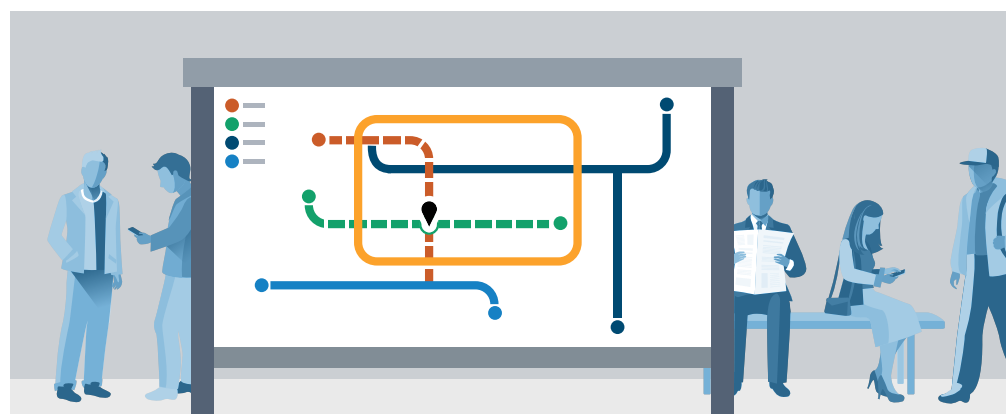


DESTINATION:
SMART TRANSPORTATION
 How to Set Your Mass Transit Roadmap In Motion



Every city today is looking for ways to become 'smarter', with transportation as a key focal point. With an array of demands to meet, the roadmap for a mass transportation systems can vary, but all operators ultimately want to achieve:

- Improved Safety and Security
- Increased Operational Efficiency
- Maximized Revenue Generation

To reach these common goals, operators need a robust and flexible network infrastructure that can adapt to current and future demands.

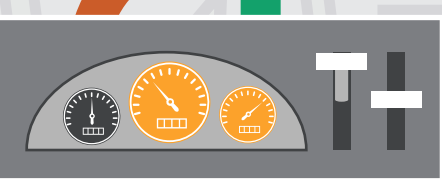
Enter Rajant – the only fully mobile private network solution to support all aspects of your transportation 'roadmap'.

HERE'S HOW

Roadmap of Objectives



Improve ridership capacity with **communications-based train control (CBTC).**

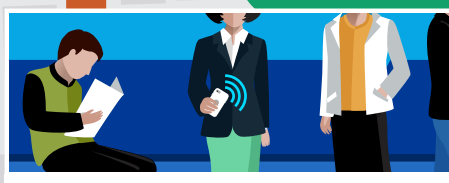


Automate prevention of unsafe speeds and movements with **Positive Train Control (PTC).**

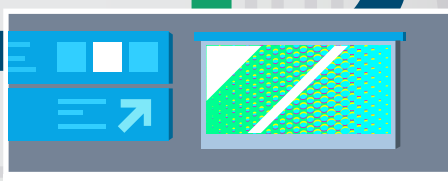


Improve passenger safety with **onboard CCTV.**

Constant connectivity between your high-speed trains and **broader fixed track infrastructure** is especially critical for capacity- and safety-enhancing applications.



Enable **e-ticketing** with contactless smart cards or smartphones.



Offer dynamic advertising space with onboard **digital signage.**



Improve the commuter experience with **Passenger Information Systems (PIS).**

Applications that help onboard employees' efficiency and engage passengers in a positive commuting experience require **evenly distributed, end-to-end connectivity** across all cars in your train consist.



Eliminate recurring leased line costs with a **high-bandwidth private wireless network solution.**



Support today's **mobility-driven network imperatives** without replacing existing investments.

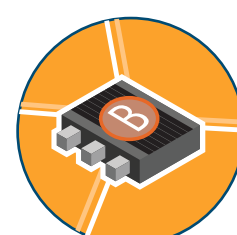
A highly **cost-effective alternative** to expensive build-out of wayside infrastructure is **implementation of a 'hybrid' network** that can easily supplement trackside connectivity with cellular as needed.

Connect everything as part of 'Smart' Mass Transit System with a **robust, flexible network.**

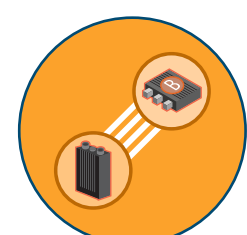
Network Requirements

Enabled By
Trackside to Train Connectivity

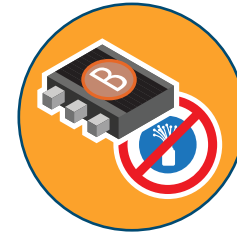
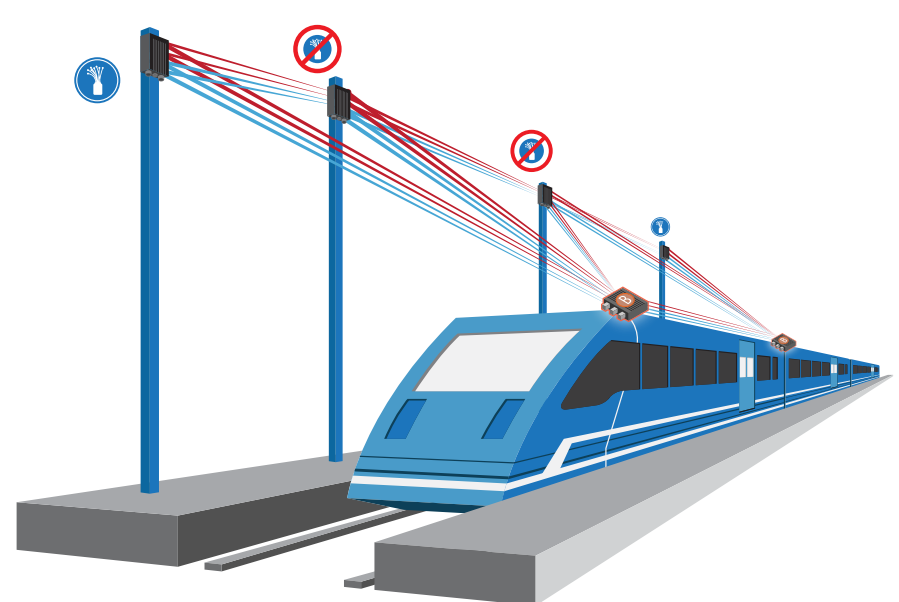
Rajant Kinetic Mesh networks use BreadCrumb® wireless nodes with patented InstaMesh® networking software in a 'make then break' paradigm to maintain always-on connectivity **without** handover.



Always connected



Multiple frequencies at Automatic Transmit Power



BreadCrumbs can act as repeaters where fiber or other connectivity is absent

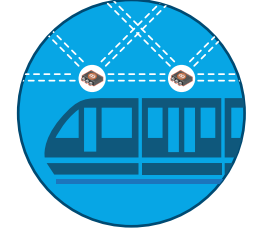


Ultra secure

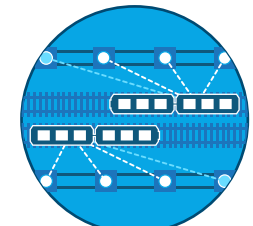
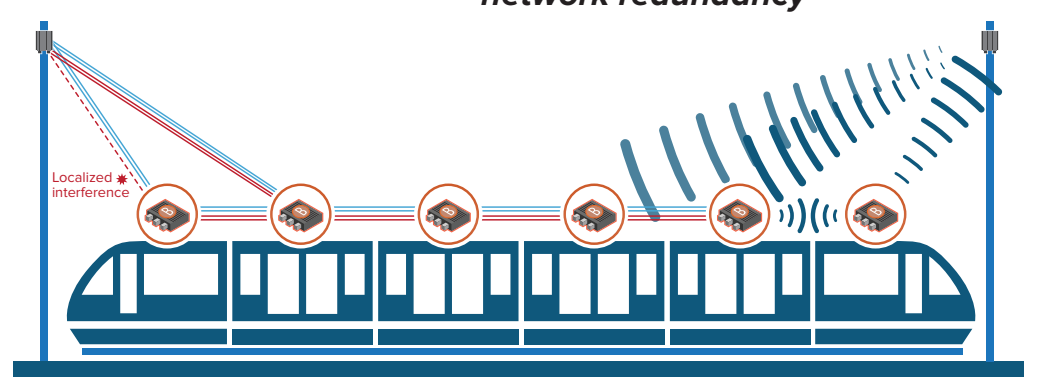
Enabled By
Car-to-Car Connectivity

Using the same Rajant BreadCrumb nodes that provide trackside to train connectivity, operators can instantly establish robust intracar connectivity—without degradation between cars.

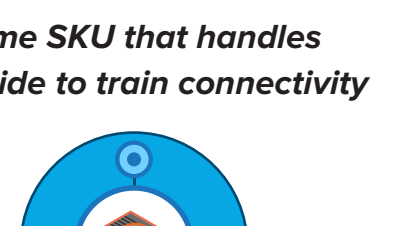
No capacity loss



Increases overall network redundancy



Automatically adapts when cars are moved in and out of train consist

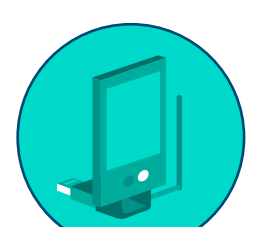
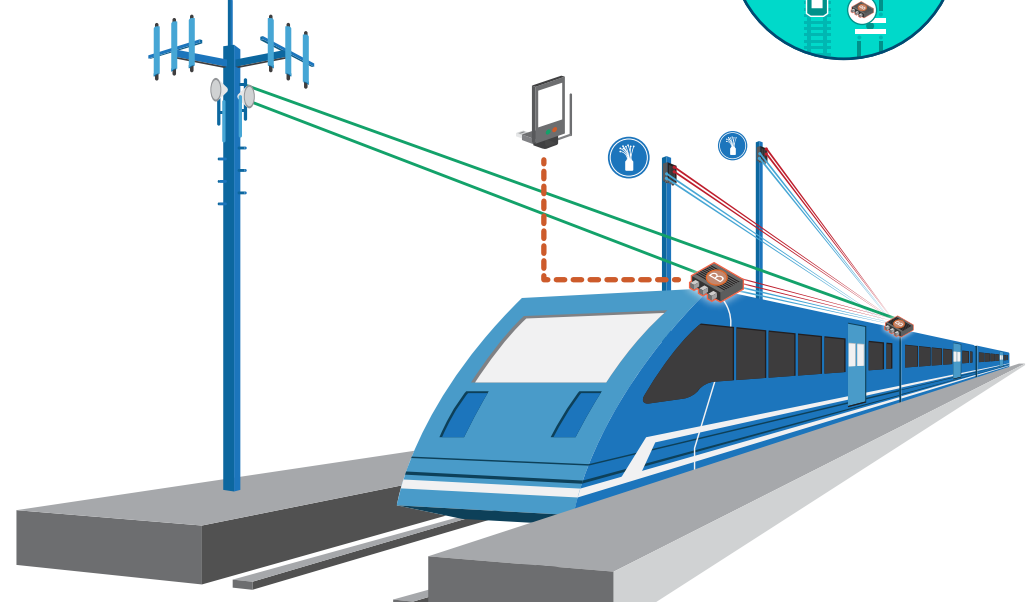
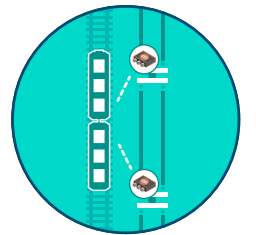


Same SKU that handles trackside to train connectivity

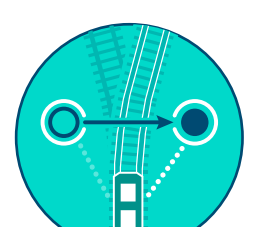
Enabled By
Cellular and Trackside Load Balancing

The ability of InstaMesh to seamlessly network between fixed, wireless, and mobile nodes is what makes the Rajant Kinetic Mesh network the perfect solution for expansive mass transit environments.

Switch between trackside to cellular in microseconds



Install aircard directly into onboard BreadCrumb (no added equipment needed)



Network dynamically determines the best path on a packet-by-packet basis