RSR 312

X-band 3D Surveillance Radar

RSR 312 Radar is a lightweight 3D Surveillance radar system that provides for both sea and air surveillance under specified environmental conditions. The RSR 312 operates as a standalone surveillance radar, or as an integrated surveillance radar system in a National Surveillance (NS) solution providing Plot, Track and System Health data to the Command Network, while allowing the System to be controlled remotely. The RSR 312 is used to detect, track and determine position of the targets on the surface of the ocean as well as in the air, operating within the radar's coverage.

FEATURES

- 3D Dual Frequency Operation
- Coherent pulse Doppler processing
- Comprehensive ECCM suite
- Frequency diversity
- Integrated to Command Network or stand alone
- Close range and long range detection simultaneously
- Extensive Built-In Test
- Software signal and data processor
- Automatic and manual track initiation
- Seamless IFF and AIS integration
- Designation of optical system



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PERFORMANCE SPECIFICATIONS

- Radar Frequency: X-band
- Radar Detection Range:
  - Aircraft ($3m^2$ RCS): > 27 nm
  - Surface Vessel ($5m^2$ RCS): > 40 nm
- Rotation Rate
  - 6, 9 or 12 RPM
- Accuracy:
  - Azimuth: < 0.3 ° RMS
  - Range: < 10 m RMS
  - Elevation: < 1.5° RMS
- Instrumented Range: 50 nm
- Minimum Range: < 30 m
- Elevation Coverage
  - > 5° $Cosec^2$ to 25°
- Temperature (Operational)
  - Exposed Equipment: -25°C to 60°C
  - Non-Exposed Equipment: -25°C to 50°C

SUBSYSTEM FEATURES

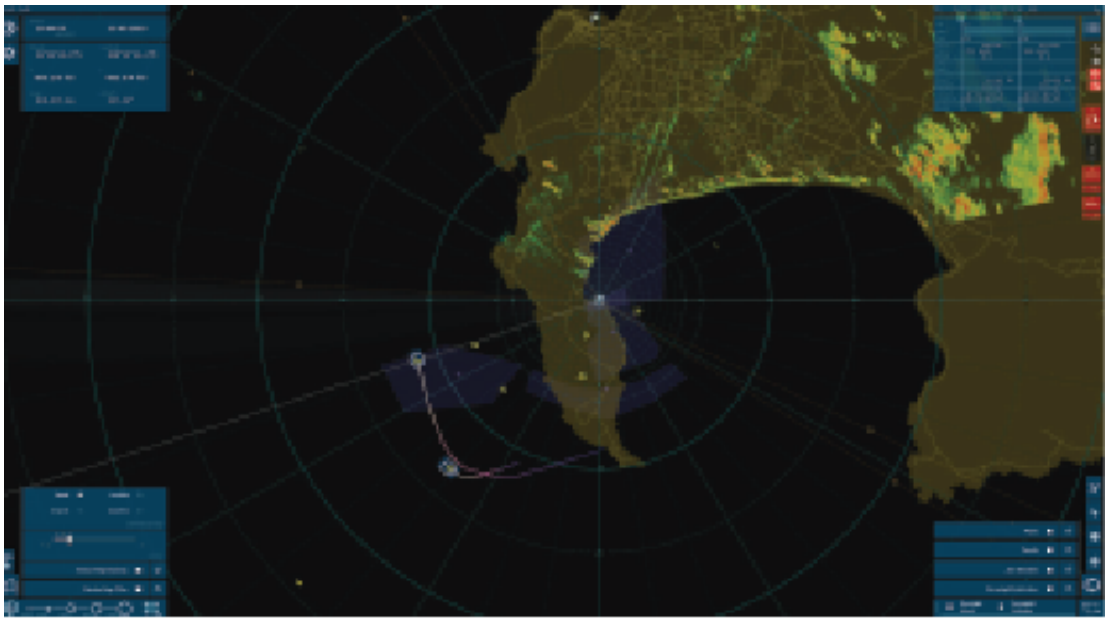
- Antenna Pedestal:
  - Planar Array Antenna
  - Beam Width: < 0.8°
- Transmitter:
  - Solid State Amplifier
  - Dual Channel Transmit/Receive
  - Output Power: 250W Peak (Per channel)
- Receiver:
  - Dual Channel
  - Pulse Compression
- Signal/Data Processing:
  - Doppler Software Signal Processor
  - Air Tracks per Scan: 300
  - Surface Tracks per Scan: 300
  - Track Initiation: Manual or Automatic

PHYSICAL FEATURES

- Mass
  - Antenna and Pedestal: < 300 kg
  - Processing Rack: < 300 kg
- Dimensions
  - Antenna and Pedestal:
    1.5m height x 1.5m Swept radius
  - Processing Rack:
    1.8m x 0.9m x 0.9m (hxwxd)

EXTERNAL INTERFACES

- Power Supply
  - 220 VAC, 50 Hz
  - < 2000 W
- IFF
  - IFF Supplied as Customer Furnished Equipment
  - Plot integration with Radar or Separate Interface
- AIS
  - AIS Supplied as Customer Furnished Equipment
  - Displayed on Radar
- Electro Optical
  - Designation via Human Machine Interface



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