Electronic Vehicle Identification.

The solution for more security in vehicle license plates, identification and authentication.

iltage (Intelligent License Tag)
& RFID License Plate.

UTSCH
World Leader in Security License Plate Technology
Worldwide...

... the number of vehicles on the streets increases constantly. Vehicle theft grows rapidly, too.

Cases of arbitrary registration, and therefore tax offences, accumulate. Recognition and reliable identification of both the vehicles and the drivers are required. Not only for supervisory departments and administrative services of state organs, but also for daily traffic incidents, for example in case of accidents and insurance related matters.

As the international specialist of innovative vehicle registration systems, UTSCH is developing unique concepts that address the increasing needs of higher security. To confront these issues UTSCH has designed a variety of RFID-based solutions: the RFID windshield label (iltag) and the RFID license plate.

Radio Frequency Identification (RFID).

Radio-frequency identification (RFID) is the use of an object (typically referred to as an RFID-tag) applied to or incorporated into a product for the purpose of identification and tracking using radio waves.

Some tags can be read from several metres. Radio-frequency identification comprises interrogators (also known as readers), and tags (also known as labels).

Most RFID tags contain at least two parts. One is an integrated circuit for storing and processing information, modulating and demodulating a radio-frequency (RF) signal and other specialized functions. The second is an antenna for receiving and transmitting the signal.
iltag® – the intelligent license tag.

The iltag is a RFID windshield label and offers the possibility to store data electronically and print vehicle related information on it. It serves as a 3rd license plate.

Its core benefit is the additional optical authenticity confirmation of the outer number plate.

A use of counterfeited or stolen license plates is useless without the corresponding intelligent license tag. For all applications which require a reliable vehicle identification, the iltag on top of high-security license plates is the best solution.

Security Features.

Security features against counterfeiting:
A variety of visible and hidden printed security features gives the windshield label a very high security standard.

Security feature against manipulation:
A transfer of an already fixed label to another vehicle is virtually impossible due to the self destructible holographic layer and security die-cuttings at the edges.

The printed information, the holographic structure and the label itself will be destroyed.

RFID License Plate.

The RFID license plate is an aluminium license plate with integrated transponder.

Such an „intelligent“ license plate supports automated working processes and offers many applications.

For example, it allows back tracing of a manufacturing and distribution process or the possibility to store data to identify a vehicle in traffic.

Security Features.

- The RFID license plate is equipped with a hot stamped chrome based OVD stripe.
- The UID of the tag will be laser buried into the reflective foil to avoid the change of the RFID inlay.
Technical Features.

iltag and RFID Plate

The state of the art design of the UTSCH iltag and the RFID license plate offer the opportunity to use different types of passive RFID technologies or even a combination of it. The RFID inlay is an integrates part of the iltag and the RFID license plate.

Sample of RFID Technologies:

<table>
<thead>
<tr>
<th></th>
<th>HF</th>
<th>UHF</th>
<th>HF + UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>ISO 15693 or ISO 14443</td>
<td>EPC Class1 Gen2</td>
<td>Best results are achieved by a combination of HF and UHF (iltag only).</td>
</tr>
<tr>
<td>Frequency</td>
<td>13.56 MHz</td>
<td>868 - 928 MHz</td>
<td></td>
</tr>
</tbody>
</table>
| Main Characteristics| · high data storage capacity  
· highest level of encryption and authentication for data security | · long range readability  
· vehicle identification also in moving traffic |                                    |
| Data                | · UID + vehicle identification  
(no private data)  
· secured private information  
(e.g. owner)  
· authorization levels | · UID + vehicle identification  
(no private data) |                                    |

The iltag and the RFID license plate are the key elements of an electronic vehicle identification system.
Applications

**Electronic ticket generation and vehicle identification**

The vehicle data will be read and compared with the actual vehicle. In case of a traffic violation a ticket can be printed directly.

For more information (vehicle or owner) the officer sends the code number to the trust centre and receives the respective data, according to his/her level of authorization.

**Automated vehicle identification**

By passing a check point the code number Code no. Alarm will be transferred to the trust centre or computer.

The code number will be checked.

Marked vehicles can be stopped and checked in detail.

**Border Control**

The code no. will be checked and the corresponding dataset transferred to the border office. The operation will be recorded.

The vehicle will be check and the result transferred to the trust centre.

**Access control**

The authorization will be checked and a signal with the Code no. sent to the barrier.

**Traffic management**

Measuring points with traffic information panels transfer the code no. to the traffic management office.

Data can be used for active traffic management, e.g. speed regulation subject to the traffic density.

**Technical inspection**

The code no. will be transferred to the trust centre.

The respective data set displayed on the screen will be updated after the inspection and be available to all concerned authorities.

**Anti gas theft**

While refueling the car, a camera is reading the license plate. Simultaneously the vehicle data will be read from the ttag and compared to the camera’s reading. Therefore the use of a counterfeit or stolen license plate will be immediately recognized.