DEFENCE | ELECTRONIC WARFARE | COUNTER-UAS

microwave amps
Part of Nodica Group



Engineering RF & microwave amplifier solutions for the modern battlespace

Built around your RF challenge.

Microwave Amps designs and manufactures high-reliability RF and microwave amplifier solutions for radar, electronic warfare, Counter-UAS and defence applications, tailored to your requirements.

CYBER ESSENTIALS

A member of ADS

Part of Nodica Group

microwaveamps.co.uk



Every defence programme presents different RF challenges

Whether developing a next-generation radar, integrating a Counter-UAS capability, modernising electronic warfare systems or replacing legacy tube technology, every project brings its own combination of performance, environmental and integration challenges.

POWER | BANDWIDTH | EFFICIENCY | LINEARITY
SIZE | DUTY CYCLE | WEIGHT | RELIABILITY
THERMAL MANAGEMENT | TIMESCALES

Every parameter influences another.

Choosing the right amplifier is rarely about selecting the highest specification. It is about finding the right balance for the application.

That's where engineering experience matters.

Engineering, not assumptions

At Microwave Amps we work alongside defence organisations, OEMs and system integrators to understand the technical requirement before recommending the right solution.

Sometimes that's an existing amplifier.

Sometimes it's an adaptation.

Often it's something completely bespoke.

Our objective is always the same:
Deliver the right amplifier for the application.

35 YEARS RADIO FREQUENCY EXPERTISE

20 MHz - 20 GHz
High-reliability solid-state amplifier solutions

<0.5%
Annual returns.
Built for demanding RF applications

100%
Designed, built & tested
in Bristol, UK

An engineering partner from concept to deployment

For more than 35 years, Microwave Amps has specialised exclusively in the design and manufacture of solid-state RF and microwave power amplifiers.

Working across defence, space, science and specialist industrial sectors, we help customers solve complex RF challenges through practical engineering, proven technology and complete in-house capability.

Everything we do is built around long-term performance, dependable support and collaborative engineering.



Complete in-house capability

Unlike many manufacturers, every critical stage of production remains under one roof. This gives us complete control over quality, performance, traceability and delivery.

- RF Design
- PCB Manufacture
- Precision CNC Metalwork
- Assembly
- RF Testing
- Final Validation





Standard, adapted or bespoke

Not every application requires a completely new design.

1. Where appropriate we recommend proven amplifier platforms.
2. Where needed we modify existing designs.
3. Where required we develop entirely bespoke amplifier solutions engineered around your exact technical requirement.

27
In-house engineers & staff

ISO 9001
2015 Certified
Quality

Supporting today's electromagnetic battlespace.

Applications we support

Our RF and microwave amplifier solutions support a broad range of defence and security applications, from surveillance radar and electronic warfare to Counter-UAS, communications and specialist RF systems.

Radar

High-power solid-state amplifier solutions supporting surveillance, tracking and phased-array radar systems, optimised for efficiency, reliability and demanding operational environments.

Electronic Warfare

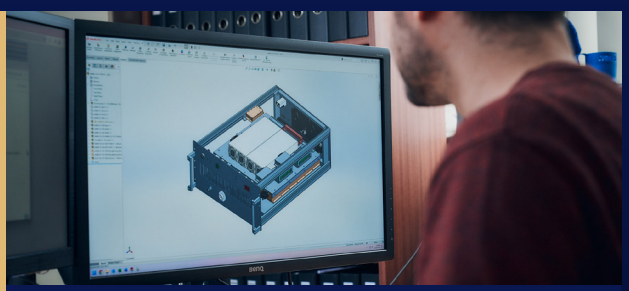
Wideband RF amplifier solutions delivering the linearity, bandwidth and power needed for modern electronic warfare and spectrum dominance applications.

Counter-UAS

Highly linear RF amplification preserves waveform integrity for complex electronic countermeasure techniques requiring precise amplitude, phase accuracy and dependable performance.

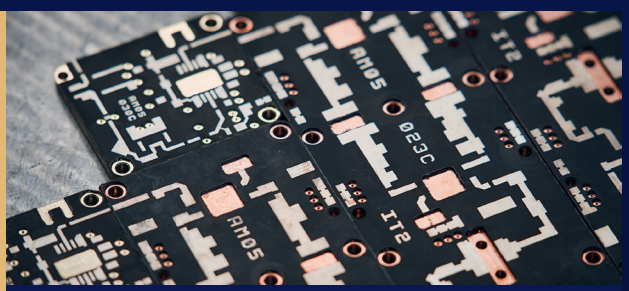
Built around engineering excellence.

Every amplifier is engineered, manufactured and tested in-house by a multidisciplinary team, delivering the performance, reliability and flexibility demanded by today's defence programmes.



Design

Our RF engineers develop amplifier solutions optimised for performance, integration, efficiency and reliability.



PCB manufacture

In-house PCB production provides greater quality control, faster turnaround and complete confidence throughout every build.

Whether supporting established defence platforms or emerging technologies, our solutions are tailored to the operational demands of each application.

Electronic Countermeasures

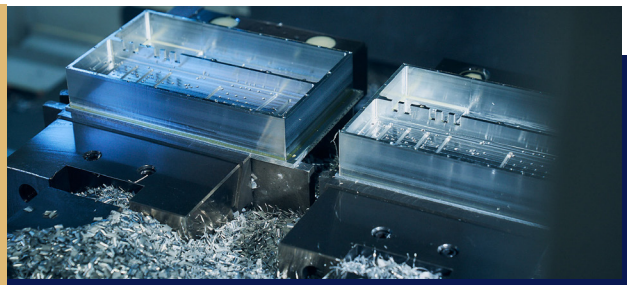
Highly linear RF amplification preserves waveform integrity for complex electronic countermeasure techniques requiring precise amplitude, phase accuracy and dependable performance.

Communications

Reliable RF amplifier solutions for tactical communications, SATCOM and secure data links, providing stable performance across demanding operational environments.

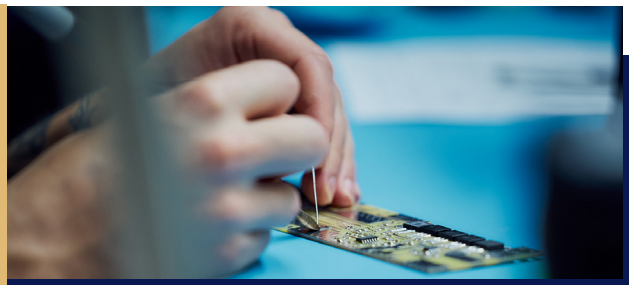
Threat Simulation

Broadband RF amplifier solutions generating realistic radar and communications signatures for electronic warfare development, system evaluation and operator training.



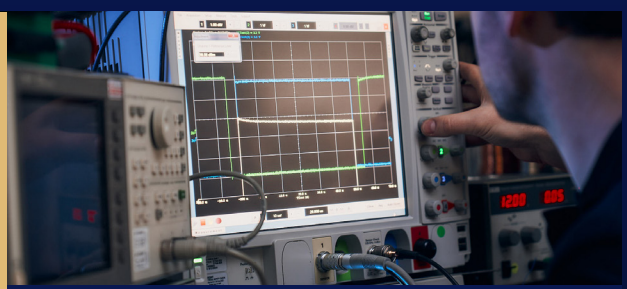
Precision metalwork

Enclosures are manufactured in-house for optimum thermal performance, protection and mechanical integrity.



Assembly

Every amplifier is carefully assembled by experienced technicians using proven processes and rigorous quality standards.



Validation

Comprehensive RF testing verifies performance, stability and reliability before every amplifier leaves our Bristol facility.



Lifecycle Support

Our engineers provide responsive technical support, helping customers integrate, maintain and evolve systems throughout service life.

Choosing the right technology

Every application demands different performance characteristics.

Every application demands different performance characteristics. Rather than promoting a single technology, we select the semiconductor platform that best

GaN-ON-SIC

The preferred technology for high-power defence RF systems above 1 GHz, including radar, electronic warfare and Counter-UAS. Its high power density, excellent efficiency and thermal resilience enable sustained transmission in demanding mission-critical environments.

GaAs PHEMT

Well suited to lower-power amplifier stages, receive-path LNAs and applications where low noise, linearity and efficiency are critical. Widely used in defence RF subsystems where signal integrity and cost-per-watt take priority over maximum output power without compromising reliability.

Silicon LDMOS

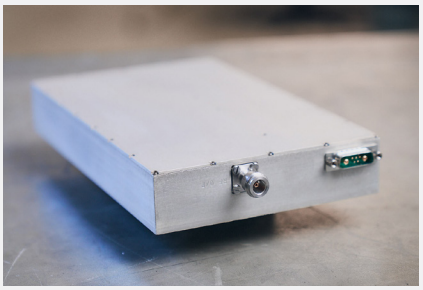
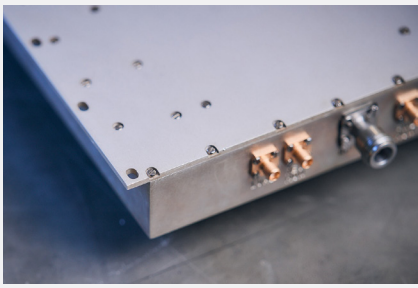
The established choice for high-power operation below 1 GHz, supporting applications such as long-range communications, GPS-band jamming and VHF/UHF systems. Often combined with GaN in multiband architectures to optimise performance, coverage and cost.

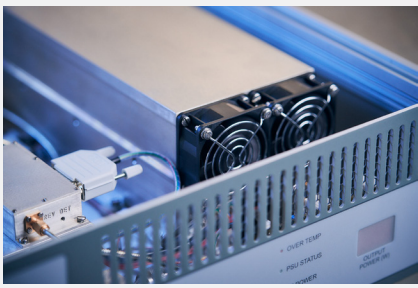
> **Every amplifier we build has to earn its place in the chain** – range, bandwidth, duty cycle, efficiency and reliability are never independent decisions.
>
> **Jamie Clark**
> MD, Microwave Amps

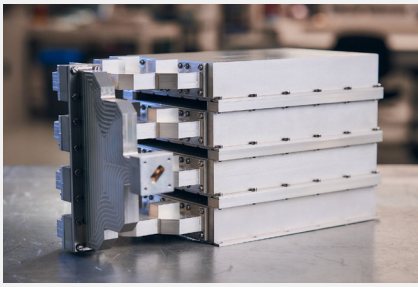
Typical amplifier capabilities

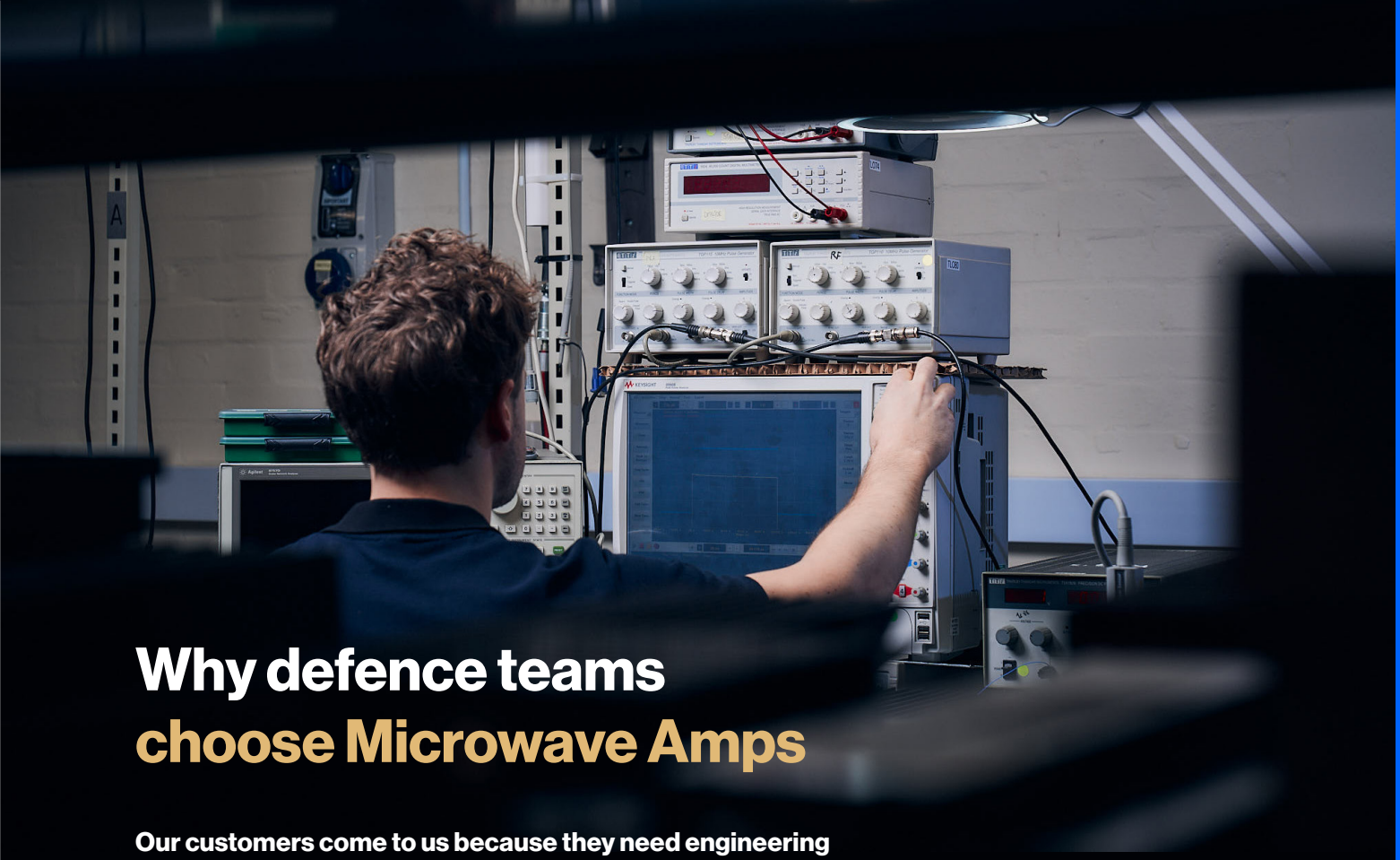
Capabilities vary by product and application, with solutions engineered to meet a broad range of RF requirements.

- 20 MHZ – 20 GHZ
- CW & PULSED
- HIGH POWER
- WIDEBAND
- MODULES
- RACK SYSTEMS
- CONTROL & MONITORING
- CUSTOM INTERFACES





Why defence teams choose Microwave Amps

Our customers come to us because they need engineering confidence. Not catalogue products.

Engineering partnership

Work directly with experienced RF engineers from initial specification through design, manufacture, testing and long-term support. One engineering team takes ownership throughout your project, enabling faster decisions and better technical outcomes.

Proven in demanding environments

For more than 35 years, we have designed and manufactured high-reliability RF and microwave amplifiers for defence, space, science and specialist industrial applications where performance and reliability are critical.

Tailored to your application

Whether your requirement is met by a proven standard product, an adapted design or a completely bespoke solution, we recommend the approach that best fits your technical, commercial and programme requirements.

Built for long-term support

Our involvement extends beyond delivery. We support customers throughout the product lifecycle with engineering advice, product evolution, repairs and ongoing technical assistance, building partnerships that last for years.

Let's discuss your RF challenge

Whether you're developing a new defence capability, upgrading an existing system or replacing legacy technology, our engineers are ready to discuss your requirements in confidence and help identify the right technical approach.

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Powering the Electromagnetic Domain

Microwave Amps designs, manufactures and tests high reliability solid-state RF and microwave amplifier solutions from 20MHz to 20-GHz.

Based in Bristol, we have supported demanding RF applications for more than 35 years, combining proven engineering expertise with reliable performance across CW, **pulsed, wideband and high-power systems.**

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35 YEARS RADIO FREQUENCY EXPERTISE

20MHz -20GHz
High-reliability solid-state amplifier solutions

Made and serviced in United Kingdom