



## Free Flow Profiler

Automated and precise measurement of vehicles and objects

**SICK**  
Sensor Intelligence.

Contact-free axle counting over several lanes



## Additional module: Axle Counter

With electronic toll collection systems, along with the toll route, the vehicle type is the decisive factor for calculating the toll. The vehicle type can be determined using different criteria: In addition to the vehicle size and vehicle profile, the number of axles is used as a reliable variable for accurate specification of vehicle classes, and therefore calculation of the appropriate toll.

The Axle Counter, an additional module for the TICx02 and Free Flow Profiler profiling systems from SICK, is perfectly suited to this task. It enables the precise detection and counting of vehicle axles, even on multi-lane roads and in free-flowing traffic.

**Find out more**



## Technical data overview

<b>Application</b>	Measurement of vehicles and objects in motion Verification of compliance with vehicle dimension regulations Optimization of the loading process for ferries and car trains (RoLa) Basis for a size-based toll or payment system
<b>Scanner design</b>	2-scanner solution / 3-scanner solution (depending on type)
<b>Installation position</b>	Overhead or at the side
<b>Integrated application</b>	Vehicle measurement Toll systems Verification of compliance with vehicle dimension regulations Optimization of the loading process
<b>Number of covered lanes</b>	Up to 4 lanes at best performance Max. 9 sensors per system
<b>Counting accuracy</b>	99.8 %
<b>Classification accuracy</b>	98 % (For TLS8+1 classes)

## Product description

The Free Flow Profiler profiling system measures and classifies vehicles and objects of all types in free-flow traffic conditions. Eye-safe 2D LiDAR sensors scan objects up to 75 times a second, thereby enabling fully-automated length, width and height measurement. The vehicle speed and direction of movement are also taken into account here. The measurement data recorded can be used to generate a 3D model for each vehicle which also visualizes excessive heights, widths and lengths. In addition, the modular system setup enables functional extensions such as the counting of axles or the detection of overheated vehicle parts.

## At a glance

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- Additional axle counting
- Data output as a point cloud
- Data history of the last 50 vehicles detected in the user interface
- TCP/IP interface for data transmission
- Event logging and monitoring of system status

## Your benefits

- Reliable vehicle measurement and classification in free-flowing and stop-and-go traffic
- Visualization and alarms for excessive height, width and length
- Non-contact axle counting in multi-lane traffic sites
- ANPR, WIM and RFID transponders can also be integrated
- Can be used in all climate zones from  $-40\text{ }^{\circ}\text{C}$  to  $+60\text{ }^{\circ}\text{C}$  thanks to the expanded temperature range
- Quick data access due to storage directly in the customer system via FTP or UNC transmission
- Easy commissioning and operation thanks to an intuitive configuration wizard

## Fields of application

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- Verification of compliance with vehicle dimension regulations
- Optimization of the loading process for ferries and car trains (RoLa)
- Protection of traffic infrastructure

## Ordering information

Other models and accessories → [www.sick.com/Free\\_Flow\\_Profiler](http://www.sick.com/Free_Flow_Profiler)

- **Integrated application:** Vehicle measurement, Toll systems, Verification of compliance with vehicle dimension regulations, Optimization of the loading process

Items supplied	Type	Part no.
2D LiDAR sensor LMS511 SE (2 x), Traffic Controller FPS including software, USB stick with TEMS info sample client, source code for TEMS info sample client, TEMS analyzer and operating instructions	FPS502	1111841
2D LiDAR sensor LMS511 SE (3 x), Traffic Controller FPS including software, USB stick with TEMS info sample client, source code for TEMS info sample client, TEMS analyzer and operating instructions	FPS503	1088784

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)