

OPUS[®]

Optical Profile Unifying System

TransCore's Optical Profile Unifying System (OPUS) is the industry model for tolling environments requiring overhead detection and profiling capabilities. OPUS covers the entire open road tolling (ORT) zone, including shoulders.

From its position on an overhead gantry, OPUS profiles vehicles as they pass and classifies them based on their profiles. This means OPUS can either replace or supplement in-ground classification systems, giving customers more flexibility.

Complete Solution

OPUS uses LED-based infrared technology and is specifically designed for use in bumper-to-bumper, stop-and-go, or high-speed ORT applications. OPUS is highly reliable and features motorless Micro Motion Technology. The complete OPUS unit includes the necessary control boards, processor boards, and power supplies to be integrated into TransCore's *Infinity Digital Lane System*[®].

Positioning

OPUS units are mounted from the gantry or overhead canopy in each lane, pointing directly down onto the roadway. The unit supports remote access, enabling efficient setup and configuration.



Data Every Few Milliseconds

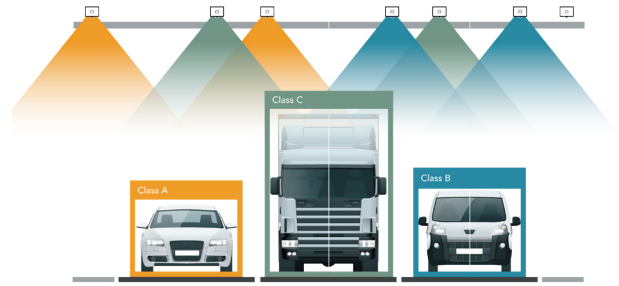
Every few milliseconds, each OPUS sensor provides a data block to the OPUS controller at a frequency in the hundreds of hertz. The timestamped data block comprises dozens of high-granularity bins of data, including measured distance and signal amplitude. From this data, the OPUS controller can accurately describe the vehicle data, which is then passed to the ORT or lane controller.

Redundancy and Coverage

An OPUS unit's coverage area extends beyond the lane it is mounted over. Each OPUS unit's data is also correlated with units in adjacent lanes. This improves accuracy, and it allows the OPUS controller to continue measuring vehicle data, even if a lane's designated profiler fails. The OPUS system can also include a backup controller, ensuring redundancy throughout the entire system.

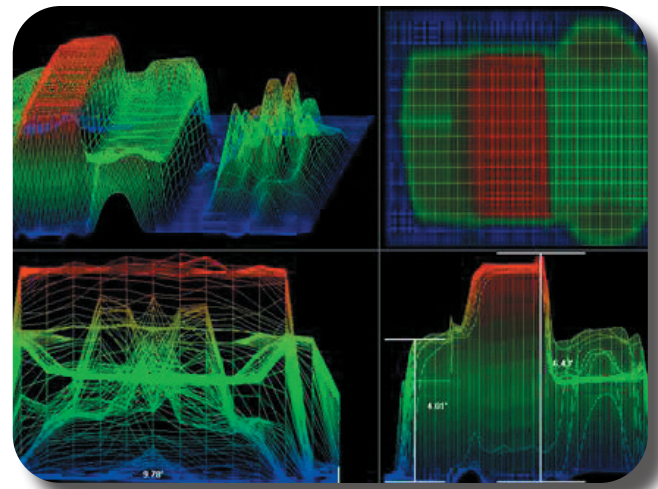
Configuration

The number of OPUS sensors depends on customer-specific design and performance requirements. In a typical ORT configuration, two units are installed per lane, providing wrong-way detection and speed measurements. TransCore works closely with its clients in the design process to ensure all requirements are met and integrated within the gantry's design.



OPUS Advantages

- ▶ 100% overhead environment
- ▶ Single technology for all lane configurations
- ▶ Shoulder-to-shoulder coverage
- ▶ Minimal requirement for vehicle separation
- ▶ No minimum or maximum speed requirements
- ▶ Direct 100Mbit/s full-duplex Ethernet connection
- ▶ NEMA 4 enclosures protect from -40°C to +60°C
- ▶ Robust infrared flood technology
- ▶ Low maintenance cost
- ▶ Mirrorless, frictionless, and rotation-free



For more information:

Call
615.988.8960

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