



Smartmicro-MLR **Multi-Lane Radar detector**

Shorter waiting times at signalized intersections

YUNEX
TRAFFIC

Intelligent detection system enables intelligent intersection control

The new Smartmicro-MLR Multi-Lane Radar detector takes traffic-actuated intersection control to a new level of quality. The Smartmicro-MLR detector is not only extremely compact (only 11.0 × 9.9 × 3.0 cm), but also very efficient: It provides a whole range of useful data for high quality traffic-actuated intersection control. Compared to conventional detector systems, the additional advantages of our Smartmicro-MLR detector enable substantially enhanced intersection control.

Every Smartmicro-MLR detector allows the definition of traffic-actuated time gap triggers

Trucks are often the reason for backlogs forming at an intersection. As the Smartmicro-MLR is able to distinguish reliably between various vehicles classes, green phases can be extended to give trucks or other predefined vehicle classes enough time to cross. This will harmonize and accelerate the traffic flows at the intersection.

Every Smartmicro-MLR detector 'covers' up to 120 m of space in front of the stop line

The Smartmicro-MLR's extended detection range allows the system to recognize also 'stragglers' or widely spaced rows of vehicles and adapt the signal switching times accordingly. So more vehicles can pass during each green phase.

Every Smartmicro-MLR detector can scan up to 16 virtual loops

The behavior of road users is not always rational. While there is a long backlog on one lane, the next lane may remain virtually empty just because it changes into a turning lane some 150 m ahead. In such and similar cases, it is a huge advantage that every single Smartmicro-MLR detector does not only have an extensive range of 120 m, but is also able to scan up to 16 virtual loops. This ensures that the detector really grasps the entire situation even on multi-lane streets.

Every Smartmicro-MLR can distinguish between passenger cars, trucks and bicycles and exactly determine each vehicle's speed

The Multi-Lane Radar detector can count bicycles even if they are traveling on the same lane as motorized vehicles.

The reliable identification of vehicles, including correct classification, and the precise calculation of their current speeds allows the system to adapt the green phases exactly to the prevailing traffic situation. The detector calculates each vehicle's estimated time of arrival' at the stop line. These data can be used to extend the green phases accordingly or to extend the switching times by a certain safety margin.

Prevents data overkill

When configuring the Smartmicro-MLR detectors, filters can be set for vehicles classes, speed or direction of travel in order to eliminate undesirable detection events. This allows the traffic engineer to define exactly the data base that he needs and make sure that his system will not be slowed down by superfluous masses of data.

Every Smartmicro-MLR detector works reliably under any lighting and weather conditions

No matter if during the day or at night, in dense fog or glaring sunlight – its radar technology makes the Smartmicro-MLR detector immune to adverse lighting and weather conditions and keeps it working reliably at all times.

Applications of the Multi-Lane Radar detector Smartmicro-MLR at the intersection:

- Stopleveline detection
- Remote detection /measurement
- Precise speed measurement
- Combination of stopline and remote detection
- Time gap trigger, available for all vehicles classes
- Bicycle detection
- Length of backlog in front of the stopline
- 'Estimated Time of Arrival'
- Recording of statistical data

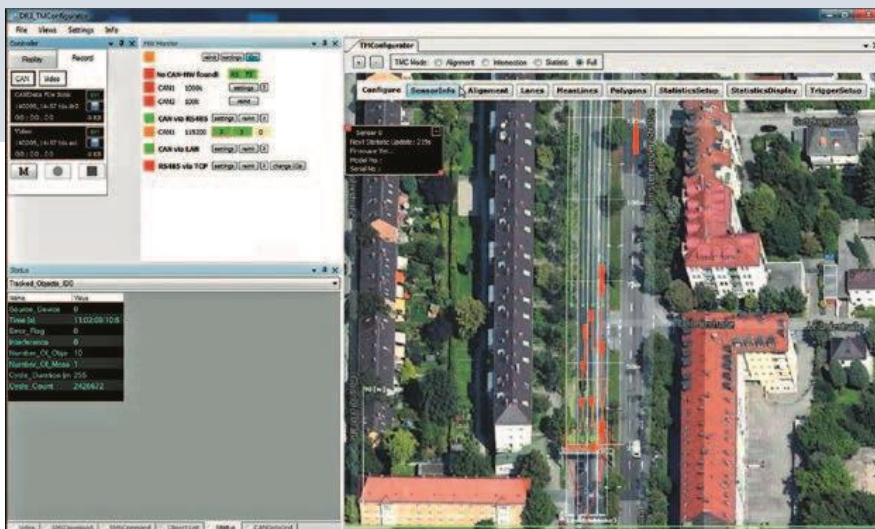
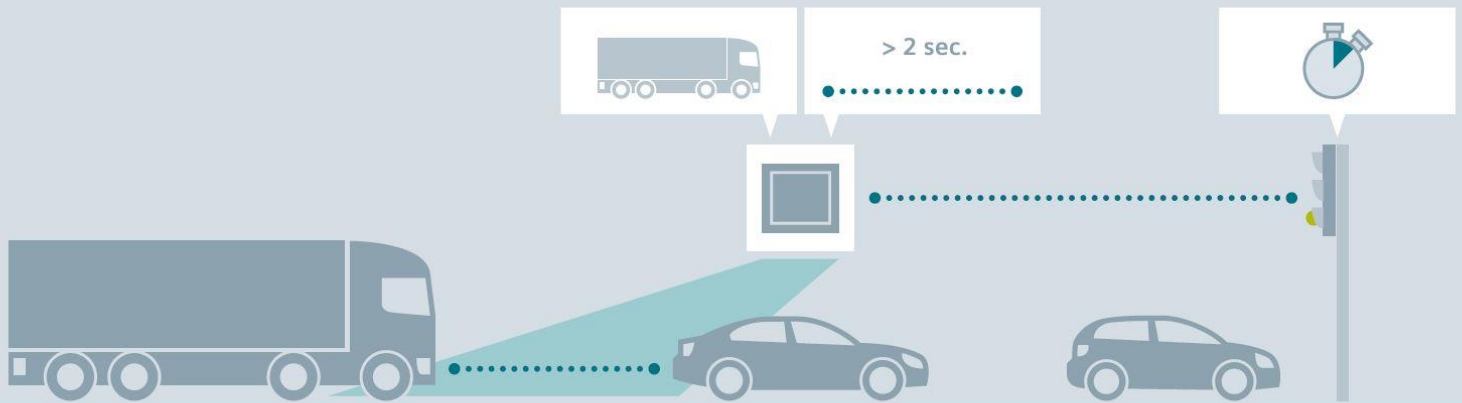
Applications of the Multi-Lane Radar detector Smartmicro-MLR for collecting traffic data:

- Occupancy
- Vehicle speed
- Vehicle counting and classification (up to 4+1)
- Detection of backlogs
- Special functions such as wrong-way driver detection

While the Smartmicro-MLR detector is extremely compact (11.0 x 9.9 x 3.0 cm), it provides a whole range of useful data for high quality traffic-actuated intersection control.



Traffic-actuated time gap trigger: As vehicle types are included in the calculations, the green phase duration can be adapted automatically, which leads to reduced waiting times at the intersection



The Multi-Lane Radar detector can recognize all vehicles at up to 64 measuring points and with a detection range of more than 150 m from the stopline.

Technical data of the Multi-Lane Radar detector Smartmicro-MLR

Max. distance for vehicle recognition	150 m
Min. distance for vehicle recognition	20 m
Speed range	up to 200 km/h
Precision of speed calculation	< ±1% resp. < ±1km/h
Ambient temperature	−40 °C to +85 °C
IP	67
Dimensions (width × height × depth)	110 mm × 99 mm × 30 mm
Weight	360 g
Supply power	8 V to 32 V
Power consumption	<5 W
Frequency band	24.0 GHz to 24.25 GHz
Band width	< 250 MHz
Connector type	12-pin connector (Binder series 423)
Interfaces	8 × relays I/O, RS485, CAN, Ethernet (optional)
Coverage	6 – 8 lanes

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