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SAR-C

Single Polarimetric SAR Payload

High-performant C-band Synthetic Aperture Radar payload featuring flexible imaging modes for wide-swath, high-resolution imaging.

Payload Specifications

Frequency of Operation	C-band	Peak Gain	40.5 dBi
Antenna Configuration	Deployable Phased Array	Rx Noise Figure	< 4.5 dB
Payload Modes	Stripmap, Spotlight, ScanSAR, Sliding Spotlight, Stripmap Wide, VideoSAR	Tx Duty Cycle	3.6-18%
Achievable Ground Resolution	1 m	Peak Transmit Power	Up to 16 kW
PRF Ranges	0.4-40 kHz	Tx Pulse Length	1-40 us
Polarisation	Single (HH or VV)	Power Consumption	
Beam Configuration	Digital Beamforming	During Imaging	Up to 4 kW
Waveform	Arbitrary Waveform Generation	Warm-Up	< 1.7 kW
Payload Mass	176 kg	Standby	< 0.9 kW
Deployed Dimensions	5550 x 1000 x 125 mm	Configuration	< 0.6 kW
Antenna Elements	240 x 42	Avg. Power Consumption	< 250 W

Imaging Mode	Stripmap	Spotlight	ScanSAR
Nominal Swath	20-44 km	10 km	100 km
Nominal Product Length	100 km	5 km	100 km
Incidence Angle	20-52°	20-35°	20-35°
NESZ	-20 to -17 dB	-19 to -17 dB	-22 to -18 dB
AASR & RASR	≤ -20	≤ -20	≤ -20
GRD, Ground Range Resolution	3 m	1-1.5 m	15 m
GRD, Ground Azimuth Resolution	3 m	1-1.5 m	15 m

Extended imaging capabilities include Sliding Spotlight, Wide-swath Stripmap and VideoSAR imaging modes.