



# Nexus 800 - Powered By HYPACK

The Nexus 800 LiDAR and Photogrammetry mapping solution includes the following key components:

## HYPACK

- HYPACK MAX -HYSWEEP software – Perpetual License.
- Access to low cost software maintenance program and industry leading support team.
- Powerful data fusion engine and data synchronization of UAV sensor data.
- LiDAR Boresight Calibration Module.
- Direct data georeferencing and direct access to all sensor acquisition parameters.
- Control LiDAR acquisition parameters and filters in real time.
- Geotag photogrammetric images in post processing with LiDAR point cloud data.
- Real-time geotagging of thermal infrared (IR) images.
- Real time data views and access to the onboard UAV computer during missions from the ground station.
- Access to project planning, acquisition, data processing, and final product generation.
- Powerful Tin module for volumetrics, visualization, and report generation.
- 1-year subscription to HYPACK maintenance plan.

## Infinite Jib UAV

- Infinite Jib Nexus 800 Y6 Coaxial Airframe (Craft dimensions: 120cm Width x 50cm Height).
- High performance UAV. Excellent wind stability. Heavy lift capability.
- Low RF signature allows sensitive sensors to perform optimally.
- Robust Window 7 64-bit Pro on-board computer with dual core i7 1.8 Ghz, 480 Gb of storage, 16Gb Ram.
- Ruggedized laptop serves as a ground station for the live remote PC view and control.
- Digital data link with extended range with ample bandwidth for complex, fast and secure data transfers.
- Commercial flight control system with enhanced satellite locking position, combined interface. and flexible configuration for complex, precise flight control.

- 14 Channel RC Radio Transmitter for manual flight control.
- Industrial grade autonomous waypoint flight control and telemetry via included iPad.
- 3 Selectable On-board Points of Views, forward, downward, wireless LED data link RSSI indicator.
- 7" LCD monitor and tripod displays 1.5 W at 5.740 Ghz. Live video and telemetry read outs.
- Custom servo driven, stabilized gimbal system for camera or thermal sensor.
- Redundant in-flight voltage displays with other telemetry such as Altitude, Speed, Distance from Home, etc.
- 6 x 11,000 mAh 6S LiPo battery packs (2 required per flight)
- Dual Battery Charger to charge two batteries at the same time
- AC/DC power converter supplies 24 Volt DC for in-house charging

## Sensor Payload

- Velodyne Puck LITE LiDAR sensor
- SBG ELLIPSE 2-Dual Antennae INS System with RTK Option (separate NTRIP account required)
- RTK Access via NTRIP Client or 400/900 MHz Wireless Modem
- Canon Camera with prime f2.8 EF-S 24mm lens
- FLIR VUE PRO (subject to US Government authorized exportation rules)



## Additional Components

- Flight Simulator software.
- Panasonic Toughbook CF-30 rugged laptop.
- Apple iPad.
- Field Maintenance Kit includes spare propeller set, metric tools, charging bag & assortment of hardware.
- Aluminum flight case effectively transports all avionic components.  
Case Dimensions: 95cm x 50cm x 60cm
- Impact resistant resin case packs all power train components including LiPo packs  
Case Dimensions: (58cm x 47cm x 30cm)

## Infinite Jib and HYPACK Training:

- 3 day HYPACK training covering all phases of LiDAR surveys using HYPACK and HYSWEEP. System preparation, calibration, data collection, and post processing.
- 2-day separate flight systems training at Infinite Jib's Schomberg, Ontario, Canada location including an overview of the aerial platform operations and basic flight maneuvers.
- Shortly after conclusion of flight training a loaner Surveyor 630 Unmanned Aerial System to practice/develop flight skills until the delivery of the NEXUS system.
- Training and travel expenses are not included with the system.
- Flight certification or license not included.

