



MWSE - Microwave Sensors and Electronics

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1

PRODUCTS

5

SERVICES

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as of 20 August 2026



MWSE - Microwave Sensors and Electronics

Microwave Sensors and Electronics S.L. (MWSE), formerly known as Balamis, specializes in microwave electronics engineered for harsh environments. The Spanish company develops multi-frequency space payloads, radars, and radiometers for ground and airborne platforms, complemented by custom electronics design services for space, industrial, and research applications. MWSE's product lines span low-power microwave payloads for small satellites, multi-frequency ground and airborne radar systems, microwave radiometers for environmental and scientific monitoring, and GNSS reflectometer systems for remote sensing applications. The company has flight heritage on missions including FMPL-2 and FSSCat, demonstrating proven space-grade reliability for L-band radiometry and GNSS reflectometry instruments. Beyond standard product lines, MWSE offers custom electronics design and engineering surveying support, applying its microwave expertise to bespoke customer requirements across the space, industrial, and research sectors.

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SERVICES

Services

custom electronics and ground systems

MWSE provides or co-designs custom electronics and ground support systems for customer campaigns or missions.

Development of microwave payloads for nano-satellites

MWSE specializes in designing low-cost microwave payloads for nano-satellites, leveraging extensive experience and flight heritage.

Electronics design for space, industrial and research applications

MWSE offers electronics design services tailored for space, industrial, and research applications, focusing on high reliability and custom solutions.

EMBEDDED PROGRAMMING

MWSE offers embedded programming services for various systems, including Linux SBCs, RTOS, and microcontrollers.

Support on surveying and ground measurement campaigns

MWSE provides support for surveying and ground measurement campaigns, including conducting on-demand measurement campaigns with their radars and radiometers.

Product catalogue



MWSE - MICROWAVE SENSORS AND ELECTRONICS

MWSE Space Microwave Payloads (GASPER / FMPL-2 / GBSAR)

Spanish company developing L-band radiometers, GNSS reflectometers, software-defined radio payloads and ground-based synthetic aperture radars for small satellite and nanosatellite

Space payload: GASPER	Galileo-enabled in-orbit receiver for IOD/IOV missions
Space payload: FMPL-2	L-band radiometer + GNSS-Reflectometer SDR; flown on 3Cat-5/A nanosatellite
Space payload: FSSCat RF front-end	L-band radiometer and GNSS-R reflectometer channels for FSSCat mission
Ground system: MFFP-GBSAR	Multi-frequency full-polarization ground-based SAR for InSAR deformation monitoring
Frequency bands	L-band (primary); multi-frequency radar
Technology	Software-defined radio (SDR), L-band radiometry, GNSS reflectometry, InSAR

price on request

Contact MWSE - Microwave Sensors and Electronics

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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