

# SECVEL Kartenschutzhüllen – Testbericht 2014



**Ort:** iDTRONIC GmbH  
Donnersbergsweg 1  
67059 Ludwigshafen

**Teilnehmer:** Tobias Böhler (Support)  
Peter Löcher (Key Account Manager Professional RFID)




## **Rahmenbedingungen :**




- Testfrequenz NFC 13,56 MHz.
- Testdauer 5 – 10 Sekunden / Muster und Karte
- Getestete Lesereichweiten 0 bis 20 cm

## **Testablauf:**

- Jeder Transponder wurde vor dem Test erfolgreich auf seine Funktion überprüft
- Danach wurde versucht die Transponder aus dem Inneren der Muster zu lesen, wobei die Muster 4, 5, und 6 sowohl in geöffneter als auch in geschlossener Form getestet wurden.

**Anlagen:** Datenblätter der verwendeten Lesegeräte

Getestetes Produkt	Verwendete Transponder im Kredit-Kartenformat (unterstützte Norm)	Verwendete Lesegeräte	Testergebnis
 <p>Muster 1</p>	DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	Kein Transponder konnte aus dem Inneren des Musters gelesen werden.
 <p>Muster 2</p>	DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	Kein Transponder konnte aus dem Inneren des Musters gelesen werden.
 <p>Muster 3</p>	DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	Kein Transponder konnte aus dem Inneren des Musters gelesen werden.

 <p>Muster 4</p>	<p>DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)</p>	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	<p>Kein Transponder konnte aus dem Inneren des Musters gelesen werden.</p>
 <p>Muster 5</p>	<p>DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)</p>	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	<p>Kein Transponder konnte aus dem Inneren des Musters gelesen werden.</p>
 <p>Muster 6</p>	<p>DESFire-EV2 (ISO14443A) MIFARE S20 (ISO14443A) MIFARE S50 (ISO14443A) I-Code SLI (ISO15693)</p>	<ul style="list-style-type: none"> <li>➤ USB Desktop Reader EVO (R-DT-EVO-HF)</li> <li>➤ HF Module (OEM-HF-M890-TTL) mit Antenne 20 x 30 mm (OEM-HF-A910)</li> <li>➤ BLUEBOX HF – Controller 1CH (5232H) mit Panel Antenna (9222H )</li> </ul>	<p>Kein Transponder konnte aus dem Inneren des Musters gelesen werden.</p>

# USB Desktop Reader EVO



The iDTRONIC USB Desktop Reader EVO is an easy-to-use RFID Reader for your USB equipped PC or Laptop. The USB 2.0 interface guarantees high-speed data transfer. The EVO is a versatile device for various applications.

Special Feature of the iDTRONIC USB Desktop Reader EVO is the excellent design, including an LED illuminated frame, turning on during reading process. The USB Desktop Reader EVO is a full read/write device which comes with full SDK and Windows based application Software.

The EVO is available in UHF, HF, LF or LEGIC. Keyboard Emulation is optional for all Versions.

## Features

- Modern Design
- LED illuminated frame
- Internal antenna
- USB interface
- iDTRONIC SDK included
- Keyboard Emulation (option)
- ETSI & FCC approved (UHF only)
- MIFARE and LEGIC support (HF & LEGIC only)

## Technical Data

### Mechanical Specifications

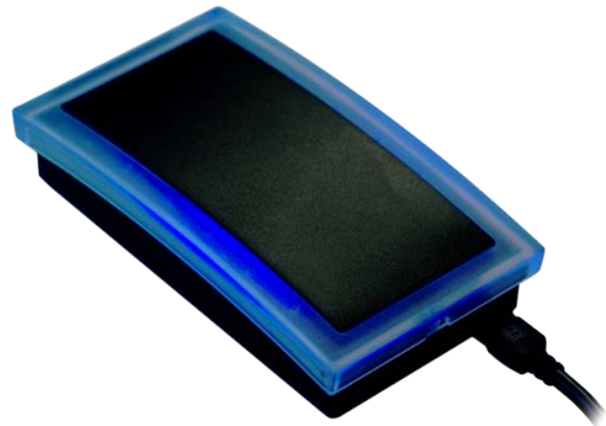
Housing-Material: ABS  
Colour: Anthracite  
Dimensions: 125x70x26 mm

### Electrical Specifications

Power Supply: 5 VDC , via USB  
Operating Systems: Windows XP/7, Linux  
Antenna: Integrated  
Interface: USB 2.0, cable length 1.2 m  
Read / Write Speed: Up to 424 kbps

## Applications

- Desktop Reader / Encoders
- Network Access Control
- Point of Sales
- Access Control



### Environmental Conditions

Operating Temperature: 0 °C to +50 °C  
Humidity: 5 % to 95 %

### Features

Signals: Multi-coloured LED Illuminated frame  
Option: Keyboard Emulation  
Compliant: CE, RoHS

## Available Versions

	Frequency	Standard	Supported Tags	Order Code
<b>UHF</b>	860 - 925 MHz	ISO1800-6C	ISO1800-6C EPC Class 1 Gen 2 NXP U-Code GSXM/G2XL	R-DT-EVO-UHF R-DT-EVO-UHF-KEMU
<b>HF</b>	13.56 MHz	ISO14443 A/B ISO15693	MIFARE® Classic Mini/1K/4K MIFARE Ultralight® NXP I-Code SLI TI Tag-it HF-I	R-DT-EVO-HF R-DT-EVO-KEMU
<b>LF</b>	125 kHz	ISO11784	EM4200 EM4550 NXP Hitag 1, 2, S	R-DT-EVO-LF R-DT-EVO-KEMU
<b>LEGIC</b>	13.56 MHz	ISO14443 A/B ISO15693 NFC	LEGIC Prime LEGIC Advant MIFARE® Classic Mini/1K/4K MIFARE Ultralight®	R-DT-EVO-LEG42 R-DT-EVO-LEG42-KEMU

### Order Codes

UHF	R-DT-EVO-UHF
HF Multitag	R-DT-EVO-HF
LF Multitag	R-DT-EVO-LF
LEGIC	R-DT-EVO-LEG42

## BLUEBOX HF – Controller 1CH



iDTRONIC's BLUEBOX Controller & Antenna family is well suited for industrial and enterprise applications, where reliable, robust and well performing products are needed. All components are designed as a powerful combination for an easy and cost efficient system installation.

The BLUEBOX HF – Controller 1CH is a Read/Write device with one antenna port. This powerful device can achieve a reading distance up to 20 cm. The BLUEBOX HF – Controller 1CH allows Near-Field and Short-Range applications. The combination of a modern RF module and an up-to-date controller engine enables a fast data processing and high reading rates in one device. The powerful BLUEBOX SDK allows the fast development of extensive applications.

### Applications:

- Industrial Automation
- Asset Tracking
- Laundry Management
- Access Control



### Features

- 13.56 MHz
- Supports ISO14443A, ISO15693 & ISO18000-3
- 1 antenna port
- Possibility of using different RFID standards parallel in one application
- Several Standard Read Modes like Buffered Read Mode, Scan Mode & Notification Mode
- Integrated I/O ports
- Micro SD slot for memory extension
- Diagnostic mode via USB
- Multiple interface options
- Ruggedized product design and enclosure
- Integrated webserver for remote access to controller
- Unique SDK for all BLUEBOX products
- BLUEBOX SHOW applications software
- CE approved

## Technical Data

### Mechanical Specifications

Housing-Material:	Aluminium
Dimensions:	110 × 140 × 60 mm
Weight:	430 g
Protection Class:	IP65

### Electrical Specifications

Power Supply:	24 VDC ±10 %
Power Consumption:	3 W
Operating Frequencies:	13.56 MHz
Operating Distance:	Up to 20 cm
Connectors:	2 × M12 (Power & Interface)
Antenna Connector:	1 × Tachel 3 Pin
Digital I/O:	2 (opto-isolated)
Interface (Standard):	Ethernet
Interfaces (Option):	RS232 &485, GPRS, PROFIBUS, PROFINET, Ethernet/IP
Memory Extension:	Micro SD-Slot

### Environmental Conditions

Operating Temperature:	-20 °C to +55 °C
Humidity:	5 % to 95 %



### Features

Supported Transponders:	ISO14443A, ISO15693, ISO18000-3, NXP Mifare family
Working Modes:	Scan Mode, Notification Mode, Buffered Read Mode, Stand-alone Mode
Integrated Webserver:	Remote Configuration & Standalone Mode
Status Display:	8–12 LEDs
Temperature Sensor:	On-board
Real – Time Clock:	Accuracy > 0,01s
Service Interface:	USB

### Applicable Standards

Radio Regulation:	CE
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## Available Antennas

		
<i>Name</i>	<b>Cylindrical antenna</b>	<b>Panel antenna</b>
<i>Sizes</i>	M30 × 78 mm	200 × 200 × 20 mm 210 × 450 × 20 mm
<i>Reading distance</i>	Up to 13 cm	Up to 20 cm
<i>Order codes</i>	9221H	9222H (200 × 200 mm) 9223H (210 × 450 mm)

### Order Codes

RS232 / RS485:

5231H

Ethernet:

5232H

Profibus:

5233H

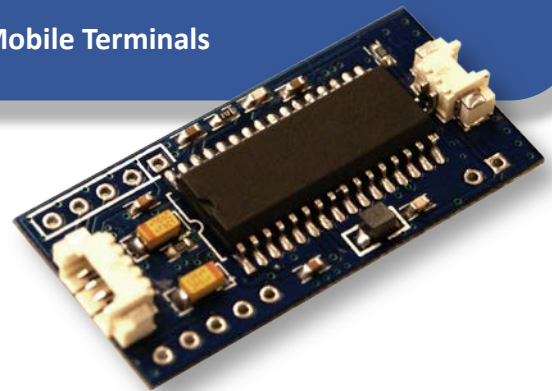
The iDTRONIC embedded HF Module has been designed to support ISO 14443 A/B, ISO 15693 + NXP MIFARE family tags. It is a full Read/Write device, which is compliant to MS Windows, Linux and Android devices, which makes it useable for many different applications.

The iDTRONIC embedded HF Module has the possibility to connect an external antenna. iDTRONIC offers a choice of different antenna sizes. The reading distance can be up to 10 cm (depending on type of transponder).

iDTRONIC's embedded HF Module comes with a full SDK and MS Windows based application Software. An Antenna 35 x 50 mm with 2 Pin Connector is included.

## Applications

- Identification
- Ticketing
- Payment
- Access Control
- Mobile Terminals



## Technical Data

### Mechanical Specifications

Dimensions: 39 × 19 × 1 mm

### Electrical Specifications

Power Supply: 5 VDC (±5 % regulated)

Power Consumption: < 80 mA

Antenna: external

Reading Distance: up to 10 cm (depending on tag and antenna type)

Operating System: MS Windows, Linux, Android

Interface: UART (TTL)

Baudrate: 9600 - 115200 bit/s

Signals: 1 LED

### Supported Standards / Tags

ISO 14443 A/B

ISO 15693

NXP MIFARE Ultralight®

MIFARE® Classic Mini / 1K / 4K

### Environmental Conditions

Operating Temperature: -10 °C ... +70 °C

Storage Temperature: -20 °C ... + 80 °C

Humidity: 5 % to 95 %

## Order Code

OEM-HF-M890-TTL



## Available Antennas

Antenna Size (PCB size)	Reading Distance (Depending on type of tag)	Order Code
20 × 30 mm	Up to 4 cm	OEM-HF-A910
20 × 40 mm	Up to 5 cm	OEM-HF-A911
35 × 50 mm	Up to 6 cm	OEM-HF-A912
49 × 55 mm	Up to 7 cm	OEM-HF-A916
54 × 86 mm	Up to 10 cm	OEM-HF-A915
60 × 80 mm	Up to 11 cm	OEMHF-A914
80 × 80 mm	Up to 11 cm	OEM-HF-A913