

# Rajant Radio


## Kinetic Mesh® Radio Kit

The Rajant Kinetic Mesh Radio Kit quickly establishes a robust network to teleoperate Spot in lieu of WiFi on site.

Deploy Spot quickly and easily within an isolated network, with no infrastructure required.



## Features

-  Radio coverage up to 200,000 sqft (~250ft radius per radio indoors)
-  Radios support dual band 2.4 GHz and 5.8 GHz
-  Easy to mount on top of Spot, Spot EAP, or Spot CORE
-  Comes with default settings to run on Spot out of the box

## In the Box

- Four Rajant ES1 BreadCrumb radios, including two repeater nodes, one Spot-mountable radio, and one operator control unit (OCU)
- Three tripods for the OCU and repeaters
- Three 120VAC POE power supplies (repeaters and OCU)
- Spot GXP with POE
- Travel case

Powered by  **RAJANT**

[www.bostondynamics.com/products/spot/payloads](http://www.bostondynamics.com/products/spot/payloads)

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## Specifications

### RAJANT ES1 BREADCRUMB

**Wireless Options** = 2.4 GHz or 5.8 GHz

**Antenna Connector** = (2) Type N (female)

**Frequency**<sup>1</sup> = 2402 — 2482 MHz (2.4 GHz)

U-NII-1: 5150 — 5250 MHz (5.8 GHz)

U-NII-2A: 5250 — 5350 MHz (5.8 GHz)

U-NII-2C: 5470 — 5725 MHz (5.8 GHz)

U-NII-3: 5725 — 5850 MHz (5.8 GHz)

**Modulation** = DSSS (2.4 GHz), CCK (2.4 GHz), OFDM (2.4 or 5.8 GHz)

**Max. Physical Layer Data Rate** = 300 Mbps (throughput varies)

**Max. RF Transmit Power**<sup>2</sup> = 29 dBm ± 2 dB

**Receive Sensitivity** =

Varying between -93 dBm ± 2 dB and -72 dBm ± 2 dB

### NETWORK + SECURITY

**Network Functionality** =

VLAN and QoS support; Access Point; Bridge; Gateway; DHCP; NAT and Port Forwarding; Automatic Protocol Tunneling (APT)

**Security** =

- Multiple cryptographic options, including NSA Suite B algorithms (implementation not certified). For information on models with full Suite B certification, contact Boston Dynamics.
- Separately configurable data and MAC address encryption via AES256-GCM, AES192-GCM, AES128-GCM, AES256-CTR, AES192-CTR, AES128-CTR, XSalsa20, XSalsa20/12, and XSalsa20/8.
- Configurable per-hop, per-packet authentication between BreadCrumbs via AES256-GMAC, AES192-GMAC, AES128-GMAC, HMAC-SHA512, HMAC-SHA384, HMAC-SHA256, HMAC-SHA224, HMAC-SHA1, and Poly-1305-AES.
- Supports IEEE 802.11i: AES-CCMP and TKIP encryption, WPA Personal/Enterprise, WPA2-Personal/Enterprise, 802.1x; 64/128-bit WEP; Access Control Lists; Compatible with Layer-2 and Layer-3 client/server and peer-to-peer security solutions; Compatible with Harris SecNet 54® encryption.

### INPUT / OUTPUT

**Ethernet** = (1) 10/100/1000 Mbps IEEE 802.3, RJ-45, auto MDI/MDIX

**USB** = USB port for firmware upgrades, and for GPS device add-on (through adapter cable)

**LED** = Status LED

**Switch** = LED Configuration / Zeroize Keys and Restore Factory Defaults (through optional adapter cable)

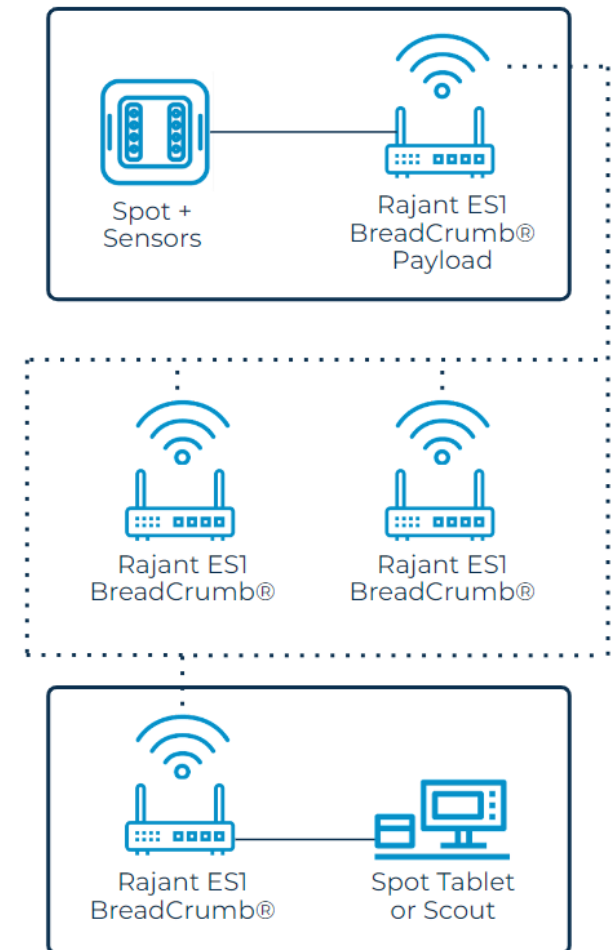
<sup>1</sup> Channel, frequency, and bandwidth options vary based upon regional and local regulations and certifications.

<sup>2</sup> RF transmit power is governed by local regulations and varies by frequency.

## Network Diagram

### Robot Radio Configuration

Standard radio kit in action



## Contact

sales@bostondynamics.com

[www.bostondynamics.com/products/spot/payloads](http://www.bostondynamics.com/products/spot/payloads)

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