MOSAIK™ Suite
Automated validation of sensors and algorithms, enabling machine learning and AI projects

Key Features
- Includes MVIS Auto-Annotation software
- Automatically annotates objects and lanes
- Allows for manual editing of objects and lanes
- Supports data of selected third-party lidars
- Scalable due to cloud-compatible architecture
- Offers the complete toolchain from a single source
- Compatible with MVIS SyncBox Pro

Toolchain

### RECORDING SYSTEM

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>Real-time Tracking and Recording</th>
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<tr>
<td>0 % raw data</td>
<td>100 % raw data</td>
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#### Hardware
- Lidar
- Lane tracker SLMS
- Third-party lidar sensors*
- MVIS ECU
- MVIS SyncBox Pro
- IMU / GPS

#### Software
- MVIS ECU Recording Suite
- MVIS CaliGraph

<table>
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<tr>
<th>STEP 2</th>
<th>Recorded Data Validation</th>
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<td>0 % GT** data</td>
<td>100 % GT data</td>
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### MVIS Validation

#### MVIS Auto-Annotation Software
- Automatic object detection, classification & tracking
- Automatic lane marking and road boundary detection (highway)
- Automatic scenario detection
- Cloud-compatible architecture due to Docker image
- Intuitive graphical user interface
- Data formats:
  - For objects .json
  - For lanes OpenDRIVE x0DR

#### MVIS Reference Software
- Visualization for scan point, object, and lane data
- Editors for object, lane and scenario data
- Interface software development kit (SDK)

*Selected third-party hardware not in MVIS product portfolio; real-time object data not available

**GT = Ground Truth

Safe mobility at the speed of life

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System Architecture

MOSAIK™ Suite: Our Difference

Third-Party Lidar Data Support
- MOSAIK™ Suite supports selected lidar devices from other suppliers
- Offers increased flexibility through support of third-party lidar devices (e.g., 360° lidar on the rooftop)
- Enables simultaneous operation of different devices to accommodate any use case

Object and Lane Editing
- Quick and intuitive tools to increase object and lane quality of the reference data manually
- Enables modification of objects and lanes, such as position, orientation, and classification
- Applies changes to the entire object track instead of frame-by-frame editing

MVIS SyncBox Pro
- Time management device that synchronizes all systems in the car to a single source of truth
- Able to function as leader clock or follower clock for each connected component or protocol
- Ensures data time quality of all systems in the car
- Supports all common time protocols (such as PPS & NMEA, gPTP/PTP, NTP, CAN) and can be configured to the use case accordingly
- Monitors synchronization status for various interfaces