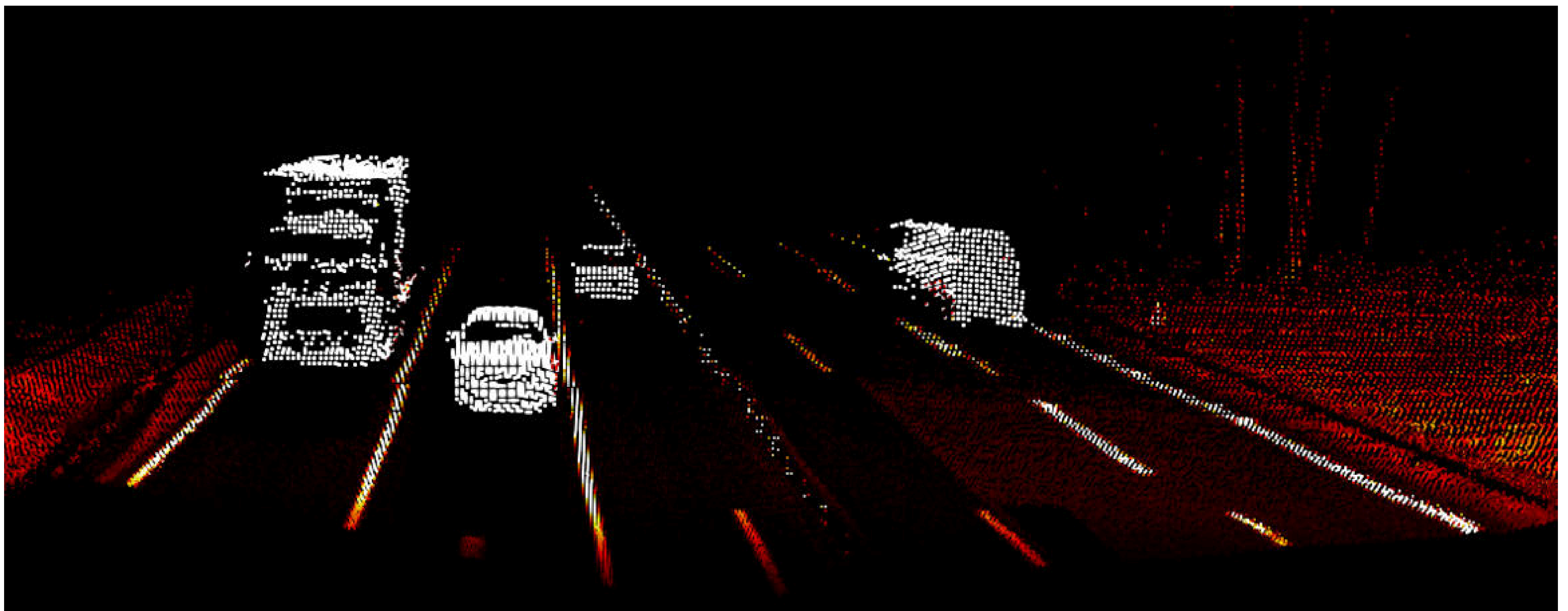


Real-time traffic monitoring with 3D LiDAR

Blickfeld
LiDAR / scan your world



LiDAR technology plays a key role in modern traffic and infrastructure management and is a vital component of smart city concepts. It provides precise real-time data on vehicle and pedestrian movements, optimizes traffic flow control, and enables reliable speed and height measurements. With its high accuracy, LiDAR supports the monitoring of critical infrastructure such as bridges and tunnels and contributes to efficient parking management. The technology forms the foundation for data-driven, safe, and future-oriented transportation systems.

FEATURES

Track vehicles – Continuous monitoring of vehicle movements in real time.

Measure velocity – Automatic speed measurement using high-density laser data.

Classify vehicle types (8+1) – Identification of vehicle categories such as cars, trucks, buses, and motorcycles.

Vehicle counting – Automatic counting of all passing vehicles for accurate traffic statistics.

Detection of stationary vehicles – Recognition of stopped or slow-moving vehicles.

Accurate vehicle measurement – Measurement of height, width, and length for compliance verification.

Wrong-way driver detection – Identification of vehicles moving in the wrong direction.

Parking occupancy detection – Real-time detection of occupied and free parking spaces.

Monitoring of emergency bays and reserved parking – Tracking of usage to ensure availability and compliance.

Red-light violation detection – Detection and recording of signal violations.

Queue and congestion detection – Identification of bottlenecks and traffic build-ups.

3D LIDAR TECHNOLOGY BENEFITS

▶ 3D Zone Placement

Precise placement of monitoring zones enables accurate detection within the target area, including object tracking and exact speed measurement.

▶ Weather and Lighting Agnostic

LiDAR performs reliably under various environmental conditions, including rain, fog, and low light, ensuring uninterrupted operation.

▶ Reliable Long-Range Detection

LiDAR allows early hazard detection and monitoring of large areas, enhancing safety, optimizing traffic flow, and supporting efficient infrastructure planning.

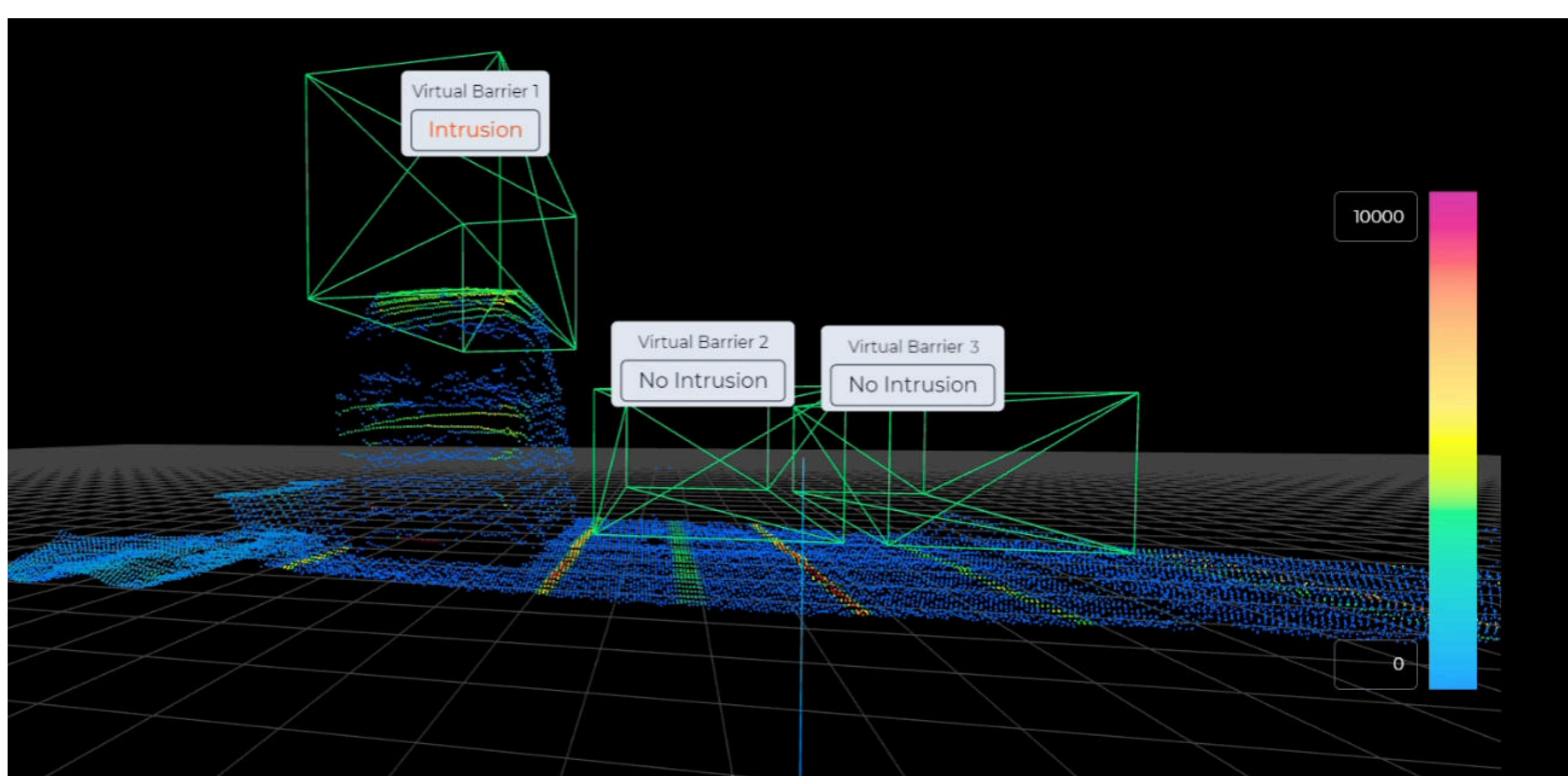
▶ Size Detection

Detection based on actual object size for classifying vehicles and people according to the 8+1 standard.

▶ Privacy

Captured data does not reveal any personal information or vehicle license plates.

Watch in this video how height detection with virtual barriers works:



BLICKFELD SENSORS

On-Device Processing

Qb2 sensors perform data analysis on-board. This eliminates the need for external PCs and enables compact, low-maintenance systems with fast response times.

High Scan Rate

High and flexibly adjustable scan rates (up to 250 Hz) enable detection of very fast objects across multiple lanes.

Standard Interfaces

Blickfeld devices support both direct I/O triggering and communication via TCP/IP or MQTT, ensuring seamless integration into existing traffic management systems.

Durability

Patented solid-state technology with IP67 protection ensures reliable operation day and night.



Blickfeld Qb2 - Smart 3D LiDAR with on-device processing for intelligent and customizable sensing solutions

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