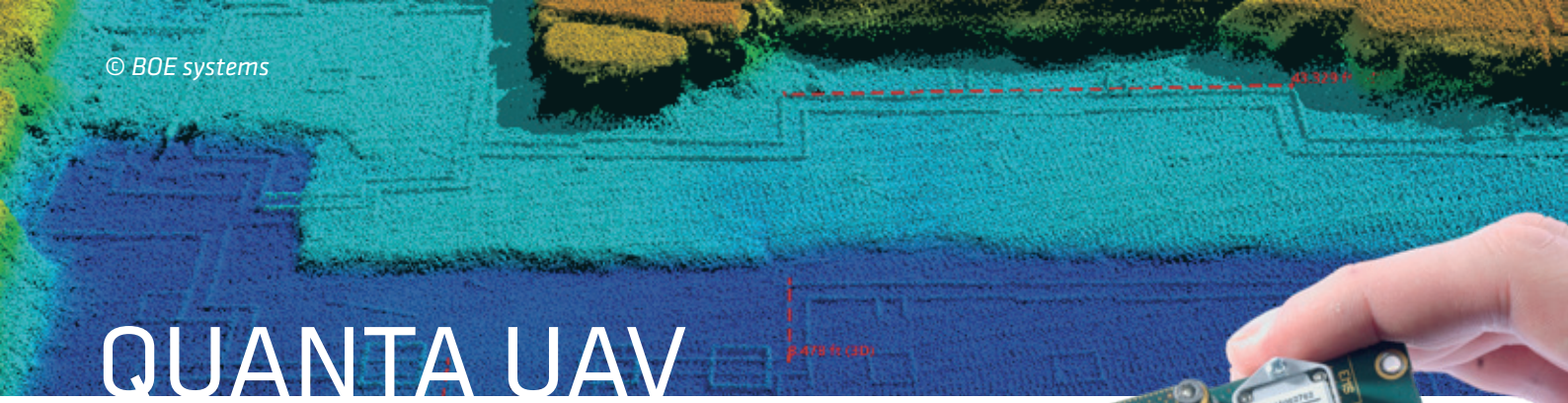
Quanta UAV

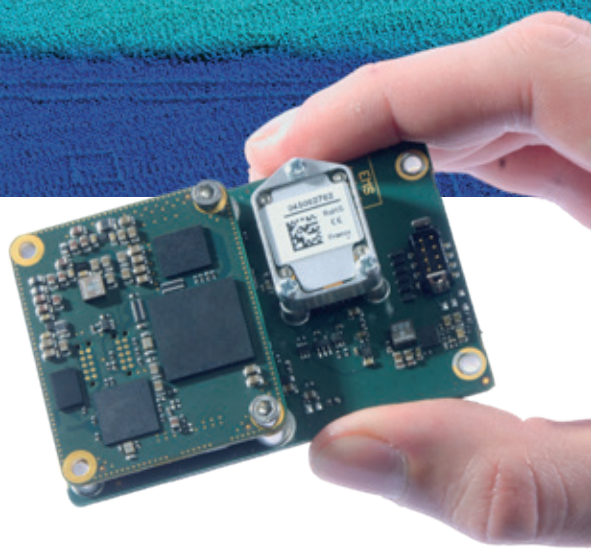
Direct Georeferencing Solution for UAVs
INS + GNSS

Because we want UAV integrators to reach the optimal productivity, we have designed the QUANTA UAV SERIES, a small, low-power and highly accurate inertial navigation system which provides orientation and navigation data, in real-time and post-processing.

SBG SYSTEMS



QUANTA UAV



The **Quanta UAV Series** is a powerful and easy INS+GNSS solution designed for UAV survey applications. Thanks to centimeter level position, it eliminates the need for Ground Control Points (GCP). Its precise orientation and position reduce processing time.

The Exact Combination for UAV Direct Georeferencing

- SMALL FORM FACTOR, LIGHTWEIGHT
- PRECISE AND ROBUST ROLL/PITCH
- SINGLE OR DUAL ANTENNA HEADING
- GPS-GLONASS-GALILEO-BEIDOU
- ROBUST REAL-TIME RTK
- THE EASIEST PPK SOFTWARE

For your Payload and your Autopilot

All Quanta INS are calibrated from -40 to 80°C for a consistent behavior in all weather conditions.

Best-in-Class Inertial Navigation Systems

		Quanta UAV	Quanta UAV Extra
Roll/Pitch	Real-time RTK	0.03°	0.008°
	Post-processing	0.025°	0.005°
Heading	Real-time RTK	0.5° Single Ant. 0.2° Dual Antenna	0.1° Single Ant. | 0.06° Dual Antenna
	Post-processing	0.08°	0.025°
Position Horizontal		1cm + 1ppm	1cm + 1ppm

Automatic Dual antenna Lever arm Calibration : *Alignment between antennas and the INS is easy to enter and can be re-estimated in flight for more precision.*

More Productivity For Your UAV

Photogrammetry

Quanta UAV reduces the need of GCPs and overlapping thanks to precise orientation and position data. You can extend your survey mission.

LiDAR

Quanta UAV directly geotags your point cloud in real-time and with more accuracy in post-processsing.

Single or Dual Antenna

If a single antenna solution tends to be more practical, the dual antenna mode allows a more precise heading, an ideal set up for low dynamics flights such as pipes or electrical lines surveys.

EVALUATION KIT

The evaluation kit consists of the evaluation board, antennas, cable, and accessories.

Evaluation board

QINERTIA POST-PROCESSING SOFTWARE

Qinertia uses inertial data and raw GNSS observables to provide astonishing attitude, heading and position performance, thanks to a forward, backward and merge processing.

Centimetric position after your mission

Obtain the centimetric position without the constraint of an RTK radio link. Just drag and drop your base station, Qinertia PPP function will automatically determinate your base station coordinates.

Extensive Quality Indicators

- Interactive quality indicators assessment
- Display of separation, standard deviation, bias, scale factor, lever arm
- Statistics report generation (RMS, min/max)

1 YEAR FREE

Tightly Coupled INS/GNSS Fusion

Modern & Intuitive User Interface

+ 7,000 Base Stations always up-to-date

Specifications

Preliminary

All parameters apply from -40° to 85°C temperature range, unless otherwise stated.
Full specifications can be found in the Quanta Hardware Manual available upon request.

INTERFACE

Aiding (input)	GNSS, RTCM
Protocols	NMEA, ASCII, Binary
Output rate	0.1 to 200 Hz
Logging Capacity	8 GB or 48 h @ 200 Hz
Ethernet	Full Duplex (10/100 base-T)
Serial	5x TTL UART ports
CAN	1 CAN 2.0 A/B bus up to 1 Mbit/s
Pulses	Inputs: PPS, Event marker up to 1 kHz Outputs: SyncOut, Trigger, PPS 5 inputs / 2 outputs
Connectors	44 pin contacts, 1.27 mm pitch, SMD

PHYSICAL CHARACTERISTICS

Model	Quanta UAV	Quanta UAV Extra
Weight	76 g	345 g
Dimensions (L x W x H)	51.5 x 78.75 x 20 mm	GNSS+Processing: 51.5 x 78.75 x 20 mm IMU : 83.5 x 72.5 x 50 mm
Consumption	< 3.5 W	< 5.5 W
Supply	3.3 to 5 VDC	3.3 to 5 VDC

ENVIRONMENTAL

Temperature	-40 to 85 °C / -40 to 185 °F
MTBF (computed)	50,000 hours
Operating vibrations	8 g RMS (20 Hz to 2 kHz per MIL-STD-810G)
Humidity	95% non condensing

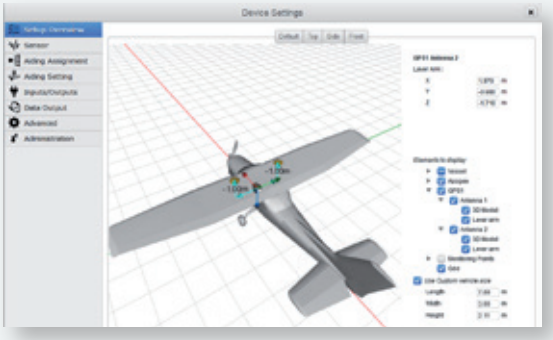
RMS values for typical survey trajectories.
Performance may be affected by atmospheric conditions, signal multipath, and satellite geometry. All specifications subject to change without notice.

WE SIMPLIFY YOUR INTEGRATION

Free Technical Support | Unlimited Firmware Updates | 2-year Warranty

INTUITIVE WEB INTERFACE

Connect your sensor and configure it throughout the intuitive web interface.



3D VIEW

The 3D View helps you to check your mechanical installation, especially your sensor position, your alignments, and levers arms.

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