

RSR 940 Spider

StealthRad™

REUTECH
RADAR SYSTEMS



Covert Air and Sea Surface Surveillance Radar

The RSR 940 SPIDER is a mobile, rapid deployment, continuous scanning surveillance radar optimised for the simultaneous detection of both air and surface targets.

It forms part of the RSR 900 StealthRad product range of Fully Coherent, Low Cost, Light-weight, Low Probability of Intercept (LPI) Frequency Modulated Continuous Wave (FMCW) radars.

FMCW provides a cost effective way to achieve coherent operation and the low transmitted power levels make StealthRad ideal for covert operations. The low power levels also increase reliability and reduce component costs.

The antenna, transceiver and signal processor are integrated into a single line-replaceable unit, which is mounted on a deployable frame. An integrated power generator supports autonomous operations at remote sites.

The RSR 940 SPIDER can be transported on a 1 ton pickup truck (single or double cab), with the antenna stowed away to fit in the vehicle envelope. Deployment is quick and simple on or off the truck. The radar display is available for the local operator and can be easily integrated into control centers via suitable communication links.

Innovative Solutions...Affordable...Available...

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Typical applications

- Border control operations
- Monitoring of private and unattended airfields
- Rapid deployment surveillance operations
- Monitoring of coastal traffic (both sea and air)
- Monitoring of activities on inland lakes
- Multi-role radar gap filler

Mode of operation

Continuous scanning surveillance. The unique architecture of the StealthRad continuous scanning surveillance radars allows them to be optimised for both surface and air targets at the same time. This enables the StealthRad to be deployed in littoral situations as well as on inland water areas, where it can serve in both the air surveillance and surface surveillance role.

System features

- High mobility
- Rapid deployment
- Local and remote (via wire or wireless network) operation
- Data distribution to an area control center
- Autonomous operation
- Geolocation and North alignment Detection and tracking +50°C



Technical specifications

- Frequency band: I / J Band
- Transmit power: 20 Watt
- Antenna size: 4 m
- Antenna tilt range: - 10° to + 10° (manually adjustable)
- Instrumented range: 40 km
- Scan rate: 15 RPM
- Range accuracy: 8 m
- Azimuth accuracy: <1°
- Detection ranges: Air targets
 - ▶ Light aircraft (RCS = 2 m²) 20 km
 - ▶ Private jet (RCS = 5 m²) 30 km
 - ▶ Helicopter (RCS = 10 m²) 35 km
- Detection ranges: Surface targets
(SPIDER 10 m above ground - normal atmospheric conditions)
 - ▶ Inflatable boat (RCS = 1 m²) 15 km
 - ▶ Power boat (RCS = 5 m²) 30 km
 - ▶ Fishing vessel (RCS = 100 m²) Instrumented range
- Power supply
 - ▶ Source: 230 VAC 50 Hz (integral generator or external source)
 - ▶ Consumption: 2.5 kW
- Weight: 750 kg
- MTBF: >3500 h
 - ▶ Temperature storage: -20°C to +70°C
 - ▶ Temperature operational: -20°C to +55°C

