

# INDAGO 3

Vertical Takeoff and Landing  
Systems For Military Markets

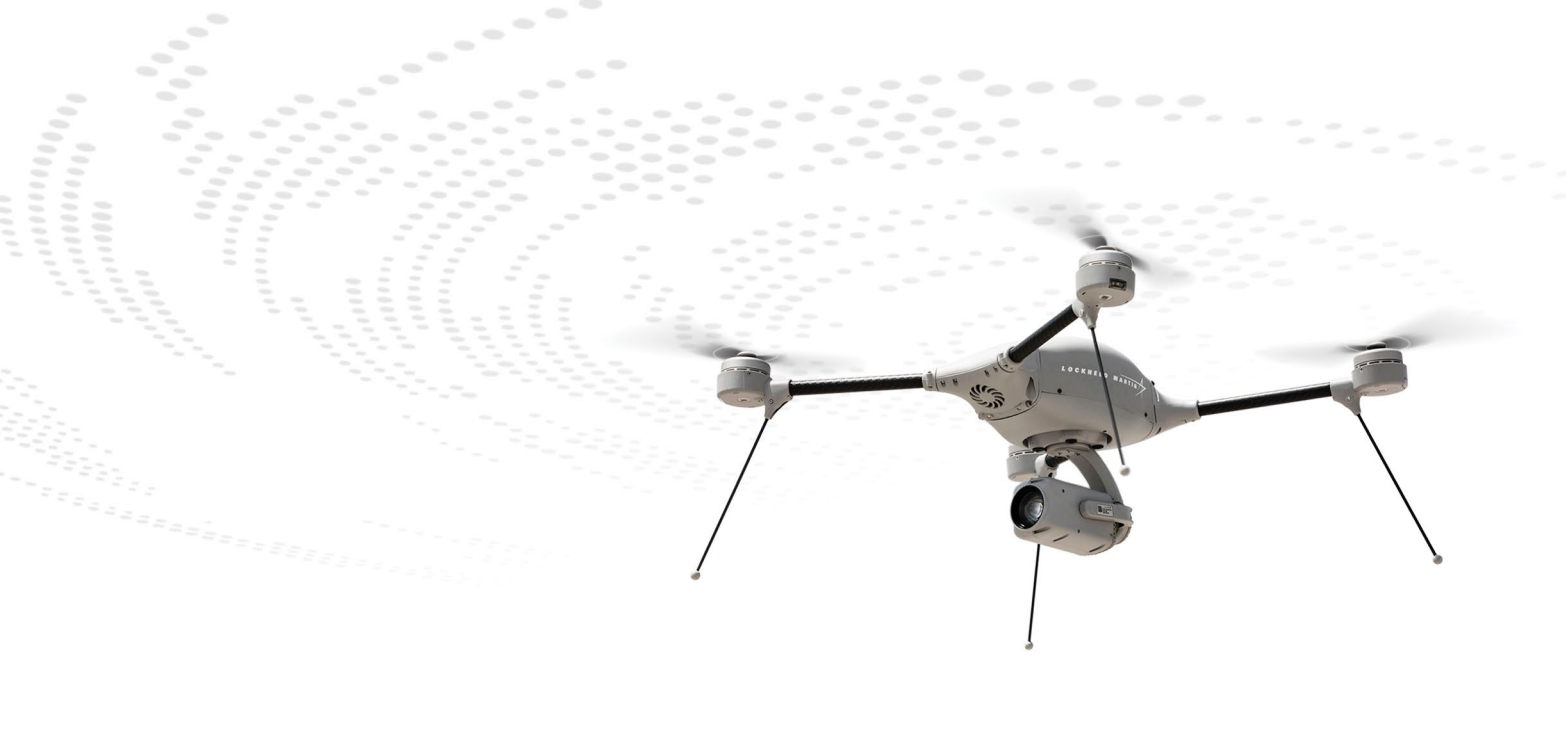
**LOCKHEED MARTIN** 



## Explore. Examine. Investigate.

The Indago is a Vertical Take-off and Landing (VTOL) Small Unmanned Aircraft System (sUAS) which was specifically designed and built to be a portable, rapidly deployable, Intelligence, Surveillance and Reconnaissance (ISR) platform. Indago System development began over 10 years ago with the development of the highly advanced and dependable Kestrel autopilot. Completing field trials and low rate initial production in 2012, more than 300 Indago Systems have been successfully fielded. Today, with the continued refinement and feedback from our customer base, our latest sUAS solution is the Indago 3 system. With a low acoustic signature, ruggedized dependability, and rucksack portability the Indago 3 System is successfully deployed in support of military operations and covert missions globally.





# Accessories



## Features Include:

- Man packable, compact folding design
- Setup in 60 seconds, airborne in 2.5 minutes
- Whisper quiet, rugged, all-weather capability
- Operation via handcontroller or windows based laptop
- with external antenna
- Tactical Scalable MANET (TSM) encrypted radio
- Hot-swappable payload options for ISR, battlefield situational awareness, and target acquisition
- Industry-leading image stabilization with vision tracking
- Configurable Failsafe behaviors

## Specifications

Endurance .....	50 to 75 minutes with Payload
Payload .....	Multiple, hot-swappable payloads
Range .....	10 km line of sight
Dimensions .....	32 x 32 x 7 in (12 x 9 x 7 folded)
Weight .....	4.4 lbs. 2050 grams with payload
Operating Altitude .....	10-500 ft AGL (typical); 18,000+ MSL
GCS .....	Touchscreen handcontroller with Virtual Cockpit Touch or mGCS

## Hand Controller

- For small UAS; fixed-wing and VTOL
- Stand-alone, untethered operation
- Secure digital data link
- Windows based operating system
- Intuitive user interface developed with feedback from tens of thousands of flight hours
- Small ergonomic design with large outdoor readable touch-screen
- Ruggedized and weather resistant (IP 55)
- Lightweight (3.1 lbs.)
- Long run time (4 hours)

## Battery

- Provides 50 to 70 minutes of Indago 3 flight time with payload
- Packaged in durable Kevlar/carbon fiber enclosure
- Intelligent with self-balancing/store-charging ability
- Integrated fuel gauge for quick indication of state of charge



## System Charger

- Allows for simultaneous charging of both Indago and hand controller batteries
- Accepts wide range of input voltage (120-240 AC, 10-28 DC)
- Ultra-reliable (waterproof when fully closed)

## System Packaging

- Major system components protected in carbon fiber "soft-shells"
- Full System weight is less than 10 lbs
- Additional packaging options available upon request



# Payloads

Indago payloads are designed for military operations. Combined with the aircraft's whisper quiet acoustic signature, the high resolution camera systems are able to provide users with incredible zoom capability used to accurately identify people, objects, vehicles, and weapons. The EO or daytime cameras include low light settings which are useful during twilight, night time, and cloudy days. The IR cameras providing thermal infrared capabilities for covert night time operations providing heat signatures in white hot, black hot, and heat map color displays for detailed analysis and situational awareness in the darkness.



## ION 30X Payload

### Features Include:

- 30x optical zoom provides industry leading zoom capability providing highly detailed target identification and ISR operations
- Crisp 720P live video feed from large global shutter imager
- Industry-leading 3-axis mechanical and electronic stabilization keep the image rock solid in even the worst environmental conditions
- Vision processing provides feature tracking of objects, reducing operator workload
- Real-time Geo-location and Geo-pointing capability

### Specifications

Video .....720P global shutter  
Optical Zoom .....Level 30x (2° fully zoomed FOV)  
Stabilization .....3-axis mechanical and electronic  
Weight .....470 grams

## Noctis IR Payload

### Features Include:

- Dual FLIR Boson IR cameras provide 640x512 video and still imagery streamed to Hand Controller and recorded onboard
- Digital zoom from 32° to 2° FOV with seamless transition between cameras
- Integrated laser pointer for high accuracy targeting
- Vision processing provides feature tracking of objects, reducing operator workload
- Real-time Geo-location and Geo-pointing capability

### Specifications

Image Capture .....32° Wide HFOV Lens, 8° Narrow HFOV Lens  
Video .....IR: 640x512  
Laser Pointer .....1 50 mW low power, 650 mW high power  
Stabilization .....Roll/Pitch mechanical and electronic  
Weight .....570 grams



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