

# RAJANT RADIO

## KINETIC MESH® RADIO KIT



Use the Rajant Kinetic Mesh® Radio Kit to quickly establish a robust network to teleoperate Spot in lieu of WiFi on site.



POWERED BY 

### BENEFITS

- Rapidly deploy radio coverage over ~200,000 sqft (~250ft radius per radio indoors)
- Radios support dual band 2.4Ghz and 5.8Ghz
- 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

- 4 Rajant ES1 BreadCrumb radios, including 2 repeater nodes, 1 Spot-mountable radio, and 1 operator control unit (OCU)
- 3 tripods for the OCU and repeaters
- 3 120VAC POE power supplies (repeaters and OCU)
- Spot GXP with POE
- Travel case

## SPECIFICATIONS

### Rajant ES1 BreadCrumb

Wireless Options	2.4Ghz or 5.8Ghz
Antenna Connector	(2) Type N (female)
Frequency <sup>1</sup>	2402 — 2482 MHz (2.4Ghz) 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 5.8Ghz)
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)
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### 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<sup>®</sup> 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

