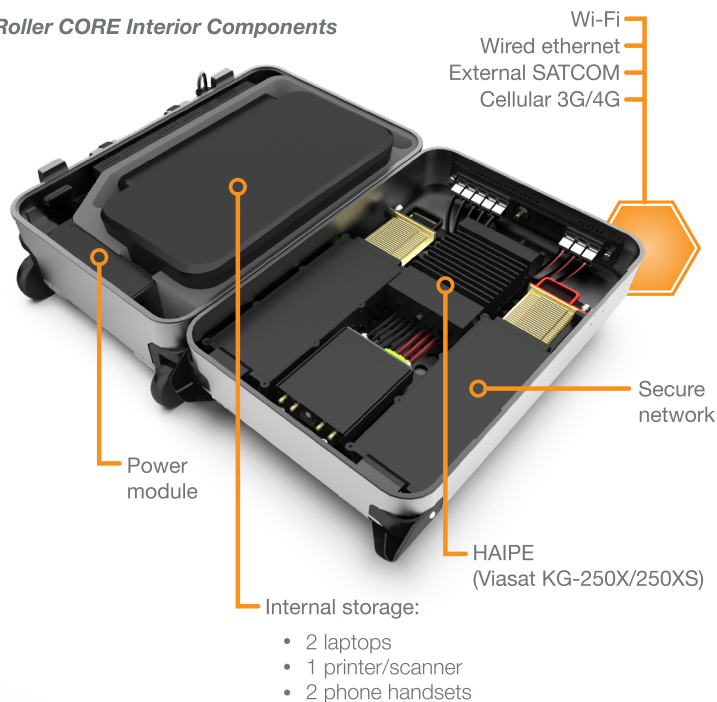# Roller CORE®

This portable network solution provides security and ruggedization within a minimized SWaP† form factor that is designed for secure and discreet travel.

Roller CORE was designed and engineered with mobility and flexibility in mind. Its sleek, nondescript, and Federal Aviation Administration (FAA) carry-on compliant exterior belies the powerful ciphertext-compatible network equipment inside. Roller CORE's flexible architecture, multiple interfaces, and removable computers provide an ideal balance between a ruggedized encryption network and transportability.

The Roller CORE system is comprised of several components that allow for rapid replacement and upgrade as technologies advance. A key component to the Roller CORE architecture is the implementation of a software-defined network (SDN), which allows for the rapid replacement and reconfiguration of the system without the added cost and time to procure new hardware components. Additionally, the standard form factor removable single board computers (SBCs) allow for the rapid removal of all sensitive data.

Roller CORE Exterior

Roller CORE Interior Components

Wi-Fi
Wired ethernet
External SATCOM
Cellular 3G/4G

Secure network

Power module

HAIPE (Viasat KG-250X/250XS)

Internal storage:
- 2 laptops
- 1 printer/scanner
- 2 phone handsets

CAPABILITIES

- Simultaneous transmit-and-receive video, voice, and data up to 10 Megabits per second.

- Operates in wide area networks including satellite communications and 3G or 4G.

- Compatible with Wi-Fi.

- Powerful encryption inside CORE keeps your computing environment secure.

- Configurable for both hard case and backpack transport.

- Sleek yet ruggedized and complies with FAA carry-on size requirements.

- Low profile exterior network access connections.

- A firewall in excess of platform requirements provides extra security for communications.

- Cross-node visibility into enterprise-wide system configuration and metrics through distributed, decoupled network management software.

- Utilizes virtualized environments with separation of key components to enable flexible adaptation of the system as a whole.

† Size, weight, and power (SWaP).

Discreet & Secure Portable Networking

This portable network solution provides security and ruggedization within a minimized SWaP form factor that is designed for secure and discreet travel.

Portable cyber security is the essential function of the Roller CORE system. It employs two-factor authentication and Linux Unified Key Setup (LUKS) disk encryption to meet the Category 1 NIST requirement to enable data at rest for mobile hardware and software. Roller CORE also includes a built-in health monitoring and configuration tool called DSM (Decoupled System Manager) that provides a real-time view into the network status and configuration of Roller CORE.

DSM allows local and remote users to view metrics about systems health, interface status, and basic NetFlow Statistics. DSM's functionality also reduces the need to deploy an expert to troubleshoot or update the system by allowing users to modify or restore router, quality of service, or WAN optimizer configuration as necessary. The Roller CORE/DSM combination provides users with the power to monitor, troubleshoot, and make corrections.

Roller CORE Black Enclave

Black SBC

Roller CORE Red Enclave

Red SBC

Contact

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Roller CORE® Specifications

Physical

Size (L × W × H):	21 × 14 × 9 in
Internal Storage Size:	9 × 14.5 × 5.25 in
Weight:	30 lbs

Power

- Universal input voltage range (85 to 264 VAC)
- Two 28 Wh UPS
- 60 W (5 A @ 12 V) with FAA-compliant batteries

Primary Components

- FAA-compliant carry-on bag with telescoping handle and wheels
- Additional storage for laptops and printer
- Physical security lock
- Two removable SBCs with SDN routing, boundary defense, and WAN optimization and acceleration
- Built-in Wi-Fi, cellular, and physical connections for WAN access
- Two VOIP phones, one each for red and black enclaves
- Support for ViaSat KG-250x and KG-250XS HAIPE
- AC power unit and UPS

SDN Components

OS:	Red Hat Enterprise Linux running kernel-based virtual machines
Processor:	Intel Atom E3845 (4 Cores) or Intel i7 (2 or 4 Cores)
RAM:	8 to 16 GB DDR3
HDD:	128 GB SSD
Routing:	Border Gateway Protocol, Open Shortest Path First, Enhanced Interior Gateway Routing Protocol, policy-based routing, IPv6, virtual routing/forwarding–lite, multicast, Lisp, and Generic Routing Encapsulation
Addressing:	Dynamic Host Configuration Protocol, Domain Name System, Network Address Translation, 802.1Q VLAN, Ethernet Virtual Connection, and VXLAN
VPN:	IPsec VPN, Dynamic Multipoint VPN, Easy VPN, SSL VPN, and FlexVPN
MPLS:	MPLS VPN, virtual routing/forwarding, and Bidirectional Forwarding Detection
Security:	Cisco IOS Zone-Based Policy Firewall, access control list, RADIUS, TACACS+, and authentication, authorization, and accounting

Other SDN Components:
- Support for boundary defense protection system and deep packet inspection (e.g. Cisco ASA or Palo Alto)
- WAN optimization and acceleration (e.g. Riverbed VCX)
- Open vSwitch Layer 2/3 virtual switch for VLAN tagging, isolation, trunking, and separation of system management plane from data plane

Black Enclave

- Seven 10/100 ethernet ports: one WAN, one HAIPE, one management, one PoE supporting 802.3af, and three configurable data ports

Red Enclave

- Seven ethernet 10/100 ports: one HAIPE, one management, one PoE supporting 802.3af, and four configurable data ports
- All ports are configurable switched or routed

WAN Access

- WAN interface
- One Fast Ethernet
- One embedded LTE Advanced modem with dual SIM slot
- 802.11b/g/n Wi-Fi or AP

Certification and Compliance

- NSA Type I encryption certification
- NSA Commercial Solutions for Classified Program compliant
- FAA and ICAO carry-on compliant