

HUSSAR by SpaceForest

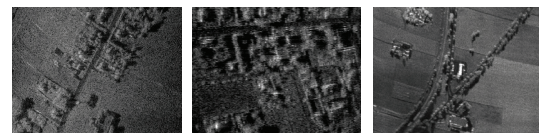
Portable X-Band Synthetic Aperture Radar

HUSSAR

- ◆ Range up to 15 km
- ◆ Resolution 15 cm
- ◆ Max altitude 5 km
- ◆ Operating on Stripmap SAR mode
- ◆ Antenna with gimbal stabilization
- ◆ Onboard real-time SAR processor
- ◆ Ground base post-processing station
- ◆ Linear polarization
- ◆ FMCW radar (LPI - low probability interception)
- ◆ GMTI - Ground moving target indication
- ◆ Built-in real-time SAR procesor
- ◆ Spotlight-Strip SAR (highest resolution)



HUSSAR
imaging sample



HUSSAR Portable X-Band Synthetic Aperture Radar (SAR), which can be attached to an unmanned aircraft, allows terrain scanning and motion detection using electromagnetic waves with a resolution of up to 15 cm. The radar can be used for surveillance of security areas, for example by border guards, police and firefighters, to detect and track suspicious and unauthorized drones and vehicles, but also in surveying, mapping and land monitoring.

Parameter	Minimal	Typical	Maximal	Unit
Frequency range	9		11	GHz
Antenna polarization		V/V		
Range (radar to target)	150		15000	m
Max altitude			5000	m
Finest range resolution		30	15	cm
Finest range cross-resolution			30	cm
Elevation angle of the beam	25		65	°
Supply voltage	36		52	V
Supply power			180	W
Antenna stabilization in azimuth (mechanical)	-20		20	°
Weight			10	kg
Temperature range	-10		50	°C
Dimension (LxWxH)	120 x 20 x 20			cm
Digital control interface	Ethernet			
Data storage interface	USB			
Housing material	Kevlar-reinforced composite			
Image / video stream files extension	JPEG / MPEG			
Mechanical mounting interface	Customizable according to client requirements			
Operation modes	Stripmap SAR, Spotlight SAR, GMTI			

**specifications subject to change without notice*



SpaceForest
innovative solutions

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HUSSAR by SpaceForest

Portable X-Band Synthetic Aperture Radar

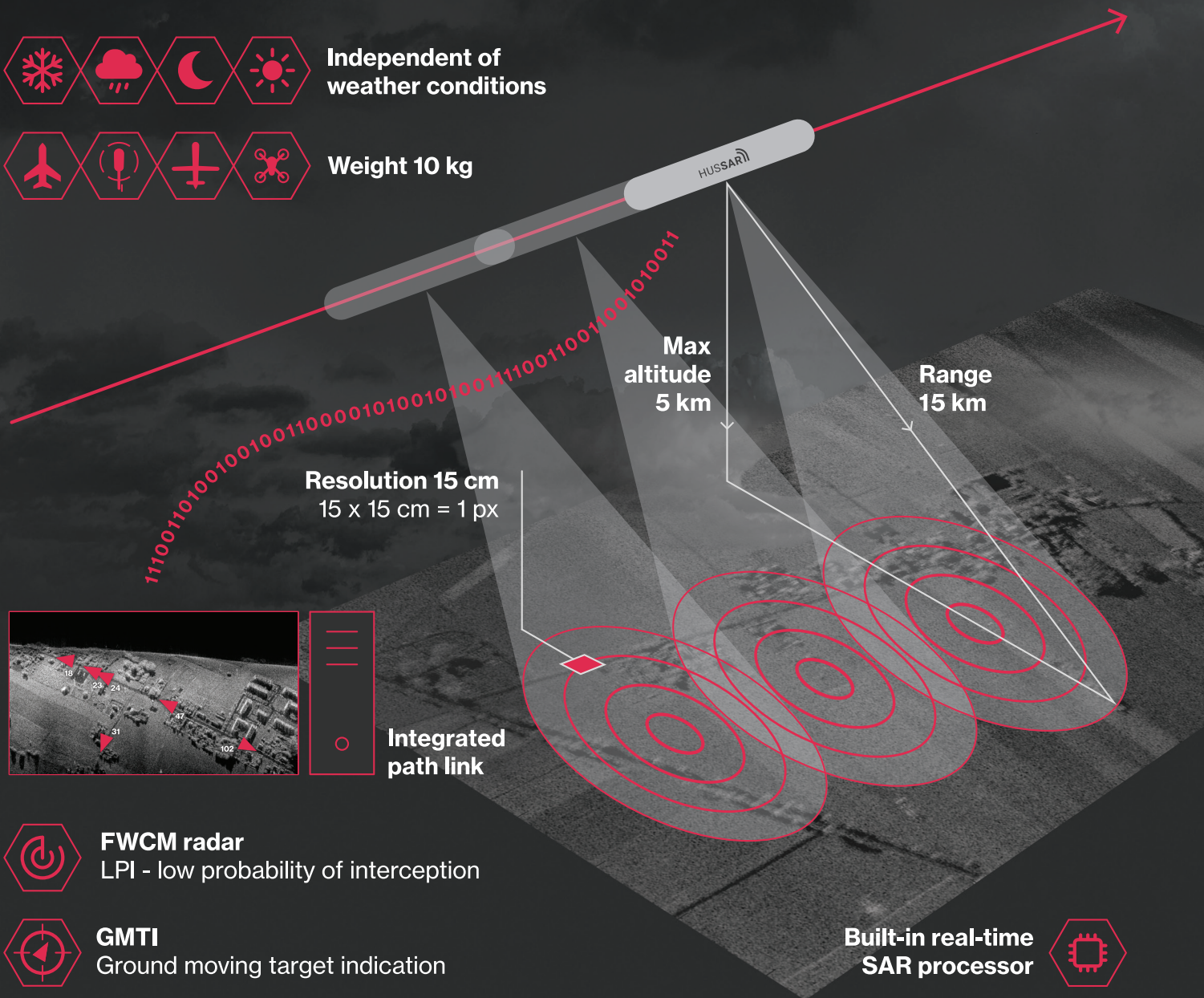
HUSSAR



Independent of
weather conditions



Weight 10 kg



FWCM radar
LPI - low probability of interception

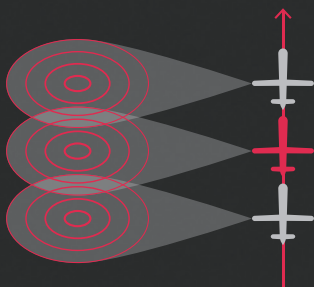


GMTI
Ground moving target indication

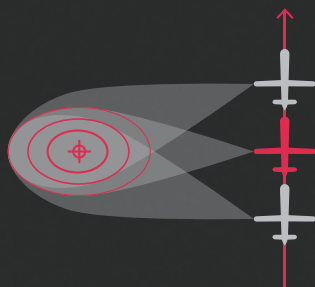
**Built-in real-time
SAR processor**



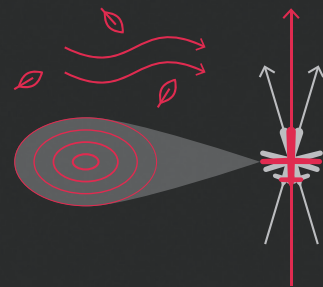
Strip SAR mode
Wide coverage



Spotlight SAR
Highest resolution



**Antenna with
gimbal stabilization**



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