

The Network Powering **Multiple Lines of Defense Against Security Compromise**

Security is paramount for every industry, and especially those managing sprawling environments. From industrial work zones to college campuses, both physical and data security are key to ensuring the safety of people, the safeguarding of equipment, and the protection of valued information. With operations rapidly digitalizing, and the potential for hacks and breaches rising, proactive 24/7 security monitoring across operations is necessary. **Enter Rajant Kinetic Mesh®.**

Rajant's private wireless network is empowering those charged with industrial security to gain comprehensive, real-time situational awareness across their entire environment – keeping people safe and systems secured.

That is because Kinetic Mesh includes the military-grade cryptographic solutions for end-to-end information assurance across the network, while at the same time enables next-gen security applications themselves – including surveillance drones, inspection bots, guarding robots, and more – by providing resilient, continuous communication links over which to gather and output real-time data.

If It's Moving, It's Rajant: **Secure, Nonstop Data Flow to Protect Today's Mobile, Information-Based Corporate Assets**

Connected devices and people all generate data, which, if carried through a secure and reliable communication network, can fortify monitoring, situational awareness, security management, and rapid response. As the use of air, land, and sea robots to supplement security workforces increases, secure data-sharing and device cross-communication becomes even more critical. These assets are highly mobile and demand continuous high-capacity links over which to transmit audio, video, and sensor data. If there are drops in connectivity or systems cannot talk to each other, important information can be missed and security or safety breaches can happen.

Rajant's technology uniquely supports all aspects of the industrial security equation, from powering physical security assets to protecting the sensitive data they hold. **Here's how.**

Extreme reliability to power real-time security applications.

Kinetic Mesh employs any-node-to-any-node communications to ensure no single point of failure and extreme reliability, as BreadCrumb® nodes can hold multiple connections over multiple frequencies simultaneously. The network is infused with the intelligence of Rajant's InstaMesh® networking protocol which seamlessly links fixed, wireless, and mobile nodes together. It continually works to select the fastest path for delivery among the meshed connections, and will dynamically redirect traffic to the next-best available path(s) if any one peer is compromised or obstructed. Multi-radio, multi-frequency redundancy creates 'never-break' coverage even in hard-to-network settings, providing for continuous data flow to, from, and between the infrastructure and assets performing security-related operations.

Total mobility for assets securing operations by land, air, and sea.

Because every BreadCrumb node can be fixed or mobile, they can be deployed directly on robotics used for security and safety operations. From aerial drones surveilling large-scale environments, to patrol robots guarding desolate perimeters, to bots performing highly targeted tasks like lock inspections, these assets can take resilient connectivity with them wherever they go.

Machine-to-machine (M2M) communications to orchestrate actions.

Rajant is the only network that enables physical assets to communicate directly with each other. Any BreadCrumb-equipped machines can share data directly and in turn coordinate tasks to proactively enhance security or safety, or respond rapidly to breaches.

Easily deployable to fully cover large-scale, diverse environments.

Rajant's portfolio of BreadCrumbs gives you flexibility to deploy a Kinetic Mesh network ad hoc, in areas with or without existing infrastructure in place, in even the hardest-to-network environments. Nodes can be deployed above ground, underground, in areas with significant infrastructure interference, and even on water. The network's unique architecture enables it to perform optimally with any network density, in sparse and sprawling remote settings and in compact city deployments.

Proactive, Converged Security and Safety: What's Enabled with Kinetic Mesh

Whether securing outdoor industrial work sites, plants and manufacturing facilities, or large community campuses, Kinetic Mesh provides the secure and adaptive connectivity essential for peak protection.

Gain Continuous 360° Situational Awareness

Security teams and organizational leadership can rest assured knowing that Kinetic Mesh is providing real-time audio, video, and data streams from every corner of their operations without fail – helping them identify and react to changing security issues quickly. Rajant's network provides continuous mobile connectivity that enables

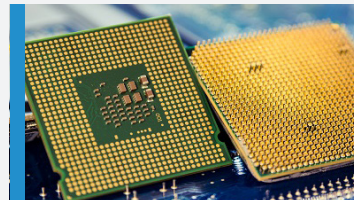
Military-grade defenses against data compromise.

Rajant BreadCrumbs offer many levels of encryption to protect packets from devices and people accessing them directly. Packet cipher and MAC address cipher settings from X-Salsa basic encryption to Suite B military-grade encryption are available, with per-packet, per-hop authentication to prevent packet injection and MAC spoofing.

BreadCrumbs also support Access Control Lists (ACLs) to prevent unwanted MAC addresses from sending or receiving information from the Kinetic Mesh network. Rajant's robust protection extends to mesh endpoints, providing varying levels of security on access point connections, including WEP, WPA, WPA2 personal, mixed, and enterprise.

Additionally Rajant's newest cryptographic module technology, the Wolverine, contains advanced encryption and authentication algorithms using a fail-safe design to provide design flexibility for multiple IIoT applications.

IDEAL TECHNOLOGY FOR INDUSTRIAL SECURITY



The Wolverine is Rajant's next-generation, fully programmable, cryptographic module technology, which contains advanced encryption and authentication algorithms.



Rajant's entire portfolio of BreadCrumb nodes support strong cryptographic options used for data, including MAC address encryption and per-hop, per-packet authentication. Security options can be configured to your unique requirements.

roaming security robots to broadcast telemetry and live video from distant zones to security or command centers with no data drops. The high capacity network easily runs bandwidth-intensive video and data streaming applications for instant access to crucial information.



Improve Physical Security of Infrastructure, Assets, and People

Any location where people and infrastructure reside needs to be protected. Some locations can be rural or sprawling, which makes it difficult to patrol the entire area effectively by manual means. Rajant enables operations to supplement human guarding with robotics and autonomous platforms, providing the continuous data link they need to run 24/7. With real-time input, they can output data and perform tasks that would be difficult or dangerous for people to execute. They can also link up with cameras, intrusion detection systems, keypads, and other security bots to share data and react accordingly – speeding response time if security or safety infractions do occur.

Protect Your Data Flows

Data security is critical to safeguard proprietary and sensitive information and to ensure that the data leadership teams base decisions on is not corrupt or compromised. Rajant's technology was born from military applications and is the only wireless network to offer multiple cryptographic options inclusive of NSA Suite B algorithms and down to per-hop, per-packet authentication. This protects data flowing between machines in the field, to the command center, and to the enterprise.

Move from Reactive to Proactive, Predictive Security

With Rajant, rather than waiting for a security breach or safety situation to occur, teams can begin to proactively assess their security stance and head off potential issues with immediacy. Kinetic Mesh, with its mission-critical network reliability and rapid scalability to cover wide-ranging, highly diverse environments, gives you a standardized solution to satisfy the myriad of security requirements across any and all of the areas you need to protect.

RAJANT IN ACTION

Australian Droid + Robot Makes Remote Inspection Possible with Rajant

Australian Droid + Robot specializes in robotics and automation platforms for the mining and defense industries. Its Explora underground mapping and inspection robot has Rajant's BreadCrumb technology onboard—enabling its ability to independently perform visual inspections, thermal imaging, laser survey scanning, gas sensing, and other tasks to identify hazardous mine conditions. M2M communications enable multiple robots to create an ad hoc underground mesh network and orchestrate their movements throughout the mine.



APPLICATIONS ENABLED

Designed to support both mobile and fixed assets, Kinetic Mesh addresses the diverse requirements for enhanced security and safety across your operations.

Data Security

- MAC Address Encryption
- Per-Hop, Per-Packet Authentication
- Cryptographic Options including NSA Suite B
- EKMS and Tactical Key Management (TKM)
- Over-The-Air-Keying (OTAK)
- Secure Boot Capability

Autonomy & Robotics

- Surveillance Drones
- Watchguard & Security Bots
- Maintenance & Inspection Bots
- HAZMAT Robotics for Material Disposal
- Sentinel & Mobile Robots
- Explosive Removal & Disarmament

Physical Safety & Security

- CCTV / Video Surveillance
- Aerial Perimeter Monitoring
- Theft Monitoring
- Real-Time Voice, Video, and Data Communications
- Emergency Response Communications
- Wearable Communications Systems
- Intrusion Detection Systems

Additional Applications

- Campus / Workplace Health Monitoring
- Artificial Intelligence-Based Apps



Rajant Private Wireless Networks: **Ultra-Reliable Security for All Industries**

The convergence of physical and information risks demands bulk protection in equal measure. Secure data communication is mission-critical to these initiatives, along with real-time insight into everything happening across your operations. Rajant's proven ability to protect critical data and to run advanced applications for physical security makes it the ideal network to shore up your security stance, quickly.

RAJANT IN ACTION

Ghost Robotics' Unmanned Systems Rely on Rajant to Protect Human Lives

Ghost Robotics offers legged robotics for safety and security applications in the industrial, mining and energy, defense, and public safety markets. These systems handle diverse terrain with ease and can be deployed anywhere where a human may not be safe. Rajant provides the mission-critical, fully mobile connectivity required to power these robots in the harsh, difficult environments they operate to keep people out of harm's way.

We'll show you how our innovative wireless network can take your industrial security to the next level.

Visit rajant.com/robotics to get started.

Proud Member of the



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