

Selective Vehicle Detection

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The Selective Vehicle Detection (SVD) solution from Siemens is an unobtrusive above ground selective detection system offering both high quality and unbeatable reliability. The SVD system provides authorities with the ability to offer selective vehicle priority to groups of vehicles; even down to an individual vehicle. Siemens has the capability to supply, install and support the complete end-to-end SVD system.

Complete system lifecycle cost effectiveness and an aesthetically pleasing environment are fundamental requirements in today's urban and rural areas. The new Siemens SVD solution has been specifically designed to meet these needs, enabling value for money and minimal streetscape impact without compromising on quality.

Siemens SVD

The SVD solution uses automatic Radio Frequency Identification (RFID) to selectively detect suitably tagged vehicles. Flexibility and performance are key factors when delivering a complete end to end SVD solution. Traditional vehicle detection and priority systems require road closures and extensive civil engineering works. The Siemens SVD solution can be installed on existing street infrastructure and can interface with existing roadside controllers to grant priority or access to recognised and identified vehicles.

The above ground reader can be simply mounted onto existing traffic poles, lighting columns or any other piece of roadside infrastructure. The reader can detect passing tags up to 14 metres away at speeds of up to 350kph. The read range can be adjusted to trim the detection area.

The tag is easily and simply mounted in the windscreen of the vehicle. Each semi-passive tag is equipped with a small battery, which keeps the ID-tag awake but is not used to transmit its own signal. This enables a prediction of battery life, under normal conditions. No power is induced from the reader's output signal, hence the extremely low RF power output. The ID-tag can be read an unlimited number of times, without reducing the battery's energy.

Each tag has a unique ID that is associated with the equipped vehicle. Lists of tag IDs can be kept in the reader creating black lists and white lists, allowing the reader to decide whether the vehicle passing is allowed access or should be granted priority over other traffic. Once a tag has been detected, and the vehicle has been confirmed on the white list, the reader outputs a signal to the traffic controller for traffic priority or to the barrier / bollard for access control.

- Automatic priority and access
- Unobtrusive above ground solution
- Unbeatable, fail-safe reliability
- Complete end-to-end lifecycle cost effectiveness
- Congestion management and access control tool
- Extremely low power requirements
- ELV compatible

The use of semi-passive ID tags, coupled with cutting edge high-frequency technology, helps to create a long, very clearly defined reading lobe, combined with unprecedented performance and reliability.

Siemens SVD Applications

Bus priority

A common use for SVD solutions is to provide local bus priority at traffic signal junctions.

Buses can be equipped with tamper evident tags that have unique IDs linked to the bus. White lists can be generated within the reader such that only a recognised tag associated with a particular bus route is granted priority. When a bus passes a reader, and the tag ID is recognised as being on the white list, an output is generated and linked to the traffic controller that will enable priority to be given at that particular junction. This is especially effective when used on bus corridors.

Access control

There are numerous access control applications where the Siemens SVD solution is perfect. These can range from the automatic lowering of bollards to allow access for buses, through to the automatic raising of barriers at private residential areas. In all cases, the unbeatable levels of accuracy allow for seamless access control.



Emergency vehicle priority

Similar to how the Siemens SVD solution can be used effectively for bus priority, localised emergency vehicle priority is another perfect application of the technology. The junctions that are nearest the critical points of the emergency vehicles' route can be equipped with Siemens SVD equipment, which will enable priority to be given to the emergency vehicle reducing any unnecessary travel delay.

Barrier free traffic control

The Siemens SVD solution can be used in multi-lane free-flow situations, where the removal of the need to stop at barriers is essential to enable smooth traffic flows.

Fleet management

Large vehicle fleets can be equipped with the Siemens SVD tags to give the fleet owner reliable, accurate and up to date information regarding the location of all vehicles within the fleet.



How the system works

Technical specification

Operating frequency	2.45 GHz
Output power	75 mW
Encapsulation	IP65
Power supply	10 to 30 VDC
Operating temperature	-30°C - +60°C
System status indicator	LED
Approved	CE & FCC
Read range	Up to 14m
Tag dimensions	70mm by 45mm
Speed	Up to 350kph

Siemens Infrastructure & Cities

Traffic Solutions

Sopers Lane, Poole, Dorset, BH17 7ER

Tel: +44 (0) 1202 782000 Email: sales.stc@siemens.com

siemens.co.uk/traffic

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