

Operator Performance Lab Mi-2 Twin-Turbine Helicopter

IOWA

OPL's two Mi-2 helicopters are flight-proven airborne testbeds for a variety of sensor and instrumentation packages, configurable for vertical lift flight test needs



LET OPL SERVE YOUR FLIGHT TEST NEEDS

opl.ecn.uiowa.edu
1801 S. Riverside Drive, Iowa City, IA 52246
319-384-0811
thomas-schnell@uiowa.edu
[youtube.com/ResearchAtOPL](https://www.youtube.com/ResearchAtOPL)

IOWA

Technology
Institute



FULL SERVICE FLIGHT TESTING

AIRCRAFT SPECS

- General:
 - Crew: 3 (1 pilot, 1 in co-pilot seat, 1 at rear flight test engineer station)
 - Length: 37ft 5in (11.4m)
 - Height: 12ft 4in (3.75m)
 - Main Rotor Diameter: 47ft 7in (14.5m)
 - Disk Area: 1,777.7 sq ft (165.15 sq m)
 - Powerplant: 2 x PZL GTD-350P turboshaft engines
 - 400 shp each
- Performance:
 - Max Speed: 110 kts (200 km/h, 120 mph)
 - Range: 240 NM (440 km, 270 mi)
 - Service Ceiling: 13,000 ft (4,000 m)
 - Disk Loading: 4.59 lb/sq ft (22.41 kg/sq m)

COMMUNICATIONS & DATA

- GPS
- 4G LTE datalink
- Provisions and infrastructure for GPS integration with customer payloads

SENSORS & INSTRUMENTATION

- Collins CAAS glass cockpit (MFD-268, CDU, DTU, VPM, PSM)
- Flight state recording and Linear Time Code synchronization
- Saint-Gobain 14" Radome and radar hardpoint on nose
- Hensoldt SferiSense 500 LIDAR and Sferion symbology generator
- Weather-proof electro-optics pods
- 4-channel high-res capture boards capable of capturing high-quality input
- Video recorders for SDI/DVI/HDMI/VGA/NTSC input sources
- Cognitive Avionics Tool Set (CATS)
- Navigation grade GPS/INS
- OPL proprietary remote process management
- Synthetic and Enhanced Vision Systems (SVS/EVS)

HARDWARE

- External payload hard-points (sensor pod, radio, camera pod, etc)
- Instrumented racks for multi-purpose applications
- High performance PC computers (Linux or Windows)
- 4kW 120VAC true sine wave inverter with buffer batteries
- General purpose outrigger mounts that can each carry 400 lbs.
- Optional external removable fuel pods for increased flight time
- External cable pass-through for quick integration
- Standardized payload mounting plates
- Centrifugal vortex dust filters for engine air intake particle separation
- Nose hard-point capable of supporting weather radar or other compatible sensor packages
- Additional removable backpack rack/hard-point aft on tail

INTEGRATED BIOCULAR HELMET MOUNTED DISPLAY

- Hensoldt Optronics Archer Head Tracker
- SA-Photonics SA-62 biocular color HMD
- 1080p helmet mounted forward-looking camera

OPTICAL IMAGERS

- Canon ME-20F color night vision (5 million ISO)
- Triplex Distributed Aperture System based on Canon ML-100-EF
- Sony UMC-S3CA CMOS imaging photometer
- Goodrich SWIR
- Cockpit and external witness cameras
- Provisions for gimbal and scanning optics on outriggers

