



PRODUCT DATA SHEET

LoFu Localization Fusion

THE CHALLENGE

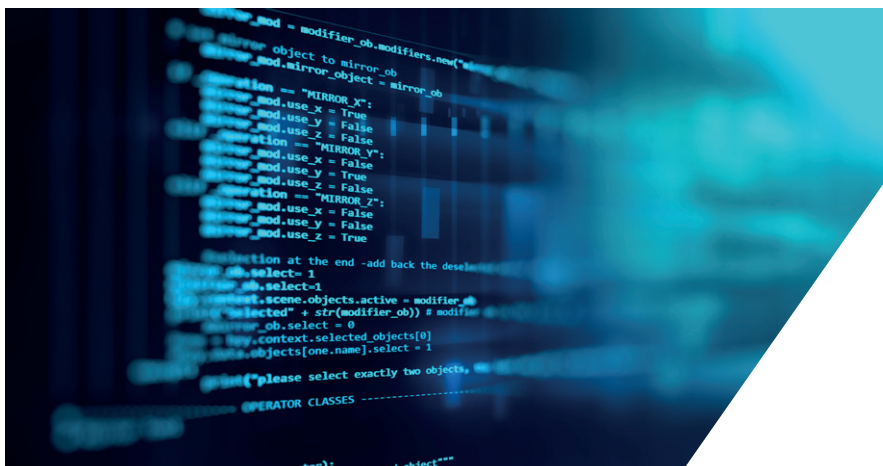
The trend towards individualization and a rapidly growing demand are forcing companies to become more flexible in their production and business models. In addition to its relevance for autonomous self-driving systems, the localization of assets is becoming more and more important in development, goods transportation (logistics), production, sales, service, marketing, and networks. Highly accurate localization is also playing an important role at autonomous vehicle depots and fully automated warehouses and during autonomous driving. In these cases, localization must always function reliably, independent of the environment and environmental influences.

THE SOLUTION

We ensure the safe and secure real-time localization of objects indoors, outdoors and above all in transition situations. To do this, we select the necessary sensor systems for each use case on the basis of a modular principle. The infrastructure required for this is small, low-cost and requires little maintenance. Our intelligent sensor fusion enables us to create a further important key component for self-driving systems. However, due to the technological merging and evaluation of the data gathered in this way, far more fields of application are conceivable in addition to autonomous driving. Alongside the pure output of a position with centimeter accuracy, we can aggregate the recorded data and process them further. Intelligent sensor fusion and the evaluation of the acquired data make it possible, for example in logistics or production control, to provide hotspot analyses, speed profiles, accuracy evaluations, big data analyses or applications for pattern recognition.

TECHNICAL DATA

- Multi-GNSS receiver with RTK functionality
- Integrated inertial measurement unit (IMU)
- LTE module for RTK FIX
- Ultra-wide-band (UWB) localization and data transfer at up to 6.8 Mbps
- IoT functionality MQTT via UWB/LTE
- Update rate faster than 1 Hz
- Indoor accuracy better than +/- 30 cm
- Outdoor accuracy better than +/- 10 cm
- CAN interface



CUSTOMER BENEFITS

- Quality assurance in production
- Efficiency increase in production
- Increased flexibility towards batch size
- Basis for KPI asset tracking (e.g. dwell time)
- Increase in the safety and clock frequency of autonomous systems
- Reduction in costs due to greater autonomy of driving systems in scenarios that were previously impossible (outdoors/indoors)
- Low-cost and low-maintenance infrastructure solution

UNIQUE SELLING POINT

- Modular multi-sensor solution for different use cases
- Centimeter-accurate localization outdoors and indoors
- Continuous localization without loss of connection
- Easy system integration
- Developed on an automotive scale

LoFu – A development from Bertrandt Technologie GmbH, Regensburg

KONTAKT

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