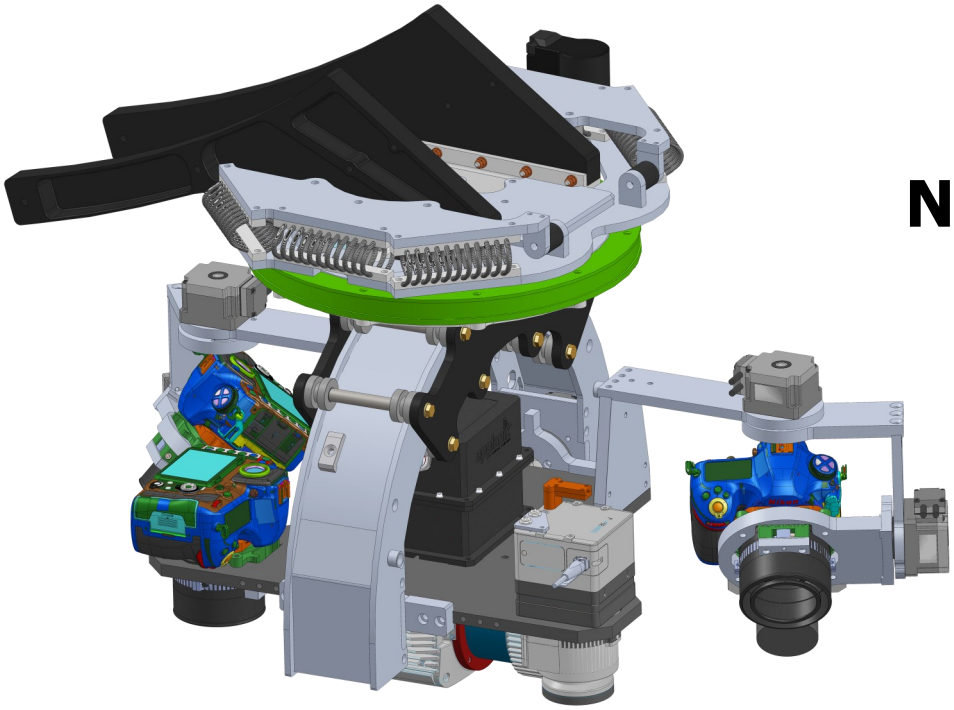
LEADAIR, INC
SKY HIGH TECHNOLOGY

HELIDAS

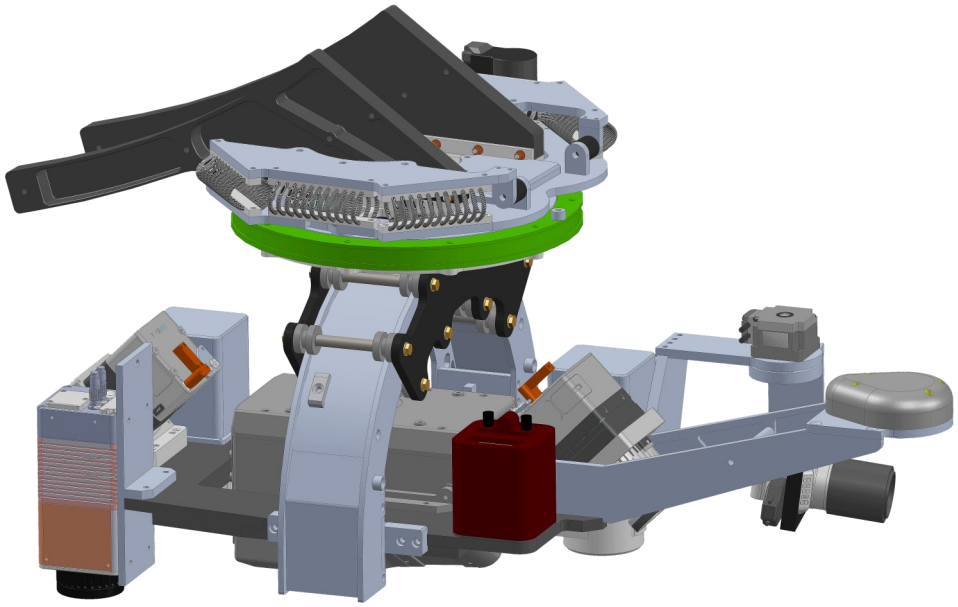
HELIcopter
Digital
Acquisition
System

Multi-Sensor Custom Acquisition System



New Designs!

Flexible Sensor Selection!



PROTOTYPE FLIGHT TESTING

Building on our successful **MIDAS** line of products, the **HELIDAS** efficiently captures sensor data from cameras, LiDAR systems, Infrared sensors, and other devices. Lead'Air's equipment is fully integrated with the Applanix line of INS systems, from AP15 to AP60 depending on the required accuracies for your application. In addition, we have complete integration with Riegl's Airborne LiDAR Systems.

Above is a prototype of a ***5 Axis HELIDAS*** customized Powerline system with an Applanix AP60 INS, Riegl VUX1-LR LiDAR, and 3 PHASE ONE iXM-RS 150 Digital cameras as Nadir, fore and aft RGB obliques. There is a Nikon D850 and Black Magic video for real-time targeting of towers (see page 3 for more information). In addition, there is a VARIOCAM Infrared sensor in a Nadir position.

Lead'Air owns and operates our own Bell 206B helicopter and two Piper Seneca's with 25" camera ports so we can fly and test our products in flight on a real project.

Real-time Targeting

Controlling the fully stabilized platform, the system can automatically follow a predetermined path or manually target the system using the joystick and real-time feedback from the video camera to the Blackmagic Video Assist display and capture system.

The system can optionally maintain a manually targeted position based on IMU data as well as auto -correct for horizon changes.

The systems can include a Nikon D850 and Black Magic video for real-time targeting of powerline towers as shown below.

NIKON D850 CAMERA AND BLACK MAGIC CAMERAS

TYPICAL SETUP IN HELICOPTER SHOWING NAVIGATION, VIDEO, AND IMAGE CAPTURE IN REALTIME

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MIDAS Computer Control Center

(the picture is only a typical system; your final MIDAS may be different depending on the number of sensors for your final design)

The MIDAS Computer Control Center is the brain of the MIDAS line of products. It will contain at least 9 computers with specialized interfaces to each one. Because most of our systems are customized for our clients we have created a design that is completely tailored to the sensors included in the build.

The MIDAS can grow or reduce in size to accommodate the number of electronic boards required.

Because the MIDAS is modular, it is field repairable with replacement boards available to ship to the customer overnight in most cases.

Warranty

As is our custom, the System is Warranted for four years, with a free overhaul after two years, required to extend the warranty to four.

The only thing our customers pay is the shipping costs, which will be shipped on your account. There are no additional charges for handling.

Low Altitude Acquisition

The system is particularly adapted to low-level flight, automatically tracking and firing at very low altitudes, and delivering very fine GSD better than 0.25 inch (0.6cm).

Equipment Testing in Actual Conditions

Distinguishing ourselves as one of the only companies in this industry to own their own Helicopter (Bell 206B Jet Ranger) and fixed wing aircraft, Lead'Air has the ability to test every system we create in actual flight conditions.
One of our first helicopter test flights of a ***HELIDAS*** is shown below. Testing every piece of equipment we have created for our clients is our way of assuring the quality and durability of our products meets our own rigorous standards before it reaches our customers hands.

The ***HELIDAS*** falls well within the allowable limitations of the Meeker Nose Mount STC SR01654LA that will carry a load at up to 120 lbs.

The ***HELIDAS IMU*** compensating helicopter mount allows for +/- 25° roll, +/- 15° pitch and +/-45° yaw. These extreme angles allow for full stabilization of the aircraft tracking the fight lines, greatly enhancing productivity and assuring orthogonal image geometry.

Do you have different equipment than we are showing? Since we manufacture our equipment onsite, most of our systems can be reconfigured and we can create a custom mount configuration to fit your equipment. ***Just email salesusa@trackair.com for a quotation.***

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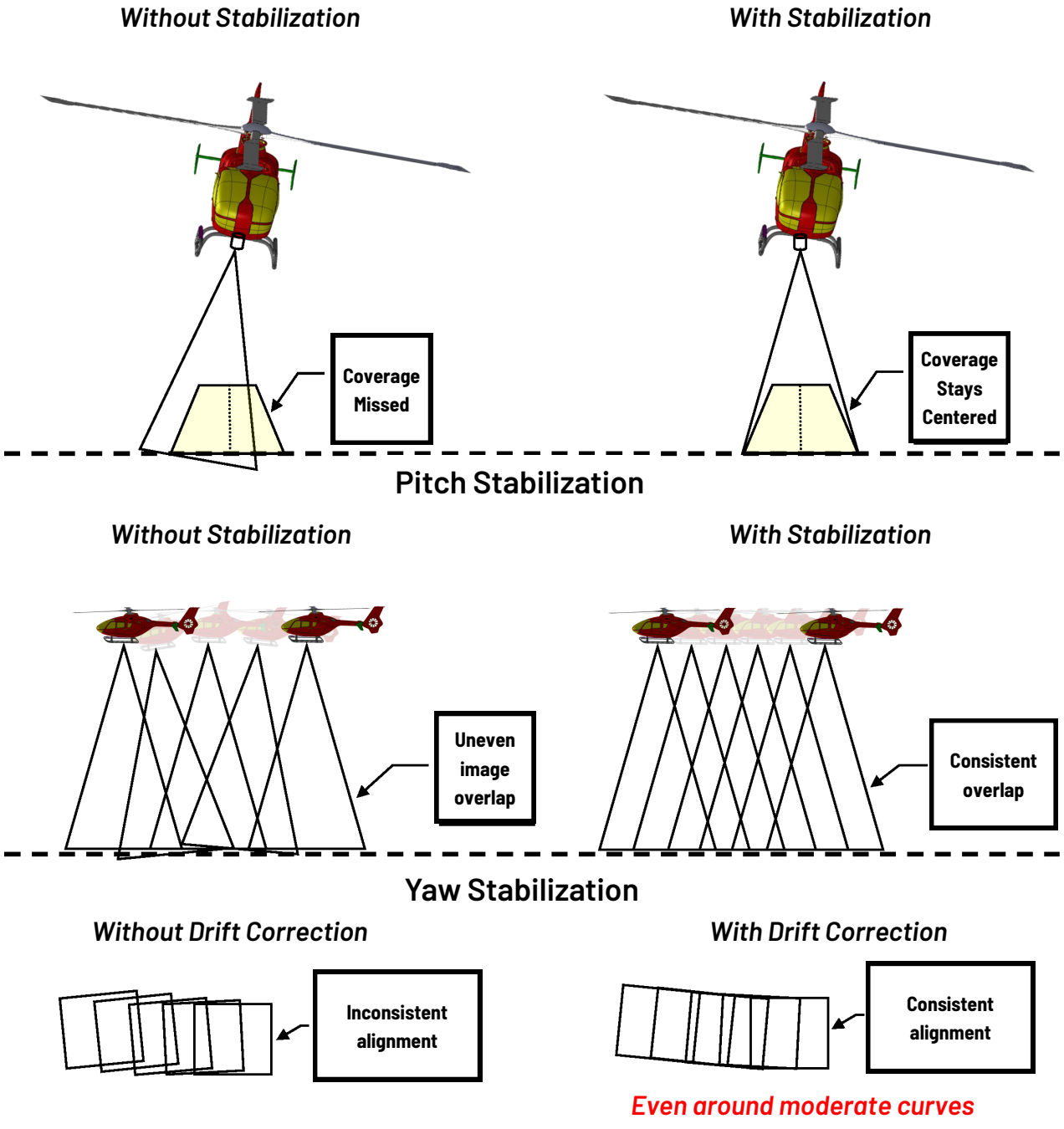
Helicopter Survey Solutions

Full Sensor Stabilization Advantages



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TECHNICAL SPECIFICATIONS (Sample based on Nikon D-850 sensors)

Power requirements	22-32 Volts at 24-30 Amps
Size	19.6 x 18.75 x 17.3 inch (W/H/D) (498 x 476 x 440 mm)
Navigation/camera control	Integrated X-TRACK flight mgmt. system
GPS	Integrated Garmin 18; any external GPS
FMS interface	Flat panel touch screen
Drift measurement	Automated from IMU data
Cameras	Nikon D850 46 MP 1 vertical, 4 oblique
Sensor	14 bit
Nikon Images	5 X 46 MP - 1 Vertical and 4 Oblique
Image Quality control	Integrated real time viewer with display
Image storage	6 Solid State SATA SSD Drives

(Cameras may vary for your particular application e.g. Nikon, Hasselblad, Phase One, or a combination)

Performance	0.8 second interval with Nikon D850
Altitude	Max 18000 feet
Operation temperature	32-140 Fahrenheit (0-60 Celsius)
Shock/vibration	Pneumatic shock absorbers
IMU	Integrated Applanix AP 50 or 60

Fully Stabilized Camera Mount

Drift correction	Motorized +/- 30 °
Pitch/roll leveling	Motorized +/- 15 °/+/- 40°
Camera angle	Fixed: 30° to 60° brackets available
Shock/vibration	Pneumatic shock absorbers

Weight and Balance

MIDAS computer system w' frame, POS, cables and disks	~ 101 lbs. ~46 kg
HELIDAS Mount (including cameras)	~ 106 lbs. ~48 kg
HELIDAS Backup Station	~ 35 lbs. ~16 kg
Total	**~ 242 lbs.. ~110 kg**

Approximate weights only. Each custom system is weighed after completion and all specifications are included in a final report.

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