

BreadCrumb® ES1

Portable Wireless Mesh Network Node

The ES1 is an IP67 Kinetic Mesh network device intended for use in IIoT applications and light-duty vehicles. This portable mesh network node contains two transceivers with up to four external antenna ports and provides Ethernet and Wi-Fi access point interfaces to enable data, voice, and video applications with multiple mounting options.



BreadCrumb ES1 Key Features

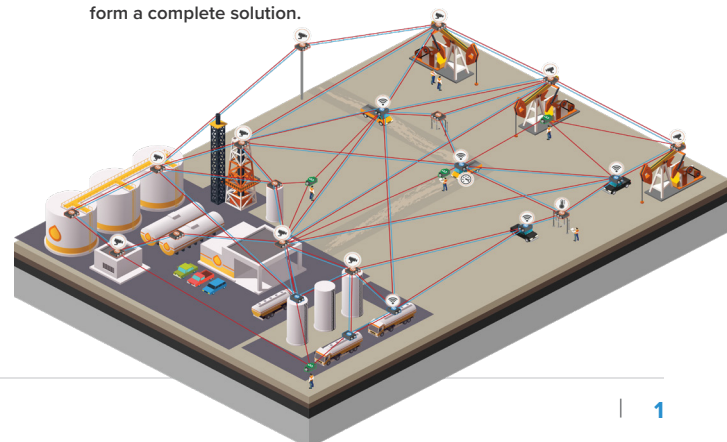
- Combines Kinetic Mesh backhaul, Wi-Fi access and layer 2 switching across interfaces in a single device
- Outdoor-rated:
 - o -40°C to +60°C (-40°F to 140°F) temperature range
 - o IP67
 - o Optional DIN rail mount kit for existing NEMA enclosures
- Rajant’s patented¹ InstaMesh® networking software, enables the network to quickly adapt to rapidly-deployed and quickly or constantly moving network elements
- 2.4 GHz, 4.9 GHz, and 5 GHz radio frequencies supporting a wide variety of applications and environments
- Lightweight, portable, and low power consumption
- Support for several strong cryptographic options used for data and MAC-address encryption and per-hop, per-packet authentication
- High bandwidth for data, voice, and video applications
- Scalability to hundreds of mobile, high-bandwidth nodes
- Integrated Wi-Fi Access Point service for compatibility with millions of commercial off-the-shelf (COTS) client devices such as laptops, tablets, smart phones, IP cameras, sensors, and other IP devices
- Self-configuring operation for fast and easy deployments
- Reliable and fast off-loading to Ethernet via multiple, simultaneous bridge-mode links through Automatic Protocol Tunneling (APT) feature
- Mesh Clustering to designate per-BreadCrumb sub-meshes that will only mesh with a user-specified series of nodes, useful applications include:
 - Enabling two BreadCrumbs to operate in a point-to-point (PTP) capacity on the same channel as other mesh nodes, eliminating the need to purchase a third-party PTP link for backhaul
 - Isolating one or more groups of BreadCrumbs to mesh with each other and not with other nodes outside the user-defined mesh cluster

Utilizing ES1 BreadCrumbs to Your Advantage

The ES1 is Rajant’s mid-level BreadCrumb with the same features and reliability as our other BreadCrumbs intended for IIoT markets, including seaports, airports, oil & gas, utilities, solar, wind, smart cities, and public safety.

This commercial-grade network node not only offers reliability, performance and scalability but also security to support virtually any application, operating in outdoor environments that can utilize a less ruggedized solution. While the LX5 is recommended to build your core Rajant mesh infrastructure and the ruggedized LX5 and ME4 are recommended for the most severe environments, including deployment in extreme temperatures and on equipment with high shock and vibration, the ES1 is an excellent solution to expand coverage within your IIoT network.

ES1 BreadCrumbs are designed to perform flawlessly in a variety of environments, such as Oil & Gas, and integrate seamlessly with all Rajant BreadCrumb models to form a complete solution.



¹ U.S. Patent 8341289B2

