ACTIONABLE INTELLIGENCE

L3HARRIS™
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NYFR ELINT SYSTEM

OVERVIEW

NYFR represents the latest state-of-the art development by L3Harris with 100 percent POI, staring over 15 GHz (instantaneous bandwidth) to provide reliable radar threat warning. The modular set of building-block components places special emphasis on size, weight and power, cost, and life-cycle logistics.

NYFR uses novel technologies to provide unprecedented detection range over the 3 to 18 GHz band. With a block down converter, it also covers 18 to 33 GHz. NYFR has similar sensitivity and dynamic range to ELINT systems, with size and weight comparable to radar warning receivers.

Compared to other 100 percent POI techniques, NYFR provides a unique combination of a digital receiver, low cost and full processing of simultaneous radar pulses.

	NYFR	COMPRESSIVE RECEIVER	IFM RECEIVER	OPTICAL RECEIVER
Low Cost	X		X	
Digital Receiver	X			
Simultaneous Pulse Processing	X	X		X

Comparison of NYFR to Other 100 percent POI Receivers

FREQUENCY COVERAGE	29.2 H x.39.37 W x 116.1 D (cm)		
WEIGHT	30 lbs (13.6 kg)	**INSTANTANEOUS BANDWIDTH**	15 GHz
DYNAMIC RANGE	50 dB at 500 MHz	**NOISE FIGURE**	20 dB
POWER	300W, 400 Hz or 115V/60Hz*		
SIZE	11.5 H x 7.5 W x 17.2 D (in)		
SENSITIVITY (AT RADIO FREQUENCY)	-75 dBm, 1 usec pulse width		
MINIMUM SNR	-10 dB in folded 500 MHz BW, 1 usec PW, Modulation dependent, detection threshold typically set 12 dB above noise floor estimate		
TYPICAL MEASUREMENT ACCURACY AT HIGH SNR	Frequency: 100 kHz TOA: 20 nsec SNR: 0.1 dB Pulse Width: 30 nsec Frequency Modulation Bandwidth: 200 kHz		
MODULATION TYPES	Pulse LFM/NLFM or PSK/FSK; wideband frequency agile; wideband FMCW		
DATA PRODUCTS	Pulse descriptor words (continuous dwelling without gaps) or digitized RF data (up to 256 msec)		

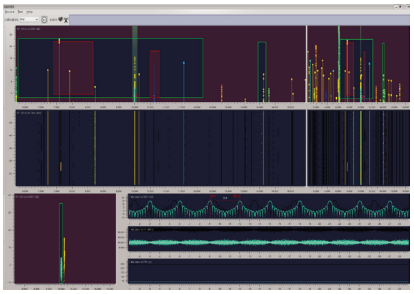
Note: Exact specifications will largely depend on system configuration
*Available upon request

NYFR CHASSIS

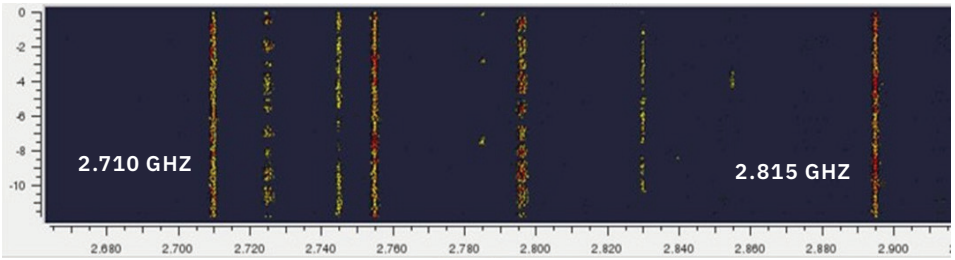
Nyquist Folding Receiver (NYFR) uses patented techniques to provide 100 percent Probability of Intercept (POI). It operates as a stand-alone threat warning system or as a part of a comprehensive Olympia ELINT suite.

FEATURES

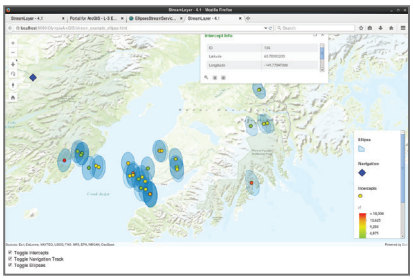
- NYFR uses a patented process to digitize 15 GHz simultaneously and detect radar emitters
- Digital signal processing detects and characterizes emitters – radio frequency, modulation, pulse repetition interval
- 100 percent Probability of Detect/High Probability of Intercept (HPOI)
- Dynamic range 50 dB
- Cues threat warning indicators and full ELINT system for detailed collection and geolocation
- 30 pounds – appropriate for a wide range of manned and unmanned platforms
- Operationally fielded in 2017



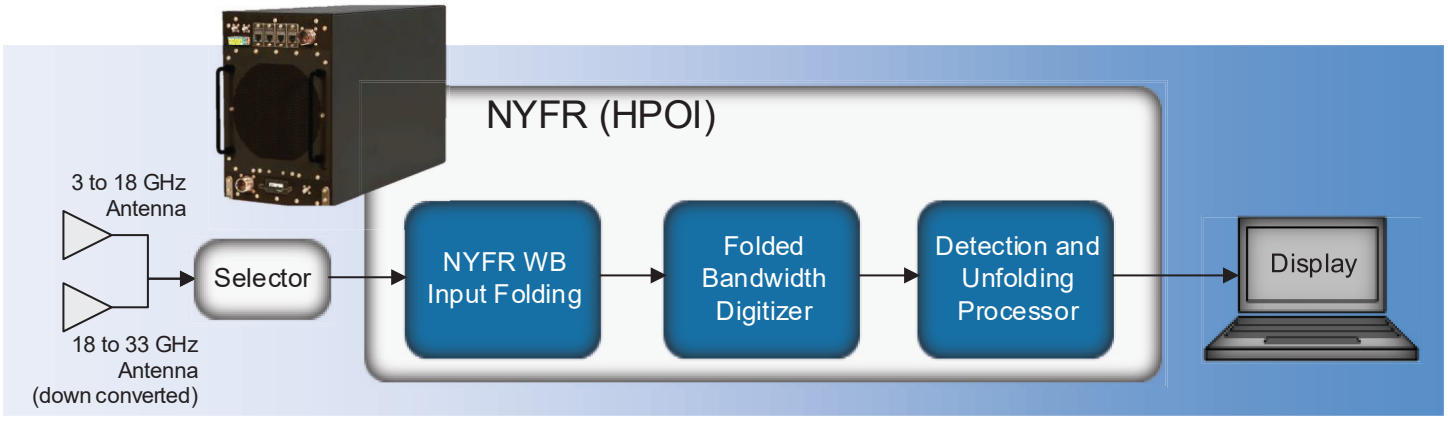
ELINT/ESM DISPLAY



NYFR ANALYSIS DISPLAY



NYFR-CUED ELINT GEOLOCATION



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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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