SlipStream

Supercharge Your APT Connections

The Rajant SlipStream is a BreadCrumb® model that enables high throughput connections between your wired network and your Kinetic Mesh® network. When installed on your wired network, it assumes responsibility for bridging the wired network to any other BreadCrumbs on the same Ethernet segment, performing any required encryption or decryption to ensure secure and fast delivery of data, voice, and video traffic. Working in concert with other BreadCrumb models via Rajant's proprietary Automatic Protocol Tunneling (APT) functionality, the SlipStream allows network operators to establish multiple Layer 2 connection points between the wired LAN and Kinetic Mesh networks in order to increase capacity while eliminating single points of failure.

Utilizing SlipStream to Your Advantage

Whether you are deploying a new wireless mesh network or expanding the capabilities of your existing mesh network, SlipStream nodes can greatly increase throughput and eliminate potential ingress/egress bottlenecks. Video is an example of an application that can tax connections between the wired and Kinetic Mesh networks as the number of video sources and viewers increases. SlipStream nodes can greatly accelerate the flow of this data across the LAN/mesh boundary, providing network operators with greater flexibility to construct or expand a wireless network that meets a wide range of high-capacity requirements and integrates with your existing wired infrastructure.

SlipStream Key Features

- Powerful CPU devoted to Kinetic Mesh encapsulation and decapsulation
- Seamless integration with current BreadCrumb models, and backward compatibility with prior BreadCrumb nodes
- Fast and reliable ingress and egress for data, voice, and video
- Support for several strong cryptographic options used for data and MAC-address encryption and per-hop, per-packet authentication (list of options on page 2)
- InstaMesh® networking software, enabling the network to quickly adapt to rapidly deployed and quickly- or constantly-moving network elements
- Self-configuring operation for fast and easy deployments
- Compatible with Rajant's BC|Commander® network management software and BC|Enterprise monitoring tool
- Designed for indoor installation

InstaMesh®

InstaMesh is the advanced, patented[1] protocol developed by Rajant that manages multiple wireless and wired connections for each node. It also allows each node to manage its own routing independently of any other nodes. Used as a system, BreadCrumb nodes deliver continuous connectivity in a mobile environment, and enable robust fault tolerance, high throughput, and low latency with very low maintenance and administrative requirements.

Because InstaMesh operates at Layer 2 and does not use a root node or LAN Controller, reliability, mobility, and bandwidth are maximized. No matter how you configure your network, InstaMesh networking software always determines the most efficient pathway between any two points, even when those points are in motion.

[1] U.S. Patent 8341289B2

Wired APT Performance Comparison
TCP unicast between two PCs connected to one BreadCrumb® each that are then connected via APT

APT/Encryption	SlipStream (Mbps)	BreadCrumb LX5 (Mbps)
None	605	87
AES-256-CTR	189	23
AES-256-GCM	141	15
XSalsa20	170	32

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, and HMAC-SHA1 • Support 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

Power

Input Voltage	12V, 3A
Power Consumption	10W @ 12V; power adapter included

Input / Output

Ethernet	X2 10/100/1000 Mbps, IEEE 802.3, RJ-45, auto MDI/MDIX
USB	X4 USB host ports for firmware upgrade, zeroization, and GPS; includes USB 3.0 and serial port
Switch 1	Power On/Off

Physical

Dimensions	135mm x 128mm x 35mm (5-5/16" x 5-3/64" x 1-3/8")
Weight	630g (22.2 oz)
Temperature	Operating Temperature: 0° C to 85° C (32° F to 185° F)
Enclosure	Indoor use only

20+ OF GAME-CHANGING WIRELESS

RĀJANT
MAKING THE COMPLICATED SIMPLE
Continuous Connectivity Anywhere