

Nexus 800

Unmanned Aerial System

Taking Aerial Survey
and Mapping
to the Next Level



Intelligent Scientific/Industrial Remote Sensing

The NEXUS 800 UAV is highly effective in applications where turn around time is paramount

- When collecting very high-resolution site data is paramount to the project
- When you need to survey an area with quick turn-around time requirements
- When inclement weather limits the use of other UAVs
- To increase work efficiency and optimize onsite personnel resources
- When assessing a remote area that might be hazardous for survey teams

The Nexus Benefits:

- Real-time sensor data quality control
- Real-time ground coverage
- The ability to safely make critical assessments
- Efficient survey operations and better situational awareness
- Minimal post-processing and reporting time

Designed and supported by: HYPACK, Infinite Jib, SBG Systems, and Velodyne

- The standard Nexus 800 UAV payload includes:
- Velodyne Puck Lite (16 Channel)
- FLIR Vue Pro Thermal Camera
- SBG Ellipse-D Dual GNSS Inertial Navigation System
- RGB Camera
- HYPACK/HYSWEEP
- Hi-performance on-board computing with the Intel Core i7



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Nexus Aircraft System Component List

- Nexus 800 Y6 Coaxial Airframe
- Durable construction of the unit, designed for operations in extreme conditions
- The gimbal is servo-powered to provide greater flexibility in payloads allowing for changes to the camera, lens selection or different sensors.
- Window 7 Pro on-board computer
- Velodyne Puck LITE LiDAR sensor, FLIR Vue Pro Thermal Camera and Canon Camera
- Panasonic Toughbook CF-30 is provided to allow remotely control of the on-board CPU running HYPACK software
- SBG ELLIPSE Dual Antennae INS System with RTK options via NTRIP (separate NTRIP account required)
- Digital data link with extended range provides bandwidth provides secure remote access to the on-board CPU.
- Infinite Jib™ systems feature a commercial grade flight control software that we selected due to its software options, ease of use and proven reliability.
- iPad in a protective case serves as ground station for waypoint flight control and telemetry readouts
- 6 x 11,000 mAh 6S lithium polymer batteries (LiPo) battery packs (note two battery packs are required for flight).
- The charger charges two LiPo battery packs simultaneously
- A 24 Volt AC to DC power converter for shop charging.
- Field Maintenance Kit includes: voltage tester, spare propeller set, metric tools, charging bag & assortment of hardware

Nexus training program includes:

3-day Nexus system operation instructed provided by Infinite Jib™ at the Schomberg, Ontario, Canada location.

3-day HYPACK training covering all phases of LiDAR surveys using HYPACK /HYSWEEP at the Hypack, Middletown, Connecticut, USA location.



BASIC TECHNICAL SPECIFICATIONS

ENDURANCE:

Up to 15 minutes LiDAR and Canon Camera

SPEED:

Waypoint flights up to 15km/h, Manual flight up to 36km/h

RANGE:

Line of sight

WIND TOLERANCE:

Up to 50km/h gusts without survey quality degradation

ENVIRONMENTAL TEMPERATURE RANGE:

-10° to 40° C (colder temperatures with training)

ALTITUDE:

Most flights 30-50m AGL (max alt 5800m)

UAV SIZE:

DIMENSIONS H - 54cm, L - 110cm, W - 122cm

WEIGHT: 10.23 Kg (with batteries, ready to work)

UAV CASE SIZE:

H - 60cm, L - 95cm, W - 50cm

RESIN CASE SIZE:

H - 23cm, L - 58cm, W - 46cm

Implementation support

No Excuses, No Compromise

Round the clock... "We never close" commitment to producing and supporting the best UAVs in our class.

We understand the importance of a smooth implementation of UAV technology into your company and we want our clients to be successful. To achieve that, we make sure to provide you with our full support from day one. Starting with first contact, we work with you to understand your requirements, provide you with expert advice and recommend the UAV most appropriate for you.

If your requirements demand the accuracy and performance of one of our heavy lift, remote controlled aircraft systems, we will work with you to incorporate any custom features that may be required and determine your delivery and training timeline. As the manufacturer, offering this build to order process provides our client with the advantages to target specific requirements for their UAV investment.

Transport Canada Compliant UAS Design



Transport
Canada

For information about Infinite Jib™ UAS solutions, contact your Infinite Jib™ representative

Call 1-905-859-8857 or email: sales@infinitejib.com

infinite jib™
inc.

