

NSP-5

Tactical Multi-Int SAR/MTI/CCD Radar

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



UNMANNED AIRCRAFT SYSTEMS



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

KEY BENEFITS & FEATURES

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.
- **Spot light** – 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



1.3 MILLION
FLIGHT HOURS

50
GLOBAL SITES
OF OPERATION

MODULAR
FAMILY OF
SYSTEMS

SERVICES,
ACQUISITION
AND FMS

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Find and track moving targets
and identify critical changes over time



SAR baseline pass



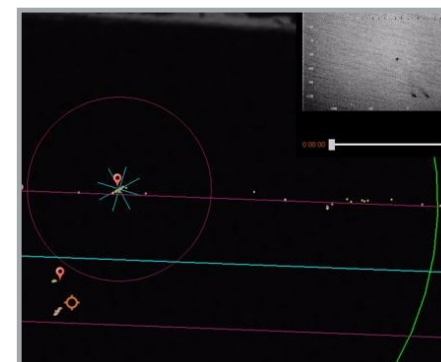
Pattern of Life Analysis

Coherent Change
Detection (CCD)



Ground Moving Target Indicator

Pink indicates object moving above
threshold speed

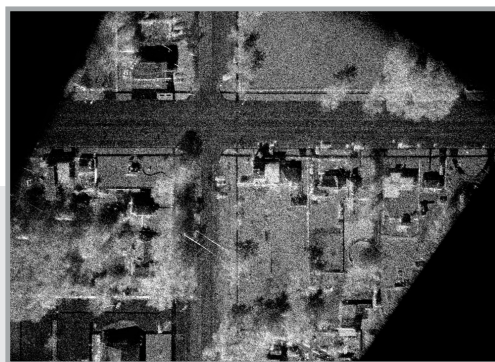


Maritime Surveillance

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: 24 km (at 1m resolution)
- MTI (vehicle): 12 km max. range; max. continuous coverage 60 km²
- Maritime
 - Raft: 6.5 nmi range; 6 nmi swath width
 - Fishing Boat: 8.5 nmi range; 8 nmi swath width
 - Super Tanker: 55 nmi range; 51.5 nmi swath width

STANDARD DATA FORMATS

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

VARIANTS

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