# Resilience against Cyber and Electronic Warfare (EW) Threats

*Part of the Series: The Argument for Embedded Logic at the Edge vs Centralised Large AI in Modern and Future Warfare - April 2025*

*John Blamire*

*Founder - Ambient Stratagem*

*in: linkedin.com/in/john-blamire*

# Executive Summary

In today's theatres of war, the first casualty is not necessarily infrastructure, territory, or combat power—it is connectivity. Modern adversaries have learned to target the electromagnetic spectrum and digital attack surface as a first-strike domain. In response, this white paper makes a clear and timely argument:

> Warfighting AI must be embedded at the edge to ensure survivability, adaptability, and mission continuity.

# The Case for Embedded Logic

Large, centralised AI models—often hosted in hyperscale data centres or reliant on real-time cloud connectivity—offer significant power during peacetime and simulation. But in conflict zones, they introduce fatal dependencies. They rely on high-bandwidth links, unjammed signals, and access to remote resources that simply do not survive under electromagnetic attack.

By contrast, embedded logic—pre-deployed, mission-specific, and locally executable—ensures that tactical systems can function when GPS is jammed, comms are denied, and decision cycles must shrink to milliseconds. It restores resilience to digital systems under fire.



## Embedded Logic Advantages

- Functions without network connectivity
- Operates in GPS-denied environments
- Millisecond decision-making capability
- Resilient to electromagnetic interference

# Key Takeaways

**Latency kills**

In a contested battlespace, round-trips to a data centre cost time—and potentially lives.

**The spectrum is weaponised**

From Gaza to the Red Sea, adversaries are now proficient in spectrum denial. Embedded logic ensures continued performance in signal-black zones.

**Cloud dependency is fragility**

Forces depending on centralised inference are exposed to cyber disruption, infrastructure collapse, and geopolitical constraints.
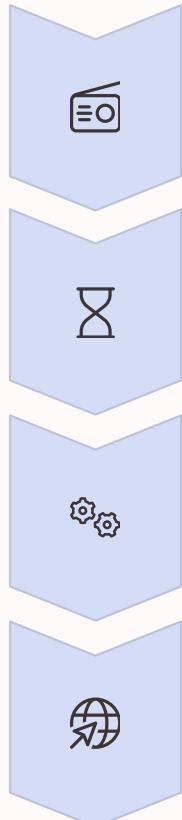
**Embedded AI secures sovereignty**

Nations must own their logic to retain operational control in high-threat scenarios.

This white paper presents detailed analysis, case studies, and strategic recommendations for policymakers, military planners, and defence technologists across NATO, the UK, and European allied states.

# Next in the Series

 Chapter 1: The Electromagnetic Battlefield – Lessons from Ukraine and Beyond

 Chapter 2: Latency Kills – The Fatal Cost of Cloud Dependence in Combat

 Chapter 3: Logic in the Line of Fire – Surviving the Spectrum War

 Chapter 4: Sovereign by Design – The Geopolitical Imperative of Embedded AI