

# Rampart StrataWave™ UAS Radio

Secure point-to-point uncrewed vehicle (UxV) radio communication system



The Rampart StrataWave™ UAS Radio provides secure, resilient communications for uncrewed systems—groups 2 and 3—in the most contested environments. Engineered for low probability of detection, anti-jamming, leading-edge physical layer encryption, and GPS-independent communication, our StrataWave™ radio ensures uninterrupted connectivity and survivability for UAS operators. With Rampart's UAS Radio, you can confidently extend your mission into the most challenging environments.



*Increase survivability and effectiveness of your UAS capabilities and operators in denied, defended, and contested environments.*

## Specifications

Dimensions:	6.13" x 3.15" x 1.75"
I/O:	Ethernet (RJ 45)
Frequency Range:	UHF
Transmission Range:	Up to 100 km
Data Rate:	500 kbps in 40MHz Channel
Security Level:	256-bit Physical Layer Encryption

## Low Probability of Jamming

Rampart's StrataWave™ UAS Radio is designed explicitly for EW-contested conditions. It is optimized to reduce the likelihood of detection for scenarios where reactive jammers respond directly to signals of interest that cross a set energy threshold or match a certain waveform signature. Where detection is unavoidable or jamming is persistent, the radio is also designed for resilience, both to withstand and operate through in-band interference and to instantly re-establish communications after any temporary loss of connectivity, all without depending on GPS or other external PNT.

## About Rampart

Founded in 2016, Rampart Communications, Inc. is a privately held technology company, founded by alumni of the U.S. Intelligence Community, built to revolutionize wireless communication. Our cutting-edge radios and waveform technologies are making fundamental advancements in science to enhance the security, reliability, and capacity of communication systems. Rampart Communications is headquartered in Linthicum Heights, MD with 49 registered patents, technical validations from MITRE, Navy Research Lab, Army DEVCOM Lab, and operational validations from USSOCOM and other National Security entities.

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## Use Cases

### Superior UAS Command and Control

Uncrewed and autonomous systems are essential in modern warfare, and command and control (C2) of those assets is critical for battlefield effectiveness. Today's threats to reliable C2 outpace defenses, leading to low survivability, and a high material and effort cost to sustain operations. With the Rampart StrataWave™ UAS Radio, you will communicate with better resistance to jamming and a better ability to recover connectivity in contested environments.



### Assured Communications in EW-Contested Environments

Jamming and signal exploitation are company-echelon capabilities on the 21st century battlefield. Artificial Intelligence (AI) has enabled the adversary to quickly identify and fingerprint RF communications, rapidly turning RF emitters into targets, even with mitigations like frequency hopping and encryption. The Rampart StrataWave™ puts you back in control: eliminating exploitation and measurably reducing the effectiveness of state-of-the-art EW tools, meaning a higher rate of mission success.



### Global, Secure, and Flexible UAS Communications

The rapid advancement of adversary capabilities leaves the US and allies in a constant race to stay one step ahead. Even with state-of-the-art and defense-in-depth solutions, today's UAS communication systems fall short, leaving valuable mission data unprotected. The cryptographic and LPJ protection capabilities of the Rampart StrataWave™, a commercial solution, deliver the security needed for current and future missions, allowing for reliable global communication and enabling the US and partner forces to remain mobile and flexible enough to carry out our global peacekeeping mission.

