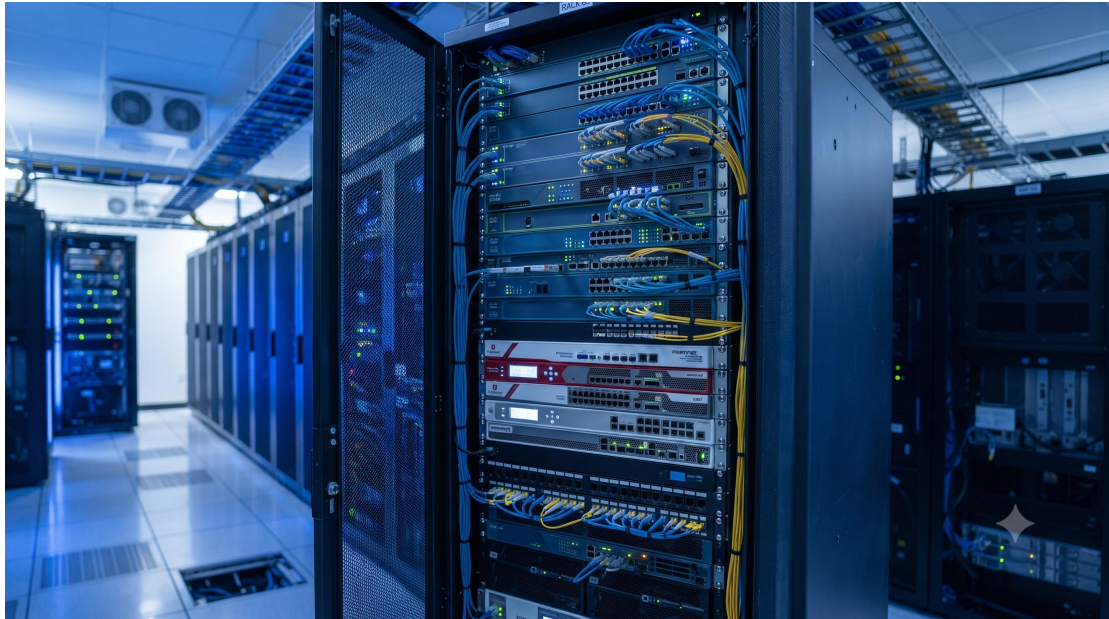


Securing Enterprise Routers Best Practices - Official Technical Overview & Hardware Datasheet

EXECUTIVE SUMMARY

In the contemporary enterprise landscape, the network edge represents the primary vector for both performance optimization and security threats. This datasheet delineates the official technical overview and hardware specifications for the implementation of 'Securing Enterprise Routers Best Practices'. Our solution addresses the critical intersection of high-velocity data forwarding and comprehensive security enforcement, establishing a new benchmark for resilient, intelligent edge routing infrastructure.

This document serves as the foundational technical reference for network architects and security engineers. It details the hardware capabilities, embedded security features, and performance metrics necessary to deploy a secure, carrier-grade enterprise routing platform. Designed to mitigate sophisticated cyber threats at the line rate, this equipment ensures that security is not an impediment to network performance but an integral component of the data path.



ARCHITECTURE & CHASSIS DESIGN

The underlying architecture of this routing platform is engineered to deliver secure, high-performance connectivity for distributed enterprise environments. The chassis design integrates advanced silicon with a hardened operating environment to support a comprehensive suite of security protocols without compromising throughput. This architecture embodies the principles of securing enterprise routers best practices, embedding security functions directly into the forwarding hardware.

HARDWARE FEATURES

SECURE FORWARDING ENGINE: The platform is powered by a dedicated, purpose-built ASIC that enables line-rate encryption, including IPsec and

MACsec, alongside advanced access control lists (ACLs). This ensures that the security posture scales directly with network bandwidth, a critical requirement for modern enterprise WANs.

HIGH-AVAILABILITY REDUNDANCY: To maintain operational integrity, the system supports 1+1 power supply redundancy (AC or DC) and hot-swappable fan trays. The modular architecture provides for N+1 line card redundancy, ensuring that security policies remain enforced even during hardware maintenance events.

COMPREHENSIVE INTERFACE SUITE: The hardware provides a flexible mix of high-density 1G/10G/25G Ethernet ports and modular uplink bays for 40G/100G connectivity. This versatility allows enterprises to architect a secure edge that adapts to existing campus infrastructure while providing a clear upgrade path for future bandwidth demands.

COMPLIANCE & STANDARDS

The platform is rigorously tested to comply with the most stringent industry and governmental standards, ensuring that the implementation of securing enterprise routers best practices is aligned with global regulatory frameworks.

SECURITY CERTIFICATIONS: The hardware and cryptographic modules are validated to FIPS 140-2 Level 2 and are pending certification for Level 3. The platform supports Common Criteria (EAL-4+) certified security functionality.

NETWORK & TELECOM STANDARDS: Adherence to IEEE 802.1AE (MACsec), IEEE 802.1X, and the MEF 3.0 Carrier Ethernet standards is guaranteed. The equipment meets all relevant NEBS Level 3 and ETSI environmental requirements for deployment in central office and enterprise edge data center environments.

TECHNICAL SPECIFICATIONS

The technical specifications below provide a granular breakdown of the platform's performance and physical attributes. These parameters are crucial for capacity planning and ensuring that the system aligns with the performance expectations of a secured enterprise network.

Form Factor: 2RU Rack-Mountable Chassis

Forwarding Capacity: Up to 2.4 Tbps (Full-Duplex) with integrated security processing

Encryption Throughput: 1.6 Tbps (IPsec/ MACsec line-rate)

Concurrent Sessions: 10 Million

Interfaces: 24x 1/10/25G SFP/SFP+/SFP28 ports + 4x 40/100G QSFP/QSFP28

uplink bays

Control Plane: 2x Multi-core x86 CPUs, 64GB DDR4 ECC RAM, 120GB SSD

Power Supply: 1+1 Redundant, Hot-Swappable (AC: 100-240V, DC: -48V)

Dimensions (HxWxD): 3.5 x 17.4 x 23.2 in

Parameter	Specification
Form Factor	2RU Rack-Mountable Chassis
Forwarding Capacity	Up to 2.4 Tbps (Full-Duplex)
Encryption Throughput	1.6 Tbps (IPsec/ MACsec line-rate)
Power Supply	1+1 Redundant, Hot-Swappable (AC/DC)

ORDERING OPTIONS

To facilitate precise procurement and deployment, this platform is available in several factory-integrated configurations. Each SKU is optimized for a specific security and performance profile, simplifying the adoption of security best practices for various enterprise size and topology requirements.

SECURE-EDGE-1000: Base chassis system with the Secure Forwarding Engine,

2x 400W AC power supplies, and no interface cards. Includes the foundational security license (MACsec, ACL, stateful firewall).

SECURE-EDGE-2000: Fully populated chassis with 24x 1/10/25G SFP+ ports and 2x 40/100G uplinks. Includes the Advanced Security License (IPsec VPN, next-gen firewall, and advanced threat detection).

SECURE-EDGE-MOD-SFP: Expansion module providing 8 additional 1/10/25G SFP28 ports.

SECURE-EDGE-MOD-QSFP: Expansion module providing 2 additional 40/100G QSFP28 ports.

Please consult your local representative for accessory kits, optics, and software subscription services designed to keep your deployment at the forefront of enterprise security.

