



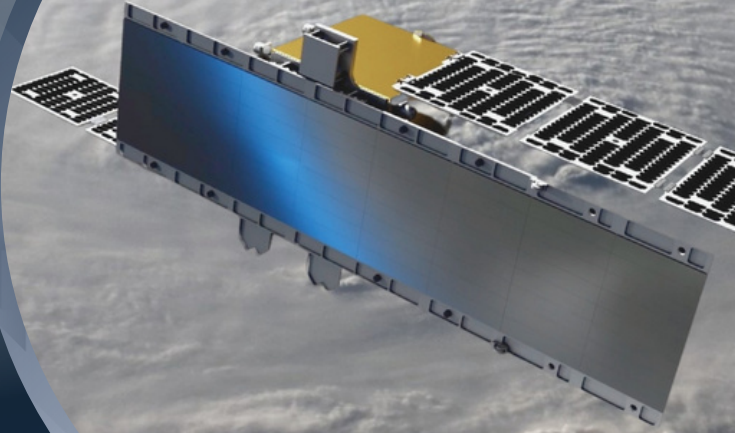
METASENSING
RADAR SOLUTIONS

STARSAR-X

SPACEBORNE SAR PAYLOAD

**PRECISION REDEFINED
VERSATILITY UNLEASHED**

Your Ultimate Solution for Advanced
SAR Imaging



STARSAR-X ADVANCED CAPABILITIES

The StarSAR-X is MetaSensing's high-performance X-band radar system, designed with some of the most advanced capabilities in radar technology.

Its configurable architecture spans payload masses from 90 to 172 kg, allowing operators to balance imaging performance, mission objectives, and platform constraints. Based on a fully phased array radar with digital multichannel electronic steering in both azimuth and elevation, the system enables advanced beamforming capabilities and supports single-, dual-, and full-polarimetric SAR acquisitions. StarSAR-X supports all primary imaging modes, including Stripmap, Spotlight, ScanSAR, and TopSAR, delivering exceptional imaging performance and operational versatility across a wide range of mission scenarios.



PRECISION AND PERFORMANCE EXCELLENCE

Combining advanced radar technology with precision engineering, StarSAR-X delivers outstanding image quality, operational reliability, and mission adaptability. From very high-resolution imaging to wide-area coverage, the payload is designed to provide consistent performance while meeting the evolving requirements of next-generation SAR missions.



FLEXIBLE ANTENNA TECHNOLOGY AND CONFIGURATIONS

Built using microstrip patch array antenna technology, the StarSAR-X is available in single and multichannel configuration for enhanced steering capabilities. This adaptability enables the system to meet a variety of mission requirements and environmental conditions, offering flexibility to support various imaging needs and applications.

STARSAR-X TECHNICAL DATA

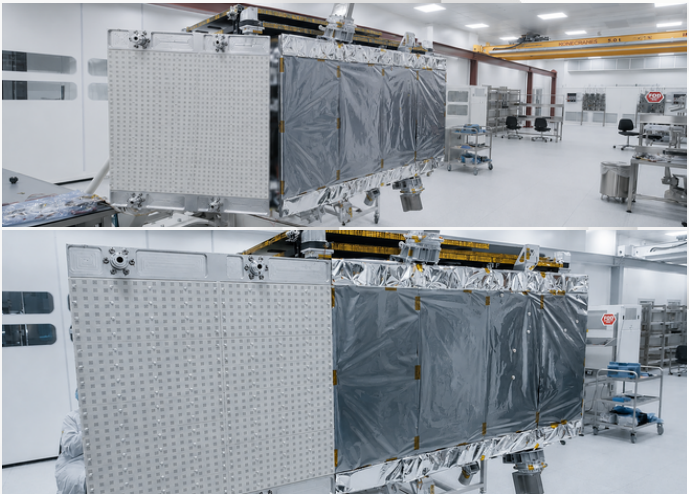
MetaSensing STARSAR-X	StarSAR-X – 4x TRM-16 modules per tile, 8 tiles (SSX-S-408-20)	StarSAR-X – 5x TRM-16 modules per tile, 8 tiles (SSX-S-508-25)	StarSAR-X – 4x TRM-16 modules per tile, 10 tiles (SSX-S-410-25)	StarSAR-X – 6x TRM-16 modules per tile, 8 tiles (SSX-S-608-30)	StarSAR-X – 8x TRM-16 modules per tile, 8 tiles (SSX-S-808-40)	StarSAR-X – 8x TRM-16 modules per tile, 10 tiles (SSX-S-810-50)
Radiating antenna dimension (elevation x azimuth)	0.35 x 3.2 m	0.44 x 3.2 m	0.35 x 4.0 m	0.53 x 3.2 m	0.70 x 3.2 m	0.70 x 4.0 m
Phase centers (elevation x azimuth)	16 x 32	20 x 32	16 x 40	24 x 32	32 x 32	32 x 40
Electronic Steering angle in Elevation	+/- 20 deg	+/- 20 deg	+/- 20 deg	+/- 20 deg	+/- 20 deg	+/- 20 deg
Electronic Steering angle in Azimuth	+/- 4.5 deg	+/- 4.5 deg	+/- 4.5 deg	+/- 4.5 deg	+/- 4.5 deg	+/- 4.5 deg
RF peak power	2.0 kW	2.5 kW	2.5 kW	3.0 kW	4.0 kW	5.0 kW
DC power consumption	2.3 kW	2.8 kW	2.8 kW	3.5 kW	4.6 kW	5.7 kW
Slant range resolution	> 0.125 m	> 0.125 m	> 0.125 m	> 0.125 m	> 0.125 m	> 0.125 m
Maximum bandwidth	1200 MHz	1200 MHz	1200 MHz	1200 MHz	1200 MHz	1200 MHz
Incident angle recording data	15-50 deg	15-50 deg	15-50 deg	15-50 deg	15-50 deg	15-50 deg
SAS (SAR Antenna Subsystem) payload mass	~70 kg	~78 kg	~85 kg	~105 kg	~135 kg	~150 kg
SES (SAR Electronic Subsystem) payload mass	~10 kg	~10 kg	~10 kg	~10 kg	~10 kg	~10 kg
Payload interface	~10 kg	~10 kg	~10 kg	~10 kg	~10 kg	~12 kg
Total Mass	~90 kg	~98 kg	~105 kg	~125 kg	~155 kg	~172 kg

KEY FEATURES:

- High Performance X-Band Radar: StarSAR-X offers top-tier performance for radar applications.
- Fully Phased Array System: Features electronic steering in both azimuth and elevation.
- Versatile Imaging Modes: Supports all SAR imaging modes, including Stripmap, Spotlight, ScanSAR, and TopSAR.
- Microstrip Patch Array Antenna: Built on advanced antenna technology for superior performance.
- Multichannel Configurations: Available in both single and digital multichannel for enhanced steering capabilities.

KEY BENEFITS:

- Advanced Capabilities: StarSAR-X offers state-of-the-art features for optimal performance.
- Versatility: Supports a wide range of imaging modes, making it suitable for diverse applications.
- Adaptability: Multichannel configurations enable customization to meet specific mission requirements.
- Superior Performance: Built on advanced antenna technology for exceptional signal quality.
- Enhanced Mission Effectiveness: Provides reliable and precise data in various environmental conditions, ensuring mission success.



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