TOLLCHECKER ROADSIDE
GANTRYLESS TOLLING

To meet the requirements of tolling roads with fewer lanes VITRONIC has developed an alternative to conventional gantry infrastructure. In contrast to sensors affixed to overhead frameworks, VITRONIC’s new system allows camera-based identification and vehicle classification from the roadside. All vehicle-to-infrastructure (V2I) components, processing technology and sensors are installed in a compact housing, the iconic design housing, which requires minimal groundwork.

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Lateral sensor array – a clever solution
Most Electronic Toll Collection (ETC) free-flow systems are gantry-mounted. But especially for coverage of roads with fewer lanes, gantries have drawbacks. They require extensive, costly groundworks with temporary lane closures during construction.

For smaller toll roads TOLLCHECKER ROADSIDE can replace gantry installations with equal functionalities. It is secured to the roadside and houses all necessary components including a complete sensor array, illumination and data processing technology – a clever all-in-one tolling solution.

High-resolution optical classification
TOLLCHECKER ROADSIDE uses advanced machine vision technology to capture high resolution images of passing traffic from the side. The process of identifying vehicles works similar to that of gantry systems; either through front and/or rear ANPR or with V2I communication via RFID or DSRC transponders.

TOLLCHECKER ROADSIDE is able to support all current modes of Electronic Toll Collection (ETC). The integrated microwave DSRC communication is compatible with the European Electronic Toll Service (EETS).

The high-res images can determine vehicle dimensions (length, width and height), the number of axles and whether trailers or superstructures are present. The applied sensor technology is particularly suitable for the identification of long vehicles, since uniform illumination over the entire vehicle length und thus excellent image quality is achieved. In addition, it can optionally read vehicle markings such as hazardous goods placards or other labels. All sensor data is compiled into complete passage reports. The vehicle is automatically sorted into the respective class of the tolling scheme and immediately verified against existing tolling accounts or passed on for billing.

Compact, service-friendly design housing
For straightforward installation and service, TOLLCHECKER ROADSIDE is integrated in VITRONIC’s design housing. The design minimizes installation effort and environmental footprint. The housing comes preconfigured and can be quickly set up at the roadside with minimal groundwork. The system is equipped with a built-in 4G-ready wireless data connection. For maximum security, the aluminium casing offers video surveillance, an electronic two-way locking system and an encrypted data transmission. The color design of the pillar can be customized to suit any environment.