

Sensor Line SL Road System Basic

The Simple and Flexible Way to Vehicle Classification.

Product Description

The SL-Road System Basic is an axle-based vehicle classification system that can be used as a complete turnkey solution or a subcomponent of a traffic/tolling management system.

SL Road System Basic is designed to be used with fiber optic axle detection sensors from Sensor Line and loops in a basic version. Information from photoelectric sensors, light curtains, lidars or cameras can be integrated as an option.

The system can be combined with various axle sensor layouts and sensor combinations to fulfill the requirements of different classification tables.

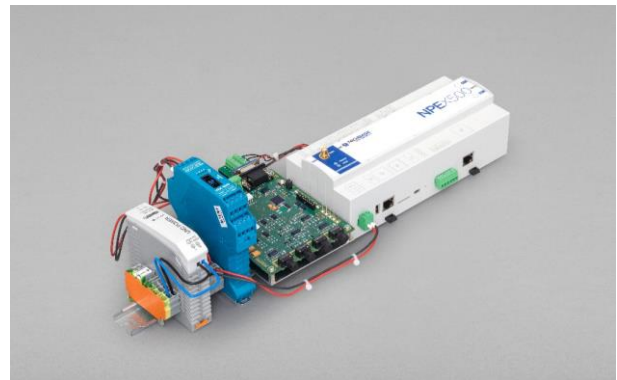
SL Road System Basic is intended to be used in slow-speed stop and go tolling stations as well as high-speed free flow roads.

Advantages

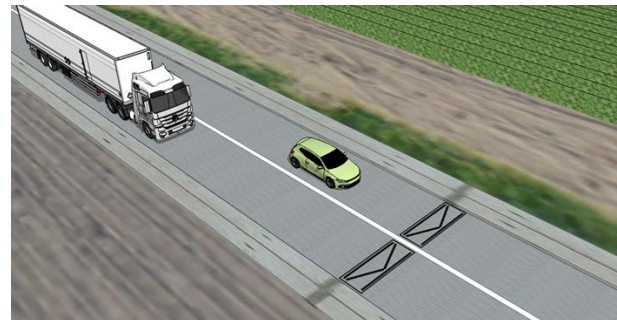
- High accuracy of axle data
- User defined vehicle classes
- Real time TCP/IP data output
- Graphical customization tool
- Up to 4 lanes with single controller

References

- Aydin – Denizli Highway, Turkey
- Göcek Tunnel, Turkey
- Ruta del Cacao, Columbia
- Single lane toll station, Thailand



SL Road System



SL Sensor Configuration

SL Road System Basic: AVC System for road traffic applications

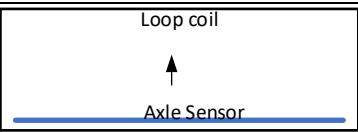
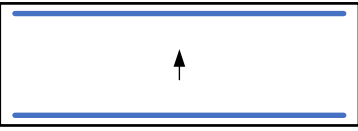
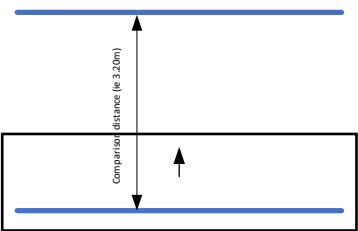
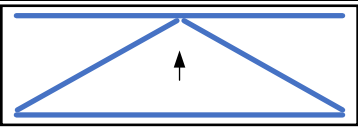
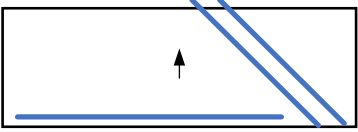
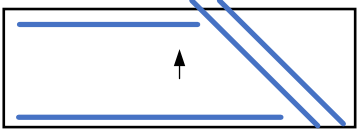
Measured Vehicle Characteristics

- Vehicle count
- Axle count
- Dual Tire count
- Distance between axles
- Vehicle length
- Vehicle width
- Direction
- Speed
- Tandem axle count
- Front and rear extensions from the first and last axle
- Optional: Vehicle height on the first axle
- Optional: Maximum vehicle height
- Optional: ANPR Camera trigger

System Components

- Power supply 100-240VAC/15VDC
- SL Road Controller with embedded license
- Configuration File Editor (vehicle classes, hard- and software setup)
- Basic Studio Software (store classification results on DB server)
- Loop controller
- Sensor Line analyzer
- DIN Rail rack mount

Different configurations, for different solutions

Config.	Axle Sensors and Loop Coil Layout	Axle Count	Dual Tire Count	Axle Distance	Vehicle Width	Direction
No 1		✓				✓
No 2		✓		✓		✓
No 3		✓		✓		✓
No 4		✓	✓	✓	✓	✓
No 5		✓	✓			✓
No 6		✓	✓	✓		✓

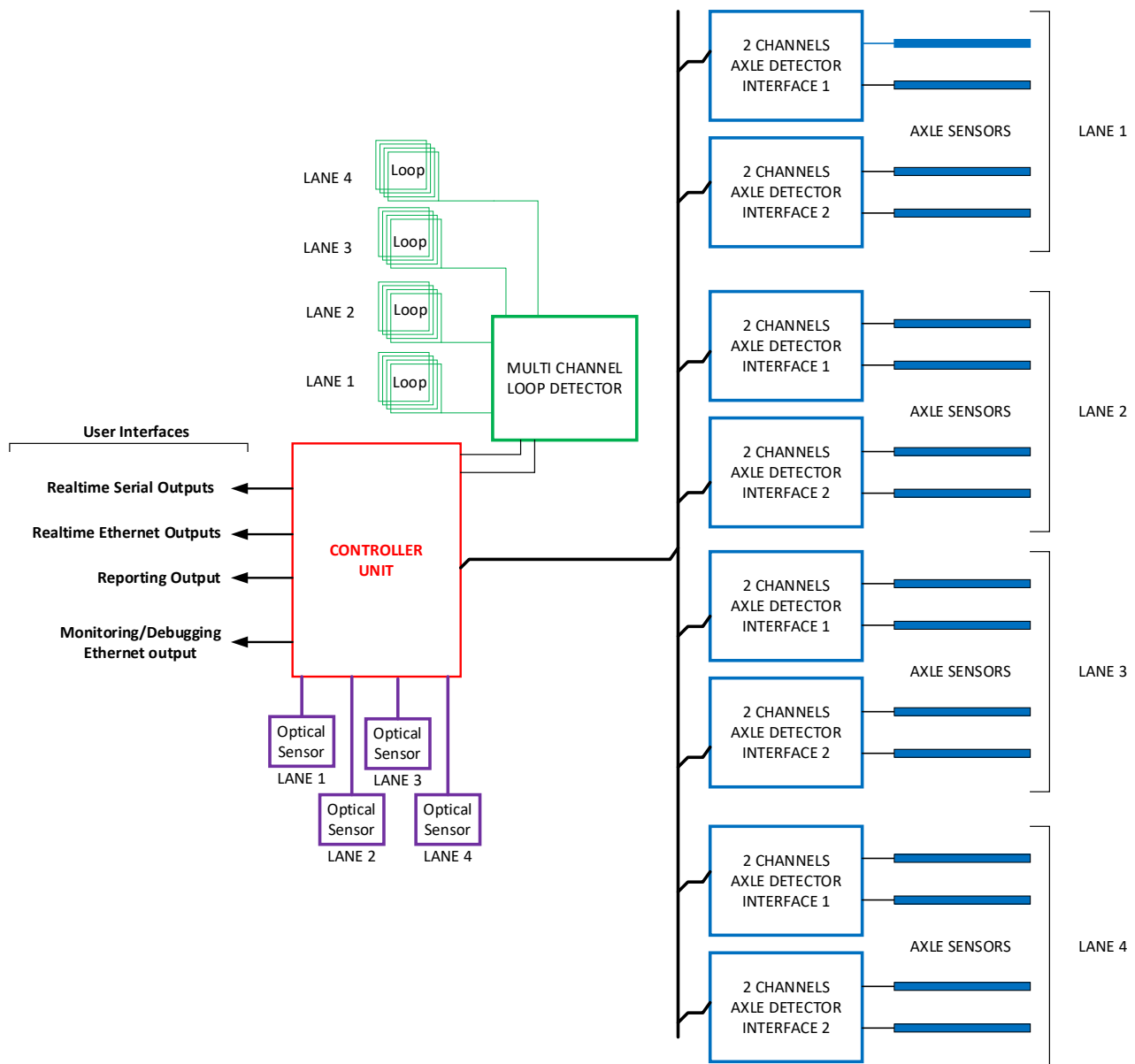
SL Road System Basic: System Description

The vehicle classes are defined on the basis of their characteristic physical properties such as number of axles, maximum or minimum axle distance, number of dual tire axles, etc.

In the standard configuration, inductive loops are used to detect the presence of vehicles. Instead of loops, laser scanners, optical curtains or other vehicle detectors can also be integrated into the system.

SL-Road System Basic can control up to four lanes with a single controller unit. The number of lanes and sensors can be changed depending on the requirements of the system in which it is to be used.

SL-Road System Basic has Ethernet and serial (RS232/RS485) outputs that can communicate with host systems in a wide range of complexity, from simple microcontroller-based industrial boards to modern network-based systems.



SL Road System Basic: Technical Data

System

Hardware	Supply voltage	100-240 VAC
	Power consumption	Max. 30W
	Size (up to 8 axle sensors)	38x16x12 cm (15.0x6.3x4.7 in)
	Weight	1.0 to 1.3 kg (2.2 to 2.8 lb)
	Size (9 to 16 axle sensors)	48x16x12 cm (18.9x6.3x4.7 in)
	Weight	1.4 to 1.7 kg (3.1 to 3.8 lb)
	Mounting	DIN rail or DIN rail 19 inch rack
	Interfaces	TCP/IP on Ethernet Serial RS232 or RS485
Software	Operating system	Linux
	User defined classes	up to 50

Performance

Axle detection accuracy	> 99,9+%
Maximum speed	up to 250 km/h (155 mph)
Operating / storage temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Humidity	No limitation
Warranty	24 months

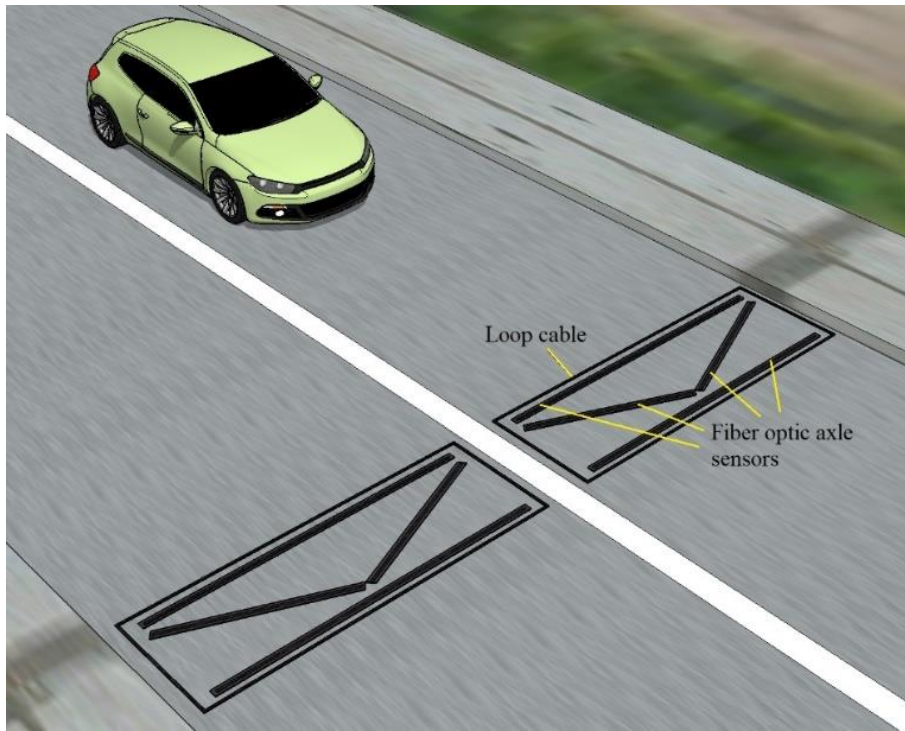
Accompanying Products

- SL EZ Frame sensor: Axle detection sensor in polymer frame
- SL PUR sensor: Axle detection sensor
- SL Loop Wire: Presence detection sensor

Ordering Information

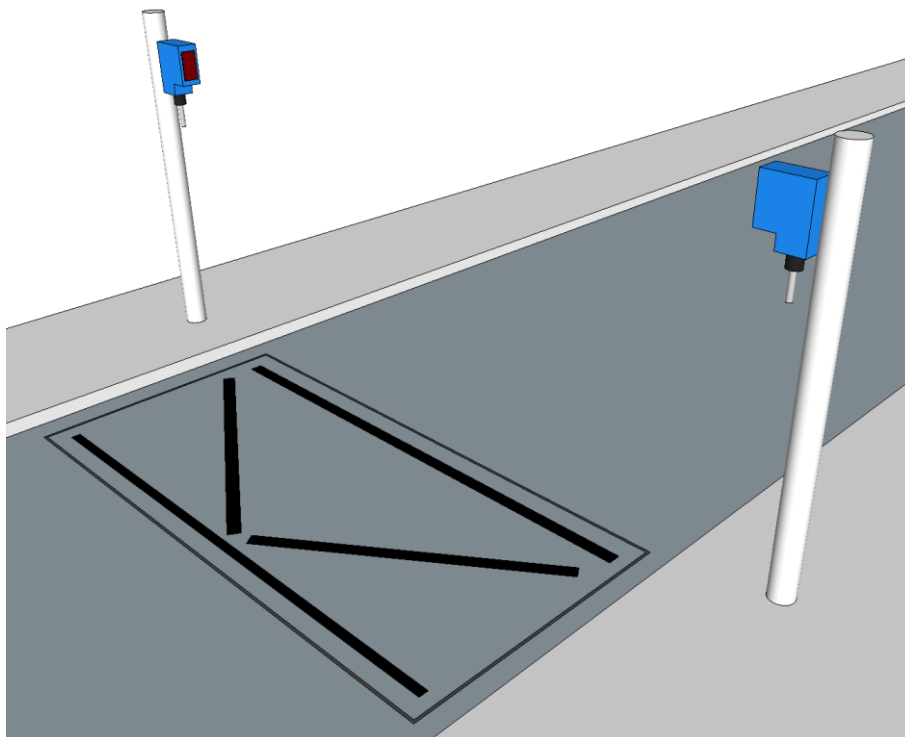
SL Road System Basic X-Y	X: Configuration Number (1 to 6) Y: Number of connected lanes (1 – 4)
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SL Road System Basic: Installation Examples



Configuration 4 with two lanes

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Configuration 4 with height sensor