehop.com

sitehop



World's lowest latency

Up to 10,000 times faster than software-based encryption.

Verified by Spirent



PQC and crypto agility

Stay ahead of threats with our PQC ready, securely upgradable platform



Ultra-high throughput

Delivers 400 Gbps in 1U rackspace, 8000 simultaneous connections

SAFE Series

Hardware-enforced security

The Sitehop SAFEcore™ 1000 is a 1U rack-mounted system designed to deliver a high-availability data center solution for securing highly sensitive business data during transmission over the public internet. It supports up to two hot-swappable, redundant SAFEblade™ modules and two redundant, hot-swappable power supplies, ensuring maximum network availability and reliability.



SAFEblade™

A module with either 100G or 10G full-duplex throughput.

Each SAFEcore™ 1000 can house one or two SAFEblades™

The Sitehop SAFEblade™ is a hardware encryption and decryption module that provides a full-duplex, low-latency solution for securing data-in-motion across network topologies. Accelerating and aggregating your IPsec applications.

	SAFEencrypt 10/ SAFEpqc 10	SAFEencrypt 100 / SAFEpqc 100
Data Speed	10Gbps full duplex (IMIX)	100Gbps full duplex (IMIX)
Latency (encryption/ decryption)	<2µs*	<1µs*
IPsec Properties	400 concurrent IPsec connections	4000 concurrent IPsec connections
	Certificate Based Authentication	
	SAFEencrypt: IKE-V2	
	SAFEpqc: Hybrid IKE-V2 (ML-KEM) PQC - RFC9370	
ESP Cryptography	AES-256-GCM	
	Tunnel mode	
Certificates	RSA ECDSA	
IPv4 Compatibility	IPv4 policy and route-based tunnels	
IPv6 Compatibility	IPv6 route-based tunnels	
Packet Size Support	64 Bytes to 9000 Bytes (jumbo frame)	

* for 64 byte packets in encryption or decryption path



PQC transition

Sitehop offers a seamless solution for upgrading legacy cryptography to the latest Post-Quantum Cryptography (PQC) standards.



Cryptographic agility

Cryptographic standards are advancing faster than ever. Unlike ASICs, FPGAs provide unmatched flexibility, allowing your system to adapt to new threats and stay ahead.



10x less power

Reduce your carbon footprint with energy-efficient hardware that uses up to 10 times less power than software-only solutions.



Sub-microsecond latency

Secure your data with latency measured in microseconds, highly deterministic encryption delivering unmatched speed and reliability for mission-critical operations.



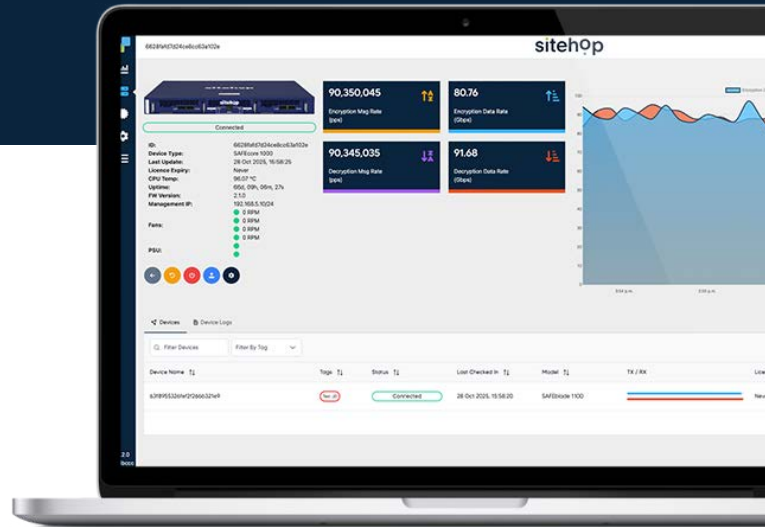
Unyielding Protection

Hardware-Enforced Security delivers trusted, resilient systems that are immune to the vulnerabilities and exploits commonly used to compromise software-based VPNs.

Sitehop SAFEnms

SAFE Series Network Management System (NMS)

Sitehop SAFEnms is a powerful Enterprise Network Management System that simplifies the deployment and management of global encryption devices. Its intuitive platform enables quick configuration of certificates and permissions.



Seamless transition to PQC

Future-proof your network with high-throughput security that's ready for tomorrow's challenges. Remote firmware updates, managed through Sitehop SAFEnms, ensure a smooth transition to Post Quantum Cryptography (PQC) while maintaining robust protection today.



Role-based access control for all sites

Sitehop SAFEnms offers a flexible, secure permissions system with SSO and role-based access, supporting multi-tenanted configurations for complex networks. This enables precise access control, letting users manage individual sites and separate customers with ease, ensuring only authorized access.



Advanced monitoring and auditing

Maximize your network's performance with advanced data tracking, auditing, and logging features. These tools provide insight into network activity, ensuring your infrastructure operates at its full potential.



REST API integration

Easily integrate Sitehop SAFEnms with your existing OSS/BSS or other management systems using its REST API. This ensures seamless interoperability with your operational workflows and readiness for Infrastructure-as-Code applications.



Centralized dashboard

The dashboard delivers real-time insights into network performance, displaying total throughput and IPsec connectivity. Administrators can organize users into tenants and resource groups, enabling tailored monitoring, resource allocation, and customized security settings for efficient management and optimal performance.



Built-In PKI

Sitehop SAFEnms includes a built-in PKI system, enabling users to create and manage certificates, with support for third-party certificates and AWS KMS integration for easier deployment and compliance.