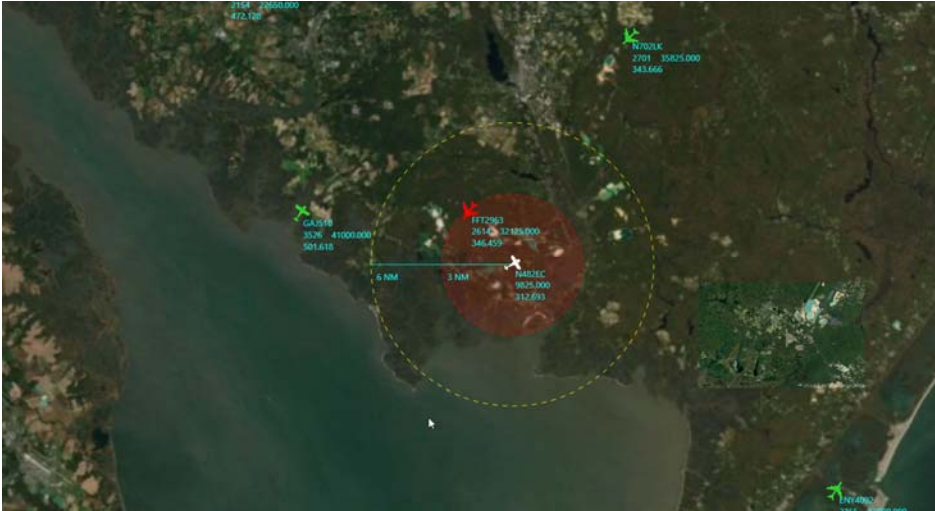


UAS Integration & Tracking Solution



SMS displaying Ownship with Custom Geofencing and Visual Alerts

Sunhillo's UAS-C system provides operators a fully customizable real-time situational awareness platform to enhance BVLOS flight operations safety and the capability to be fully integrated into Air Traffic Control (ATC).

The UAS-C system is designed to handle multiple UAS and has provided a modular approach to evolve and expand as the industry matures into full integration.

UAS-C centralizes surveillance information (i.e. data) so that it can be used by any connected UAS-C (UAS pilots, ATC, etc.).

UAV TRACKING:

Tracking of UAVs does not rely on Radar or ADS-B. By connecting to the UAS Ground Control System (GCS), Sunhillo's UAS-Connector converts the positional data that is already being sent from the UAV to the GCS into a radar or ADS-B message using Sunhillo's

proprietary software. This message can then be sent to ATC or a local command center and displayed with other radar and ADS-B targets for situational awareness. No equipment is required on the aircraft saving payload. The UAS-Connector can be used remotely via LTE or directly connected via Ethernet.

SITUATIONAL AWARENESS:

Both manned and unmanned aircraft pilots have a complete visual situational awareness picture. The UAS-Connector provides the UAS pilot with a See and Avoid display showing all aircraft (via Radar and ADS-B) in the immediate area as well as sending the location of the UAV to ATC or a local command center.

Sunhillo's UAS-C securely integrates with existing ATC Surveillance Systems to support ALL UAV operations flying BVLOS

Features

- Tracks all UAS regardless of altitude, distance, size
- Situational Awareness Display of manned and unmanned aircraft
- Tracking of UAV's does not rely on ADS-B or radar
- No equipment required on-board the UAV
- Integrate multiple UAS' for large operations

including flying in or through Controlled airspace regardless of size or altitude.

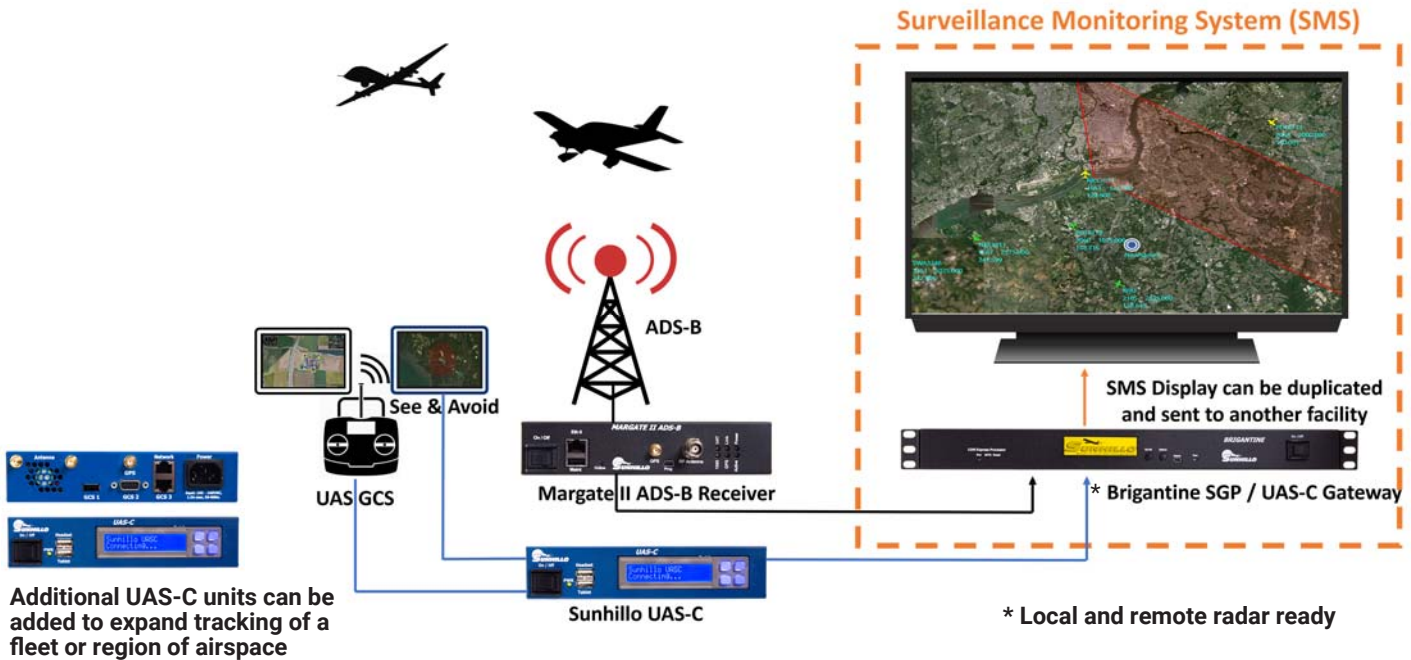
OPTIONAL GROUND-BASED UAS VOICE COMMUNICATIONS is available for communication between UAS pilots and ATC/ command centers.

WHO IS THE UAS-C SOLUTION FOR:

- Tracking one or multiple UAV's of any size without any on-board equipment
- Full surveillance integration of UAV's and manned aircraft in a local ATC Tower or command center
- Pilot in Command (PIC) who needs a See and Avoid display of all local aircraft for situational awareness for BVLOS operations or in controlled airspace
- UAS fleet operations
- Integrating with UAS platforms to provide situational awareness

UAS-C System CONOPS

This example of a single UAS solution is part of a modular solution that can be expanded with additional UAS-Connectors for large UAS operations or full ATC integration. Multiple UAS-Connector units can provide feeds from additional UAS' to feed a single SMS. UAS pilots using UAS-C will have see & avoid capability via a surveillance display and communications with all connected UAS'.



UAS-C Solution Components

UAS-Connector

- ➔ Connects to the UAV GCS to receive the positional information and forwards the data to the UAS-C Gateway
- ➔ Provides feed for UAS pilot See & Avoid Display

UAS-C Gateway

- ➔ Utilizes Sunhillo's ATC-grade Brigantine SGP platform to handle an operation or complete region of airspace
- ➔ Acts as the conduit to provide updated aircraft positions of all participating UAS-C units and an operational command center
- ➔ Receives the ADS-B or optional Radar feeds and processes them to the Surveillance Monitoring System (SMS) display
- ➔ Returns the fused surveillance data to the PIC for see & avoid

Margate II ADS-B Receiver Kit

- ➔ Kit contains the Margate II, ADS-B antenna, 100ft ADS-B cable, GPS antenna
- ➔ Accepts and decodes ADS-B to track equipped aircraft
- ➔ Sends the data to the Brigantine SGP / UAS-C Gateway for display on the SMS

Surveillance Monitoring System

- ➔ System includes PC and SMS Software
- ➔ Situational Awareness display of radar, ADS-B, and UAS targets.
- ➔ Sunhillo ADS-B or a radar feed required to display manned targets.
- ➔ Ownship moving map with boundary alerts
- ➔ Geographic filtering
- ➔ Image overlays
- ➔ No internet connection required
- ➔ Single Sensor Tracker and Multi-Track Fuser plug-ins available

Portable Tactical Kit Available

- ➔ The UAS Situational Awareness (USA) Tactical Kit combines these components in a portable carry-on sized waterproof case for easy transport

