

SURGE

AIRSPACE AWARENESS AT THE TACTICAL EDGE

SURGE is a mobile, passive RF sensor designed to detect and track low-altitude aerial threats in contested environments. Combining passive multi-static radar and direction finding in a single system, SURGE delivers real-time airspace awareness while remaining fully passive and undetectable.

Designed for both fixed-site and expeditionary operations, SURGE integrates seamlessly into command-and-control systems while maintaining a compact size, weight, and power footprint, enabling operators to stay ahead of today's increasingly complex low-altitude threats.

[SURGE]

[CAPABILITIES]

Fully Passive & Emission-Free

Tracks low-altitude aerial threats while remaining undetectable, enabling decision advantage.

Dual-Mode

Performs passive radar and RF detection simultaneously, enhancing threat classification and improving targeting confidence.

Detects RF-Silent Threats

Identifies RF-silent targets that active radar misses, keeping pace with emerging threats.

Multi-Domain

Operates across environments through the ability to leverage a variety of complex RF signal sources, providing continuous passive radar.

Integration Ready

An open architecture streams real-time tracks into command-and-control systems, accelerating coordinated response with mission partners.

Software-Defined

Evolves through remote software updates instead of hardware changes or site visits, staying future-ready against emerging threats.



Technical Specifications

PERFORMANCE

PASSIVE RADAR & DF

1.7-6.0 GHz

RF DETECTION / TDOA

0.4-6.0 GHz

FIELD OF VIEW

120° Az × 90° El

TRACK ACCURACY

<2° Az · <1° El

TRACK UPDATE RATE

2 Hz

DETECTION RANGE

Passive Radar: 5-30+ km

RF: 7-25 km

SIZE · WEIGHT · POWER

SIZE

20 W × 39 H × 15 D in

WEIGHT

75 lb

POWER

335 W

POWER INPUT

DC: 20-33 VDC · MIL-1275

AC: 100-240 VAC · <6 A

INTEGRATION & DATA

PRIMARY I/O

100 Mbps / 1 Gbps RJ45 Ethernet

OUTPUT FORMAT

GeoJSON-based API

C2 CONTROL

JSON RESTful API

NETWORK

Correlated data is delivered to Hidden Level Display or third-party command-and-control systems.



[DEPLOYMENT OPTIONS]

Vehicle-Mounted

Integrate onto mobile platforms for sensing on the move.

Fixed-Site

Mount safely to:

Tripods

Poles

Rooftops/Towers

Fixed Infrastructure

[DESIGNED TO MEET INDUSTRY STANDARDS]

TRL - 8

TECHNOLOGY READINESS LEVEL

IP66

INGRESS PROTECTION

MIL-STD-810H

SHOCK · VIBRATION · TEMPERATURE

MIL-STD-416G

EMI / EMC