

ERZIA

Integrated Microwave Assemblies PRODUCT GUIDE 2026

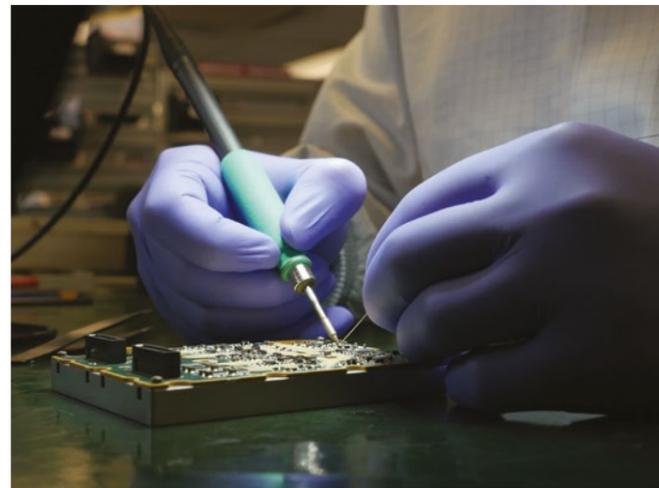


Mission Engineered for Electronic Dominance

COMPLETE ENGINEERING SOLUTIONS

Engineering

ERZIA's in-house engineering team combines deep RF expertise, advanced design tools, and rigorous quality control to create high-performance solutions tailored for critical applications. Every product is carefully developed and tested to ensure exceptional reliability, meeting the exacting standards of industries such as aerospace, defense, and telecommunications.

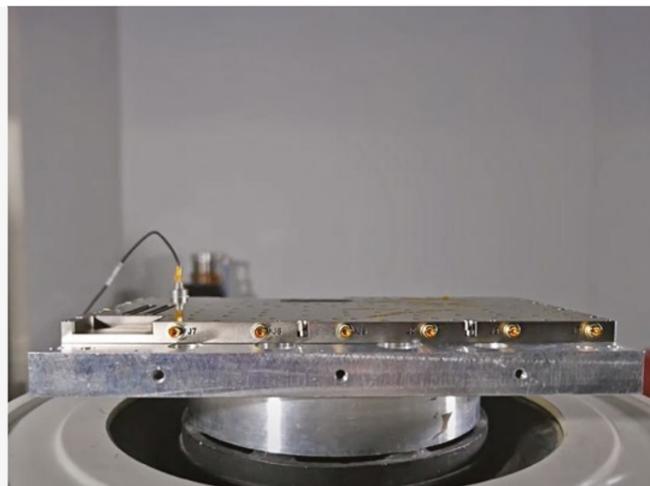


Manufacturing

With state-of-the-art in-house production, we transform designs into high-performance hardware. Specializing in bonding, die attachment, and the integration of hybrid circuits, our meticulous attention to detail ensures every component meets the highest industry standards.

Environmental Verification

ERZIA conducts rigorous environmental verification to ensure every product performs reliably under extreme conditions. Through extensive testing (including vibration, thermal cycling, and humidity exposure) each unit is validated to meet the toughest industry standards, ensuring durability and stability in aerospace, defense, and other mission-critical environments.



A CENTER FOR EXCELLENCE

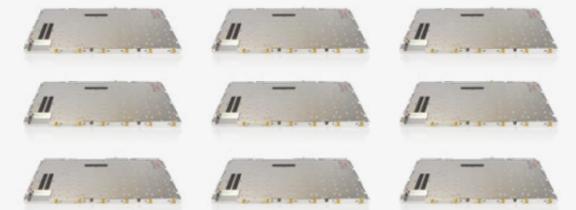
Upholding Quality Standards

Our designs are ready for the most demanding qualifications and ensure reliable, repeatable production. We also implement advanced automation techniques in our manufacturing and testing processes, all governed and certified under our AS9100 and ISO 9001 quality systems.



Volume Meets Precision

ERZIA is committed to delivering both low- and high-volume production with the same level of precision and care. From small batches to large-scale programs, we ensure flexibility, strict quality control, and efficient manufacturing at every stage.



ELECTRONIC WARFARE

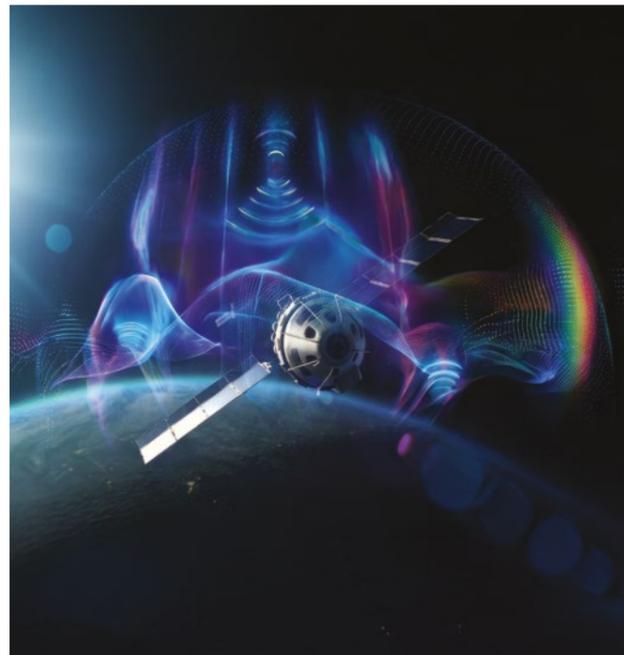
Outstanding Performance

Electronic Warfare (EW) demands near-instantaneous detection and state-of-the-art signal processing across extremely wide bandwidths, with high output power density and excellent band selectivity. ERZIA's proven solutions excel in signals intelligence (SIGINT), electronic intelligence (ELINT), electronic protection (EP), and electronic attack (EA) applications, delivering the front-end and back-end performance that electronic surveillance and signal collection systems depend on.



Technical Edge

Our extensive experience spans integrated assemblies, including beamformers, filter banks, wideband converters, and complete front ends for air, ground, and maritime platforms. From military aircraft and stealth fighters to drones and multi-platform designs, ERZIA's EW solutions provide the technical edge required for the tactical employment of forces in today's complex electromagnetic warfare environment.



MISSION CRITICAL SOLUTIONS

Airborne Electronic Warfare

ERZIA's microwave amplifiers and assemblies enhance mission success and protection by detecting and analyzing enemy signals, disrupting hostile radar and communication systems, and shielding allied forces from electronic threats.

Proven Heritage
F-16
F-18
MQ-1 Predator

Naval Electronic Warfare

ERZIA's RF modules have been tested and proven in maritime environments: detecting and identifying electromagnetic emissions, disrupting enemy radar and communications, and protecting friendly systems against electronic attacks.

Proven Heritage
F-110 class frigate
K-130 class corvette

ERZIA delivers mission-critical RF & microwave solutions for Electronic Warfare applications where spectrum dominance can determine battlefield success. Our integrated microwave assemblies provide the exceptional performance and ultra-wide bandwidths essential for electromagnetic spectrum (EMS) operations.

Success Story



ERZIA's collaboration with Raytheon Deutschland GmbH led to the development of a unique RF subsystem for advanced radar detection systems, enhancing airborne ELINT capabilities.



UP DOWN CONVERTERS

Best in class converters, narrow to wideband solutions across the whole RF spectrum



BEAMFORMERS

Offering precision phase control of your entire operating bandwidth



SWITCHED FILTERED BANKS

Latest technologies to achieve the highest rejections and lowest insertion loss



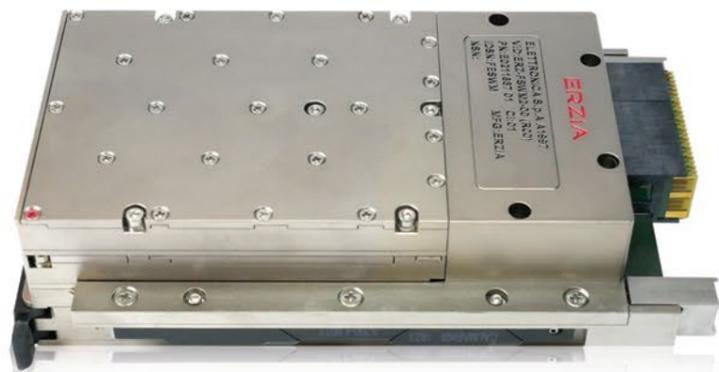
RF FRONT ENDS

Compact and rugged modules to handle any signal under demand



SWITCHING MATRICES

Wideband and ultra-fast operation through multiple channels



CUSTOM UNITS

Bring us your RF needs, we will create a bespoke solution



SWITCHING MATRICES

Smart Paths.
Solid Performance.



Technical Approach

There are several different ways to approach the implementation of a switching matrix. ERZIA focuses on the use of solid-state switches, combined with filtering and amplification stages, to design and manufacture compact and reliable units.

Features

Typical switching matrix topologies are available, as well as mixed types with fully custom routing and switching capabilities and functionalities like phase shifting, variable amplification, specific band selection or built-in test features.

RF Bands



Channels from DC up to 50+ GHz
Wideband (20+ GHz)

Key Technologies

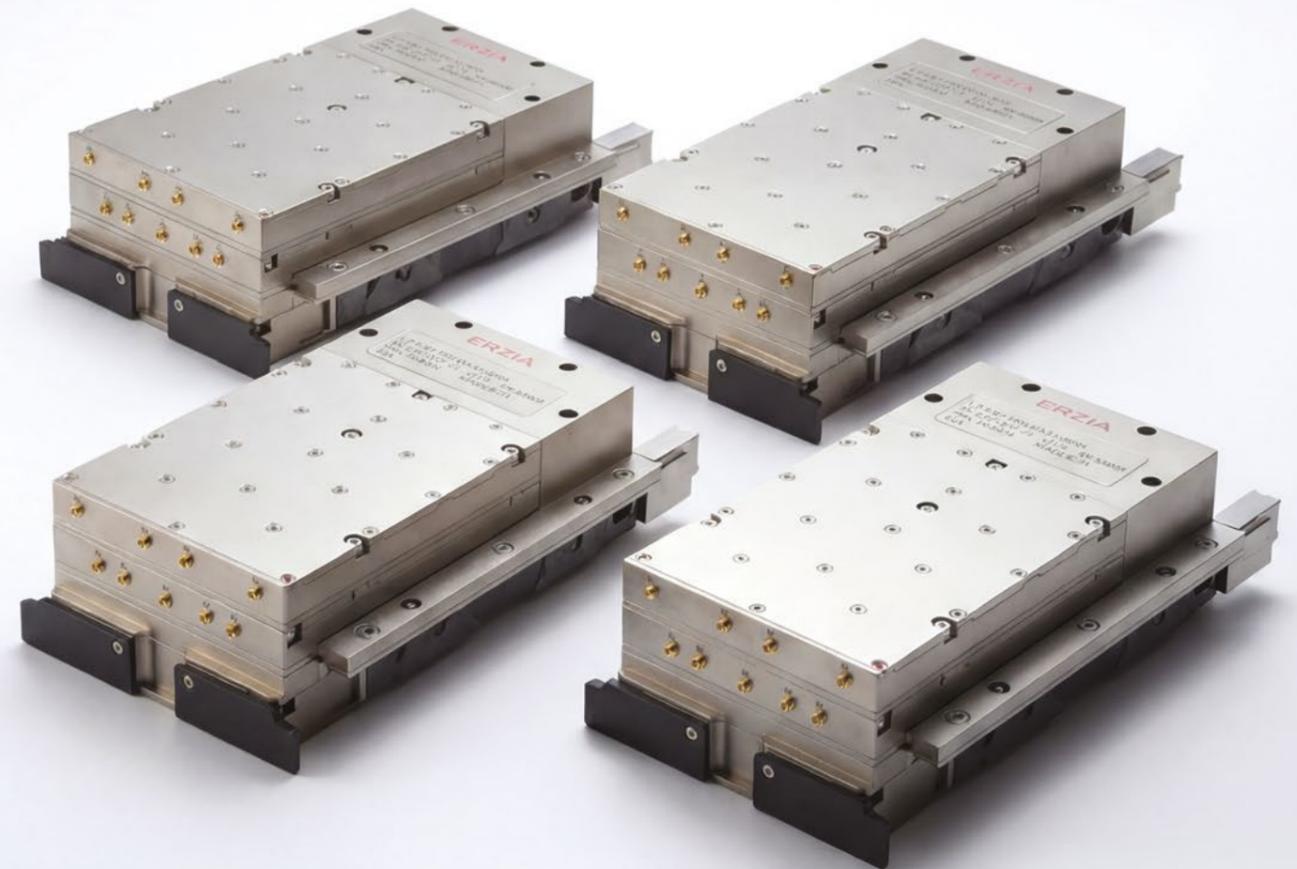


GaAs/GaN
Suspended Substrate filters
Fast digital switching
Microstrip integration

Typical Uses

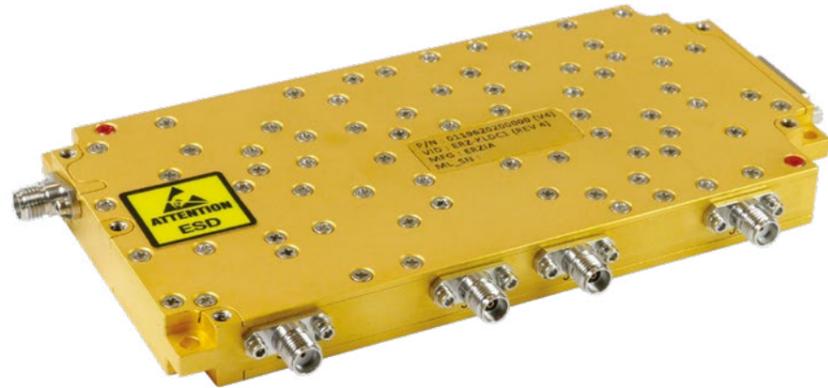


Electronic Warfare
Satcom
Telecom



UP DOWN CONVERTERS

Direct Your Power.
Define Your Signal.



Frequency Conversion

Frequency conversion is a key enabling technique in RF and Microwave systems. ERZIA offers several frequency conversion options in either narrow- or wide-band options for use in radar, signal intelligence systems, electronic warfare, remote sensing instruments and radio communication systems.

Wide-Band Converters

Narrow-band converters are typically found in Satcom, Telecom, and Radar applications operating in X-Band, K/Ka-Bands or the newer Q-Band. Our designs utilize reliable, proven technologies with the latest advancements.

Narrow-Band Converters

Wide-band converters are typically found in Electronic Warfare and Test Equipment applications. ERZIA up/down conversion can completely move important sections of the spectrum while considering factors like the overall flatness, harmonics, spurs rejections, etc. Additionally, a tunable wideband up/down converter allows for a relatively narrow section of the spectrum to be converted. Also, because it can be dynamically tuned, any portion of a very wide band section can be quickly converted and tuned.



RF Bands

X-Band
Ka Band
Q/V Bands
Wideband



Key Technologies

GaAs/GaN
Suspended Substrate filters
Fast digital switching



Typical Uses

Electronic Warfare
Satcom
Telecom



DESIGNING A MISSION? LET'S BUILD IT TOGETHER.

From initial concept to fully qualified hardware, we design and manufacture integrated systems tailored to your exact requirements. We manage engineering, sourcing, assembly, and testing — delivering a seamless, high-performance solution ready for your most demanding environments.



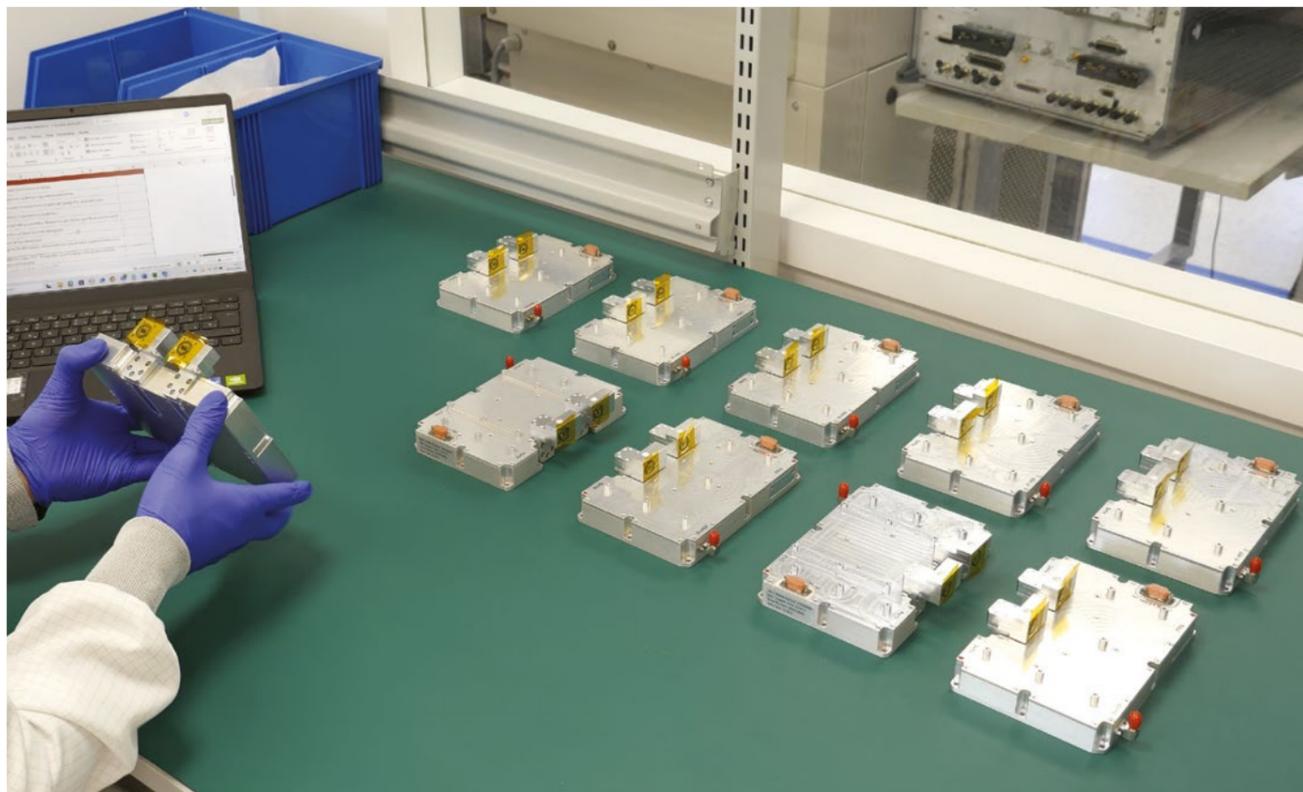
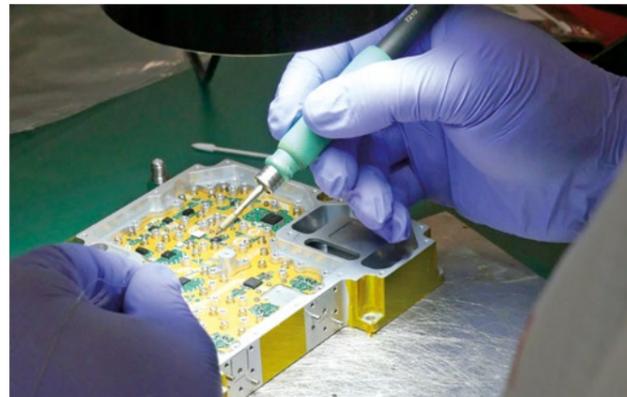
WHY CHOOSE ERZIA

Efficient, Dependable and Customized Solutions

When precision, reliability, and customization are critical, ERZIA delivers high-performance integrated assemblies that exceed expectations. Designed for the most demanding applications, including Electronic Warfare, Signal Intelligence, Radar, and Scientific Instrumentation, our RF and microwave subsystems are built to meet strict size, weight, and performance requirements without compromise.

ERZIA collaborates with engineering teams worldwide to design, prototype, qualify, and manufacture complex RF solutions. By leveraging proven topologies and advanced automation in manufacturing and testing, we ensure repeatable, high-quality production, fully certified to AS9100 and ISO 9001 standards.

Our integrated assemblies are deployed in air, ground, and naval platforms across the globe. Whether optimizing an existing system or developing a new one, ERZIA is your trusted partner in maximizing RF performance.



ERZIA

WE TAKE YOU FURTHER



ERZIA Technologies
Josefina de la Maza, 4
Santander, Spain
+34 942 29 13 42



ERZIA Technologies of America
1800 Diagonal Road, Suite 600
Alexandria, VA USA
+1 (703) 373 1946

sales@erzia.com

Download the digital version:



WWW.ERZIA.COM