



L3HARRIS™
FAST. FORWARD.

RIO™ GRANDE COMINT SYSTEM

Rio Grande provides multithreaded COMINT for theater-level situational awareness and threat warnings to multiple operators.

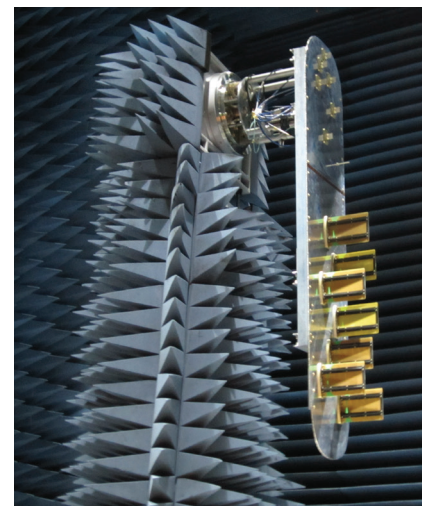
| SPECIFICATIONS | | | |
|---|---|---------------------------------|-------------------------------|
| Weight: | 45 lbs (20kg) | Power: | 28 VDC, 550W |
| Frequency Coverage: | 0.1 MHz - 6 GHz | Instantaneous Bandwidth: | 960 MHz (80 MHz per receiver) |
| Receiver Ch Qty: | 12 | Dynamic Range: | 75.3 dBm at 500 MHz |
| Sensitivity (at RF): | -115.5 dBm, 3dB SNR at 500 MHz with 30 KHz DDC BW | Architecture: | 3U VPX PCIe |
| Size: | 10.6 H x 6.1 W x 18 D (in) 26.9 H x 15.5 W x 45.7 D (cm) | | |
| Minimum SNR: | 12 dB, modulation dependent, detection threshold typically set 12 dB above noise floor estimate | | |
| Modulation Types: | AM, FM, SSB, FSK, BPSK, QPSK, OQPSK/SQPSK, QAM and MSK | | |
| Geolocations Techniques Supported: | N-Channel or Commutated DF/Advanced Geo Engine and Precision Geo (JICD 4.2) | | |
| Datalink Bandwidth: | Uplink as low as 10kbps/downlink as low as 100kbps BLOS/LOS, ground-air internet protocol | | |
| Data Products: | Lines of Bearing/Geolocations/Audio/Digitized Signal Output/Metadata/Cursor on Target | | |

OVERVIEW

Rio Grande is the latest generation of technology, leveraging decades of investment in advanced, multichannel coherent systems. It is a full-featured 45-pound COMINT system leveraging 12 coherent software-defined receivers and five million lines of software from L3Harris' largest SIGINT systems. It uses open architecture, provides theater-wide coverage and is sized for multiple operators. It can also operate autonomously using Rio Virtual Operator. All operators can be airborne or remotely located anywhere in the world. The system can cover 0.1 MHz (HF) to 6 GHz (SHF) and uses a 12-channel coherent receiver set. Rio Grande creates COMINT processing threads continuously, as it adapts instantaneously to the threat environment. This results in dozens of outputs from search, detect, geolocation and copy functions, creating maximum COMINT output from a 45-pound hardware set. An external RFD that can support multiple antenna arrays is required for full coverage N-Channel DF.



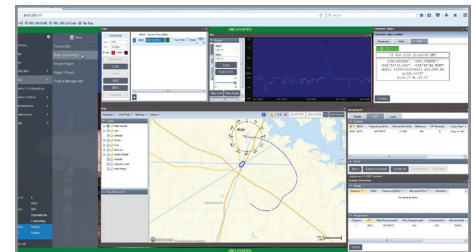
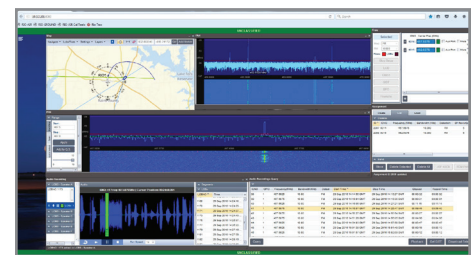
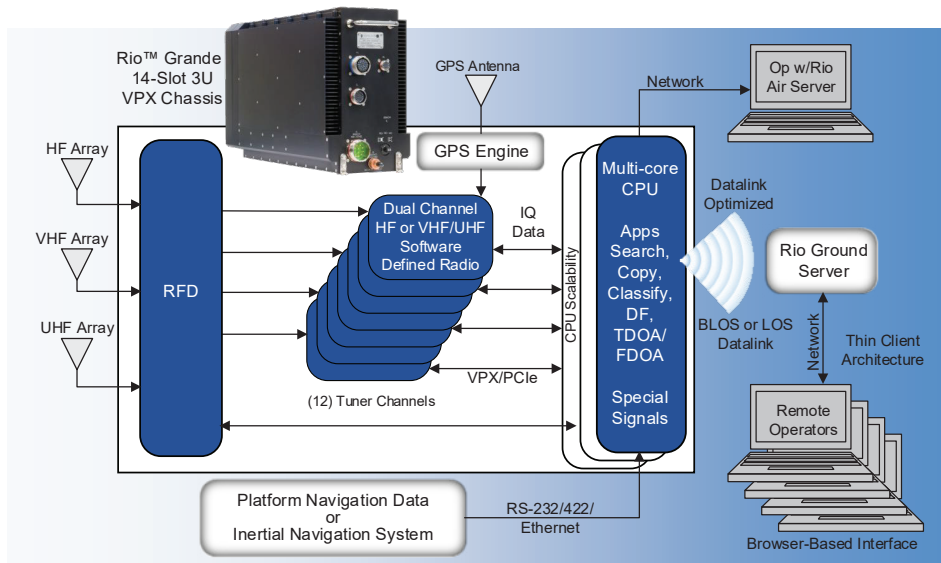
Rio Grande COMINT System



Example of L3Harris DF Antenna Array

FEATURE

- > Twelve coherent receiver channels for simultaneous search, detect, copy and N-channel DF/beam forming
- > COMINT search, detect, classify, DF/ geolocate, copy, special signals and dissemination
- > Member of L3Harris scalable COMINT family - common software and future upgrades
- > Remote or local operators using as little as 100 Kbps of IP datalink
- > High-resolution maps for situational awareness display signal locations and Rio/aircraft tracks
- > Available to operate in a non-pressurized environment
- > Real-time audio and digitized RF recording and playback for later analysis
- > Supports four to eight operators
- > Uses omni-directional antenna arrays for collection and geolocation
- > Joint Interface Control Document (JICD) compliant; interoperable with Theater Net-Centric Geolocation (TNG) networks for multi-platform precision geolocation



RIO GRANDE SYSTEM DIAGRAM AND WORKSTATION DISPLAYS

Rio Grande uses a thin client graphical user interface - any workstation can run Rio Grande using a web browser.

Rio Grande COMINT System - Rev C

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



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