

# GBSAA RADAR SYSTEM

An integrated, flexible and scalable approach that **enables UAS flights in domestic airspace**

Unmanned aircraft systems (UAS) are integral to national defense and disaster relief plans. To train for these critical missions, UAS need to fly in the National Airspace System (NAS), such as civilian airspace corridors between military training areas.

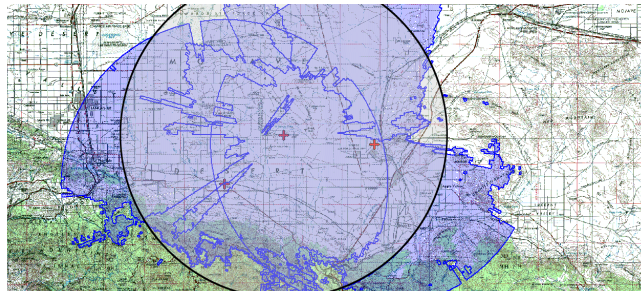
However, in the U.S., federal aviation regulations require aircraft operators to “see and avoid” other aircraft. This is a function normally performed by a pilot in the cockpit, which, by nature, UAS do not possess. Therefore, an alternative means of compliance is necessary, which GBSAA provides.

SRC's GBSAA solution allows for the operation of UAS in the NAS without a chase plane or ground observer. It utilizes ground sensors for detecting aircrafts, providing the UAS operator with the necessary information to maintain separation from other aircraft, allowing for the safe completion of missions.

SRC's approach to GBSAA is an integrated, flexible and scalable solution based on the *LSTAR*<sup>®</sup> system, a lightweight surveillance and target acquisition radar with a low lifecycle cost. The radars are remotely operated and send their detection and track information to a central fusion processor. This data is then correlated with existing information to provide a complete and robust surveillance network sufficient to meet the rigorous requirements of the FAA.

The small footprint of the *LSTAR* system allows for a variety of emplacement options, such as a tripod, tower, rooftop or vehicle. Its low acquisition and operational costs allow you to fill surveillance gaps by adding multiple sensors.

**OUR GBSAA SOLUTION  
IS BASED ON PROVEN  
TECHNOLOGY USED IN MORE  
THAN 600 FIELDED SYSTEMS**



Multiple operational features of the *LSTAR* system

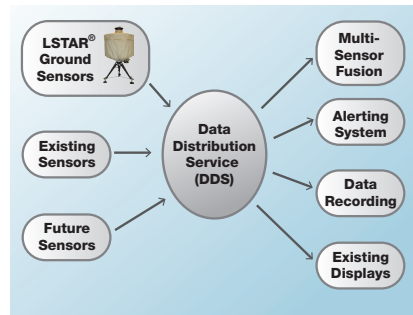
## GBSAA RADAR SYSTEM

The LSTAR system uses non-proprietary interfaces and an open architecture backbone, allowing it to be easily integrated with other sensors. The alerting system keeps the UAS operator aware of potential collisions, and a data recording ability helps with mission reviews. Users have the option of viewing data on our unique, user-friendly data display, or it can also be integrated into a customer-preferred data display.

SRC's GBSAA solution provides the information necessary to prevent unmanned aircraft systems from operating in the same space as civilian and commercial air traffic. Our approach is based upon proven technology used in more than 600 fielded systems. Fly with confidence – SRC has been *redefining possible*® with innovative solutions for our defense, environment, and intelligence customers for more than 50 years.

### APPLICATIONS

- Terminal area operations in a confined volume of airspace
- Lateral transit (corridor) operations – ability to safely transition through a predefined horizontal corridor within the NAS that bridges two volumes of airspace
- Vertical transit (cylinder) operations – ability to safely transition through a predefined vertical corridor that bridges lower and higher classes of airspace



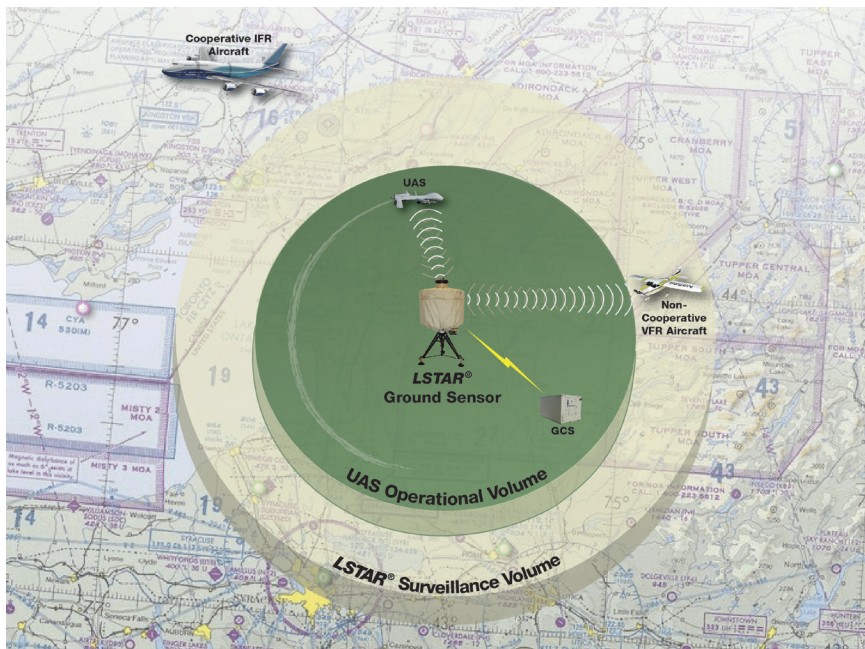
### FEATURES

- Provides 3-D target position
- > 98% track reliability
- High mean time between failure (MTBF)
- Full integrated logistics support
- Flexible installation options
  - Tripod or pedestal
  - Rooftop or tower
  - Vehicle mount
- Flexible power options (AC grid, generator, or 24 VDC vehicle)
- Unattended remote operation over IP network
- ASTERIX or custom interfaces

### BENEFITS

- Low lifecycle cost
- Easily transportable and rapid emplacement
- Ideal for integrated solutions
  - Cueing of visible/IR camera
  - ADS-B or Secondary Surveillance Radar

BELOW: image depicting how the GBSAA system operates



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