VEXCEL
IMAGING

ULTRANAV V7

Boost your flight productivity

ULTRANAV V7

We've got you covered

EMILIO
ULTRANAV CUSTOMER

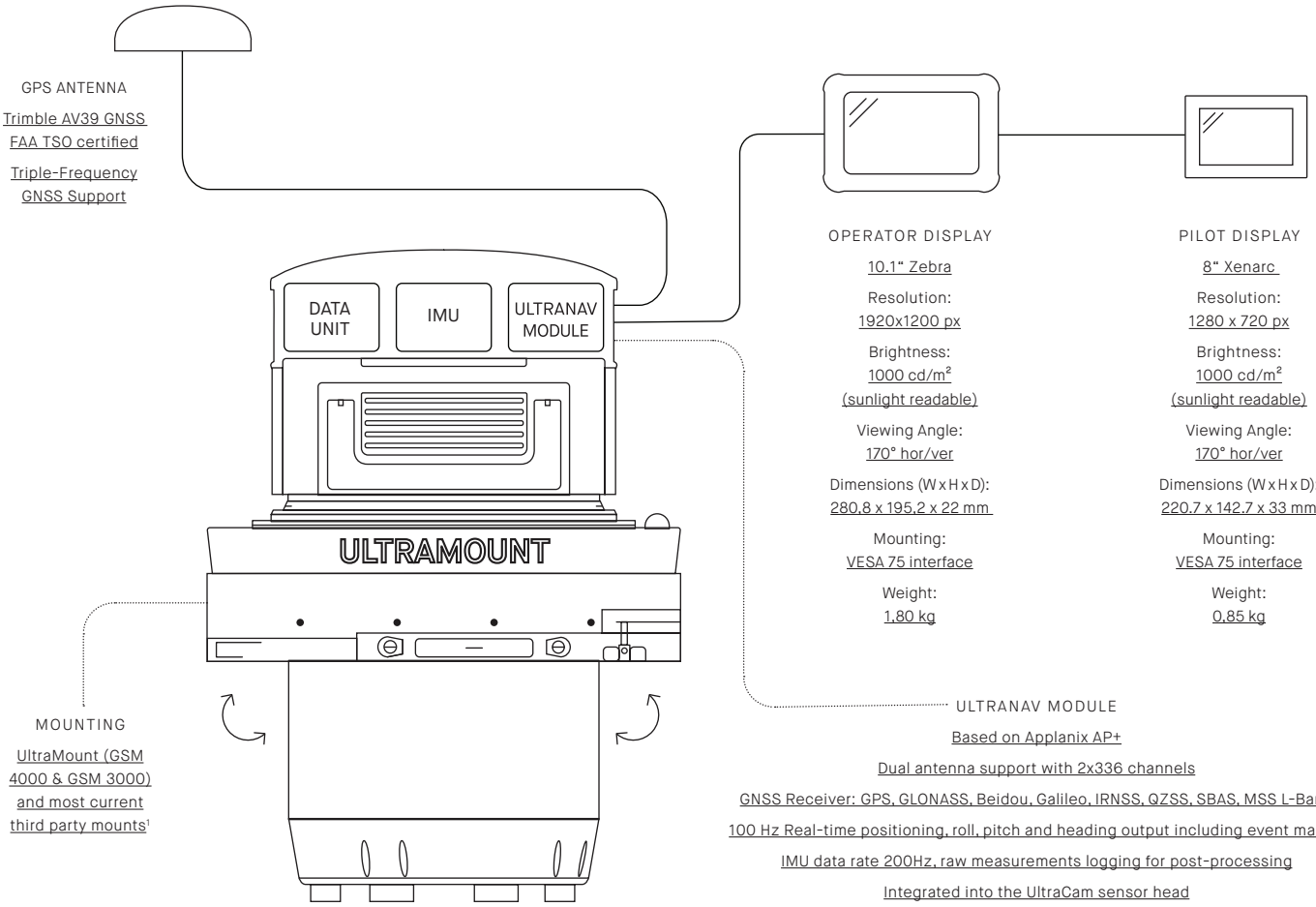
"The UltraNav flight planning and direct georeferencing solution is the easiest system we have to use. I can train operators to use this system faster than I can any other. A new operator is typically trained and ready to go in less than 2 or 3 days of training. Real time feedback of data is great!"

The UltraNav v7 all-in-one flight management and direct georeferencing solution optimizes your UltraCam data collection for highest productivity, precision and cost-efficiency.

The latest UltraNav version 7 offers a fully integrated workflow, guiding customers every step of the way. During 3D Flight Planning, UltraNav uses digital elevation models for fast, interactive and cost-effective flight plan designs. Up in the air, the software manages camera parameter settings, exposure triggering and automated mount stabilization for precise ground coverage and image overlap. Two displays for real-time navigation for the pilot and in-flight quality control for the operator, support smooth and efficient data collection. Back on the ground, industry-leading GNSS/INS post-processing software achieves both maximum accuracy and maximum efficiency for direct georeferencing. Customers can choose between 510 and 610 accuracy class performance levels based on the included Inertial Measurement Unit (IMU). All IMUs are ITAR free for maximum flexibility. For easy handling and space saving in often cramped aircrafts, the IMU and UltraNav module are fully embedded into the UltraCam sensor head. In 4th generation UltraCams, both can be comfortably accessed via a bay door on top of the camera and can be changed on-site.

Specifications & details

SYSTEM COMPONENTS



[1] Please contact our sales team for detailed information.

PERFORMANCE SPECIFICATION[2,7] (RMS ERROR)

UltraNav v7 510 IMU-91	SPS	SBAS[8]	RTX[3]	Post-Processed-RTX[6]	Post-Processed[5]	IMU-91
Position (m)	1.5 H 3.0 V	0.50 H 0.85 V	0.04 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V	Integrated into sensor head
Velocity (m/s)	0.050	0.050	0.010	0.005	0.005	MEMs
Roll & Pitch (deg)	0.010	0.008	0.005	0.005	0.005	ITAR free
True Heading[3] (deg)	0.070	0.050	0.020	0.010	0.010	1,0 kg

UltraNav v7 610 IMU-57	SPS	SBAS[8]	RTX[3]	Post-Processed-RTX[6]	Post-Processed[5]	IMU-57
Position (m)	1.5 H 3.0 V	0.50 H 0.85 V	0.04 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V	Integrated into sensor head
Velocity (m/s)	0.030	0.030	0.030	0.005	0.005	FOG
Roll & Pitch (deg)	0.005	0.005	0.003	0.0025[8]	0.0025[8]	ITAR free
True Heading[3] (deg)	0.030	0.025	0.010	0.005	0.005	2,6 kg

[2] Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects.
[3] Typical mission profile, max RMS error (GAMS not required).
[4] Real-time Trimble CenterPoint® RTXTM correction service, typical airborne results, subject to regional coverage. Subscription sold separately, requires RTK license.
[5] POSPac MMS, Single Base station or SmartBase.
[6] POSPac MMS, Post-processed CenterPoint® RTX™, typical mission performance subscription sold separately. The accuracy is subject to quality of GNSS, data set duration, and regional coverage.
[7] Performance based upon external IMU.
[8] May require local gravity model to achieve full accuracy.

TopoFlight Mission Planner

3D FLIGHT PLANNING

Flight planning using DTM all over the covered area (not only in profile)

Full integration of oblique sensors in flight planning and visualization

Full support of forward and sidelap planning optimization over DTM

Advanced color-coded visualization of planned flight parameters as GSD, overlap, coverage over DTM

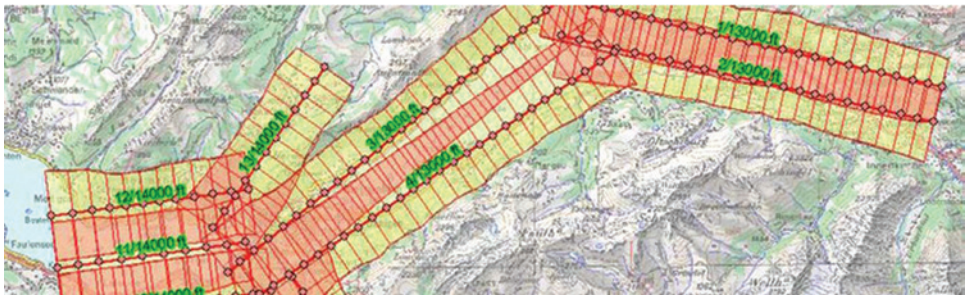
Efficient automatic and interactive flight planning over difficult terrain

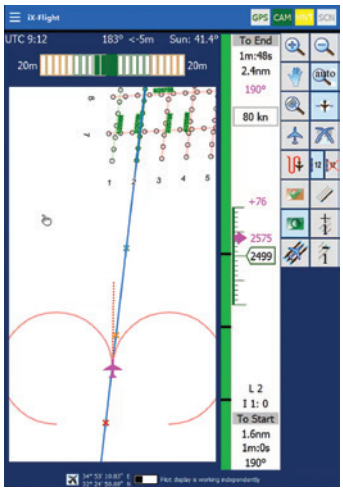
Planning results can be used for calculating project costs

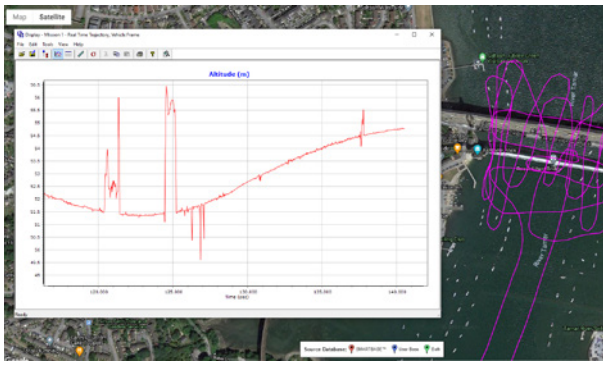
Flexible options to import DTMs

Post-flight quality control

Smooth transition from projects planned with previous UltraNav versions







TopoFlight Navigator

IN-FLIGHT NAVIGATION

Easy to operate, understand, control

Automatic or manual zooming

Enables the pilot to fully concentrate on the flight and aircraft control

Independent display content for operator and pilot

High level of customization for display contents like colors, symbols, tolerances, units, etc.

Immediate visualization of the project

Applanix POSPac Mobile Mapping Suite

GNSS/INS POST-PROCESSING

Direct georeferencing of mobile mapping sensors using GNSS and inertial technology

Differential GNSS-Inertial software featuring Applanix IN-Fusion™ technology and Applanix SmartBase™ post-processed Virtual Base Station module

Simple intuitive and efficient digitizing of project areas

POSEO and CalQC modules for generation of Exterior Orientation, IMU-Camera boresight calibration, mission-specific quality control

Post-processed Trimble Centerpoint RTX trajectory processing

Automatic base station survey using static PP-RTX

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