



Overview

Operating frequency	860 MHz – 960 MHz
Chip	NXP UCODE DNA, passive-backscatter (battery-free)
Supported protocols	RAIN RFID (ISO/IEC 18000-63 respectively GS1 EPC UHF Gen2v2)

Memory capacity	TID	96-bit factory-locked (incl. 48-bit unique serial number)
	UII / EPC length	224 bit
	User	3072 bit
Typical read range ¹	ETSI regions (2 W ERP at 866 MHz)	18 m (license plate size of 520 mm × 110 mm)
	FCC regions (4 W EIRP at 915 MHz)	16 m (license plate size of 300 mm × 150 mm)

Security features

Mechanical security features	<p>The RFID chip is an integral part of the aluminium license plate and cannot not be removed or tampered without visible damage or without compromising its intended functionality</p> <p>Embossed border and alphanumeric of the aluminium license plate coloured using opaque hot stamping foil</p>
RFID-based security features	<p>32-bit kill password and 32-bit access password</p> <p>Various 'memory lock' options</p> <p>2 × 128 bit AES keys for cryptographic security features</p> <ul style="list-style-type: none"> key0 for security: dynamic cryptographic tag authentication to verify the vehicle`s identity and to prove its origin, as well as to prevent counterfeiting key1 (group key) for privacy: untraceable function to restrict access privileges and hide (custom) data, which can be obtained only based on decryption of enciphered tag

Environmental resistance

Chip operating temperature ²	-40 °C to + 85 °C
Data retention on chip ³	20 years
Standards	Complies with the requirements of the license plate standards ISO 7591 as well as DIN 74069
Chip resistance	As an integral part of the license plate, strength to withstand all weather conditions and typical vehicle cleansing

¹ Read ranges are laboratory values and therefore are indicative only. These values are calculated on basis of measurements in a non-reflective environment. Read ranges may vary depending on used frequency, radiated power, reader sensitivity, antenna polarisation and gain, directivity of the antennas as well as environmental conditions.

² Ambient temperature may have an influence on the maximum read range

³ If the ambient temperature is ≤ 55 °C



Application

The use of plastic license plate holders is generally recommended. Apart from prefabricated holes when issuing the plates, no additional holes shall be made to attach the IDEPLATE® to the vehicle. The IDEPLATE® can be perfectly complemented by our third license plates IDESTIX® to achieve an even greater level of security. As shown in the pictures, the polarisation of the IDEPLATE® is usually linear vertical. A different polarisation is optional per agreement.

Optional security features and personalisation options

In consultation with our customer, we generate country-specific solutions that are individually tailored to the requirements of the local registration and logistic processes.

Can be combined with several security features, e.g.

- Incorporated graphics
- Unique laser engraved serialisation (alphanumeric text and 1D/2D barcode)
- Laser engraved watermarks visible at a certain angles only
- Tamper-resistant FE-script
- High security holograms
- Serialised holographic validation sticker
- Hot stamping foil with country-specific, diffractive inscription, e.g. iridescent colours

Special license plate holders or one-way screws available to prevent plate theft

The IDEPLATE® can be ordered as a Tamper Proof Plate (TPP) which leaves a visible destruction of a seal at the attempt of plate theft

Chip pre-programming

Pre-programming of the chip is optional per agreement