

RAJANT KINETIC MESH®

# Rajant Intelligent Edge: Transforming Tunnel Construction Efficiency

**Seeking enhanced safety, productivity, and coordination during the build phase?**

## Seamlessly Integrated Systems: Driving Construction Innovation with Industrial AI

Rajant BreadCrumb nodes enable seamlessly integrated peer-to-peer connections across multiple frequencies, offering resilience and adaptability for construction tasks. This intelligent edge unites an Industrial Internet of Things (IIoT) ecosystem, linking machinery, worksites, and Reios tracking with RCP-2450 antennas extending coverage up to one kilometer per node. InstaMesh dynamically routes traffic, supporting construction automation with Industrial AI. This integrated seamlessly solution enhances safety, efficiency, and project timelines, adapting effortlessly to the evolving construction environment.

Rajant Kinetic Mesh® networks deliver transformative solutions, seamlessly integrated to optimize underground tunnel construction for crews, heavy machinery, and platforms, requiring no active tunnel components. Our BreadCrumb® nodes, deployed on equipment and worksites, team up with Reios IIoT technology to provide real-time people and asset tracking, streamlining workflows deep underground. This intelligently integrated approach mitigates challenges like interference, ensuring consistent performance during the construction process.



## Integrated Resilience: Optimizing Construction in Deep Tunnels

Construction in tunnels faces challenges like interference and shifting conditions, which Rajant's integrated seamlessly multi-radio redundancy overcomes. Paired with RCP-2450 antennas, our solution extends range up to one kilometer per BreadCrumb node, requiring no fixed infrastructure for easy adaptation during the build. Reios tracking bolsters this by monitoring construction personnel and equipment, reducing risks and improving response times. This intelligently integrated approach ensures reliable performance, supporting critical construction applications without interruption.

## Tangible Outcomes: Safety + Productivity

- \* **Safety Advancements:** Enhance security with Reios people tracking, asset oversight, and machinery monitoring to protect workers.
- \* **Operational Efficiency:** Enable smooth coordination between crews and equipment for seamless project progress.
- \* **Construction Innovation:** Power automated machinery and predictive maintenance through Industrial AI.

## Rajant Solutions: Designed for Construction Demands

- \* **BreadCrumb:** Multi-radio nodes for resilient, integrated performance on construction assets.
- \* **RCP-2450 Antennas:** Extend coverage up to one kilometer underground.
- \* **Reios:** Real-time tracking of people and assets for enhanced safety during construction.



## The #1 Choice: Adaptive, Resilient, Future-Focused

Rajant's intelligently integrated wireless networks and edge-computing systems offer total mobility, proven resiliency, rapid scalability, rugged durability, and enhanced security. Lead the tunneling construction industry with Reliability, Redundancy, and Resiliency, powered by Industrial AI.

Discover how Rajant can elevate your tunnel construction with seamlessly integrated innovation.

Visit [www.rajant.com](http://www.rajant.com) to learn more.

Tel: 484.595.0233 | [www.rajant.com](http://www.rajant.com)

BreadCrumb, InstaMesh, Kinetic Mesh, and their stylized logos are trademarks of Rajant Corporation. All other trademarks are the property of their respective owners.  
© Copyright 2025 Rajant Corporation. All rights reserved.



**RAJANT**  
INTELLIGENT EDGE  
Enabling Industrial AI