Kratos RT Logic announces general availability of a suite of products in 2015 that capture, transport and regenerate real-time RF spectrum over any distance using existing IP networks.
Optimizing your Ground Infrastructure

Ground systems have been constrained by analog technology for decades. Analog equipment, such as receivers, modems, RF cables, waveguides, inter-facility links (IFL) and intermediate frequency (IF) switches/hubs must be physically located in close proximity to the antenna to preserve signal quality and prevent signal degradation. This simple physical constraint has driven the architecture of ground networks since their inception. It has driven non-optimal designs that have inflated hardware and operational costs and reduced flexibility.

Limitation of RF Transport

Kratos RT Logic’s SpectralNet™ Appliance now enables you to perform real-time digitization, lossless transport and faithful analog reconstruction of RF spectrum over private and public IP networks without distance limitations. SpectralNet eliminates the physical distance constraints in RF signal distribution enabling the true optimization of ground infrastructures to maximize flexibility and reliability and reduce costs. SpectralNet’s unique capabilities enable the optimization of your ground networks to solve vexing challenges and to lower the capital and operational costs of your system. The result is a significant reduction in operations costs and footprint, enhanced security, simplified CONOPS, higher availability and scalability.

The SpectralNet Solution

SpectralNet opens up new capabilities that enable new features within ground system designs to help tackle legacy limitations.

SpectralNet Use Cases

- SpectralNet eliminates the physical distance constraint in transporting RF spectrum. This enables ground equipment to be placed or centralized where it is optimal for operations and cost reduction including specialized security equipment that is often collocated to protect the communications links. The site’s resulting reduction in hardware and personnel can drive a significant reduction in the size, weight, and power footprint at a site.
- SpectralNet can transport your RF spectrum with a deterministic latency over non-deterministic IP networks. This capability ensures that the rest of your ground equipment can operate free from concerns about the quality of your IP connectivity and allows interconnection of remote teleport services.
- SpectralNet can align digital IF signals generated from the same RF source but captured at different locations. This precise data alignment combined with SpectralNet best source selection algorithms helps mitigate the impacts of signal loss due to rain fade or equipment failure at a particular RF reception site.
- SpectralNet’s ability to faithfully reconstruct its digital signals back into RF spectrum enables you to take advantage of transporting RF without limitation while continuing to utilize the rest of your legacy ground infrastructure.
Mitigate RF Signal Loss by Diversifying your Reception Sites

Kratos RT Logic’s SpectralNet gives you a new option to mitigate the loss of RF signals through diversity of your reception sites. RF signal loss can be caused by rain fade, equipment outage, interference, or maintenance. SpectralNet enables you cost effectively receive RF at two geographically diverse sites and to switch between sites seamlessly in real-time, independent of distance and delay. The modems sustain the communication links without re-acquiring or sustaining a service outage during the switch.

Use SpectralNet Lite™ to Enable Virtualization of the Gateway Ground Architecture

The pace and impact of change in the general computing and IP networking worlds allow for virtualization of select processing functions within a gateway. Kratos RT Logic SpectralNet’s Lite* enables traditional modem functions to be hosted remotely in a virtual computing environment. Modems no longer need to be collocated with the teleport and provide data as a service within the cloud.

- Enables reduction of modem equipment at gateway teleport sites
- Transport the spectrum to a software modem hosted in the cloud where it is accessed as a service from anywhere in the world
- Reduces hardware footprint, maintenance, and logistics associated with traditional hardware modem solutions

SpectralNet Lite

Available Now

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specifications</th>
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<tbody>
<tr>
<td>L-Band Input and Output (950-2150 MHz)*</td>
<td>5 to 54 MHz BW Simplex/Duplex</td>
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<tr>
<td>Web-based GUI</td>
<td>Embedded FEC (Multi-Packet Correction)</td>
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<tr>
<td>Status and Control Rest API, SNMP</td>
<td>Bit Depth 4-12 bits</td>
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*S- and C-Bands coming in 2015
About Kratos RT Logic
Kratos RT Logic’s innovative signal processing systems and software provide field-proven capabilities for communication with satellites, spacecraft, missiles, and airborne platforms. From factory test to flight, from ground data networking to RF Links - the defense and aerospace community trusts Kratos RT Logic to solve its mission’s most difficult test and communication problems.

Kratos RT Logic is a wholly-owned subsidiary of Kratos Defense & Security Solutions, Inc. (NASDAQ: KTOS), a specialized national security technology business providing mission critical products, services, and solutions for United States national security priorities. With revenue of approximately $1 billion, Kratos’ core capabilities are sophisticated engineering, manufacturing and system integration offerings in areas including C5ISR, electronic warfare, unmanned systems, missile defense, cybersecurity, information assurance, training and critical infrastructure security. Kratos provides end-to-end solutions that assure the reliability, availability and security of critical communications across satellite and terrestrial networks.

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