


# FLIGHT TEST SERVICES



When developing sensors and other intelligence, surveillance, and reconnaissance (ISR) payloads for small manned or unmanned aircraft, surrogate platforms are often necessary for flight testing. The Space Dynamics Laboratory (SDL) is uniquely equipped to provide this flight test support, with both manned and unmanned aircraft, support facilities, and ready access to test range sites. SDL offers a full array of resources and services—including pilots, operators, sensor integration, and field support—at reasonable hourly rates, and our status as a University Affiliated Research Center enables an easy contracting process for Government customers.

## SUPPORT SERVICES

- Flight test planning & execution
- Manned & unmanned aircraft piloting
- ISR system operation
- Payload integration
- Mechanical design, analysis & fabrication; machining, custom composites & 3D printing
- Software systems for command, control, downlinking & data processing

## FLIGHT TEST HERITAGE

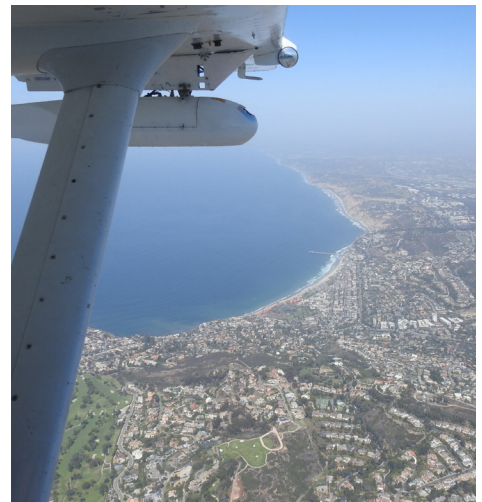
SDL has supported ISR system flight testing for Government and commercial customers for over 20 years. Past test and demonstration events include the following:

- Trident Spectre: Fort Story, VA
- Insight: Fort Irwin, CA
- Northern Edge: Fairbanks, AK
- Air to Ship Collaborative: San Diego, CA

## TEST RANGE ACCESS

SDL is located near multiple testing environments (valley, mountain, urban, riverine, and high desert):

- Logan, UT, civilian airspace
- Utah Test & Training Range (UTTR), Air Force-controlled airspace
- Dugway Proving Grounds (DPG), Army & Air Force-controlled airspace
- Idaho National Laboratories (INL), controlled airspace
- Testing is also supported at sites throughout the US



*In-flight data collection, San Diego, CA.*



# FLIGHT TEST SERVICES



Cessna Skymaster O-2A aircraft.



Technicians assemble a TigerShark UAS.



Angel VTOL UAS.

## SUPPORT FACILITIES

- Secure, environmentally controlled 80 ft x 70 ft (5,600 ft<sup>2</sup>) hangar at the Logan-Cache Airport (LGU)
- 25 ft tower/platform (full-sky line of sight)
- 20 ft field support trailer with tow vehicle
- SDL headquarters is located five minutes from the airport; facilities include a machine shop, electronics assembly lab, calibration equipment & cleanrooms

## AIRCRAFT ASSETS

### CESSNA SKYMASTER O-2A MANNED AIRCRAFT

- Two aircraft available
- 700 lb & 2 kW payload capacity
- 22U rack space
- Versatile mounts for sensor installation: four wing hardpoints & underbelly mounts
- Inline twin engines for stable flight
- Experimental category aircraft
- Telemetry data (GPS/INS) available
- Contractor owned, contractor operated

### TIGERSHARK UNMANNED AIRCRAFT

- Group 3 unmanned aerial system (UAS)
- 100 lb payload capacity
- Piccolo™ II autopilot
- 21 ft wingspan
- 80 kt max speed
- 14,000 MSL max altitude
- Up to 10 hours endurance
- Multiple payload locations (internal & external stores)
- Conventional wheeled takeoff & landing
- 32 hp Herbrandson 372cc two-stroke engine
- Government owned, contractor operated

## ANGEL VTOL UNMANNED AIRCRAFT

- Group 2 UAS
- 12 lb payload capacity
- Pixhawk® Cube Blue autopilot
- 10.5 ft wingspan
- 46 kt cruise speed
- 11,500 MSL max altitude
- 1.5 hours endurance
- Fully electric
- Vertical Takeoff & Landing (VTOL) fixed wing—no runway required
- Autonomous takeoff & landing—provides easy flight for users of any experience level
- Tool-free assembly—set up in less than 10 minutes
- FCC-compliant radios & frequencies
- Part 107 compliant

## SMALL UAS

- Custom built & commercial off-the-shelf
- Fixed wing & rotary wing
- Low size, weight & power (SWaP) stabilized cameras
- Bidirectional radios
- Part 107-certified pilots

## AUXILIARY EQUIPMENT

- EO/IR camera systems for documenting scene features & conditions
- Two-axis gimbals for steering & stabilizing payloads up to 50 lbs
- Tactical data links for real-time command, control & monitoring
- Pilot assist device for precise waypoint following

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