

WiZ-Knight (On-Prem)

Portable Encryptor



WiZ-Knight (On-Prem) is a dual-component solution comprising of a portable USB Wi-Fi encryption dongle and a high-performance gateway appliance. Purpose-built for classified and enterprise environments, it enforces a Zero Trust Architecture (ZTA) to ensure device posture verification and authentication of both device and end-user identities before granting access to enterprise resources.

Through a policy-granting server, a short-term access token is issued once the device posture is validated. Seamless integration with Active Directory enables system administrators to efficiently manage employee onboarding and offboarding in line with functional roles. By linking remote user identity notifications with firewall key exchange establishment, granular firewall rules can be enforced based on user identity.

The gateway delivers 9.6 Gbps full-duplex clear throughput and supports up to 10,000 concurrent users. It features cryptographic agility, supporting AES-256, HMAC-SHA2/3, and hybrid post-quantum key exchange (ECDH + ML-KEM 1024). The robust IKEv2 key exchange enhances multi-layered defences and resilience against (D)DoS attacks.

The endpoint dongle isolates network traffic, remaining invisible on untrusted networks. It offers 50 Mbps performance, verified boot and runtime integrity monitoring, over-the-air firmware updates, and remote quarantine capabilities.

Seamless integration with Active Directory, PKI backends (CRL/OCSP), firewalls, and enterprise policy engines positions WiZ-Knight as a new benchmark in Zero Trust and quantum-resilient remote access.

KEY FEATURE



Compact, USB-powered IP encryption dongle



Zero Trust Architecture with certificate-based access control



AES encryption algorithm for data confidentiality



Scalable access for up to 10,000 concurrent users



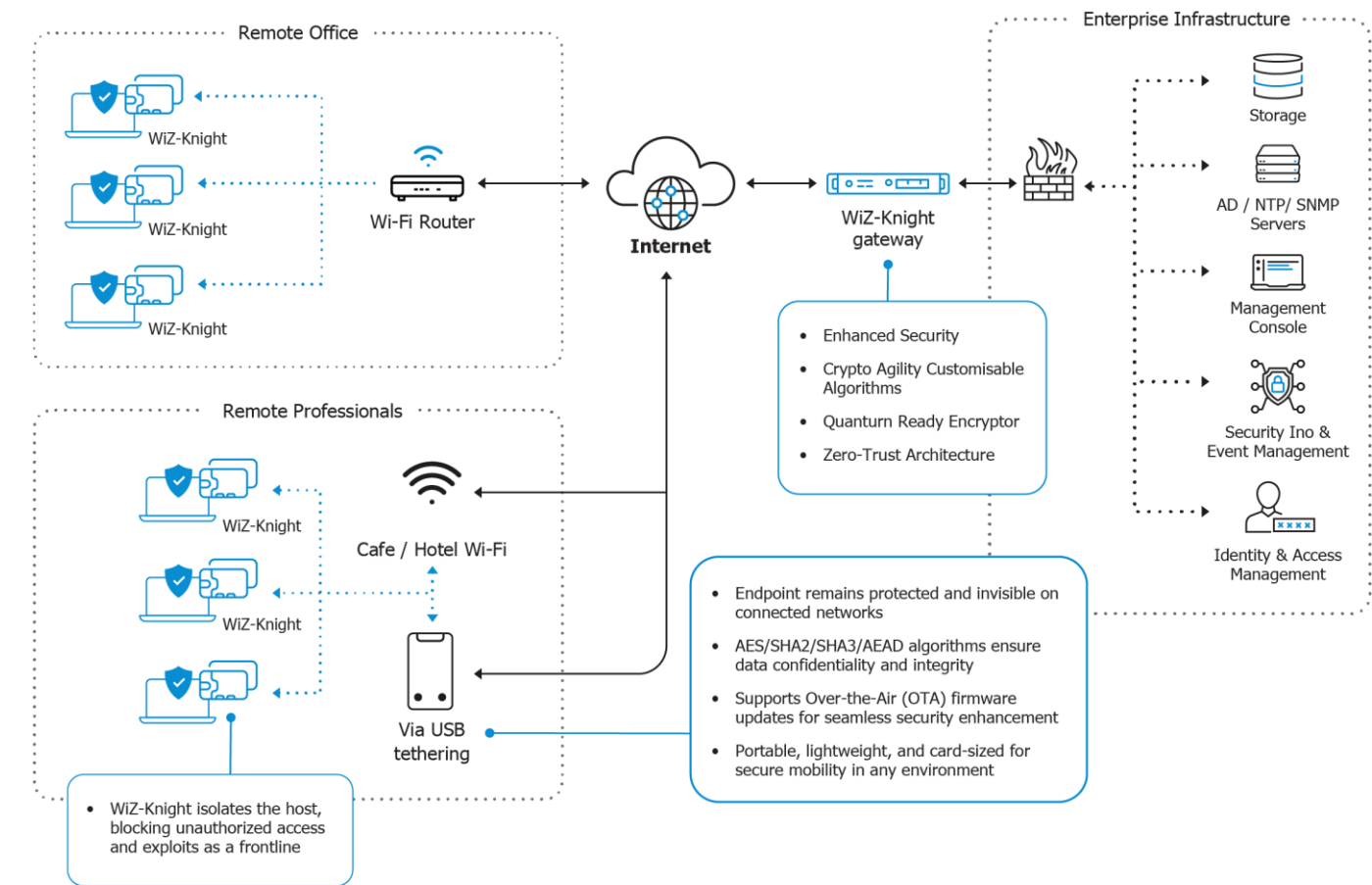
Over-the-air (OTA) patching



Quantum-resilient encryption for future-proof security



Deployment Architecture



Specifications

WiZ-Knight (Gateway)

Network Interfaces	1Gbps RJ45: Management Port, Clustering Port, System Integration Port - SFP+ (10Gbase/SR 850nm) for Trusted Ports & External Ports
Networking Features & Protocols	Network Mode (Layer 3): Supports only Unicast IPv4 protocols
High Availability Features	Load distribution through IKE redirection gateway within VPN gateway
Authentication	- Certificate-based digital signature (RSA / ECDSA) - Dual authentication (user and device)
Access Control	- Granular certificate criteria matching - Active Directory group-based access management
Key Management	- Support IKEv2 (PFS-enforced) - ECDH (up to P-521 bit) - ML-KEM-1024 (in hybrid PQC mode)
Data Protection	- AES-256-CBC with HMAC-SHA2/3 (256, 384, 512-bits) - AES-256-OCB (AEAD) - Custom IKE encryption and ESP AEAD algorithms
Performance	10 Gbps (aggregated) - Supports up to 10,000 concurrent users
Management Security / Configuration	- Remote Device Management (via management port) - Mutual TLS 1.3, role-based (certificate authentication)
Security Features	Anti-(D)DoS; Zero Trust Architecture; Hardened Kernel & Key Exchange
Dimension / Weight	4.29 x 43.46 x 74.19 (cm) Estimated at 13.1kg
Environmental	Power: 500W (Dual Power Supply) Power Connectors: 2xC14 to C13 cable provided Heat: 1832 BTU/hr (At 240 VAC)

WiZ-Knight (Dongle)

Network Interfaces	1 x USB Type-C connector Wi-Fi: Supports wireless LAN (dual band 2.4GHz & 5GHz) based on IEEE 802.11 standards (a/b/g/n/ac)
High Availability	Registration of multiple alternate gateways with auto-switching functionality
Performance	50Mbps (aggregated)
Dimensions / Weight	66 x 42 x 11 mm / 20g
LEDs	3 x bi-colour LEDs
VPN Protocol	IPSec / ESP (Encapsulating Security Payload) Support Layer 3 Encryption
Authentication	Certificate-based digital signature (ECDSA)
Key Management	- Support IKEv2 (with PFS-enforced) - ECDH (up to P-521 bit) - ML-KEM-1024 (in hybrid PQC mode)
Data Protection	- AES-256-CBC with HMAC-SHA2/3 (256, 384, 512-bits) - AES-256-OCB (AEAD) - Custom IKE encryption and ESP AEAD algorithms
Environmental	- Operating Temperature: 0°C ~ 40°C - Storage Temperature: -20°C ~ 70°C - Humidity: 40°C, relative Humidity 95%, non-condensing



WiZ-Knight (Cloud)

Portable Encryptor



WiZ-Knight (Cloud) is a compact, USB-powered encryptor designed to protect remote access over untrusted Wi-Fi and 4G/5G networks. Hosted on AWS, it offers dedicated VPN servers for each client, combined with certificate-based authentication and secure device pairing.

The dongle isolates traffic from the host device, creating an encrypted tunnel using AES-256 and RSA 2048-bit encryption. It supports hybrid post-quantum cryptography (PQC), over-the-air updates, posture validation, and remote device wiping.

With 50 Mbps aggregate throughput, dual-band Wi-Fi (2.4GHz and 5GHz), tethering, and OpenVPN protocol support, WiZ-Knight is ideal for mobile professionals. It integrates with Active Directory and, in future releases, Okta, enabling seamless multi-factor authentication.

Encased in a tamper-evident, plug-and-play form factor, comparable in size to a credit card, it keeps endpoints protected and invisible across public networks. WiZ-Knight (Cloud) empowers SMEs and enterprises with secure, policy-based access, wherever work takes place.

KEY FEATURE



Compact, USB-powered IP encryption dongle



Multi-factor authentication via mobile digital token



AES encryption algorithm for data confidentiality



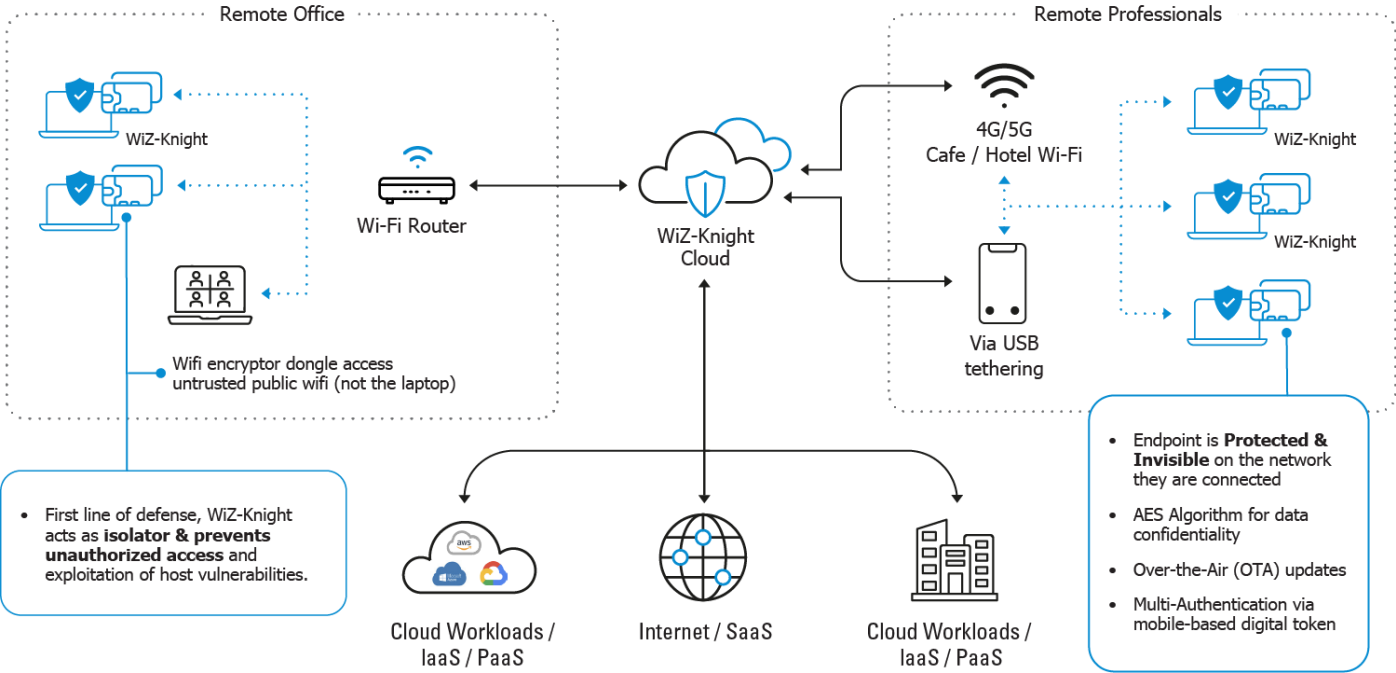
50 Mbps aggregate throughput



Over-the-air (OTA) patching



Deployment Architecture



Specifications

WiZ-Knight (Cloud)

Network Interfaces	1 x USB Type-C connector Wi-Fi: Supports wireless LAN (Wi-Fi dual band 2.4GHz & 5GHz) based on IEEE 802.11 standards (a/b/g/n/ac)
High Availability	Registration of multiple alternate VPN servers across different availability zones
Performance	50Mbps (aggregated)
Dimensions / Weight	66 x 42 x 11 mm / 20g
LEDs	3 x bi-colour LEDs
VPN Protocol	OpenVPN
Authentication	RSA public key signature (2048-bit)
Key Management	OpenSSL
Data Protection	AES-256
Environmental	- Operating Temperature: 0°C ~ 40°C - Storage Temperature: -20°C ~ 70°C - Humidity: 40°C, relative Humidity 95%, non-condensing

