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Validation Center

Data Acquisition System

VBOX, our data acquisition system uses a GPS/GLONASS receiver to achieve high level accuracy. The twin antennas have the ability to measure slip and pitch/roll angles at 100 Hz, ideal for vehicle dynamics testing.

The system is so accurate that it can even detect the difference a side wind makes to the slip angle measurement, something even the best inertial systems cannot replicate.



Standard Features and Specifications

- Simultaneous measurement of Slip Angle, Pitch or Roll Angle, Yaw Rate, True Heading, Lateral Velocity and Longitudinal Velocity
- 100 Hz update rate.
- Real-time result display via serial, USB or Bluetooth
- Audio voice taggin

| Velocity (km/h, mph) | |
|--------------------------|-----------------------|
| Velocity Accuracy | 0.1 KM/H |
| Maximum Velocity | 1000 MPH / 1609 KM/H |
| Minimun Velocity | 0.06 MPH / 0.1 KM/H |
| Resolution | 0.006 MPH / 0.01 KM/H |

| Absolute Positioning Specifications | |
|-------------------------------------|---|
| Accuracy | 2 M SBAS DGPS: >1 m RTCM DGPS: 80 cm RTK DGPS: 2 cm* |
| Hight Accuracy | 6 M DGPS: 2 m |
| Resolution | 1.8 MM |

| Acceleration | |
|-------------------|--------|
| Accuracy | 0.50% |
| Maximum | 20 G |
| Resolution | 0.01 G |

| Accel/Brake Test Time - Lap Timing | |
|------------------------------------|----------|
| Accuracy | 0.01 S |
| Resolution | 0.01 S |
| Brake Stop Accuracy | ± 1.8 CM |

| Distance Specifications (m, ft) | |
|---------------------------------|------------------------|
| Accuracy | 0.05 % (<50 CM per KM) |
| Resolution | 1 CM |

| Heading | |
|-------------------|-------|
| Accuracy | 0.1 ° |
| Resolution | 0.01° |

| Slip Angle Accuracy | |
|--|--|
| <ul style="list-style-type: none"> • <0.2° rms at 0.5 m antenna separation • <0.1° rms at 1.0 m antenna separation • <0.067° rms at 1.5 m antenna separation • <0.05° rms at 2.0 m antenna separation • <0.04° rms at 2.5 m antenna separation | |

| Pitch/Roll Angle Accuracy | |
|--|--|
| <ul style="list-style-type: none"> • <0.14° rms at 0.5 m antenna separation • <0.07° rms at 1.0 m antenna separation • <0.047° rms at 1.5 m antenna separation • <0.035° rms at 2.0 m antenna separation • <0.028° rms at 2.5 m antenna separation | |



VBOX 3i Dual Antenna

More...



Design and Simulation Software

Simulate real-world behavior of your product with the most advanced simulation software to evaluate performance, reliability and safety of materials and products.

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