IDeSTIX®

Overview

Operating frequency	860 MHz – 960 MHz
Chip	NXP UCODE DNA or NXP UCODE 7, both passive-backscatter (battery-free)
Supported protocols	RAIN RFID (ISO/IEC 18000-63 respectively GS1 EPC UHF Gen2v2)

		NXP UCODE DNA	NXP UCODE 7
Memory capacity	TID	Both, 96-bit factory-locked (incl. 48-bit unique serial number)	
	UII/EPC length	224 bit	128 bit
	User	3072 bit	NA
Typical read range[1]	ETSI regions (2 W ERP at 866 MHz)	8 m on glass	9 m on glass
	FCC regions (4 W EIRP at 915 MHz)	7 m on glass	8 m on glass

Security features

The IDeSTIX® is an innovative tamper-proof label combining various security features

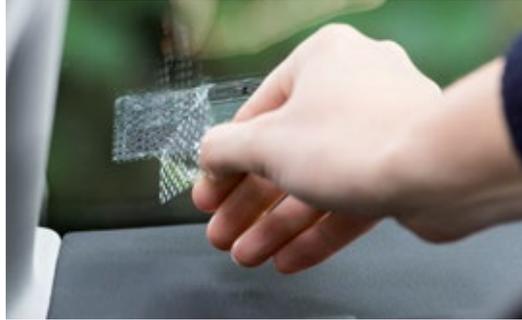|	
Mechanical security features	VOID effect and patterned destruction upon attempt of removal
	Metallic label with (partial) holographic image and matte white area for personalisation
	Protection of printable personalisation inside the label construction
	Pressure sensitive adhesive is intended for a single use and permanent application. Any attempt of removing and reapplying of the label results in visual and functional damage
RFID-based security features	32-bit kill password and 32-bit access password
	Various 'memory lock' options
Only NXP UCODE DNA	2 × 128 bit AES keys for cryptographic security features
	▪ key0 for security: dynamic cryptographic tag authentication to verify the vehicles 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
Adhesive	High adhesive strength to withstand all weather conditions and typical vehicle cleansing
Direct sunlight	Black spot UV protection print on chip position to protect against sunlight transmission

[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

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Application

Self-adhesive IDeSTIX® is applied to the inside of a vehicle's windscreen as a third license plate for electronic vehicle identification. IDeSTIX® is the perfect supplement to the IDePLATE®, the RFID-based aluminium license plate.

Personalisation options

Print	▪ Folding mechanism for personalisations using thermal transfer printers and to ensure printed information is sealed between the layers of the label ▪ Customised colour printing of static text and graphics per agreement
Overall label size	103 mm × 53 mm (with a metallic label of 100 mm × 50 mm)
Hologram	Custom-specific holographic image
Printing on the liner	Static printed application instructions on backside
Chip pre-programming	Pre-programming of the chip is optional per agreement

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