

HUSSAR by SpaceForest

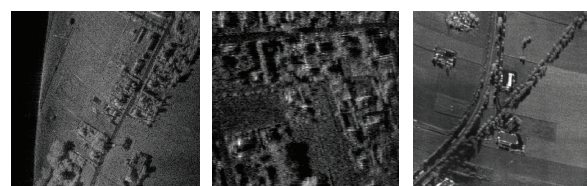
Portable X-Band Radar (SAR)

HUSSAR

- ◆ Range up to 10 km
- ◆ Resolution 15 cm
- ◆ Operation speed 75 - 200 km/h
- ◆ Max altitude 5 km
- ◆ Operating on Strip 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 processor
- ◆ Spotlight (highest resolution)



HUSSAR imaging sample



HUSSAR portable X-band 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		10000*	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, Spotlight, GMTI			

**in good weather conditions / specifications subject to change without notice*

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Portable X-Band Radar (SAR)

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Independent of weather conditions



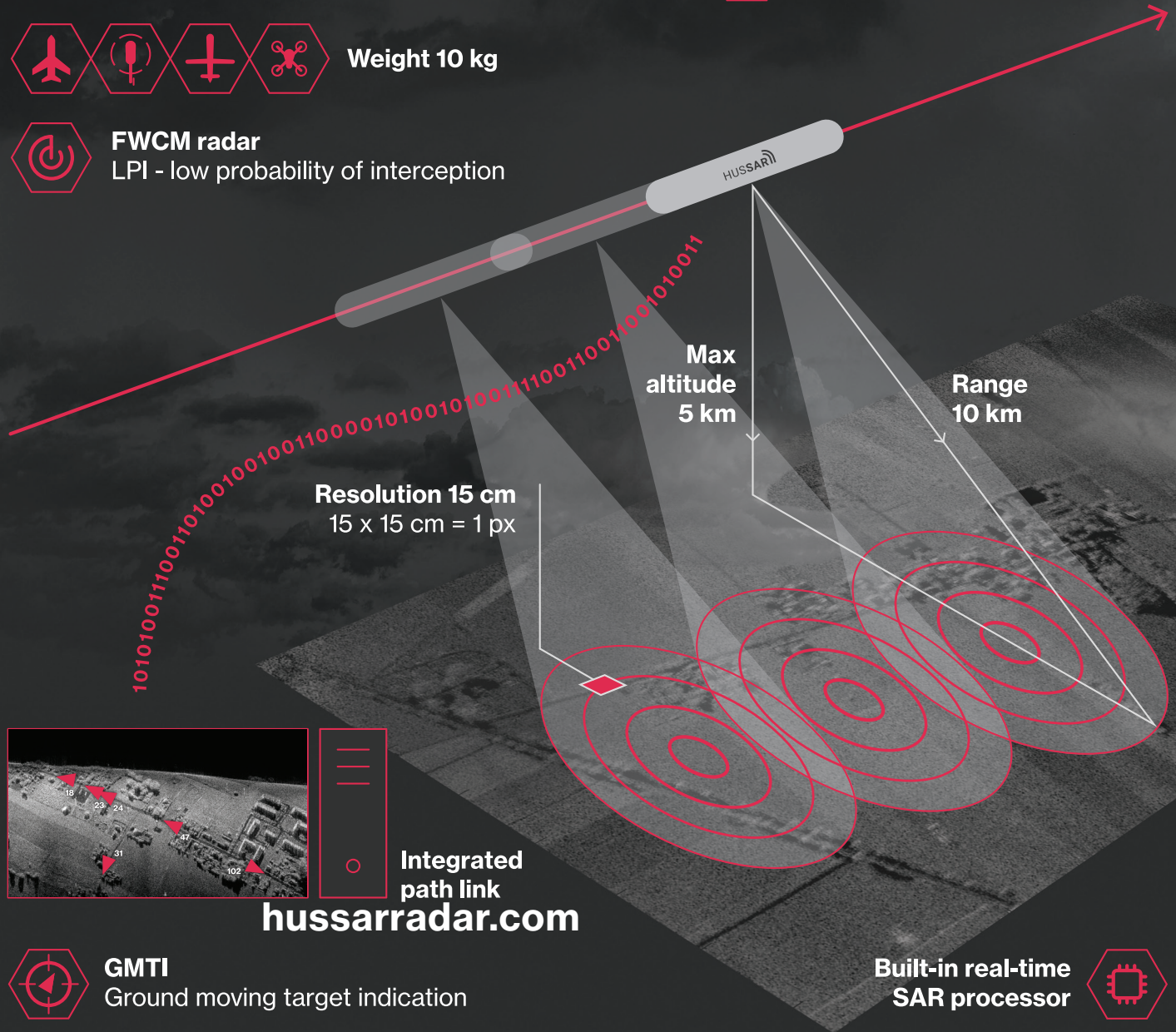
Operating speed 75 - 200 km/h



Weight 10 kg



FWCM radar
LPI - low probability of interception



Resolution 15 cm
15 x 15 cm = 1 px

Max altitude 5 km

Range 10 km

Integrated path link

hussarradar.com

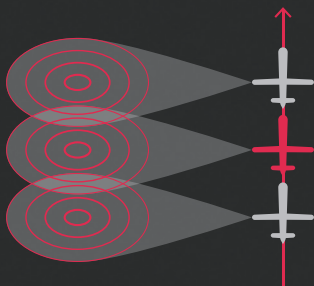


GMTI
Ground moving target indication

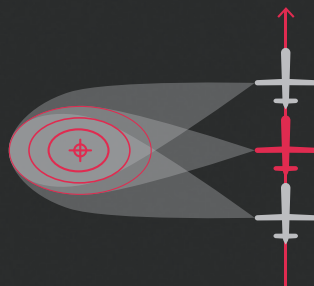
Built-in real-time SAR processor



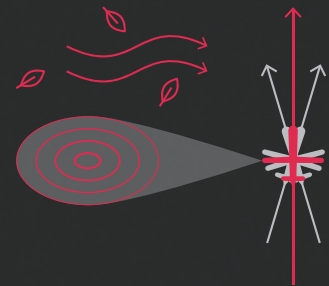
Strip SAR mode
Wide coverage



Spotlight
Highest resolution



Antenna with gimbal stabilization



SpaceForest
innovative solutions

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sensing

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