

LOCATE-T

Tactical High Frequency (HF) monitoring and Direction Finding (DF)

TACTICAL HF ELECTRONIC SURVEILLANCE

LOCATE-T is an advanced tactical HF Electronic Surveillance capability, proven for use in complex electromagnetic environments. It is in operational use by NATO forces worldwide. The system delivers HFDF for ground/skywave emitters in a rapidly deployable configuration.

TRANSPORTABLE HF DF

Supporting semi-mobile or static modes, LOCATE-T can be setup by 2 operators in 30 minutes. It uses Super Resolution Direction Finding (SRDF) and Adaptive Digital Beam Forming (ADBF) to operate seamlessly against nations deploying sophisticated electromagnetic effects.

ACCURACY

LOCATE-T SRDF is highly accurate. Elevation and Azimuth are provided for targets, even during co-channel interference such as jamming. The array provides both monopole and loop elements, selectable to match signal polarisation, and can be customised in geometry for constrained operating sites.

RF TO INTELLIGENCE

The VIPER/PREFIX software suite is common to the suite of Roke products. It provides cutting edge signal 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 your decision making cycle.

SUPPORT AND TRAINING

LOCATE-T 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

- 2MHz to 30MHz operation
- Azimuth (2° RMS) and Elevation SRDF
- SRDF through multipath, interference and jamming
- ADBF to monitor through jamming or interference
- Skywave Single Site Geolocation
- 30MHz Instantaneous Bandwidth
- GNSS positioning and 1PPS time-stamping
- VITA49.2 interface for TDoA

BENEFITS

- Tactical, compact HF ES interception and geolocation for semi-mobile or static deployment
- Fully operational in contested environments, operating through jamming and interference
- Open WebAPI for integration into national infrastructure
- Common UI (VIPER/PREFIX) with automated operator aids



LOCATE-T SPECIFICATIONS

Performance	
Intercept Frequency Range	2MHz to 30MHz
Direction Finding Frequency Range	2MHz to 30MHz
Instantaneous Bandwidth	30MHz
Direction Finding Technique	Super-Resolution Direction Finding (MUSIC)
Direction Finding Accuracy	2° RMS in azimuth
Sensitivity	Noise Figure ≤14dB
Phase Noise	-125dBc/Hz at 1kHz offset
Input Damage Limit	+30dBm

Environmental	
Environmental Limits	Operating +50°C to -32°C
Internal Heater	Operates to enable low start below -20°C
Product Standards	EN 61326, EN 301 489, EN 62368, EN IEC 6300, EN 61000
Product Certifications	UKCA / CE

Technical	
Position, Navigation, Time	Integral GNSS receiver. NMEA compliant. External or Internal 1PPS.
Alignment	Magnetic Compass.
Production Channels	4 Independent tuning channels (digital drop receivers) with ADBF.
Mission Information System	VIPER supporting Mission Planning, 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.
Skywave / Groundwave Intercept & DF	Vertical polarisation for groundwave signals. Circular polarisation for skywave signals.
Build in Test	Yes.
Frequency Tolerance	GPS Disciplined to 5ppm.
VITA49.2 Stream	1x Wideband 40MHz channel and Production Channels linked to GPS 1PPS.

Physical - Rack Sensor/Server	
Power Consumption	< 340 Watts. 150 Watt internal heater to start system <-20°C.
System Weight	68kg.
System Dimensions	846x624x567mm. 260L.
Power Sources	AC input. DC adaptor.