WARFIGHTER EFFECTIVENESS

L3HARRIS™
FAST. FORWARD.

RIO™ NIÑO COMINT SYSTEM

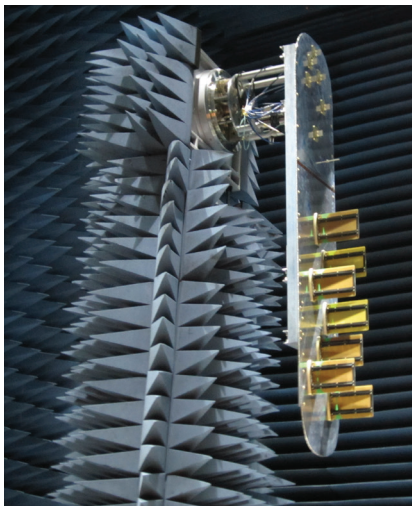
Rio Niño provides comprehensive COMINT beyond 200 nautical miles for situational awareness and threat warning.

SPECIFICATIONS	
Weight:	15 lb. (6.8 kg)
Size:	9 H x 5.7 W x 8.5 D (in) 22.6 H x 14.5 W x 21.6 D (cm)
Power:	28 VDC, 180W
Frequency Coverage:	0.1 MHz to 6 GHz
Instantaneous Bandwidth:	320 MHz (80 MHz per reciever)
Receiver Channel Quantity:	4
Dynamic Range:	75.3 dB at 500 MHz
Noise Figure:	10.6 dB at 500 MHz
Sensitivity (at RF):	-115.5 dBm 3dB SNR at 500 MHz with 30 KHz DDC BW
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
Architecture:	3U VPX PCIe
Geolocation Techniques Supported:	Commutated Direction Finding/Advanced Geo Engine & 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 Niño is the latest generation of technology, leveraging decades of investment in advanced COMINT software-defined radio (SDR) systems. Operationally fielded in 2016, the 15-pound Rio Niño contains all COMINT functionality with three million source lines of software leveraged from L3Harris' largest SIGINT systems. It is an open-architecture COMINT system providing full radio frequency (RF) coverage and sized for multiple operators. It can also operate autonomously if using Rio Virtual Operator. Both operators can be airborne or remotely located anywhere around the world. The system is fully scalable in terms of frequency range and uses a four-channel coherent receiver set. Rio Niño creates COMINT processing threads continuously as it adapts instantaneously to the threat environment. The result is simultaneous outputs from search, detect and copy functions, creating maximum COMINT output for advanced ISR systems. An external RFD that can support multiple antenna arrays is required for HF DF.

Rio Niño System



Example of L3Harris DF/Collect Antenna Array (20 MHz to 6 GHz shown)

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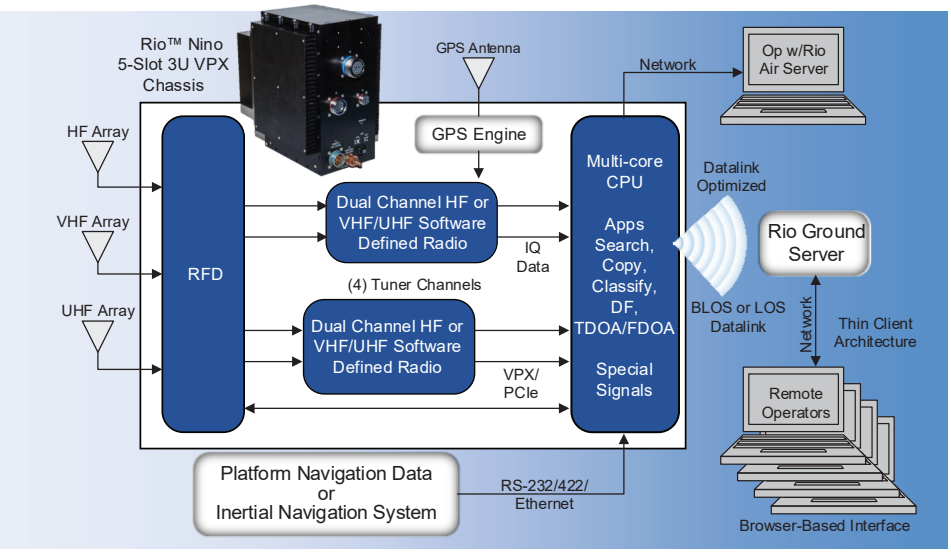
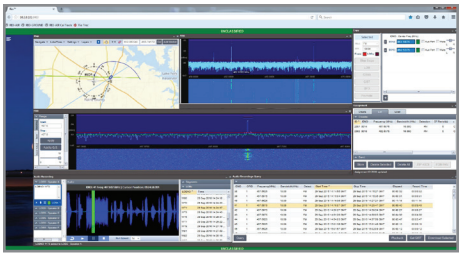
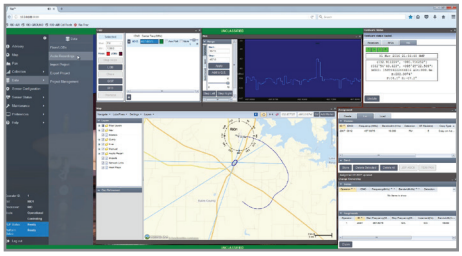
FEATURES

- Designed for size, weight and power (SWAP)—restricted manned and unmanned platforms
- 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 displays 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 at least two 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 NIÑO SYSTEMS DIAGRAM AND WORKSTATION DISPLAYS

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

Rio Niño COMINT System - Rev C

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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