

# NSP-5

Tactical Multi-Int SAR/MTI/CCD Radar

*Delivering real-time,  
actionable intelligence in day, night  
and all weather conditions*



## UNCREWED AIRCRAFT SYSTEMS

### KEY FEATURES & BENEFITS



Enabling multi-INT, all-weather ISR capabilities normally found on larger, more expensive platforms.

#### All-weather, high-quality radar data

Advanced, low-SWaP, multi-mode radar in a protected weatherized pod provides:

- Synthetic Aperture Radar (SAR)
- Moving Target Indicator (MTI)
- Coherent Change Detection (CCD)

#### Multiple radar search modes

- **Stripmap** – Monitors a swath of ground parallel to the direction of flight.
- **Spotlight** – Monitors a selected area of ground while UAS flies past or around it.
- **Wide area** – Monitors the large area within the radar's FoV for potential targets of interest.

#### Coherent Change Detection

CCD facilitates the discovery of surface disturbances and other pattern of life analyses far more effectively than EO or IR alone.

#### Wide-area search modes

Monitors and tracks moving targets with easy-to-use indicators, making NSP-5 ideal for maritime patrol, force protection and counter-trafficking missions.

- Ground Moving Target Indicator (GMTI)
- Dismount Moving Target Indicator (DMTI)
- Maritime Moving Target Indicator (MMTI)
- High Value Target (HVT) mode

#### Intuitive software optimized for radar

The radar operating software, *Lisa 3D*, for Command and Control (C2) and Processing, Exploitation, and Dissemination (PED) provides:

- Pre-mission flight geometry based on data collection plan
- Operational capability to program the radar, dynamically change plans and modes, and perform real-time analysis
- Post-mission analysis with export to standard formats and data forensics



30 YEARS  
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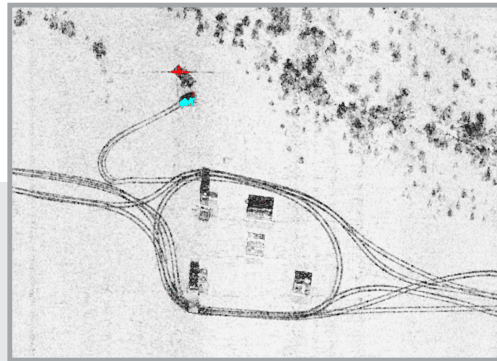
# NSP-5

Tactical Multi-Int SAR/MTI/CCD Radar

*Find and track moving targets  
and identify critical changes over time*

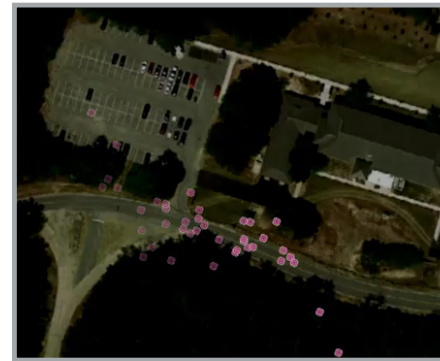


SAR baseline pass



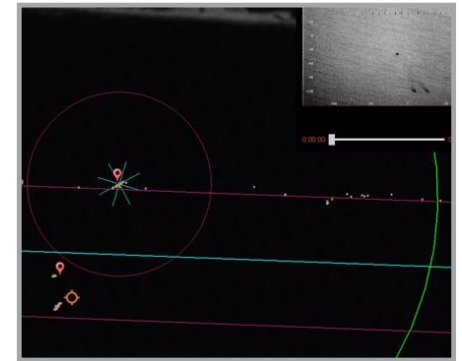
**Pattern of Life Analysis**

Coherent Change Detection (CCD)



**Ground Moving Target Indicator**

Pink indicates object moving towards the radar

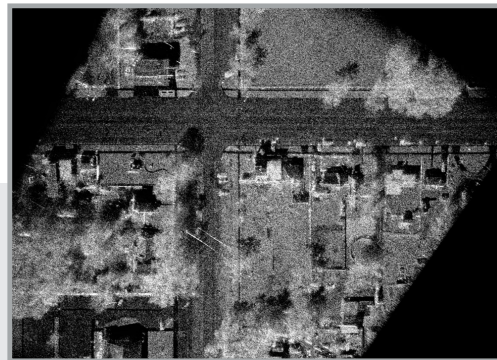


**Maritime Surveillance**

Targets of interest identified and cross-cued to IR video



EO/IR FMV



**Low Visibility Comparison**

NSP-5 SAR  
Spotlight Mode

## SPECIFICATIONS

### OPERATIONAL RANGES

- Operating Frequency: Ku band
- Operating Altitude: Mode dependent up to 10,000 ft AGL
- SAR imaging range: 34 km (at 1m resolution)
- MTI (vehicle): 15 km max. range; max. continuous coverage 60 km<sup>2</sup>
- Maritime
  - Raft: 11 nmi, 10 nmi range swath width
  - Fishing Boat: 14 nmi range, 13 nmi swath width
  - Super Tanker: 81 nmi range, 80 nmi swath width

### STANDARD DATA FORMATS

- KML, Complex NITF
- JPG, PNG, BMP
- STANAG 4607 Detects, STANAG 4676 Tracks

### VARIANTS

- **NSP-5(X)**: SAR, CCD, MCD, GMTI/MMTI (advanced), DMTI
- **NSP-5(S)**: SAR, MCD, GMTI/MMTI (standard)

*\* Not all variants are available to all customers*



*Developed and produced by IMSAR. Integrated and tested in collaboration between Insitu and IMSAR.*

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