



# Roke

## RESOLVE 3 MULTI-ROLE

Tactical Electronic Surveillance system

### LIGHTWEIGHT ELECTRONIC SURVEILLANCE

RESOLVE 3 Multi-Role (MR) is an operationally proven Electronic Surveillance system, which allows for accurate direction finding and geolocation from 2MHz up to 3GHz. It is in operational use by NATO forces worldwide.

### MULTI-ROLE

- Dismounted, Mounted & Static modes of operation are all supported. It can be operated from a lightweight pack using handheld user interface. A single system can position fix on the move
- Transition between modes can be accomplished in 5 minutes by trained personnel for operational flexibility
- Enhanced DF techniques mitigate the need for calibration or platform configuration with this system
- Modular construct enables mission specific configuration by the Operator

### HIGH PERFORMANCE

RESOLVE 3 provides a 40MHz instantaneous bandwidth wideband architecture, a low noise figure and high geolocation accuracy. It is lightweight and robust, achieving DEFSTAN certification.

### RF TO INTELLIGENCE

The VIPER/PREFIX software suite is common to the suite of Roke products. It provides cutting edge signals analysis capability with a common look and feel. Workflow based operations provide mission planning, execution and reporting. EW information can be rapidly processed and disseminated in support of tactical decision making.

### SUPPORT AND TRAINING

RESOLVE 3 is operationally deployed accompanied by training and support delivered by our EW specialists. Roke delivers bespoke packages optimised to our user requirements and delivered by domain experts. The CEMA simulator enables offline training.

### FEATURES

- Lightweight On the March System
- 2MHz to 3GHz operation
- 40MHz Instantaneous Bandwidth
- Geolocation of frequency hopping radios up to 1000 Hops/Sec
- 4 digital drop channels to monitor and record everything in the IBW
- Self-aligning digital compass and GNSS positioning
- Deployable in ~5 minutes

### BENEFITS

- Modular multi-role system on the march, mounted and static
- Mobile Single Sensor Position Fixing
- Android interface for indicators and warnings
- Reduced cognitive/training burden due to automated operator aids



# RESOLVE 3 MR SPECIFICATIONS

Performance	
Intercept & Direction Finding Frequency Range	2MHz to 3GHz.
Instantaneous Bandwidth	40MHz.
High Rejection Filter Mode	Direct Sampling HF mode 2MHz to 37.5MHz.
Direction Finding Technique	3 mode Butler Matrix Enhanced DF.
Direction Finding Accuracy	≤3° RMS 30MHz to 2200MHz. ≤10° RMS 2200MHz to 2500MHz. ≤20° RMS > 2500MHz.
Sensitivity	Frequency dependent from +10 to +70 dBuV/m.
Sensor Noise Figure	1 to 30MHz: ≤ 20dB. 30 to 1690MHz: ≤ 6dB. 1690 to 3000MHz: 6dB linearly increasing to 16dB.
Sensor Input 3rd Order Intercept Point	1 to 30MHz: +25dBm. 30MHz to 3000MHz: -17dBm.
Scan Speed	Fast Scan: 1.5GHz/sec. DF Scan: 20MHz/sec.
Frequency Hopper Operation	Up to 1000 Hops/sec.
Environmental	
DEFSTAN Environmental Qualification	Storage: +70°C to -32°C - Methods CL2 and CL5. Operating: +50°C to -20°C - Methods CL2 and CL5. 88% Humidity - Method CL6. Driven Rain, Blown Dust & Sand, Altitude, Wind, Wheeled vehicle vibration and shock - Methods CL27, CL25, CL16, M1, M3.
MIL-STD-461 EMC Qualification	RE102, RS103, DCS10, CE102, CS101, CS114, CS115, CS116 (relaxed).
Product Certifications	UKCA / CE.
Technical	
Position, Navigation, Time	Integral GNSS receiver & electronic compass. 5° RMS static self-orientation accuracy. NMEA compliant for 3rd party inputs.
Production Channels	4 Independent tuning channels (digital drop receivers).
Mission Information System	VIPER supporting Mission Planning, Range Estimation, and Analysis.
EW Application	PREFIX supporting Live Mapping, Wideband DF.
Detection & handoff Method	Wideband with SNR threshold & automated handoff.
Automatic Position Fixing	Collaborative PF via Radios or IP network. Single system (moving).
Build in Test	Yes.
VITA49.2 Stream	Production Channel streaming, linked to GPS 1PPS.
Physical - On-the-march configuration excluding batteries/pack	
Power Consumption	35 Watts. 10 hour mission duration from 2x2590 batteries.
System Weight	13.1kg (15.8kg including 2x BB2590 batteries).
System Dimensions	18 litres. Quadtac Mini 420mm x 120mm diameter.
Power Sources	2590 Batteries. AC adaptor. DC adaptor.