

UltraEAGLE ALR-510

Airborne Tactical ELINT System



Features & Benefits

- Wideband ELINT system for ultra high speed signal search/intercept
- Designed for UAVs and other small & medium aircrafts
- Net-centric
- Radar situational awareness
- World leading DF accuracy
- Streaming emitter tracks
- Online ELINT analysis

The UltraEAGLE ALR-510 (Electronic Acquisition Gathering Locating Equipment) is a family of integrated electronic support systems designed to work on a variety of platforms.

The UltraEAGLE ALR-510 airborne ELINT system is Ultra Electronics TCS' advanced Electronic Support receiver system for Intelligence, Surveillance and Reconnaissance applications, it is specifically designed for UAV and small manned airborne platforms.

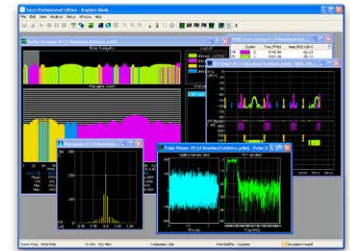
The ALR-510 is a fully integrated system with wideband microwave search and intercept, interferometry based Angle of Arrival determination providing instantaneous and accurate emitter direction. Emitter data can be collected for signal analysis using Ultra TCS's sophisticated analysis application.

The ALR-510's DF accuracy is achieved using an antenna array that covers the 0.5 to 2 and/or 2 to 18 GHz frequency band. The system provides automatic switching between

port and starboard arrays to provide maximum probability of intercept.

The ALR-510 can be controlled via low or high capacity datalinks for unmanned applications or via Ultra TCS' TALON GUI application for manned platforms. TALON's GUI is an advanced, easy-to-use Human-Machine Interface which provides real time control of the ALR-510 (in manned operations) and online or offline (post mission) data analysis.

The ALR-510 system can process both conventional emitters, as well as modern emitter types such as, pulse compression, pulse Doppler and multi-mode emitters.



Specifications

	Parameter	Specification	Remarks
RF Frequency	Frequency Coverage	2-18.0 GHz	0.5 to 18 GHz Option
RF Step Size	Frequency Step	<10 kHz	
IF Frequency	IF Centre Frequency	1 GHz	Nominal
	IF Pre-D Bandwidths	500, 250, 100, 50, 25, 10 MHz	
Measured Frequency	Frequency Accuracy	250 kHz (rms)	
System Sensitivity		-72 dBm or better	With channelizer option
Angular Coverage - Instantaneous Field of View	Ifov - Azimuth	120° Azimuth	Port or Starboard
	Ifov - Elevation	30° Elevation	
Polarization DF Antenna	DF Antenna Polarization	LHCP or RHCP	Factory Set to One or the other
Bearing Accuracy	Bearing Measured Emitters	Pulsed or CW	
Angular Coverage - Instantaneous Field of View (IFOW)	RMS Bearing Accuracy	< 1 deg	Subject to antenna array size and measured on steady emitter
Pulse Processing	RF Pulse Density	>1.0 Mpps	
	TOA Resolution	3 ns / 12 ns	
	Active Emitters	>500 Emitters	
Measured Pulse width	PW Range	50 ns to 13 ms / 250 ns to 13 ms	
	PW Resolution	3 ns / 12ns	
CW Flag	Programmable Range	100 us to 13 ms	
Measured PRI/PRF	PRI Range	100 us to 13 ms	
	PRI Resolution	3 ns / 12 ns	
Amplitude	Accuracy	2 dB	Without antenna gain
Collected PDW Parameters Analyzed	RF Carrier Modulation Types Automatic	CW, Pulsed	CW Flag
	RF Carrier Modulation Types	CW, Stable Pulsed, Frequency, Agile, Hopping	
	Interpulse	PRI Modulation	Type and Values
	Intrapulse	Scan Modulation	Circular, Sector, Conical
Emitter Library Storage	Emitter Library Capacity	10,000 emitters or better	
Standard Interfaces	Control/Data Extraction	Ethernet, RS232, RS422	

Environmental

Parameter	Specification
Temperature	-40 to +55°C operation (internal LRU) -55 to +55°C operation (external LRU)
Humidity	95% RH non-condensing
Vibration	MIL-STD-810G Method 514.6
Shock	MIL-STD-810G Method 516.6
Altitude	Up to 30,000 (standard) 55,000 (extended option)

Size, Weight & Power

Parameter	
Antenna Head	Subject to frequency band options
ELNIT-RDU	321 x 287.5 x 524 mm (w/o connectors & mounting tray)
System Weight	<100 kg (subject to configuration)
System Power	<900 Watts



making a difference

Ultra Electronics
TCS
88 Hines Road
Ottawa, ON
K2K 2T8
Canada
Tel: +1 613 592 2288
www.ultra-tcs.com
www.ultra-electronics.com

5990 chemin Côte-de-Liesse
Montréal, Québec
H4T 1V7
Canada
Tel: +1 514 855 6363

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