Microflown AVISA

3D Acoustic Situational Awareness

Vehicle Based Gunshot Localisation System

Vehicle Based Acoustic Multi-Mission Sensor (V-AMMS) is a gunshot detection and localisation system, based on the **worldwide unique and extremely small Acoustic Vector Sensor (AVS)** technology developed by Microflown AVISA.

V-AMMS is installed on vehicles and provides the crew with a **true 360° situational awareness**. It locates fire positions and **displays the direction and distance to the hostile shooters** on an easy to use ruggedised tablet.

The V-AMMS technology is based on measuring the directional *acoustic particle velocity*. This unique technology allows outstanding results with a directional accuracy of 1.5 degrees. This combined with its **low SWaP** characteristics makes it a valuable addition to any intended or existing sensor suite on board of manned or unmanned vehicles.

In comparison to traditional microphone based arrays, the V-AMMS has two main advantages: Firstly, it is **extremely small and compact** due to Microflown's unique and patented sensor technology. It **does not limit the 360 degree capability of RWS and EO system**. Secondly, user feedback for traditional shot detection systems spoke of high false alarm rates with random directions in real mission use. V-AMMS has therefore been specifically designed to increase performance while eliminating false alarms entirely.

Unlike other acoustic systems in the marketplace, **V-AMMS measures the direction of the hostile shooter instead of calculating it**.

V-AMMS can be installed on any wheeled vehicle, including light armoured vehicles and successfully can locate shooters while driving up to 60 km/h in rough terrain conditions. V-AMMS **masters true multi-shooting scenarios** while being targeted directly. It can detect shots and locate the shooter position when the bullet does not directly pass the vehicle. **Ranges up to 1500m** and miss distances up to 200m can be achieved.

The shooter location provided by V-AMMS can be used stand alone or in data fusion as part of a sensor suite, cueing a RWS, radar or EO system towards the shooter position identified by V-AMMS. **Grid coordinates of the hostile shooter position can be handed over to the battlefield management system**, if available.

Key Features

- Reliable directional accuracy of 1.5 DEG
- Unique sensor with extremely low false alarm rate
- Reliable distance accuracy of 5-10% of true range
- Reports single shots, bursts and sniper rounds
- Does not report outgoing fire
- Stand-alone system for SAF

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Technical Specifications

V-AMMS Hardware

Dimensions	10.0 x Ø 26.5 cm
Total weight	1.75 Kg
Assembly	Stainless Steel & Foam
Powering	12V-24V
Power consumption	1W-2W

V-AMMS Performance

Range	Up to 1500m
Directional Accuracy	<1.5º
Range Accuracy	5-10 %
Miss distance (CPA)	Up to 200 m
Detection capability	Small Arms Fire (SAF) Helicopters - on demand
Integration options	RWS cueing, EO cueing & C2 Integration

V-AMMS Configuration

V-AMMS system typically includes	1 x AMMS 1 x Customised vehicle mount 1 x Vehicle powered adaptor 1 x Ruggedised tablet 1 x Manual

ENG Ver. 2.0

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