

Targeting a Safer World®



ACCIPITER®
ACCIPITERRADAR.COM

***BVLOS Detect & Avoid
Surveillance Solutions***



WORLD'S MOST EFFECTIVE AND AFFORDABLE WIDE-AREA SITUATIONAL AWARENESS

Accipiter's mission is to provide the world's most effective and affordable wide-area situational awareness solutions for applications that impact the safety and well-being of the public, individuals and the environment.

Accipiter's BVLOS Surveillance Systems (BSS) acts as a force multiplier for the remote pilot in command (RPIC) who flies drones beyond visual line of sight (BVLOS) to carry out the mission. The BSS replaces the need for visual observers by automatically detecting intruder aircraft and alerting the RPIC to their presence so that avoidance actions can be taken if needed to prevent a near miss or collision.

GLOBAL PROVIDER OF HIGH PERFORMANCE RADAR SOLUTIONS

Accipiter Radar is a global provider of high-performance radar surveillance solutions built upon its patented Radar Intelligence Network™ (RIN) platform technology and sold under the Accipiter® brand. Accipiter's Surveillance-to-Intelligence™ (S2I) solutions are designed to automatically detect, track and provide alerts involving small uncooperative targets such as birds, drones and general aviation aircraft in the airspace, people and vehicles on the ground, and pleasure-craft in marine environments. The result is enhanced safety and security through unprecedented all domain awareness and understanding.

Applications include BVLOS commercial drone delivery and inspection applications, bird strike mitigation, counter UAS, perimeter security, border security, law enforcement, waterside safety and security, and environmental protection.

WORLDWIDE PRESENCE AND SUPPORT

Accipiter Radar Technologies Inc. is headquartered in Ontario, Canada and Accipiter Radar Corporation is headquartered in New York State, USA. Our extensive network of qualified strategic partners enables us to deliver high quality systems and services globally, ensures excellence in matching system selection and specifications to customer requirements, installation, training, documentation and local maintenance and technical support.

Our in-house team of experts in advanced radar and RF engineering, information technology and software development, partnered with in-house domain expertise in ornithology, aviation safety, homeland security and public safety deliver the most capable and affordable, situational awareness systems on the market today.



ACCIPITER'S RADAR INTELLIGENCE NETWORK™ PLATFORM TECHNOLOGY

Accipiter offers several carefully engineered BVLOS surveillance systems (BSS) to address your particular BVLOS drone mission; and they are all built on our patented and game-changing Radar Intelligence Network™ (RIN) platform technology. The RIN architecture ensures your system can easily adapt and grow with your changing threats and needs.

Our novel approach to wide-area, real-time detection, tracking, post processing, and display coupled with on-the-fly and interactive analytics applied to historical target data sets us apart from any other radar or sensor systems provider, by giving you unprecedented situational understanding and decision support.

Our BSS architecture allows any number of sensors to seamlessly connect over any IP network to our patented M³ Target Information System which forms the heart of all our delivered systems. And because the RIN was engineered to be radar agnostic, the right-sized 2D/3D radar sensor(s) can be selected for your BSS mission. Accipiter also provides an integrated ADS-B sub-system for cooperative aircraft tracking and a NOAA weather feed.

M³ TARGET INFORMATION SYSTEM

Accipiter's multi-sensor, multi-mission, multi-user M³ Target Information System (TIS) provides the ultimate in multi-sensor target data processing, query and retrieval, enabling rapid and efficient understanding that leads to better strategic and tactical decision making.

The TIS not only organizes, stores indefinitely, fuses, manages and distributes the rich sensor target data in earth coordinates; but it also drives an ecosystem of user apps we call Surveillance-to-Intelligence™ (S2I) tools to deliver tactical and strategic information to users. Furthermore, the TIS provides sophisticated radar/sensor slew-to-cue capabilities which control PTZ cameras to follow targets of interest, capture camera snapshots and video, and allow targets to be identified.

SURVEILLANCE-TO-INTELLIGENCE™ (S2I) TOOLS

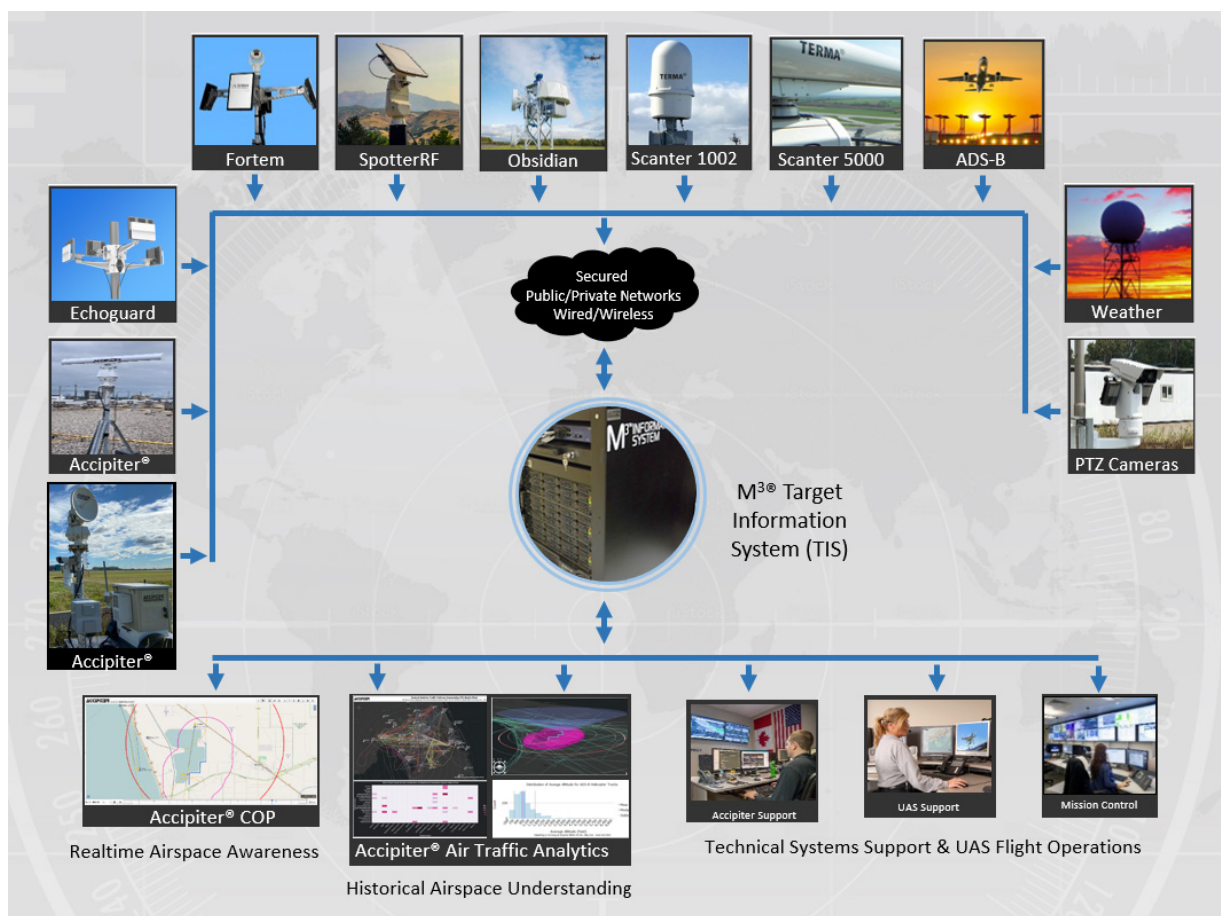
Accipiter provides a suite of S2I tools that are easy to use, securely from anywhere, right from your favorite browser.

Tactical tools such as the Accipiter® Common Operating Picture (COP) provide the remote pilot in command with real-time situational awareness including automated detection and alerting of intruder aircraft approaching the drone's operational airspace as defined by the RPIC. This allows the RPIC to rapidly assess the situation and execute appropriate go safe procedures while maintaining well clear. Pre-mission and pre-flight checks are also supported by the COP, including using radar slew-to-cue functionality to scan the airspace or specific approaching targets or aircraft before commencing operations. The COP, in different configurations and operating at different locations, also provides awareness to mission control and to BSS and UAS support teams.

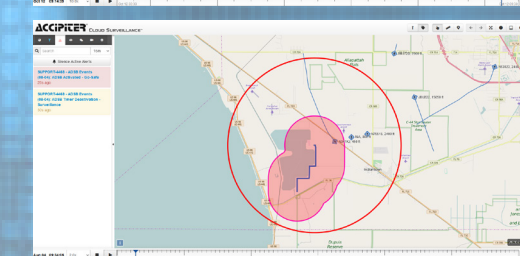
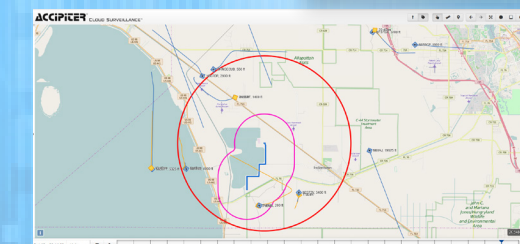
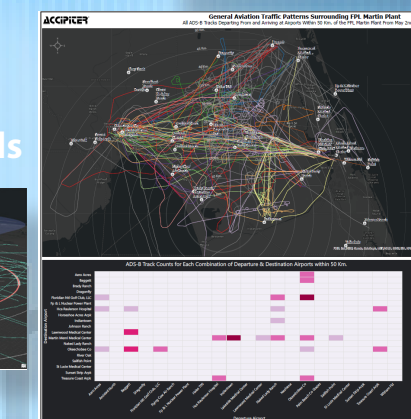
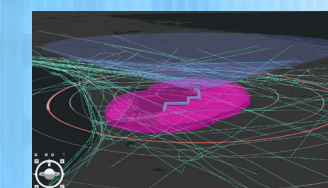
Our strategic S2I tools interactively or on-the-fly rapidly mine the TIS's historical target data to give analysts understanding of air target activity patterns. These tools are designed to provide business intelligence (e.g., when is the best time to fly), artificial intelligence (for example in the filtering of weather and birds and in improved complex alerting), and to support incident analysis and training, and regular risk assessment of the airspace.

The TIS also integrates with your air traffic management system, and enterprise GIS and business intelligence systems; supports customer tool development, any number of users and sensors, and insulates your decision support tools and standard operating procedures from sensor life cycle changes.

The Accipiter® BVLOS Surveillance Systems (BSS) architecture providing numerous system options.



Accipiter® S2I Tools





BVLOS

Detect & Avoid

AN ACCIPITER® BSS IS AN ESSENTIAL PART OF ANY BVLOS UNMANNED AIRCRAFT SYSTEM (UAS)

Whether you are carrying out inspection or delivery missions by flying a single drone over a short distance, or whether you are operating a fleet of drones over a wide area spanning thousands of square miles, a county or a state, there is an Accipiter® BVLOS Surveillance System (BSS) that is right-sized for you. The Accipiter® BSS is specially designed to affordably provide automatic detection, tracking and sophisticated alerting of intruder aircraft that enter the operational airspace of your drone so that the remote pilot in command (RPIC) can take avoidance actions as appropriate to mitigate risk.

The patented Accipiter® BSS incorporates an ADS-B sub-system to detect and track cooperative aircraft in the surveillance volume, and a radar sub-system to detect and track small, non-cooperative GA aircraft such as crop dusters, turbo prop aircraft and helicopters which typically fly at lower altitudes where deconfliction of the airspace is required. The M³® Target Information System (TIS) which forms the heart of every Accipiter® BSS provides critical sensor integration, target data integration and fusion, post-processing, management, and distribution functions, and drives and eco-system of Surveillance-to-Intelligence™ (S2I) tools that provide key decision support to the RPIC, historical traffic analytics including incident investigation, BSS health monitoring, and integration with third party UAS and mission command and control (C2) systems.

OPERATIONAL ADVANTAGES

Supports BVLOS Detect & Avoid function through:

- Various 2D and 3D radar sensors that plug and play as a result of built-in sensor agnosticity
- Advanced digital signal and data processing to detect and track intruder aircraft
- Integrated ADS-B for co-operative aircraft tracking
- M³® TIS that forms physical and virtual sensor networks providing smart, real-time alerting and historical, air domain traffic analytics
- Intelligent, automated, radar-activated cameras and slew-to-cue to identify intruders
- Various S2I tools deliver decision support to RPICs and other stakeholders anywhere securely via their browsers

Benefits:

- User applications for real time monitoring and alerting, historical event review, playback and analysis
- Unprecedented situational awareness and understanding
- Provides detect and alert functions to RPIC
- S2I tools and data will inform the UAS safety management system, support BVLOS waiver and operating certificate applications filed with the regulator, and will support continuous risk assessment, mitigation, and training
- Integrates with enterprise level GIS, UA and mission information systems and C2 interfaces
- The Accipiter® BSS grows with your mission's operational volume and right-sizes the necessary sensors to provide coverage
- Can be delivered as Radar as a Service (RaaS)



UNITED STATES

40 Centre Drive, Suite 300
Orchard Park, NY 14127
Telephone: 1 (716) 508-4432
Facsimile: 1 (888) 393-6421

CANADA

576 Highway 20 W
Fenwick, ON L0S 1C0
Telephone: 1 (905) 228-6888
Facsimile: 1 (905) 892-2249