

UltraEAGLE ULR-501

Ground Mobile Tactical ESM/ELINT System

Features & Benefits

- ITAR-free hardware
- Ultra wideband high probability of intercept omni-based ESM receiver
- Narrowband high resolution high dynamic range DF-based ELINT receiver
- Sophisticated control application - TALON GUI
- Streaming emitter tracks with library matching
- Online/offline signal analysis

The UltraEAGLE ULR-501 system is Ultra Electronics TCS' advanced Electronic Intelligence (ELINT) and Electronic Support Measures (ESM) system for ground mobile operations.

The UltraEAGLE (Electronic Acquisition Gathering Locating Equipment) is a family of integrated systems designed to work on a variety of platforms.

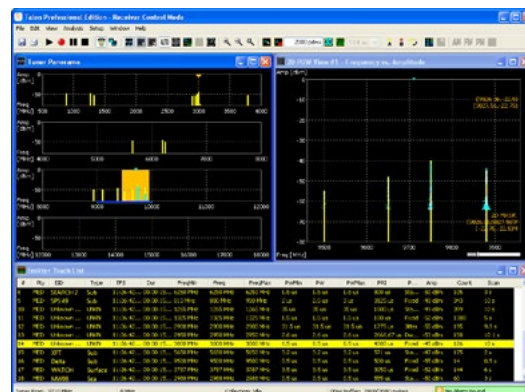
The ULR-501 frequency coverage is from 0.5 to 18 GHz (optional 40 GHz) utilizing a high Probability of Intercept (POI) Situational Awareness (SA) ESM receiver channel as well as an independent high sensitivity ELINT receiver channel.

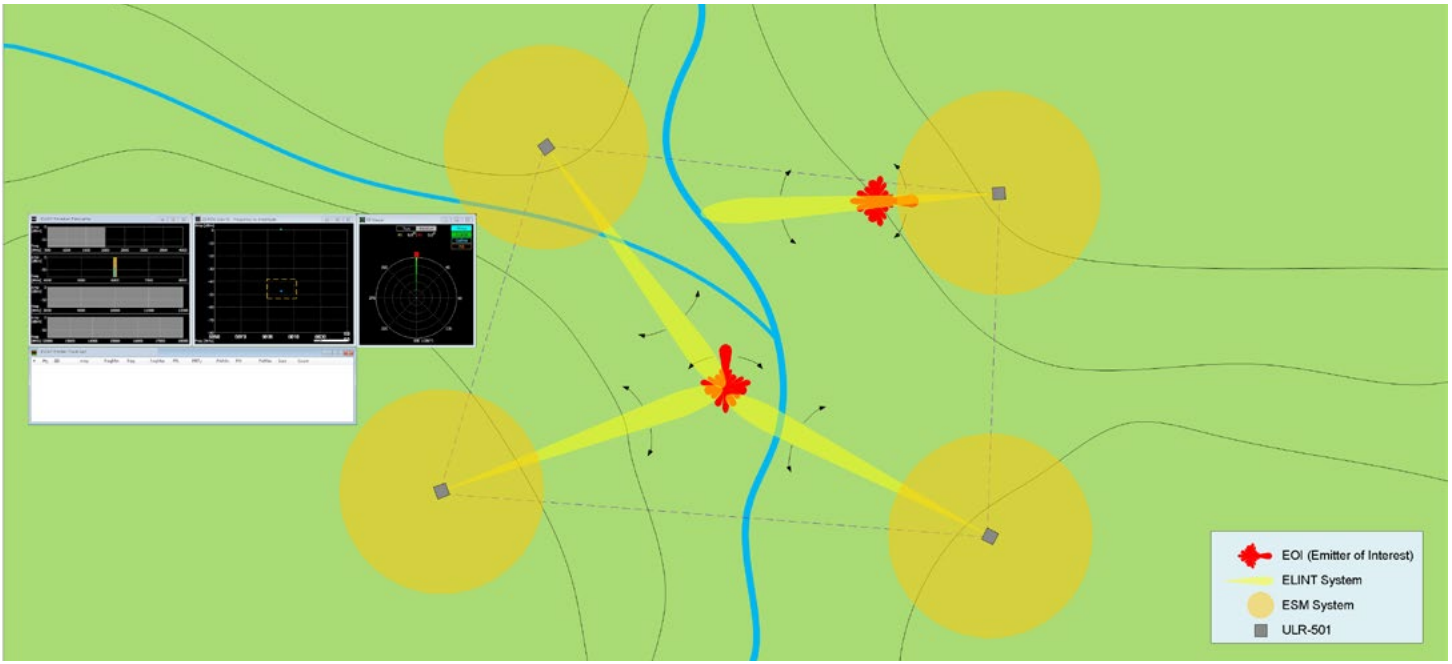
Both channels of the ULR-501 provide deinterleaving, pulse characteristics in the form of Pulse Descriptor Words (PDWs), and PDW recording. The ELINT channel also provides (emitter) Direction Finding (DF) and digitized samples of the collected pulses.



The ULR-501 equipment is designed to be located in a shock mounted equipment rack inside a standard equipment shelter. The antenna system is designed for mast mounting.

The ULR-501 is controlled via Ultra Electronics TCS' TALON GUI application. TALON GUI is an advanced, easy to use Human-Machine Interface (HMI) which provides real-time control of the system as well as online or offline (post-mission) data analysis. The system can be controlled remotely over data links, such as the Ultra ORION platform.





Single Station Vs. Multi-Station

The UltraEAGLE ULR-501 system has been designed for either single station operation or deployment as part of a wider network of ULR-501 systems. In a multi-station system, the DF information can be exchanged between ULR-501 systems to enable Emitter of Interest locations to be calculated.

Performance

	Parameter	Specification	Remarks
RF Frequency (ESM & ELINT)	Frequency Coverage	0.5 – 18 GHz	
IF Frequency (ELINT)	IF Centre Frequencies	1 GHz, 160 MHz	
	IF Pre-D Bandwidths – 1 GHz IF	500, 250, 100, 50 & 25 MHz	
	IF Pre-D Bandwidths – 160 MHz IF	100, 50, 25 & 10 MHz	
Measure Frequency	Frequency Accuracy – ELINT	250 kHz (rms)	
	Frequency Accuracy – ESM	3 MHz (rms)	
Measured PRI	PRI Accuracy – ELINT	10 ns (rms)	
	PRI Accuracy – ESM	50 ns (rms)	
Measured PW	PW Accuracy – ELINT	10 ns (rms)	
	PW Accuracy – ESM	50 ns (rms)	
Sensitivity	ELINT (TSS, 500 MHz IBW)	-85 dBm	
	ESM	-55 dBm	
Dynamic Range	ELINT (500 MHz IBW)	85 dB	Total Switched
	ESM	70 dB	Total Switched
Bearing Accuracy (ELINT)	< 2 GHz	6 deg. (rms)	
	2 – 18 GHz	2 deg. (rms)	



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