Rajant KM3

The Rajant KM3 is a non-ruggedized version of our BreadCrumb® ME4 intended for deployment inside pre-existing outdoor NEMA enclosures. It has the same ME4 performance and features but without the IP67 housing and with a lower temperature range. The nodes can be mounted on the pre-designed, pre-configured panels used with these systems along with the circuitry, sensors, and I/O devices typically included on the data panels.

The KM3 BreadCrumb is an ideal wireless network solution for the Energy market, particularly Oil & Gas operations that rely heavily on SCADA, real-time monitoring, and video surveillance.

Utilizing the Rajant KM3 to Your Advantage

While the BreadCrumb LX5 model is recommended to build your core Rajant Kinetic Mesh® network infrastructure, the KM3 BreadCrumb provides wireless connectivity environments that do not require a hardened IP67 rated enclosure.

Rajant KM3 Key Features

- Patented[1] InstaMesh® networking software, enabling the network to quickly adapt to rapidly-deployed and quickly- or constantly-moving network elements
- Multiple transceiver configurations for high levels of network reliability, redundancy, and diversity, and fewer problems due to interference, congestions, and equipment outages
- Radio frequencies – 900 MHz, 2.4 GHz, and 5 GHz
- Supports up to four antennas with MIMO (multiple input, multiple output)
- Integrated mounting bracket for DIN-Rail mounting system (Top Hat configuration)
- 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 the Automatic Protocol Tunneling (APT) feature
- Seamless integration with current BreadCrumb models, and backward compatible with prior BreadCrumb nodes

[1] U.S. Patent 8341289B2

Model	Description
KM3-2409R	KM3 with (1) 2.4 GHz, 300 Mbps and (1) 900 MHz, 65 Mbps transceivers; supports 3 antennas with 2.4 GHz MIMO and 900 MHz SISO transceivers
KM3-2450R	KM3 with (1) 2.4 GHz, 300 Mbps and (1) 5 GHz, 300 Mbps transceivers; supports 4 antennas with 2.4 GHz MIMO and 5 GHz MIMO transceivers

Wireless	900 MHz	2.4 GHz	5 GHz
Antenna Connector	(1) Type N Female	(2) Type N Female	(2) Type N Female
Frequency[2]	902 — 928 MHz	2402 — 2494 MHz	U-NII-1: 5150 — 5250 MHz U-NII-2A: 5250 — 5350 MHz U-NII-2C: 5470 — 5725 MHz U-NII-3: 5725 — 5850 MHz
Modulation	DSSS, CCK, OFDM	DSSS, CCK, OFDM	OFDM
Max. Physical Layer Data Rate	65 Mbps (throughput varies)	300 Mbps (throughput varies)	300 Mbps (throughput varies)
Max. RF Transmit Power[3]	30 dBm ± 1 dB	29 dBm ± 2 dB	28 dBm ± 2 dB
Receive Sensitivity	Varying between -96 dBm ±1 dB and -73 dBm ±2 dB		

Network & Security	
Network Functionality	VLAN and QoS support; 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 Rajant or your authorized Rajant partner. 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

[2] Channel, frequency and bandwidth options vary based upon regional and local regulations and certifications.
[3] RF transmit power is governed by local regulations and varies by frequency.

Power	
Input Voltage	24 – 48 VDC Passive PoE
Power Consumption[4]	5.5 W (average, idle); 19 W (maximum peak) @24 V

Input/Output	
Ethernet	(1) 10/100/1000 Mbps and (1) 10/100 Mbps, IEEE 802.3, RJ-45, auto MDI/MDIX
USB	Built-in USB 2.0 port for firmware upgrades and for GPS device add-on for location tracking
LED	Status LED
Switch	LED Configuration / Zeroize Keys and Restore Factory Defaults “RESET” Switch

Physical	
Dimensions	138.735 x 143.154 x 57.150 mm (5.462 x 5.636 x 2.250 inches)
Weight	1074 g +/- 100 g (2.37 lb +/- 0.22 lb) (weight depends on transceiver configuration)
Temperature[5]	Ambient (operating): -20°C to 50°C (-4°F to 122°F) Storage: -40°C to 50°C (-40°F to 122°F)
Humidity	95% (non-condensing)
Enclosure	Designed for outdoor use with a NEMA enclosure
Certification	FCC Part 15 (USA): KM3-2450R, KM3-2409R ICES–003 and RSS–210 (Canada): KM3-2450R, KM3-2409R AS/NZS 4268 (Australia and New Zealand): KM3-2409R, KM3-2450R MTC (Peru): KM3-2450R ICASA (South Africa): KM3-2450R
Warranty	1 year

[4] Power consumption depends on transceiver configuration.

[5] Maximum ambient (operating) temperature may be positively or negatively influenced by power consumption, environmental and configuration factors such as but not limited to air flow, crypto encoding settings, transmit power settings and transmit duty cycle.

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