DOC. 212-R2-ENG

EK20-IDSCAN USER MANUAL

The "RFIDSCOPE"

ID-SCAN is a powerful RFID detector covering all the most used transponders on the market.
The function LF/HF/UHF SCANNER permits to identify a tag in few seconds.
The function PAGE READ permits to read the memory contents (UID/EPC,TID,USER PAGE)
The tags actually detected by IDSCAN are listed below:

LF SCANNER 125 KHz

Type	Page Read
UNIQUE-EM4102	UID only
Q5	UID/PAGE
TK5577	UID/PAGE
TITAN-EM4550	UID/PAGE
HITAG 1	UID/PAGE
HITAG 2	UID/PAGE
HITAG S	UID/PAGE
HITAG 256	UID/PAGE

HF SCANNER 13.56 MHz

Type	Page Read
14443A	
MIFARE 1K	UID/PAGE
MIFARE 4K	UID/PAGE
MIFARE ULTRALIGHT	UID/PAGE
MIFARE PLUS	UID
MIFARE DESFIRE_D40	UID
MIFARE DESFIRE_EV1	UID
MIFARE DESFIRE_EV2	UID
14443A GENERIC	UID/PAGE
15693	
ICODE NXP 1K	UID/PAGE
ICODE NXP 2K	UID/PAGE
LRI-2K STM	
15693 GENERIC	UID/PAGE
14443B	
SRIX STM 512	UID/PAGE
SRIX STM 4K	UID/PAGE
ST19-WR08 STM	UID
CALYPSO	UID
14443B GENERIC	UID/PAGE

Read from front side (LF-HF)

Read from bottom side(UHF)

UHF SCANNER 868MHZ (EU)

Type	Page Read
MONZA2	EPC/TID/PAGE
MONZA3	EPC/TID/PAGE
MONZA4D	EPC/TID/PAGE
MONZA4U	EPC/TID/PAGE
MONZA4QT	EPC/TID/PAGE
MONZA4E	EPC/TID/PAGE
MONZA5	EPC/TID/PAGE
HIGGS2	EPC/TID/PAGE
HIGGS3	EPC/TID/PAGE
UCODE G2XM	EPC/TID/PAGE
UCODE G2XL	EPC/TID/PAGE
UCODE G2iL	EPC/TID/PAGE
UCODE G2iL+	EPC/TID/PAGE
UHF GENERIC	EPC/TID/PAGE

Permits to read EPC lengths from 2 to 16 bytes.

OPERATION MODE

IDSCAN use two area to operate:

WORKING AREA is the scan operation area.
SETTINGS AREA is an area where to set some useful parameters.

TURN ON/OFF

TURN-ON Press for a short time the key

TURN-OFF Press the key for about 2 sec.

WORKING AREA

After turn on the LCD display the current version.

IDSCAN 5.0

If IDSCAN remains inactive for more than 3 minutes automatically will be turn off to preserve the battery.

LOW BATTERY

If a low battery is detected appears:
The LCD lamp and BUZZER flash three times and IDSCAN turn-off.

Low Battery

If no alarm detected appears :
BATT: show the battery level %.

Scanner Ready
BATT: ▯▯▯▯▯▯ - - - -

RFID SCANNER

To start the tag detection press OK.
IDSCAN attempt to recognize an unknown transponder.

Before it run a scan on LF frequency

Running LF

and next a scan on HF

Running HF

and next a scan on UHF

Running UHF

When a TAG is detected the LCD lamp and BUZZER flashes 3 times.
On the LCD appear the Tag Type and the UID detected.
The UID length and meaning is different for any Type of Tag.
Refer to the "Technical Specification" of that TAG.

HITAG-1 UID

If no detection:

TAG UNKNOWN

PAGE READ

Place the TAG in the RF field.
To read the UID press OK.

HITAGS UID
34C456F8

To read the PAGES on the tag use ▲ ▼ to increment or decrement the PAGE number and press OK.
Will appear the read value in HEX format.

HITAGS 004
12345678

If a Data Error was detected appear Read Error.
To repeat press OK

HITAGS 004
Read Error

SOME EXAMPLES

UNIQUE-Q5-TK5557

The UID display the content of the USER AREA in HEX format (5bytes).

UNIQUE	UID
15F53244D5	

Q5 and T5577 have a PAGE containing an UNIQUE SERIAL NUMBER.
Use ⬆ ⬇ to change to PAGE 000 and press OK.
Q5 PAGE Serial Code (5 bytes HEX).

Q5	000
A534C21233	

T5577 PAGE Serial Code (8 bytes HEX).

T5577	000
E015015576B4F899	

HITAG S

Read Serial Code (4 bytes HEX)

HITAGS	UID
467BF970	

Read Page 004 (4 bytes HEX)

HITAGS	004
53535353	

ISO 14443A

MIFARE CLASSIC 1K Serial Code (4 byte Hex)

MIFARE-1K	UID
5C63161D	

Select a Page (Block 001)

MIFARE-1K	001

Then press OK to display 16 bytes HEX of the selected page.

1234567890ABCDEF
FFFFF3245778BDE25

ISO 15693

ICODE NXP 1K Serial Code (5 bytes HEX).

ICODE NXP 1K	UID
0009CA1B95	

Read PAGE 002 (4 bytes HEX).

ICODE NXP 1K	002
696F2050	

ISO 14443B

SRIX-ST-512 Serial Code (8 bytes HEX).

SRIX-ST-512	UID
F082CB67C71802D0	

Read PAGE 010 (4 bytes HEX).

SRIX-ST-512	010
33343536	

UHF

MONZA5 EPC Code (12 or 16 bytes HEX or ASCII).

MONZA5	EPC

Press OK to display the EPC code

3000000000000000
00000000

Use ⬆ ⬇ to change to TID and press OK.

MONZA5	TID

E2801100200054C6
155F016F

Use ⬆ ⬇ to scroll the PAGES of USER AREA and press OK.
Any pages shows 16 bytes in HEX

MONZA5	002

Es. mode HEX

3031303230333034
3035303630373038

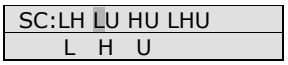
Es. mode ASCII

Paul Smith
CAMRAS SA

SETTINGS AREA

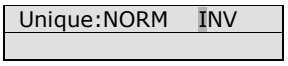
To pass from WORK AREA to SETTINGS AREA and vice versa, hold down the ESC key for 3 seconds.

When enter the SETTING AREA appear the first selection of the MENU list.



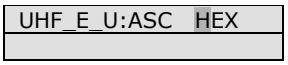
1)
Set the SCAN MODE:
LH scan only LF and HF tags.
LU scan only LF and UHF tags.
HU scan only HF and UHF tags.
LHU scan all tags.
L scan only LF tags.
H scan only HF tags.
U scan only UHF tags.
Pressing OK, the cursor moves on the selection and **stores** the value.
Scroll down to the next item.

2)
Set the reading mode of an UNIQUE code.
NORM is the INOUT format. Example: F040F2B370
INV is the SOKYMAT format 0F024FCD0E



Pressing OK, the cursor moves on the selection and **stores** the value.
Scroll down to the next item.

3)
Set the reading mode for EPC and USER MEMORY of an UHF tag.
ASC the reading is made in ASCII format.
HEX the reading is in HEX format.

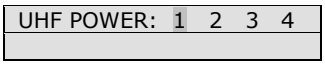


Pressing OK, the cursor moves on the selection and **stores** the value.
Scroll down to the last item.

4)
Set all the Mifare Cripto KeyA for all Sectors at the default value: FFFFFFFFFFFF into the reader chip.

Pressing OK, the cursor moves on the selection and **stores** the value.
Scroll down to the last item.

5)
Set the power on the UHF antenna between 15dbm to 16dbm (default=1).



Pressing OK, the cursor moves on the selection and **stores** the value.

AVAILABLE MODELS

EK20-IDSCAN-LH	Model with LF and HF antennas
EK20-IDSCAN-LHU	Model with LF and HF and UHF antennas.

The USB interface is always present in all the models.

FIRMWARE AND TEXT UPGRADE

Open the folder: **"**IDSCAN_CD"
INSTALL THE DRIVER USB
1) Open the folder "MCP2200WindowsDriver".
2) In "DriverInstallationTool" select "X64" forr 64bit or "X86" for 32 bit.
Launch "MCP2200DriverIstallationTool". Press "Install" and wait for the end of the driver installation.
INSTALL COM PORT ON PC
1) Turn off the READER. Insert the USB connector and turn on the READER.
2) Begin he installation of a new device. Wait for the complete installation of the assigned COM PORT.

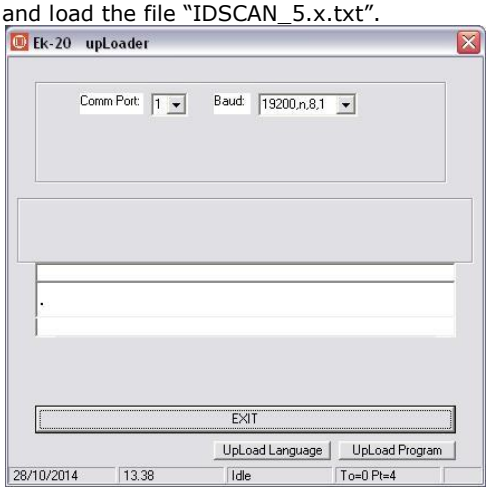
Turn on IDSCAN.

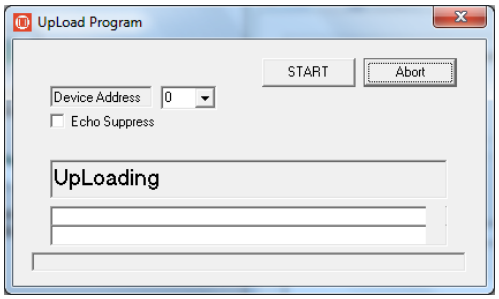
Will appear on the LCD:

USB Connected
Operate from PC

Now double click on the icon to launch the program "**EK20 UPLOADER".**
- Set the COM PORT and the bit rate at 19200.
- Press UPLOAD PROGRAM.
- Select the file IDSCAN_5.x.BIN
- Set the Reader address to which to send the program.
- Press START and wait for the text (Upload OK).
- Turn off the READER.

To upgrade the TEXT in different languages repeat the before operations selecting "Upload Language" and load the file "IDSCAN_5.x.txt".





TECHNICAL SPECIFICATION

TRIPLE FREQUENCY	LF 125Khz HF 13.56Mhz UHF 868Mhz
READ DISTANCE	LF max 1,5cm HF max 2cm UHF max 10cm
DISPLAY LCD	2 row x 16 chari White-Blue
ACOUSTIC WARNING	Buzzer
BATTERY	LIPO 400mah rechargeable via USB (5VDC). Complete charge: 4hour
DATA TRANSMISSION 19200-8-N-1	USB2.0
OPERATING TEMPERATURE	-20'C to +65'C
DIMENSIONS WEIGHT	125mm x 70mm x 23mm 170 grammi

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