

# UltraEAGLE ULR-543

## Man Portable ELINT System

### Features & Benefits

- ITAR-free hardware
- Superhet based receiver with low and high band coarse pre-selection
- Works with customer supplied antenna systems
- Inbuilt low noise amplification
- Inbuilt analysis tool
- Rugged transport case with optional air-conditioning unit

The UltraEAGLE ULR-543 system from Ultra Electronics TCS is an advanced Electronic Support (ES) system for ground-based Intelligence, Surveillance and Reconnaissance (ISR) applications.

The ULR-543 system features a narrowband high sensitivity superhet based receiver, an advanced Receiver Pulse Processor (RPP) and a laptop running TCS' sophisticated TALON server software.

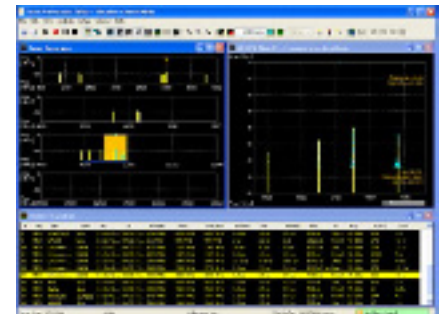
The UltraEAGLE (Electronic Acquisition Gathering Locating Equipment) is a family of integrated ES systems designed to work on a variety of platforms. The ULR-543 system is specifically designed for man portable operations. It is also suited for installation in a variety of vehicles, shelters or buildings and for use with customer-supplied antenna systems.

The ULR-543 system is a fully integrated system providing high sensitivity microwave search & intercept capability. Together this provides a world leading system for modern EW operations.

The RF receiver has low noise amplification to enable detection of weak signals plus low and high band coarse pre-selection. The system's intermediate frequency has automatic gain adjustment to drive the digitizer at optimum levels.

The RPP digitizes the IF and produces Pulse Descriptor Words (PDWs) for each pulse received. TALON server stores and clusters PDWs to enable deinterleaving of emitters as well as controlling all the system hardware.

The ULR-543 system can be controlled locally by an operator laptop using TCS' TALON software or remotely via a datalink such as the Ultra ORION.



### Man Portable Aspects

The ULR-543 hardware is designed to withstand the tough reality of man portable scenarios. The system is housed in rugged transport case and can be provided with a lightweight air-conditioning system.

The system transitions from transport to deployed configuration within a few minutes and requires very little preventative maintenance.

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## Performance

|                          | Parameter                             | Specification   | Remarks                            |                        |
|--------------------------|---------------------------------------|---|------------------------------------|------------------------|
| RF Frequency             | Frequency Coverage                    | 0.5 – 18 GHz  | Optional 40 GHz extension          |                        |
| RF Synthesizer Step Size | Frequency Step                        | < 1.0 MHz   | (RF Synthesizer resolution<0.5 Hz) |                        |
| IF Frequency             | IF Centre Frequency                   | 1 GHz   |                                    |                        |
|                          | IF Pre-D Bandwidths (1 GHz)           | 500, 250, 100, 50, 10 MHz   |                                    |                        |
| Measured Frequency       | Frequency Accuracy                    | <250 kHz (RMS)  |                                    |                        |
|                          | Frequency Resolution                  | Up to 12 bits   |                                    |                        |
| System Sensitivity       | 500 MHz IBW, TSS                      | -65 dBm   |                                    |                        |
| Measured Pulse width     | PW Range                              | 50 ns to 13 ms  |                                    |                        |
|                          | PW Resolution                         | <10 ns  |                                    |                        |
| CW Flag                  | Programmable Range                    | 100 us to 13 ms   |                                    |                        |
| Measured PRI/PRF         | PRI Range                             | <500 ns to 100 ms   |                                    |                        |
|                          | PRI Resolution                        | <6 ns   |                                    |                        |
| Collected PDW Parameters | RF Carrier Modulation Types Automatic | CW, Stable Pulsed   |                                    |                        |
|                          | RF Carrier Modulation Types           | CW, Stable Pulsed, Frequency, Agile, Hopping, FMOP, PMOP, AMOP, Period Switching, Complex | FMOP, PMOP Flags                   |                        |
|                          | Interpulse                            | PRI Modulation  |                                    | Type and values        |
|                          |                                       | Scan Modulation   |                                    | Circular, Sector, Sine |
| Intrapulse               | Modulation on Pulse                   |   | FMOP, PMOP and AMOP, Flags         |                        |
| Emitter Library Storage  | Emitter Library Capacity              | 10,000 emitters or better   |                                    |                        |

## Physical Specifications

|              | Specification                           |
|--------------|---|
| Size (HxWxD) | 16.4 x 23.0 x 36.4" (417 x 584 x 925mm) |
| Weight       | < 110 lbs (50 kg)                       |
| Power        | < 900 Watts, 115/230 VAC, 50/60 Hz      |



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