

New York UAS Test Site

Griffiss International Airport, Oneida County



AGENDA

- FAA-Designated New York UAS Test Site
 - NY UAS Test Site Operations Center
 - SkyDome
 - UAS Mobile Operations Center
- Griffiss International Airport (KRME)



FAA-Designated New York UAS Test Site

- NY UAS Test Site, owned and operated by Oneida County, is one of seven FAA-Designated Uncrewed Aircraft Systems (UAS) Test Sites in the country. Unique features include:
 - Towered airport with Class D Airspace and access to Class A, C, E, and G airspace above varied terrain, inland lakes, coastal and maritime areas.
 - A **50-mile Beyond Visual Line of Sight (BVLOS) UAS flight corridor from Rome to Syracuse, NY** provides real-time reach back to a State-of-the-Art Operations and Data Management Center.
 - The Operations Center hosts a data wall with a 3D visualization capability for real-time Air Domain Awareness and four BVLOS pilot workstations.
 - The instrumented corridor includes a Saab ASDE-X Multilateration System, Saab SR-3 Surface Movement Radar, SRC LSTAR Radar, SRC R1400 Radars, and uAvionix pingStations.
 - Laboratory space and data collection capabilities are available to support all test needs.
- The NY Team supports government and private sector UAS technology research and development (R&D), safety case analysis and airworthiness for VLOS and BVLOS operations.
- The NY Team partners with NASA and FAA on UAS Traffic Management and Advanced Air Mobility R&D and provides a test environment that emulates the future National Airspace System (NAS).



NY UAS Test Site

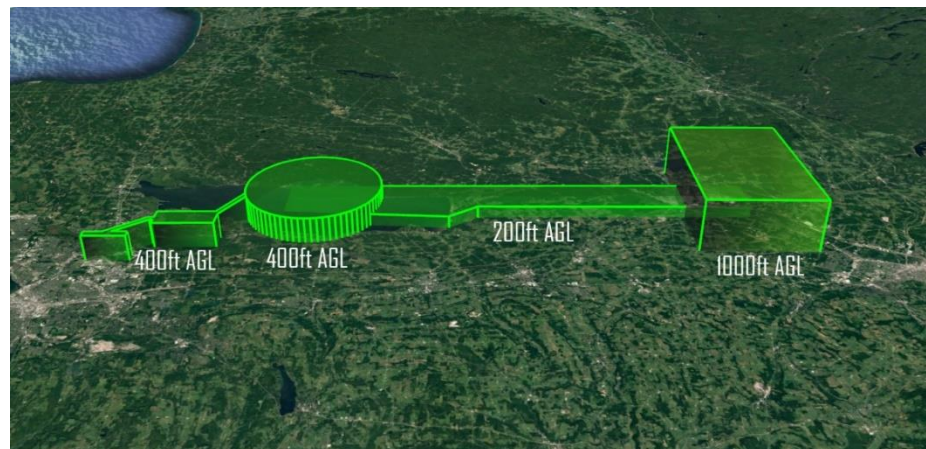
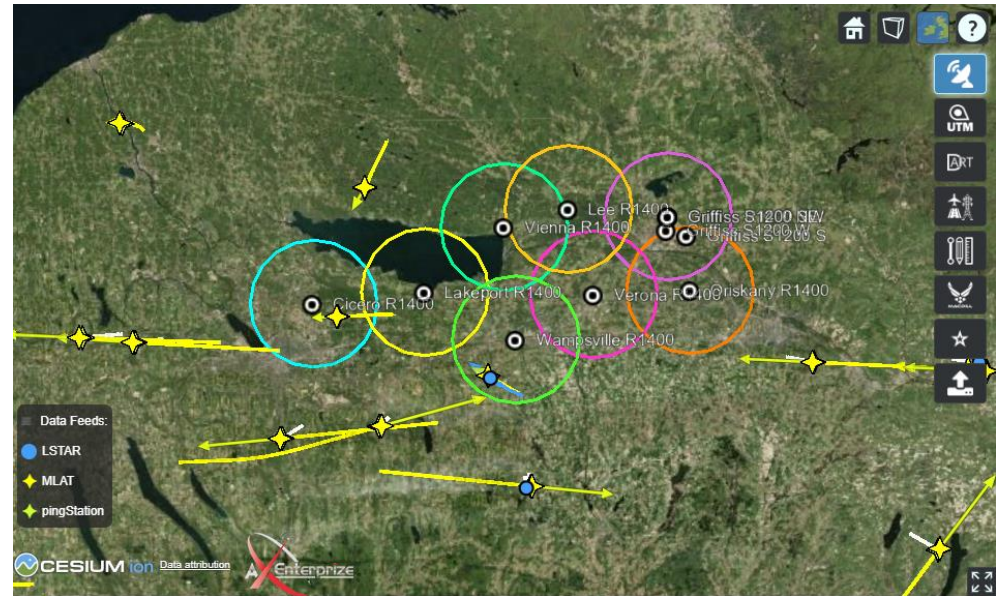
Operations & Technical Management

- **Mission:** Support the R&D needed to help accelerate the development of technology, procedures, standards, and regulations that will enable the safe integration of UAS, large and small, into the NAS.
- AX Enterprize, LLC (**AX**), serves as the managing partner and provides flight operations and technical support as needed.
 - Experienced personnel supporting crewed and uncrewed aircraft and payload testing since 2014.
 - AX flight operations team includes experienced BVLOS UAS pilots, Part 107 pilots, and commercial and private aviation pilots.
 - Experienced team of Aeronautical, Electrical, Mechanical, Network, and Software Engineers leading R&D of secure information management and communication capabilities for airborne, maritime, and ground platforms from concept through operational deployment.

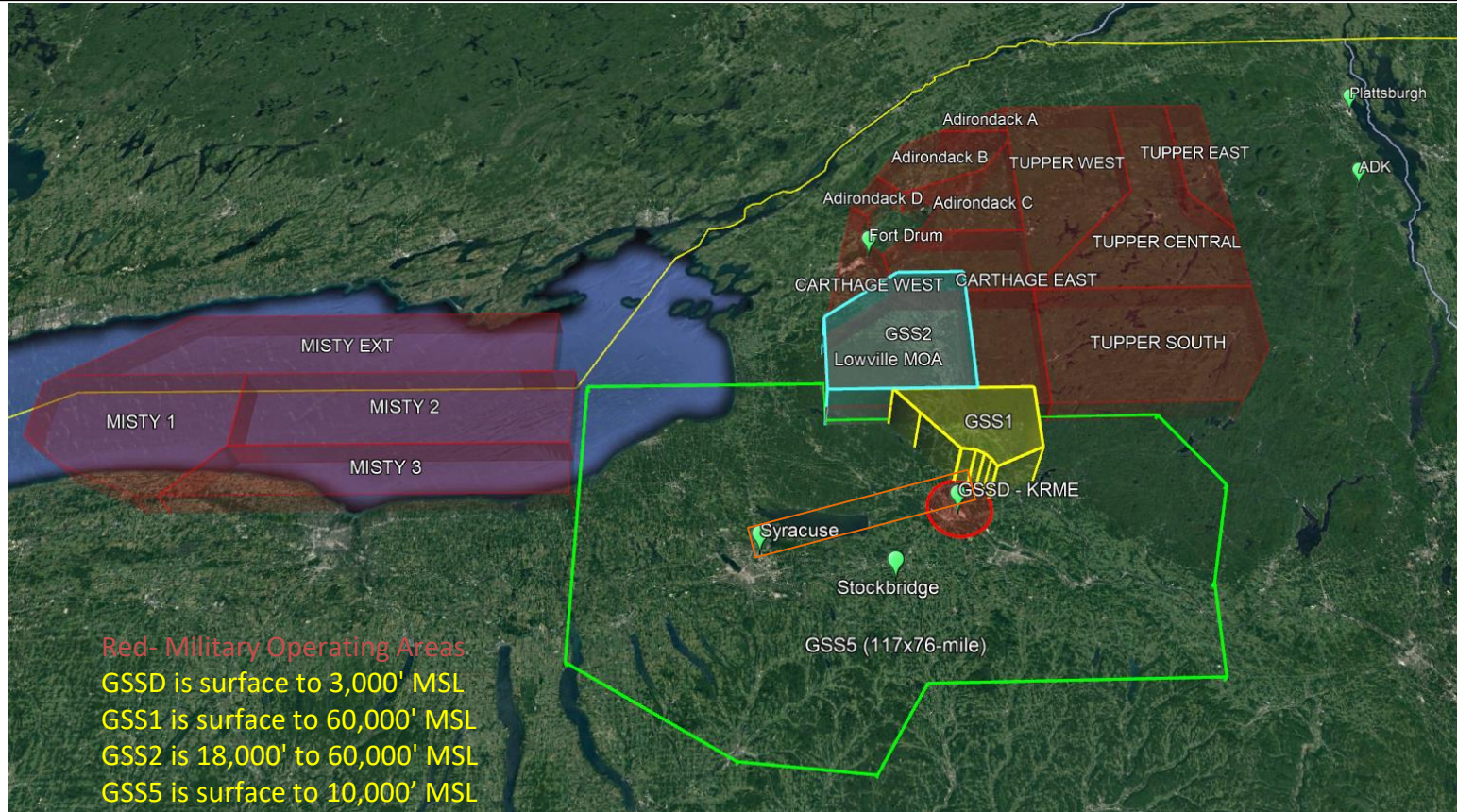


True Beyond Visual Line of Sight Corridor from Rome to Syracuse, New York

- 50 mile instrumented BVLOS UAS corridor provides real-time reach back to the NY UAS Test Site State-of-the-Art Operations and Data Management Center.
- Sensors include Saab ASDE-X Multilateration System, Saab SR-3 Surface Movement Radar, SRC LSTAR Radar, SRC R1400 Radars, and uAvionix pingStations.



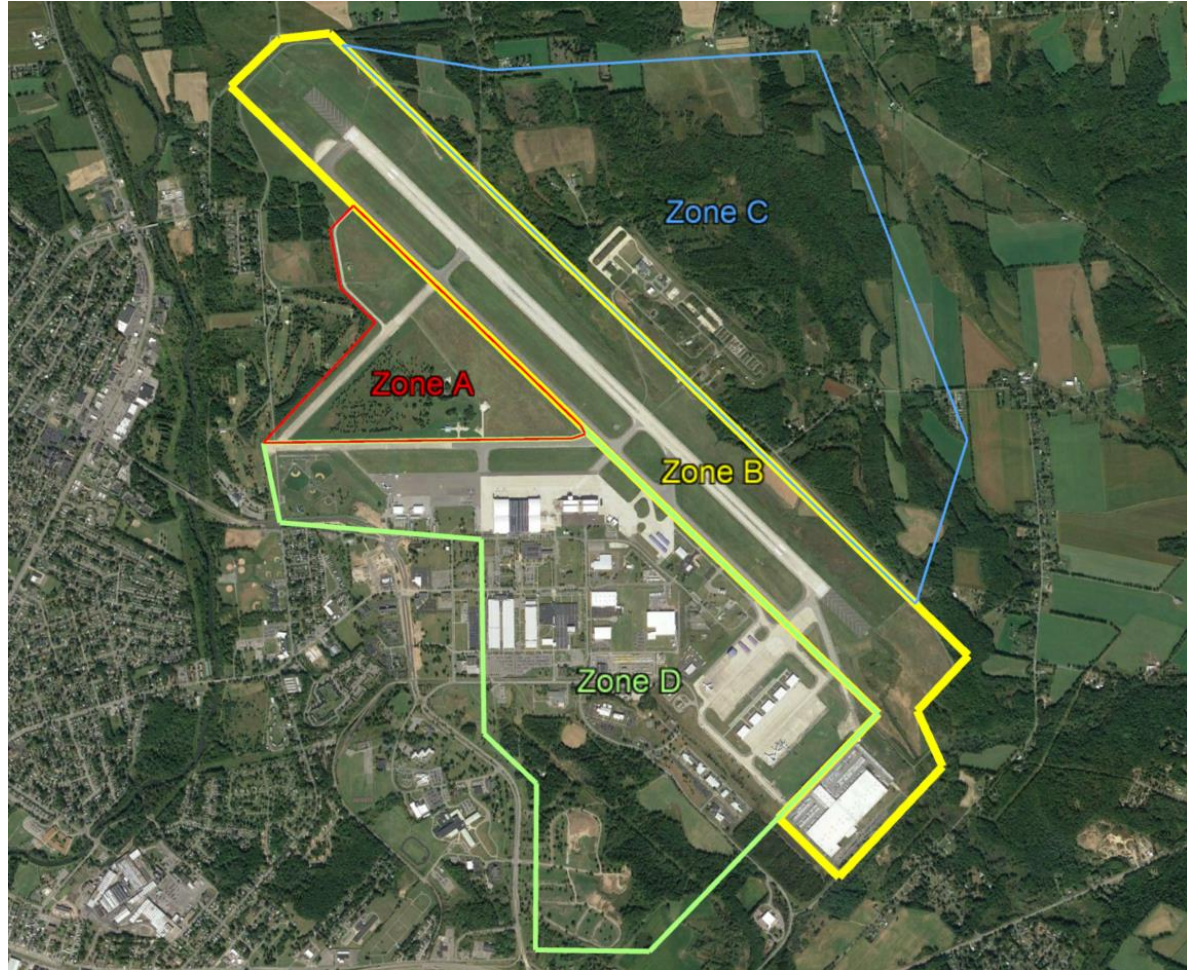
NY UAS Test Site Operating Areas



The FAA has issued over 70 Certificates of Waivers or Authorization to Griffiss for various UAS operations including small UAS to large fixed and rotary-wing aircraft.

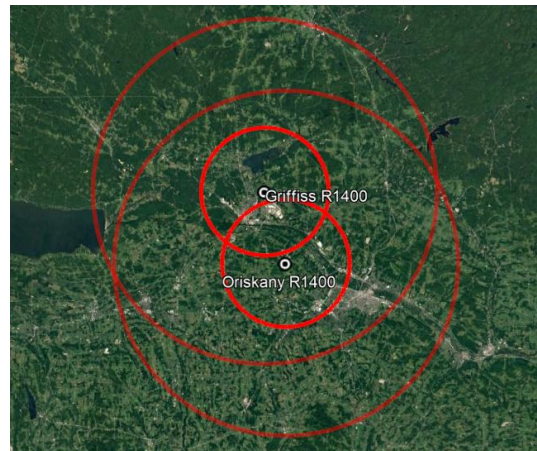
NY UAS Test Site Flight Zones

- Through a letter of agreement with Air Traffic Control, dedicated UAS operating areas have been established that enable multiple UAS operations to be executed simultaneously with crewed operations.
- Zone A (Red) – primary flight area - 250 acres
- Zone C (Blue) – secondary flight area - 965 acres
- Zone B (Yellow) – runway environment
- Zone D (Green) – business park area



NY UAS Test Site Sensor Coverage

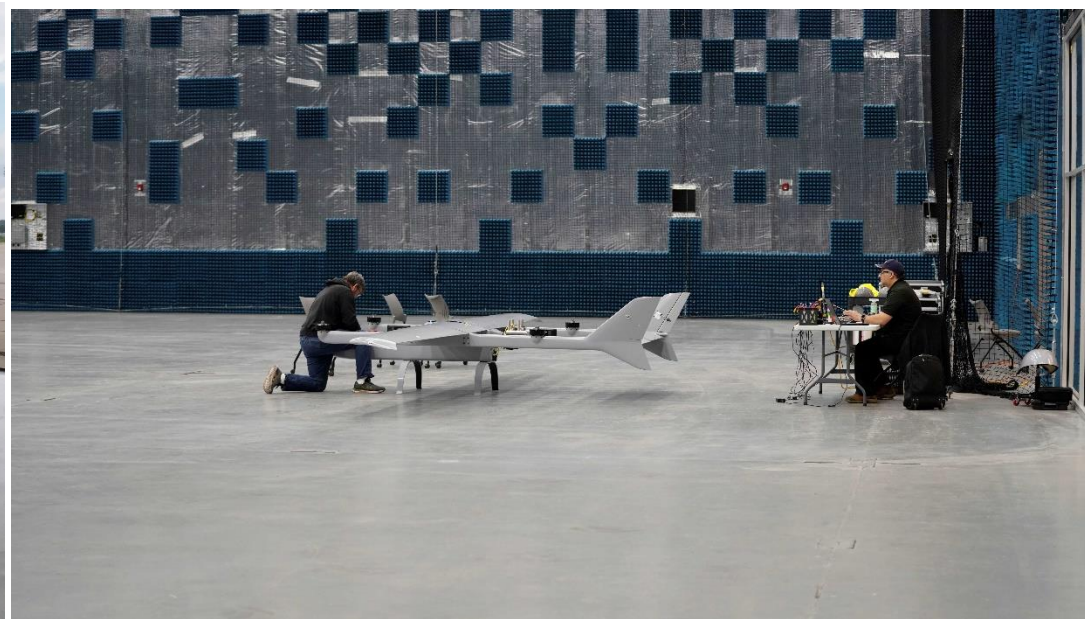
- The NY UAS Test Site sensor and radar network design objective was to detect small UAS (sUAS) at altitudes as low as 150ft AGL and general aviation at altitudes up to 8,000ft MSL.
- The sensors detect air traffic throughout much of New York State.
- ADS-B receivers detect aircraft throughout the Northeast.





UAS Platforms & Payloads

All Sizes Tested



SkyDome

Solve problems and know the risks before flying in the “wild”

- The largest, indoor/outdoor instrumented UAS experimentation facility in the country.
 - Adjacent to the NY UAS Test Site Operations Center
 - 150'(W) X 150' (L) X 50' (H) indoor UAS facility is a unique GPS-denied test environment with walls constructed to support varied Radio Frequency (RF) reflection and absorption emulating an urban environment.
 - Control room and reconfigurable test environment with data collection capabilities.
 - Connected to a 80'x50'x75'netted outdoor test area with planned expansion (**approx. 80'x150'x100'**)
- Additional SkyDome features include:
 - 16 instrumentation junction boxes are distributed throughout the walls and ceiling with RF coaxial cable and fiber optic cable reach back to the SkyDome Control Room and Data Server. Power is also provided at each junction box.
 - RF emissions in the license free Industrial, Scientific, and Medical (ISM) bands have no restrictions beyond those imposed by the Federal Communications Commission (FCC).
 - RF emissions in aviation safety critical frequency bands, including in or near Global Navigation Satellite System will be permitted on a case-by-case basis.
- Test advanced technologies including RF spectrum for command and control, counter UAS, Detect and Avoid (DAA), Vehicle to Vehicle (V2V) to communications, mobile networking, and autonomous swarms.



Mobile Operations Center

- Integrated with the Test Site or Stand-Alone Capable

- 3 pilot workstations with two 4K monitors each
- LTE Modem for internet connectivity
- Indoor and outdoor Wi-Fi access points
- Radios for ATC Tower and ground crew communication
- Indoor and outdoor 55" smart TVs
- 3 x 4MP cameras for event viewing and recording
- Onboard weather station with network interface
- 40' mast with 300-lb capacity and AC, DC, RF and ethernet cables
- Rear ramp for easily unloading aircraft and equipment



Griffiss International Airport (KRME)

- Owned and operated by Oneida County, the Griffiss International Airport at the Griffiss Business and Technology Park has inherited the unparalleled facilities from the former Strategic Command Air Force Base.
 - Griffiss holds FAA Part 139, Class IV Certification and is TSAR 1542 security compliant.
 - The airfield covers 1,680 acres equipped with a primary runway measuring 11,820' by 200' and an active Air Traffic Control Tower with Class D Airspace.
 - Runways support non-precision GPS approaches, and the Runway 33 precision Instrument Landing System (ILS) accommodates operations of all aircraft in civil and military fleets.
 - Airport amenities include wide body hangar facilities, Million Air Fixed-Base Operator (FBO), and Aircraft Rescue and Fire Fighting services.
 - Vehicles and equipment such as aircraft tugs and lifts are available to support test activities.
- Adjacent to the Air Force Research laboratory Information Directorate (Rome Lab), the Air Force's and nation's premier research organization for Command, Control, Communications, Computers, and Intelligence (C4I) and Cyber technologies.
- Home to
 - FAA-Designated New York (NY) UAS Test Site
 - Griffiss Institute Innovare Advancement Center
 - Mohawk Valley Community College (MVCC) sUAS Program
 - MVCC Airframe & Powerplant Mechanic School



Questions?



The FAA-designated NY UAS Test Site offers unique resources, airspace and terrain to support your organization's research and test needs.



For more information, contact:
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