

# Engineered for the edge. Built for the future.



The SAFEmini is an ultra-compact, crypto agile, low-power, hardware-enforced 1G IPsec encryption device, integrating post-quantum cryptography (PQC). It targets edge applications where secure, resilient, and ultra-low latency communications are essential, and where portability, weight and size are critical factors in deployment.



## Seamless Integration

Works with SAFEcore to provide unmatched security from core to edge.



## Flexible Architecture

Allows mesh and point-to-point configurations—securely connecting clusters of SAFEminis or aggregating back to a central SAFEcore. Supports 10 simultaneous IPsec connections for Mesh deployments.



## Security by Design

Built-in secure boot and secure attestation ensure end-to-end protection.



## Interoperability

Compatible with third-party IPsec devices for seamless integration.



## Effortless Management

SAFEmini and SAFEcore are centrally controlled for simplified deployment, even in the most demanding environments.



## Easy Installation

Hidden mounting points perfect for desktop use or 1U rack mounting with additional DIN Rail clips.

# SAFEmini

## Ultra-Low Latency Encryption for Mission-Critical Deployments

As cyber threats evolve, securing real-time communications across critical infrastructure, government, and enterprise environments has never been more vital. SAFEmini, combined with SAFEcore, delivers hardware-enforced, ultra-low-latency encryption that protects sensitive data without compromising performance. Whether securing remote operations or high-speed transactions, Sitehop ensures encryption is no longer a bottleneck.

## Key Capabilities & Use Cases

### Operational Technology (OT) Security

Protects Critical National Infrastructure (CNI), including energy grids, industrial control systems, and smart city networks.

### Real-Time Autonomous Systems

Enables ultra-low-latency encryption for autonomous vehicles, drones, and defence applications.

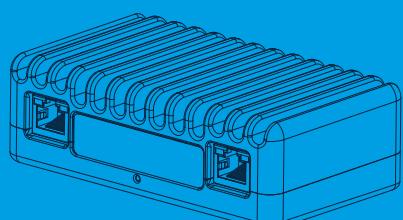
### Financial Transactions & High-Frequency Trading

Ensures secure, sub-microsecond encryption without impacting speed-sensitive transactions.

### Secure Government Communications

Protects classified data in multi-domain environments, from defence operations to secure diplomatic networks.

Cloud and Hybrid Deployments – Provides seamless security from on-premise data centers to multi-cloud infrastructures.



### Size Specifications:

Height: 37mm

Width: 116mm

Depth: 68mm

Weight: 310g

Power Usage <10w



### 1Gbps full duplex

Our hardware-accelerated encryption delivers high-speed connections that carry data in both directions. Designed for flexibility, SAFEmini can work with any third-party encryptors already in your network to meet a wide range of network security needs.



### 1,000x lower latency

Protect your data without sacrificing speed. SAFEmini's accelerated encryption has up to 1,000 times lower latency than software-only solutions.



### Future-proof Post Quantum Cryptography

PQC compliance for edge applications



### Crypto Agile

Change encryption standards using our remote, secure upgrade.



### Centrally Managed

Manage SAFEmini from a central location with Sitehop SAFEnm.

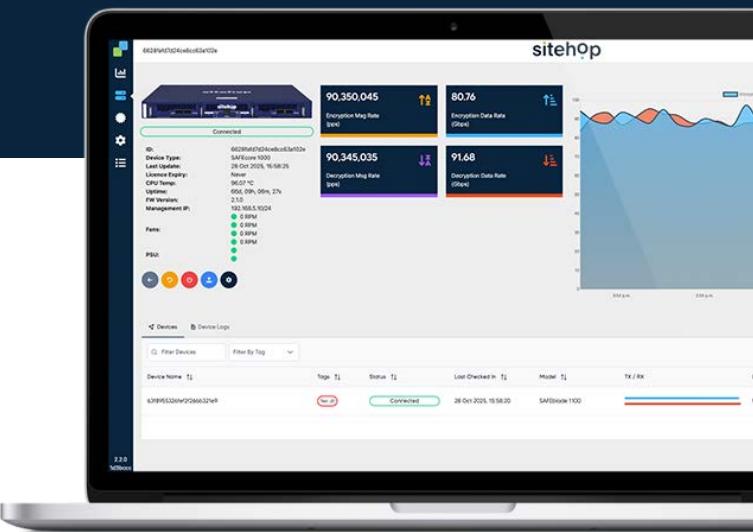
## SAFEmini Specifications

Interfaces and Modules			
WAN Interface	1G Ethernet	type	RJ45
		data rates (mbps)	1000/100/10
LAN Interface	1G Ethernet	type	RJ45
		data rates (mbps)	1000/100/10
Trusted Platform Module	Yes		
System Performance and Capacity			
Number of IPsec Connections	10		
IKE-v2 standards/Mode	RFC (6071 & 9370) / Tunnel Mode		
Post Quantum Crypto Key Exchange	ML-KEM (RFC9370) Hybrid		
Certificates Supported	ECDSA - (secp256r1, secp384r1, secp521r1) / RSA (bit length 4096/6144/7680/8192)		
VPN - IPv4 & IPv6	Route Based (Mesh / PTP / PTMP)		
Local Management	Local Device GUI		
Remote Monitoring	Sitehop SAFEnms		
Entropy Standard	NIST SP800-90B		
Tamper Resistance	Physical/Voltage and Temperature Tamper resistance		
Crypto Agility	Yes		
Device Validation	Secure Attestation, providing anti-cloning, spoofing or rogue devices		
Dimension and Power			
Dimensions	H37mm X W116mm X D68mm		
Power	5V USBC or 24V consuming < 10W		
LEDs	Power & Status		
Cooling	Passive		
Environmental			
Operating temperature	0 to +40	Deg C	
Storage temperature	0 to +70	Deg C	
Operating Humidity (non-condensing)	10 - 90	%	
Compliance & Accreditation	CE & FIPS 140-3 level 3 (entropy)		

# 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.