BLACKROCK™ COMINT SYSTEM

BlackRock™ provides COMINT processing of over 100 simultaneous signals for complete situational awareness of modern communications environments.
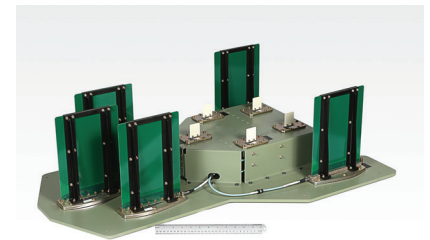
SPECIFICATIONS

Weight:	150 lb. (68 kg)	**Size:**	8U - 19" (48.3 cm) Rack Mount
Frequency Coverage:	0.5 MHz to 6 GHz	**Instantaneous Bandwidth:**	560 MHz per receiver
Power:	28 VDC, 3270 W	**Receiver Quantity:**	32
Dynamic Range:	75.3 dB, @ 500 MHz	**Noise Figure:**	10.6 dBm, @ 500 MHz
Sensitivity (at RF)	-115.5 dBm, 3dB SNR @ 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, MSK and CDMA		
Architecture:	19" (48.3 cm) Rack Mount Hardware, Intel/Linux/10GbE		
Geolocations Techniques Supported:	8-Channel Super Resolution Direction Finding (SRDF)/Advanced Geo Engine, special signal processing, Precision Geolocation (JICD 4.2)		
Interface:	10 GbE Ethernet	**Data Products:**	LOBs/Geos/Audio/Digitized Signals/Cursor on Target

BlackRock™ Systems

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

OVERVIEW

L3Harris' BlackRock™ system offers a scalable SIGINT capability in small to large commercial off-the-shelf (COTS)-based footprints. Sized for up 3 operators and up, the open architecture BlackRock™ system is fully scalable in terms of frequency range, number of parallel channels, and number of tuner assets. It utilizes the latest generation of COTS technology, leveraging decades of investment in advanced, multicoherent channel, pooled resource SIGINT systems. BlackRock™ creates SIGINT processing threads continuously as it adapts instantaneously to the threat environment. Operators create functional priorities, and BlackRock™ resources are automatically tasked by a comprehensive resource control processor. The result is hundreds to thousands of outputs from search, detect, and copy functions, creating powerful, scaled SIGINT.

FEATURES

The system uses Digital Signal Processing technology, providing the scalability to meet exacting customer requirements. BlackRock™ features include:

> N-Channel DF with Co-Channel Processing

> Band and Manual Search

> Background Search, DF, Geolocation

> Signal Seize and Recording

> Audio Storage/Recall

> Signal Panoramic Display

> Audio and DF Distribution

> Digital Beamforming

> Automatic Signal Classification

> Modern Mapping

> IMINT Cross Cueing

> Real-Time Database Storage

> System Maintenance Integration
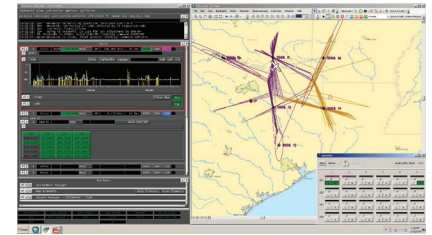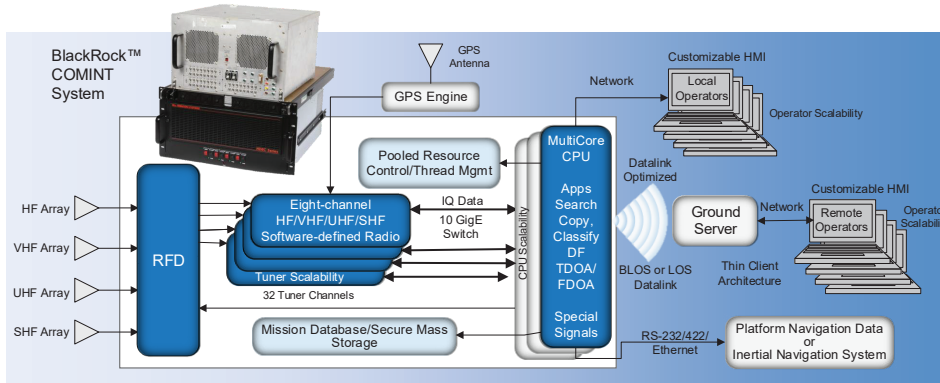
BlackRock™ Workstation Display

APPLICATIONS

The BlackRock™ Mission System design uses a pooled approach for tuner assets that deliver data based on VITA-49 standards. The data is then distributed to applications via common Internet Protocol methods. BlackRock™ capabilities include a mix of Reconfigurable Computing Environment (RCE) applications incorporated into the basic software baseline, which seamlessly use BlackRock™ resources as needed. RCE application examples include:

> Fast Search System

> X-Midas Processing

> Salvage Processing

> Theater Net-Centric Geolocation (TNG) - JICD 4.2

> Advanced Wireless Processing

> Time Division Multiplex

> Frequency Division Multiplex

> Low Probability of Intercept

> Joint Signal Processing

> Wideband Classifier

> HF Processing – ALE

> Pulse Processing

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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