







Designed in France Made in France www.stid.com



#### Acknowledgment

Welcome to the world of high security!

You have purchased ULTRYS v2 software; it will allow you to configure SPECTRE readers, encode user cards and vehicle tags.

We would like to thank you for the confidence you place in us and we hope that this solution developed by STid will keep you satisfied.

We remain at your disposal for any further information about this programming tool and our cuttingedge solutions.

We look forward to seeing you for more information on our website <u>www.stid-security.com</u>.

The STid Team



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## 1. Information

#### PC requirements

- A PC with operating system: Windows 7 or 10 or Windows server 2012r2.
- USB communication port.
- 50 MB min of free disk space.

#### **USB Key Content**

- FTDI USB Driver for Windows 7, 8.x and 10.
- ULTRYS Version 2.x.x.

#### Hardware required

#### To configure the reader:

• USB cable provided with SLA and SMA to directly configure the reader via USB link.

Or

- STid UHF 866-915 MHZ encoder to encode UHF SCB configuration card:
  - ETSI part numbers:
    - STR-W45-E/U04-5AA/1 (v10 firmware version required\*)
    - GAD-W45-E/U04-5AA/1 (v08 firmware version required\*)
  - FCC part numbers:
    - STR-W55-E/U04-5AA/1 (v10 firmware version required\*)
    - GAD-W55-E/U04-5AA/1(v08 firmware version required\*)
- UHF ISO card part number: CCTW630\_AP

To encode user credentials and vehicle tags:

- STid UHF 866-915 MHz encoder:
  - ETSI part numbers:
    - STR-W45-E/U04-5AA/1 (v10 firmware version required\*)
    - GAD-W45-E/U04-5AA/1 (v08 firmware version required\*)
  - FCC part numbers:
    - STR-W55-E/U04-5AA/1 (v10 firmware version required\*)
    - GAD-W55-E/U04-5AA/1(v08 firmware version required\*)

\*Identification on the back of the encoder.



#### Windows Installation

- 1. Insert the ULTRYS v2 USB stick on an USB port of your PC.
- 2. Wait for the automatic opening of the browser window.
- 3. Launch ULTRYS V2.x.x\_setup.exe.
- 4. Follow the instructions on the screen.

#### Compatibility ULTRYS / Reader Range / User IDs

This ULTRYS version (2.x.x) allows you to configure SPECTRE Access readers.

To configure URx & GAT readers, please use ULTRYS v1.x.x.

	ULTRYS v1	ULTRYS v2
SPECTRE + SPECTRE ANTENNA	x	$\checkmark$
SPECTRE + URD ANTENNA	x	✓
URx + URD ANTENNA	✓	x
URx + SPECTRE ANTENNA	✓	x
Credential encoding in secure mode	x	✓

Warning:

- To read credentials encoded with ULTRYS v1 on a SPECTRE reader: configure the EPC reading in Mode 1(standard) and do not use the EPC filter.
- Credentials encoded with ULTRYS v2 will not read on the Urx /GAT readers.



#### Overview

Instant and a stant and a stant and a stant and a stant a stand a stant a stant a stand a stant a stant a s

It is possible to install the software on an unlimited number of workstations.

The software is divided into three distinct parts:

**ULTRYS** settings

**Readers configuration** 

User credentials

 On the Home page, you can select the language (English, Spanish, French) and click on the link for user manual.



#### Open

At the first opening no file is loaded by default. ULTRYS is directly open on the home page.



This mention indicates the current configuration.

At the next opening, ULTRYS will automatically load the last loaded configuration file.

Two possible cases:

- The loaded file is the one to use
- The loaded file is not the one to use



### 1st case: the loaded file is the one to use

Open the last configuration file used			
Configuration file p Date last used	ath C:\Users\cpi	ialoux\Desktop\spectre\U 2/26/2019 9:14:03 A	lltrys\Parking IN.ucg M
The .ucg file is prof	ected; enter the passv skip this file and contir	word and click on OK. nue to the home page	
Password			
	Cancel	Confir	m
Open the last config 	juration file used		
Configuration name		Park	ing IN
Configuration file path		C:\Users\cpialoux\Desktop\s	pectre\Ultrys\Parking IN.ucg
Date last used		2/25/2019 1	I1:58:10 AM
The Clic	.ucg file requires a user l k on Cancel to skip this fi	ID and a password le and continue to the home (	page
		Administrator	Ť
	Cancel	Confirm	
Olitrys v2			Administrator _ X
			ØSTid
uutr		7	
The software fool that secures and stream Configuration bades Parking IV (C Warehowkowk	ines your vehicle access exitoplacedref.(BydPerking III.utg)		≝cn + ₽ ()
Uitrys settings Marsage communication, profil réptis settings	Contract Creater i	Figuring readers and your reader configurations	User IDs
			www.stid-security.com

1- Enter the password of the configuration file if there is one if not go to step 2.

- 2- Select the profile to use to open the file.
- 3- Enter the profile password if there is one.
- 4- Please confirm.

5- ULTRYS loads the file and opens the home page.

#### 2nd case: the loaded file is not the one to use



- 1- Cancel.
- 2- ULTRYS is open on the home page without any configuration loaded.





# 2. ULTRYS Settings

Oltrys v2					Administr	ator 💶 🗙
LL	CUS Version 2.0.03			Ultrys settings Communication		ίΩ <sup>3</sup>
No configuration loaded	f.				🕮 en 🔻	<b>i</b>
کې Ultrys settings	Communication Port selection for encoder or reader connection					
		Select device	COM4 *			
Readers configuration		₿ Refre	esh			
		O Connect	ivity test			
User credentials		U				

Connect the SPECTRE reader to the PC using the provided USB cable to load the configuration via serial link directly onto the reader:



or

Connect an UHF encoder to the PC to encode User IDs or load the configuration onto UHF SCB configuration card.



# To set the communication port

Select device •	1- Click on 'Refresh' to detect all readers connected to the PC.
C Refresh	
O Connectivity test	
Select device COM3	<ul> <li>2- Open the dropdown list Select device</li> <li>3- Select the COM port number corresponding to the reader.</li> </ul>
O Connectivity test	
Select device COM4 •	4- Run the connectivity test
${\cal G}$ Refresh	
O Connectivity test	
Device detected: Version 7	(29.7) Message OK (with indication of the firmware version).
Failed to connect, please c com port and connect a co reader or encoder.	Message: Failed - Check the compatibility of the reader. - Check the USB cable. - Check the Baudrate reader: it must be fixed to 115200



# 3. Reader configuration



#### 3.1 Readers configuration



This button allows to access to the settings of the loaded configuration settings.

#### 3.2 Create new configuration

The reader configuration is done in nine steps. To move from one stage to another, you must click on "Next".

1 2 3 4 5 6 7 8 9 <u>Step1</u>	Frequency band regulation
<b>1 2 3 4 5 6 7 8 9</b>	Configuration protection loaded into the reader
<b>1 2 3 4 5 6 7 8 9</b> <u>Step3</u>	Reader selection
1 2 3 4 5 6 7 8 9 <u>Step4</u>	Antenna type selection
1 2 3 4 5 6 7 8 9 <u>Step5</u>	Installation configuration
1 2 3 4 5 6 7 8 9 Step6	Setting up light indicator (only available for ANT_UHF2)
1 2 3 4 5 6 7 8 9 <u>Step7</u>	Communication protocol
1 2 3 4 5 6 7 8 9 Step8	User management
1 2 3 4 5 6 7 8 9 Step9	Configuration save and protect

UltrysV2-v1.0 - Page 11 on 56



#### Step 1- Frequency band regulation





Andorra - ETSI
Andorra - ETSI
Australia - AustraliaCustom1
Austria - ETSI
Azerbaijan - ETSI
Belgium - ETSI
Bosnia - ETSI
Bulgaria - ETSI
Canada - FCC
Croatia - ETSI
Cyprus - ETSI
Czech Republic - ETSI
Denmark - ETSI
Estonia - ETSI
Finland - ETSI
France - ETSI
Germany - ETSI

The frequency bands depend on the installation location

Select the country in which the installation will be done.

For a country which is not in the list, please contact STid: <a href="mailto:support@stid.com">support@stid.com</a>.

2

To approve the feasibility to install your reader in the selected country, you can check the compatibility.





#### With USB reader connection

Reader ID       1- Corr <ul> <li>Connect your reader</li> <li>of your reader's reference</li> <li>number</li> </ul> 2- Selu           Cancel         Confirm	nnect the SPECTRE reader and set the communication COM t. ect 'Connect your reader' ase confirm
Reader's frequency band compatible with selected country's regulations	Message: OK
Reader's frequency band incompatible with selected country's regulations           Try again	Message: NOK The reader can't be installed in the selected country.
No reader connected: check your USB connection and communication settings           Try again         Check later	<ul> <li>Check the USB cable</li> <li>Check the communication with reader</li> </ul>

#### With reader part number



Enter the first 5 characters of the reader part number Example: SLAR4, SLAR5, SMAR4...

Message: OK

Message: the reference reader is not compatible with regulation selected.



#### Step 2- Configuration protection loaded into the reader

🧿 Ultrys v2					Administrator 🗕 🗙
uut				Readers configuration Create a configuration	Ø
No configuration loaded	1				🛎 en 🔻 🖨 🕧
ţŎ	Configuration protectio	n loaded into the reader		1 2 3 4 5	
Ultrys settings		The site code is a "Key" that can be customiz configuration of a drive during installation. Modifying this configuration requires the site of All readers have the default site code "FFFFF	ced by the administrator to protect the code. FFFFF*.		
Readers configuration		We recommend you change the default site c process. Enter FFFFFFFF in the "Site code" field and s "New site code" field.	ode the first time you carry out the co specify the new site code (hexadecima	onfiguration al) in the	
		Site code	FFFFFFFFF		
User credentials		New site code	83A13C56A8		
	<b>«</b> Previous			Next 🔰	>

SPECTRE readers are initially supplied with a default configuration and a site code to 0xFFFFFFFFF.

The size of this site code is 5 bytes (10 hexadecimal characters).

After the initial setup and in order to reconfigure the reader, it will be necessary to present an UHF SCB card or a configuration file with the same 'site code' as the reader.



Random site code generator.

Caution	
This site code is important and should definitely be known by the administrator. It protects the configuration data and allows reader configuration updates.	
If you lose this site code, you won't be able to reconfigure the reader again and the reader must be reset at the factory.	
To change the site code, it will be necessary to know the current site code.	



# Step 3- Reader selection

Oltrys v2		Administrator 🗕 🗙
uut	Version 2.0.0.4	Readers configuration Create, import, modify and load your reader configurations
Configuration loaded: to	est encodage (C:\Program Files (x86)\STid\Ultrys v2\test encodage.ucg	) ≝ en ▼ 🔒 (Ì)
کې Ultrys settings	Reader selection	
Readers configuration		
User credentials		SPECTRE Reader Access
	<b>«</b> Previous	Next ≫

Only SPECTRE Access readers are compatible with this ULTRYS version.



# Step 4- Antenna type selection

Oltrys v2		Administrator 🗕 🗙
uut	C C C S Version 2.0.0.4	Readers configuration Create, import, modify and load your reader configurations
Configuration loaded: to	est encodage (C:\Program Files (x86)\STid\Ultrys v2\test encodage.ucg)	🔤 en 🔻 🖨 🕧
کې کې Ultrys settings	Antenna type selection	
Readers configuration		
User credentials	SPECTRE antenna	URD antenna
	K Previous	Next ≫

The SPECTRE reader can be connected to new SPECTRE antennas (ANT-UHF2), or previous antennas (ANT\_URD).

Select the type of antenna used in the installation and compatible with the reader selected.



#### Step 5- Installation configuration



#### Name the lane

Maximum 10 characters.

For example, Entry1.

# 2 3 Add / Delete lane

Use 'Add /Delete lane' to configure the number of lanes you will use in your application.

The default setting is one antenna on the first lane.

For more information about the possible combination please refer to the document NA\_SPECTRE.



# (4) Add / Remove antenna on lane

Set the number of antennas on the corresponding lane.

When an antenna is added, the RF port to which the antenna has to be connected appears on the reader with corresponding color to help the installation.



RF ports are assigned in order to add the antennas in the configuration wizard.

When an antenna is removed from the configuration, the RF port connection for other antennas does not change.

Example: Ant 2 deleted from lane 1 and added to lane 2.







Select the cable length for each antenna

5



For each antenna, select the cable length you would like to use between antenna and reader. Only the first Antenna of the lane 1 can be lean against the reader.



#### Advanced settings

6

a)	Voie 1	Voie 2	Voie 3	Voie 4
b Ant 1	On back of reader	• d Reading time	<b>I</b> —	
C Power	◀ 1	00% CePC mask (H	lexadecimal)	AA
		f Offset (byte)		0 o
		g Reversal		
		h RSSI value		0 dBm
		i Reversal		
		Close		

- C Adjust the power of each antenna (from 10% to 100%) to adjust the reading distances.
- (d) Adjust the timing for a scan (reading) by step of 1 second (max 30s). This setting is taking into account only if *Input type selection* is set to Activating all lanes or Activating the event lane.
- <u>The EPC filter is not available in Secure Mode.</u> Enter the value for EPC Mask, max 62 hexadecimal bytes.
- († ) Enter the value for offset EPC mask in bytes (0 to 65535). It depends on the EPC Mask length.
- *Reversal* not selected: only tags with an EPC value corresponding to the EPC mask value will be provided to the user.
  - *Reversal* selected: only tags with an EPC value different from the EPC mask value will be provided to the user.
- (h) RSSI (Received Signal Strength Indication) is a measure of the power in reception of the tag response. The value returned by the reader is proportional to the amplitude of the reception signal Enter the RSSI value (-110dBm to 0dBm). 0dBm deactivates the RSSI filter.
- *Reversal* not selected: only tags with an RSSI greater than or equal to the specified value will be provided to the user.

*Reversal* selected: only tags with an RSSI smaller or equal to the specified value will be provided to the user.

Ex: RSSI filter = -49f=dBm + Reversal not selected A tag that will have a RSSI value of -20dBm will be sent back, A tag that will have a RSSI value of -60dBm will not be sent back.



Scan time, EPC filter and RRSI filter settings are the same for antennas on the same lane. The cable length and RF power antenna are set for each antenna.

Example 1: 4 antennas on lane 1.



Example 2: 2 antennas on lane 1 and 2 antennas on lane 2.

Advanced settings			Advanced settings	5		
Voie 1 Voie 2	Voie 3	Voie 4	Voie 1	Voie 2		
Ant 1 On back of reader 🔹	Reading time		Ant 3 1.5 m cable	•	Reading time	
Power	EPC mask		Power	◀ 100% ▶	EPC mask	
Ant 2         1.5 m cable         ▼           Power         < 100% ▶	Offset (byte)		Ant 4 1.5 m cable	↓ 100% ▶	Offset (byte)	-1
	Reversal				Reversal	
	RSSI value	O dBm			RSSI value	-1
					Reversal	



#### EPC filter

#### Example:

1- EPC mask = AA AA and Offset = 0

Tag 1: AAAAABCD0000000000000000 Tag 2: AA02ABCD000000000000000 Tag 3: AA02ABCD000000000000000 Tag 4: AA02FFFF0000000000000000000

Only tag 1 is transmitted.

2- EPC mask = AA AA AA and Offset = 0

No tag is transmitted.

3- EPC mask = 01 and Offset = 11

Tag 1: AA AA AB CD 00 00 00 00 00 00 00 01 Tag 2: AA 02 AB CD 00 00 00 00 00 00 00 02 Tag 3: AA 02 AB CD 00 00 00 00 00 00 00 03 Tag 4: AA 02 FF FF 00 00 00 00 00 00 00 03

Offset is represented in blue; the filter is done on byte 12. Only tag 1 is transmitted.

4- EPC mask = AB and Offset = 2

Tag 1: AA AA AB CD 00 00 00 00 00 00 00 01 Tag 2: AA 02 AB CD 00 00 00 00 00 00 00 02 Tag 3: AA 02 AB CD 00 00 00 00 00 00 00 03 Tag 4: AA 02 FF FF 00 00 00 00 00 00 00 03

Tags 1, 2 and 3 are transmitted.

5- EPC mask = AB, Offset = 2 and Reversal

Tag 1: AA AA AB CD 00 00 00 00 00 00 00 01 Tag 2: AA 02 AB CD 00 00 00 00 00 00 00 02 Tag 3: AA 02 AB CD 00 00 00 00 00 00 00 03 Tag 4: AA 02 FF FF 00 00 00 00 00 00 00 03

EPC mask	AB	
Offset (byte)	<b>4</b>	2 o
✓ Reversal		

2 o

Tags 1, 2 and 3 are not transmitted. Only tag 4 is transmitted.

EPC mask	AAAA	
Offset (byte)	<b>I</b>	0 o
Reversal		

EPC mask	AAAAAA	
Offset (byte)	I	0 o
Reversal		

EPC mask	01	
Offset (byte)	-1	11 o
Reversal		

EPC mask

Offset (byte)

Reversal

AB



# Input/ output settings

1 2
Continuous reading -
<ul> <li>No event</li> <li>Custom LED lighting</li> <li>Output customization</li> </ul>
Next ≫

Select the reading mode, the output settings depend on this mode.

Output management			
Output type selection	Pullu	ip to V+	•
Status of outputs	Open	Closed	Continuing during detection process
Output 1	$\bigcirc$	0	
Output 2	0		
Output 3	$\bigcirc$		
Output 4	٢		
K Previous	Cancel		Confirm

Both types of output are Pull up to V+ or Open drain.

Status of outputs: select for each output the default state 'Open' or 'Closed' and if the state is maintained during the detection process.



#### Reading mode = Continuous reading + No event



In this mode, the reader scan continuously.

There is no action on input activation.

Select the output type and default state for output.

Beading mode = Continuous reading + Customized LED lighting





Nothing to do.



C Reading Mode = Continuous reading + Output customization

Input management	1 2
Reading mode selection	Continuous reading •
Managing custom events triggered by reader inputs	<ul> <li>No event</li> <li>Custom LED lighting</li> <li>Output customization</li> </ul>
Cancel	Next ≫
Output management	1 2
Output type selection	Pull up to V+ 🔻
Status of outputs	Continuing Open Closed during detection process
Output 1	
Output 2	
Output 3	
Output 4	Cancel Confirm
C	Commit

An action on Input toggles the corresponding output regardless of RF function of the reader.

Select the output type and default state for output.





Advanced settings

Ant 1 On back of reader

Power (Radio frequency) 🔺 100% 🕨

•



If an Input is activated (In1, In2, In3 or In4), the reader scans on all lanes set.

Lane 3 The duration of the reading is defined in 'Advanced settings'.

Output management			
Output type selection	Pull up	to V+	•
Status of outputs	Open	Closed	Continuing during detection
Output 1	$\odot$		
Output 2	Ō	Ō	
Output 3	$\bigcirc$	$\circ$	
Output 4	$\bigcirc$		Aucun aj
Previous	s Cancel		Confirm

AB

Select the output type and default state for output.



# Reading mode = Triggering on the lane with the event



sk AB

Advanced settings

Ant 1 On back of reader

ower (Radio frequency) 🖪 100% 🕨

•

If an Input is activated, the reader scans on the corresponding lane.

The reading duration is defined in 'Advanced settings'.

Output management			
Output type selection	Pull up	o to V+	•
Status of outputs	Open	Closed	Continuing during detection
Output 1		0	
Output 2	$\bigcirc$		
Output 3	$\bigcirc$		
Output 4	$\bigcirc$		Aucun ap
<b>K</b> Previous	Cancel		Confirm

Select the output type and default state for output.



Summary table

R	eading Mode	Input	Configurable Outputs states?	Maintain during detection available?	Output
3	Continuous reading + No event	No action	Yes by lane	Yes by lane	<ul> <li>If 'Continuing during detection process' not activated: the output state toggles at the ascent.</li> <li>If 'Continuing during detection process' activated: the output state toggles to the RF detection and remains in this state as long as, at each scan is at least one detection.</li> </ul>
<b>b</b>	Continuous reading + Custom LED lighting	Custom LED lighting for all antennas / lane	No	No	In this mode the Outputs are not usable.
$\odot$	Continuous reading + Output customization	An action on an Input toggles the corresponding output.	Yes	No	The output state is only linked to a user action on the input.
<b>b</b>	Triggering on all lanes	An action on any input activates the reading on all configured lanes.	Yes by lane	Yes	- If 'Continuing during detection process' not activated: the output state toggles at the ascent during
e	Triggering on the lane with the event	An action on Input <i>x</i> activate the scan on lane <i>x</i> .	Yes by lane	Yes	the ascent time of the identifier (physically on the BUS + 200ms. - If 'Continuing during detection process' activated: the output state toggles to the RF detection and remains in this state as long as, at each scan is at least one detection.

Note: as long as the action is detected on the input, the output remains toggled.



#### Step 6- Setting up light indicator

🧿 Ultrys v2				Administrator 🗕 🗙
uut			Readers configuration	on oad your reader configurations
Configuration loaded: to	est encodage (C.Program Files (x86)ISTidUltrys v2West enc Light indicator configuration	odage.ucg)	1	
Ultrys settings	Color and brightness selection			
Readers configuration	Reading in progress	Reading error	Detecting user ID	Customized event
User credentials	LED brightness 100%	LED brightness 100%	LED brightness 100%	LED brightness 100%
	<b>«</b> Previous			Next ≫

#### **Reading in progress**:

This LED lights when the RF is on.

After initializing reader sequence, this LED must be lit on the selected color.

#### **Reading error:**

This LED lights when the RF is bad, in this case the reader can't read the tag.

- Check the antenna connection
- Check the antenna cable

#### **Detecting user ID**:

This LED lights when a tag is detected by the antenna.

#### **Customized event\***:

By default, there is no color.

#### LED brightness:

The LED brightness can be adjusted by step of 10% (from 10% to 100%)

#### LED color:





\*The LED 'Customized event' only appears if 'Reading Mode' = Continuous reading + custom LED lighting



#### Default display:

🧿 Ultrys v2		Administrator 🗕 🗙
uut	Version 2.0.0.4	Readers configuration Create, import, modify and load your reader configurations
Configuration loaded: t	est encodage (C.VProgram Files (x86)\STIdUlitys v2test encodage.ucg) Light indicator configuration Color and brightness selection	■ en v d (1) 1)2)3)4)5)6)7 8)8)
Readers configuration	Reading in progress	Reading error     Detecting user ID       Image: Detecting user ID     Image:
,	K Previous	Next »



#### Step 7- Communication protocol

Oltrys v2		Administrator 🗕	×
LLL	C C U S Version 2.0.4	Readers configuration Create, import, modify and load your reader configurations	))
Configuration loaded: to	est encodage (C:Nrogram Files (x86)/STIdUItrys v2test encodage ucg)  Communication protocol  Authenticated encryption of EPC data (Secure mode)	User ID settings (EPC)	( <b>1</b> ) 9
Readers configuration	User ID security (EPC)	EPC size (bytes) 5 0 EPC code feedback format Mode 1 (Standard) • Format details Mode 3 Mode 2	
User credentials	Voie 4 Voie 3 Voie 2 Voie 1 CLK2 DATAA CLK3 DATA3 CLK3 DATA2 CLK3 DATA4 Ant 2 Ant 1	AA BB CC XX XX XX YY ZZ Mode 4 Filtering	
	<b>«</b> Previous	read twice 6 s	

# Communication protocol Authenticated encryption of EPC data (Secure mode) User ID security (EPC) Private key definition (16 bytes) C06A8B4BC4554F0D5E043D456D137109

The EPC can be encrypted and signed before being written in the tag.

The reader will decrypt and authenticate the EPC before sending it on its output media.

Only an EPC correctly decrypted and authenticated will produce an output data, otherwise the reader will remain mute.

Notes:

• Only UHF tags compatible with "FAST ID" feature and having at least 128 bits of EPC can be decrypted and authenticated by the SPECTRE Access reader.

The chips compatible with secure encoding are: Monza X, Monza R6P, Monza 4D, this chip is present into

- TLTA-W53M-943\_S
- TLTA-W75B-943\_S
- IronTag 206
- CCTW490\_AN
- The secure mode is not accessible if an EPC mask has been set in 'Advanced settings'.

Note: After setting an EPC security key, if you return to step 5 with the Previous button, and you set an EPC filter, then returning to step 7, the "EPC ID Security" checkmark is displayed. in gray, the key field is still accessible but not taken into account.

User ID security (EPC)

Private key definition (16 bytes)

C1111122245454455454564654654654

M





otocol	
incol	Ţ
	R\$232
	RS485
	Wiegand 26 bits - 3i
	Wiegand with customized LRC size
	Wiegand with customized size
	Clock&Data 40 bits - Iso 2B

The displays depend on the chosen protocol.

#### RS232 / RS485

Select protocol			
Select output protocol		RS232	•
Data		Hexadecimal	*
<ul><li>Padding</li><li>STX+ETX</li></ul>	CR	LRC ASCII	
Baud Rate		115200	•

#### Serial frame:

1 byte	X bytes	1 byte	1 byte	1 byte	1 byte
STX	Data*	LRC	CR	LF	ETX

\*Doubled if the ASCII option is activated.

Data	Data sent in decimal or hexadecimal format.
Padding	Add on the frame leading zeros. If this option is not activated, the leading zeros won't be sent.
STX+ETX	Add STX (0x02) and ETX (0x03) in the frame.
CR	Carriage return (0x0D).
LF	Line feed (0x0A).
LRC	Checksum byte by XORing of all previously characters without the STX.
ASCII	If this option is activated, the <u>Data</u> will be sent in ASCII mode.
Baud Rate	9600, 19200, 38400, 57600 or 115200 bauds.



#### Wiegand 26 bits- 3i



#### Select protocol Wiegand with customized LRC size • Select output protocol Overview of TTL outputs This protocol has the same message structure as the Wiegand 3Ca or 3Cb protocol, but the number of bytes can be customized (EPC size). Lane 4 Lane 3 Lane 2 Lane 1 CLK4 DATA4 CLK3 DATA3 CLK2 DATA2 CLK1 DATA1 Ant 3 Ant 4 Ant 2

#### Wiegand customized size

Select protoco	I					
Select output protocol	١	Wiegand with custom	nized size 🔹			
Overview of TTL output	Overview of TTL outputs					
This protocol has the san	ne message stru	cture as the Wiega	nd 3La or 3La protocol, but			
the number of bytes can	Lana 2	L 0 3126).				
Lane 4	Lane 5	Lane Z	Lane 1			
Lane 4 CLK4 DATA4	CLK3 DATA3	CLK2 DATA2	Lane 1 CLK1 DATA1			
Lane 4 CLK4 DATA4	CLK3 DATA3	CLK2 DATA2	Lane 1 CLK1 DATA1			

#### Decimal Clock&Data – Iso 2B

X Se	elect protoco			
Select ou	itput protocol	(	Clock&Data 40 bits - Is	• 2B •
Overviev	v of TTL output	s		
Version     Iso Size customized       Decoding     Decimal (BCD)       40 bits Data     × characters       Values     0.9				
	Lane 4	Lane 3	Lane 2	Lane 1
	CLK4 DATA4	CLK3 DATA3	CLK2 DATA2	CLK1 DATA1
		9999	Ant 3	

# Note: the graphic indicating the lanes, depends on the configuration of the number of antennas/lanes.



3 EPC size (bytes)

Protocol	Size in plain mode	Size in secure mode
RS232 / RS485	1b up to 62b	1b up to 6b
Wiegand 26 bits	Fixed to 3b	Fixed to 3b
Wiegand with LRC custom size / Wiegand custom size	1b up to 16b	1b up to 6b
Decimal Clock&Data – Iso 2B	1b up to 7b	1b up to 6b

3 о

C code feedback format	Mode 1 (Standard)	•
	Mode 1 (Standard)	
ormat details	Mode 2 (Standard reversed)	
	Mode 3	
	Mode 4	
F	PC code feedback format	PC code feedback format Mode 1 (Standard) Mode 1 (Standard) Mode 2 (Standard reversed) Mode 3 Mode 3 Mode 4

There are 4 modes to feedback the EPC.

Example: EPC data: AA BB CC DD EE xx xx ... VV WW XX YY ZZ with 'EPC size' fixed to 4bytes.



5	Filtering		
	Time between same user ID being read twice	-1	6 s

The reader emits the credential code present in the field only once during this time.

This time is adjustable from 0 to 30 seconds.



#### Clock&Data ISO2B protocol

#### Chronograms



#### **Clock details**



#### Message structure

Leading zeroes	Start Sentinel	Datas	End Sentinel	LRC	Trailing zeroes
----------------	----------------	-------	--------------	-----	-----------------

#### Message description

The frame is made of a first series of 16 zero followed by synchronization characters of 5 bits (4 bits, LSB first, plus 1 parity bit). It ends the frame with trailing zero without a clock. The message consists of the following:

Start Sentinel:	1character 1011b (0x0B) – parity bit 0. Transmission 1101 0
Data:	According to ID type: 13 or 10 decimal characters
End Sentinel:	1character 1111b (0x0F) - parity bit 1. Transmission 1111 1
LRC:	1 control character, which is the « XOR » of all characters.

#### **Example** Clock&data size 5 bytes:

For a hexadecimal user code of « 0x187E775A7F », the output code will be: « 0105200966271 ». The frame sent by reader will be:

000	1101 0	00001	1000 0	00001	1010 1		01101	01000	11100	1000 0	11111	11111	000
	В	0	1	0	5	2 0 0 9 6	6	2	7	1	F	F	
Zero	S.S	Char.1	Char.2	Char.3	Char.4	Char	Char.10	Char.11	Char.12	Char.13	E.S	LRC	Zero



# **Wiegand Protocols**

#### Chronograms



\* variant 3i timings

#### Wiegand 3i protocol

Variant	Decoding	24 bits data	Values
3i	Hexadecimal	6 characters	0 to F

#### Message structure

Bit 1	Bit 2 Bit 25	Bit 26
Even parity from bit 2 to bit 13	Data (24 bits)	Odd parity from bit 4 to bit 25

#### Message description

The frame consists of 26 bits as follows:

First parity:	1bit even parity of next 12 bit
Data:	6 hexadecimal characters 'MSB first'
Last parity:	1bit odd parity of previous 12 bits

Example: for the hexadecimal code « *0x0FC350* », the frame sent will be:

0	0000	1111	1100	0011	0101	0000	1
	0	F	С	3	5	0	
Parity	Char.1	Char.2	Char.3	Char.4	Char.5	Char.6	Parity



Wiegand 3CB protocol

Bit 1 Bit 40	Bit 41 Bit 44
Data « MSB first »	LRC

#### **Message description**

The frame consists of 44 bits as follows:

- Data: 10 hexadecimal characters « MSB first »
- LRC: 1 control char, all characters « XORed»

Example: for the hexadecimal code « *0x01001950C3* », the frame sent will be:

0000	0001	0000	0000	0001	1001	0101	0000	1100	0011	0011
0	1	0	0	1	9	5	0	С	3	3
Char.1	Char.2	Char.3	Char.4	Char.5	Char.6	Char.7	Char.8	Char.9	Char.10	LRC

#### Wiegand 3CA protocol

Bit 1 Bit 36	Bit 37 Bit 36
Data « MSB first »	LRC

#### **Message description**

The frame consists of 36 bits as follows:

- Data: 8 hexadecimal characters « MSB first » (32 bits)
- LRC: 1 control char, all characters « XORed »

Example: for the hexadecimal code « 0x001950C3 », the frame sent will be:

0000	0000	0001	1001	0101	0000	1100	0011	0010
0	0	1	9	5	0	С	3	2
Char.1	Char.2	Char.3	Char.4	Char.5	Char.6	Char.7	Char.8	LRC

#### Wiegand 3LA protocol

Same as « Wiegand 3CA » WITHOUT LRC.

#### Wiegand 3LB protocol

Same as « Wiegand 3CB » WITHOUT LRC.



# Step 8- User management

Oltrys v2		Administrator 🗕 🗙
uut	CUS Version 2.0.4	Readers configuration Create a configuration
No configuration loade	d	🔤 en 🔻 🖨 🕧
۲ ۲ Ultrys settings	User management User profiles and user rights definition	
Readers configuration	Administrator (all rights)	
User credentials	User 2 E Customize user rights	
2	<b>«</b> Previous	Next ≫

ULTRYS v2 allows to manage three different profiles by configuration file.

Administrator (all rights)	Password Administrator	Define an Administrator password to protect the configuration file.
User 1		
User 2		
Administrator (all rights)	Password User 1	Define a User 1 password and select the
	User rights management User 1	corresponding rights.
	Modify/Back up a configuration	
User 1	Create a configuration badge (SCB UHF)	
🗟 Customize user rights	Load a configuration into the reader	
	Create user credentials	
User 2		
Customize user rights		
	Password User 2	
Administrator (all rights)		Define a User 2 password and select the
	User rights management User 2	corresponding rights
	Modify/Back up a configuration	conceptionaling rights.
User 1	Create a configuration badge (SCB UHF)	
	Load a configuration into the reader	
	Create user credentials	
User 2		
(===) Customize user rights		



Oltrys v2		Administrator 🕳 🗙
uut	C C U S Version 2.0.4	Readers configuration Create a configuration
No configuration loade	id (4)	🗮 en 🔻 🖨 🤃
۲ ۲ Ultrys settings	Configuration save and protect Configuration save and protect	
Readers configuration	Create a name (maximum 14 characters)	
User credentials	3 Save as	
	5 Summary of my configuration	
2	<b>«</b> Previous	

This step allows you to save the configuration file containing all the current configuration settings (keys, formats, reader...). You can select a location and password to protect the file.

1)Choose a name to easily find the configuration. (example: Parking IN).

Note: the name of the configuration must be contained in the file name.

2 To protect the configuration file, you can define a password. This password is different from Administrator password.

3 Select a directory and a file name to save.

<ul> <li>Select a file</li> </ul>		×
🚱 🗢 💻 Burea	u <b>&gt;</b>	✓ 4→ Rechercher dans : Bureau
Nom du fichier :	Parking Entrance.ucg	•
Type :	Ultrys Configuration File (*.ucg)	•
Parcourir les doss	iers	Enregistrer Annuler

4 The name and location of 'Configuration Loaded' indicates now the chosen name and location.

If you choose a file name that does not contain the name of the configuration, ULTRYS does not take into account the specified name or directory. It saves the file with the configuration name on the Desktop.



# 5 Get a summary of the configuration created

Summary of my configuration			- 6 :
OSTIN ULTRUS		Lane 1  Arterna 1 : Power (Radio frequency) : 100 %  Description times - 1 or	EPC size (bytes) : 3 byte(s) EPC code feedback format : Mode 1 (Standard)
www.itheenham	0.0.2	remang unite's s Chine (byte) 0 Renersal - False RSS value : 0 cBrn Renersal - False	Time between same user ID being read failer $\pm$ 5 s
This document contains all the configuration settings needed to install the reader and antennas on site. For further information on installation, please refer to the <u>Clack/Oudg</u> and <u>Installation</u> missual.		Managing inputs Beeting reading mode Continuous reading Managing EUP to contenzation - None Managing outputs	
HConfiguration details Configuration name - Parking N Created on: 2255/2019 9 48 Updated on: 2255/2019 10 00	Installation manual	Selecting output type - Pail up to V+ Station doubuts : Core Closed aurig dancion process Corpus 1	
#Regulation of frequency bands           Frequency bands / Counties France. ETSI           Duty cycle:         0.975           Channels (MHz)         867,7 586,9 886,3 885,7           EKP         2000 mW		Oreput 3  Caput 3  Caput 4  Ca	
Ander: Specie ander Access Anternas: Specie anterna Installation overview Lane 1 Lane 2 Lane 3	Lane 4		
	100	LED color : Blue LED color : Red LED color : Orange #Communications protocol Secure mode	
		Select output protocol         Weigand 28 bits - 3i           Bit 1 <ul></ul>	
		Law 4 Law 3 Law 2 Law 2 Law 2 Law 1 Law 2 Law 1	
2		41 de 1 >	

Print: allows to save this configuration information in a PDF file.

Summary of my cor	ifiguration		×
🚱 🗢 💻 Burea	u 🕨	✓ 4 Rechercher dans : Bureau	٩
Nom du fichier :	Parking IN.pdf		-
Type :	PDF Document (*.pdf)		-
Parcourir les doss	iers	Enregistrer Annu	ler



# 3.3 Open an existing configuration

🧿 Ultrys v2		Administrator 🗕 🗙
uut	C C C S Version 2.0.0.4	Readers configuration Create a configuration
No configuration loade	d -	💴 en 🔻 🖨 🤃
کې Ultrys settings	Frequency band regulation Installation country selection The frequency bands depend on the installation location Select a country	
Readers configuration	Create new Configuration Configuration the reader	
User credentials		
		Next ≫

#### 3.3.1 Configuration file





1- Select a configuration file .ucg on your PC or USB stick.

2- If the file has been protected for reading, enter the password and confirm.

3- Select the profile to use and enter the corresponding password. Please confirm.

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#### 3.3.2 Reader via USB



- 1- Connect the SPECTRE reader via USB cable provided.
- 2- Configure the communication parameters.
- 3- Please confirm.

Confirr	n your user rights		4- Sele passwo
Configura	ntion name	Parking IN	
Passwor	d	Administrator •	
	Cancel	Confirm	
Olitys v2 LILL Configuration Knaded /		Configuring readers Crask wort, motify and and your scalar or	Administration × enfigurations en en ()
Utrys settings Configuring readers	Regulating frequency bands Selecting country of installation The legancy bands depice on the installation listics (name: ITH) Description of regulatory frequency law Description of regulatory frequency law Description of the Country of the Country of the Country Country (Country of the Country of the Coun		
User IDs	Chakayara naziri kuriyarabba akti ng Jakon.		ext >>

4- Select the profile to use and the corresponding password. Please confirm.

5-ULTRYS v2 then displays the configuration wizard with all settings loaded from the reader.



Open an existing configuration		
Configuration file (.ucg)	Reader via USB	Configuration badge (SCB UHF)
Cancel		Confirm

- 1- Connect an UHF encoder (STR or GAT Desk).
- 2- Configure the communication settings.
- 3- Present the SCB UHF to the encoder.
- 4- Please confirm.

Confi	rm your user rights		5- Se passv
Configu	ration name	Parking IN	
Profile		Administrator 🔹	
Passwo	ord		
	Cancel	Confirm	
🕽 Utrys v2			Administrator
uut		Configuring readers Create, import, modify and load year re	udar configurations
in the second	Regulating frequency bands Selecting country of installation	() () ()	
Ultays settings	The frequency bands depend on the installation local France - ETSI		A.
Configuring readers	Description of regulatory frequency band Duty cycle 09/5 Channels () ERF.200 =/W	- States	
	Chick your nucler is compatible with regulations	1 St C X	120
User IDs			
			Next N

5- Select the profile to use and the corresponding password. Please confirm.

6- ULTRYS then displays the configuration wizard with all settings loaded from the SCB UHF.



# 3.4 Load the configuration into the reader







#### 3.4.1 Loading the configuration into the reader



 Connect a SPECTRE reader via USB cable.
 Configure the communication settings.

3- Configure the latency of com port to 1



USB Serial Port (COM1) Properties	
Pat Setting Rest	Paramètres avancés pour COM3
General Port Settings Driver Details	
	Numéro de port COM: COM3
Bits per second: 9600 -	Longueurs des trames USB
Data bits: 8	Choisir une valeur faible afin de corriger l'apparition d'anomalies à débit réduit.
	Choisir une valeur haute afin de privilégier la rapidité.
Panty: None	
Stop bits: 1	
Flow control: None	Transmission (Octets):
	Online PM
Advanced Porter Defaulte	Choisir une valeur faible afin de corriger les problèmes de Enumérateur de nérinhérique série
Autoriced Intestore Deladits	réponse. Imprimante série
	Temps de latence (msec): 16   Invalider si hors tension
	Notification d'événements inattendus
	Valider RTS a la termeture du port
	Délai d'attente minimum en lecture (msec):
	Délai d'attente minimum en écriture
OK Cancel	(msec):

Open Advanced...





0 Ultrys v2	rus	Administrator _ ×
No configuration loade	Selecting loading mode Loading a configuration	4- Load.
Configuring readers	Lasting the configuration into the reader	Configuration badge (BCB UHF)
		Load ≫





Error the site code of the SPECTRE reader is not the same in configuration file.

The selected RF regulation is not compatible with the reader.





# 3.4.2 Configuration card (SCB UHF)



 Connect an UHF encoder (STR or GAT Desk).
 Configure the communication settings.
 Present a compatible SCB UHF card to the encoder.
 Load.

5- Close. ULTRYS v2 then displays the home page.



The tag presented to the encoder is not compatible to create a SCB UHF.



# 4. User credentials

The user credentials encoding is done in three steps. To move from one step to another, you must click on "Next".

1 2 3 Step1	Configuration details loaded
1 2 3 <u>Step2</u>	User ID definition
1 2 3 Step3	Encoding tags

# Step 1- Configuration details loaded

Oltrys v2				Administrator 🗕 🗙
uut			Create from Create your use	a configuration rID and password from a configuration
No configuration loaded	ŧ.			🟾 en 🔻 🖨 🤃
	Creating upor IDs			1 2 2
- CE	Configuration details loaded			
Ultrys settings				
	Co	nfiguration name :		<u>له</u>
Configuring readers	Op Re Set EP Set EP	en with profile : Administrator gulating frequency bands : lect protocol : C size (tytes) : cure mode : C Filtering:		
User IDs				
		EPC filter	Check user ID information	pefore encoding
		Select the lane	Ye Tag autodiag	inosis
				Next 🎾
Creation was all Da				
Creating user IDs	loaded			
	loaded			
	Configuration name - Parking IN			
	Configuration name : Parking IN Open with profile : Administrator Regulating frequency bands : Fran Select protocol : Wiegand 26 bits - EPC size (bytes) : 3 Secure mode : Disabled EPC Filtering: - Lane 1 : EPC mask : / Offset (byt - Lane 2 : EPC mask : / Offset (byt - Lane 3 : EPC mask : / Offset (byt - Lane 4 : EPC mask : / Offset (byt	ce - ETSI 3i le): 0 le): 0 le): 0 le): 0 le): 0		Check the configuration loaded is the correct one to use or open the configuration to use.



**Caution**: If the authenticated encryption of EPC data has been enabled in the configuration, make sure the tag is compatible with this option by performing the tag autodiagnosis.

If a non-compatible tag is still encoded in secure mode it will not be read by the Spectre reader.



It indicates the UHF chip type and if it is compatible with secure encoding.

Examples:

Ownership of the user ID
✔ Manufacturer : Impinj
✓ Model : 80
✗ Compatible with secure encoding ∶ No
Close
Ownership of the user ID
✔ Manufacturer : Impinj
✔ Model : Monza4D
✓ Compatible with secure encoding : Yes
Close

The chips compatible with secure encoding are: Monza X, Monza R6P, Monza 4D, those chips are present into the following credentials:

- TLTA-W53M-943\_S
- TLTA-W75B-943\_S
- IronTag 206
- CCTW490\_AN



EPC filter
Select the lane

If an EPC filter has been set in the 'Advanced settings', select 'EPC Filter' and the corresponding lane to encode automatically the value of the EPC filter into the user credential.

Example:						
Advanced settings			Advanced setting	s		
Lane 1 Lan	e 2 Lane 3	Lane 4	Lane 1	Lane 2	Lane 3	Lane 4
Ant 1 On back of reader	✓ Reading time ■	— 1 s	Ant 3 1.5 m cable	↓ 100% N	Reading time	
	EPC mask AA			100 %	EPC mask BB	
Power < 100	% ▶ Offset (byte)	— 0 o	Power	↓ 100% ▶	Offset (byte)	
					C Reversal	
	RSSI value	• 0 dBm			RSSI value	
	Reversal					
l	Close			(	Close	



In this example, if the lane 1 is selected, the user credential will be encoded with the EPC filter AA.



# Step 2- User ID definition

🧿 Ultrys v2				Administrator 🗕 🗙
uut			Create from a cor Create your user ID and	nfiguration I password from a configuration
Configuration loaded: P	Parking IN (C:\Users\cpialoux\Desktop\Parking IN	V.ucg)		🎬 en 🔻 🔓 🥡
کې Ultrys settings	User credential creation User ID definition			
	Manual ID creation	Automatic ID creation	O 🚺 Import Excel IDs	O 🚹 Import TXT IDs
Readers configuration	ID no.	First ID Last ID Increment Check validity an	Load Sheet number First cell Increment O By line O By column d detail of encoding	Delimiter     CR/LF delimiter
	<b>«</b> Previous	Data	validation	Next ≫

It is possible to enter the user IDs in four ways (described below). Warning, credentials encoding depend on the reading EPC mode and EPC filter.

ID size is constrained by the protocol defined in the menu « *Config* ». If the data is it is not respected in the input fields, then the software will complete with « 0 » (by default MSB).

Creating manual IDs	Enter directly the ID value in the field and click Next.
ID no.	Use to encode a single tag or a specific value.
AA0001	
Creating automatic IDs	Fill in each corresponding field, the beginning, the end and the increment to generate the list of user IDs to encode.
First ID	
0000001	
Last ID	
0001000	
Increment	Check validity and detail of encoding data Valid encoding data 1000 total identifiers found, ranging from 1 to 1000.
1	Validating data



🖲 🔒 Imp	orting Excel IDs	
Load	C:\Users\ \Desktop \UserIDs.xlsx	This mode allows you to import lists in Excel format to be used for the user IDs programming.
Sheet numb	er 1	
First cell	A1	
Increment		
By line	O By column	
	A     B     C       1     B657478ED     B       2     A     B     C       1     B657478ED     C     C       2     4E0074E74E     C     C       3     5     B6327478ED     C       4     E037108ED4     C     C       5     B6327478ED     C       2     4E0074E74E     C       7     E037108ED4     C       4     E037108ED4     C       5     B6327478ED     C       2     E0074E74E     C       7     E032108E104     C       4     E037108E104     C       5     B6327478ED     C       6     4E0074E74E     C       7     E032108E104     C       8     III     III	Attic lade (sage) Mitte a lade (sage) Mitte sous form Styles de callule Validating data Valid encoding data 37 total identifiers found, ranging from 1 to 37. Close





Oltrys v2		Administrator 🗕 🗙
uut	Version 20.0.4	Create from a configuration Create your user ID and password from a configuration
Configuration loaded:	lest encodage (C.\Program Files (x86)\STid\Ultrys v2\lest encodage.ucg)	■ en ▼
کې کې Ultrys settings	User credential creation Encoding tags Create user	credentiais 🖻 Read ID data 2
, , , , , , , , , , , , , , , , , , , ,	OPERATIONS	STATUS
Readers configuration		
User credentials		
	<b>«</b> Previous	Close 🗙

1 Present the user credential which you would like to encode to the encoder and click on this button.

Vser ta	ng successfully encoded	l for identifier 1 .	
Submit another ID fo	r encoding with the nex	t ID or cancel the p	rocess
Cance		Next	
2 The credential c	data reading is writte	en on Operation	s windows.
	Create user credentials	Read ID data	
OPERATIONS			STATUS
User tag read [EPC] : 000001.			Success



# Using the EPC code feedback format and EPC filter

The feedback modes allow the full compatibility with existing credential.

To encode the credential we would prefer standard mode (mode 1).

1- Encoding the value 1122334455 on 5 bytes without EPC filter.



ID no. 1122334455

Settings				Value encoded by ULTRYS v2	Value ascended by the SPECTRE
EPC size (bytes)	•1	5 o		00000000000001122334455	1122334455
EPC code feedback format	Mode 1 (Standard)		•		
EPC size (bytes)	·I	5 o		0000000000001122334455	5544332211
EPC code feedback format	Mode 2 (Standard reversed	1)	•		
EPC size (bytes)	•0	5 o		112233445500000000000000000000000000000000	1122334455
EPC code feedback format	Mode 3		•		
EPC size (bytes)	·I	5 o		112233445500000000000000000000000000000000	5544332211
EPC code feedback format	Mode 4		-		



2- Encoding the val	ue 1122334455 on 5 bytes with EPC filter 'AA'.	Annual ID creation
	Selecting lane with EPC filter	ID no.
EPC filter	🗹 Vole 1 🔲 Vole 2 🔲 Vole 3 🔲 Vole 4	1122334455
Select the lane	The channels selected do not all have the same EPC filter (EPC mask + offset byte). A user ID can only have one EPC filter, which can be applied on one or more channels.	
	Close Confirm	

Settings				Value encoded by ULTRYS v2	Value ascended by the SPECTRE
EPC mask AA					
					110000 4455
EPC size (bytes)	•	5 o		AA00000000000001122334455	1122334455
EPC code feedback format	Mode 1 (Standard)		•		
EPC size (bytes)	·I	5 o		AA000000000001122334455	5544332211
EPC code feedback format	Mode 2 (Standard reversed)		•		
EPC size (bytes)	•••	5 o		AA22334455000000000000000000	AA22334455
EPC code feedback format	Mode 3		•		
EPC size (bytes)	••	5 o		AA223344550000000000000000000	55443322AA
EPC code feedback format	Mode 4		•		
EPC mask AA Offset (byte) • 7 o					
EPC size (bytes)	•	5 o		00000000000000AA22334455	AA22334455
EPC code feedback format	Mode 1 (Standard)		•		
EPC size (bytes)	·I	5 o		11223344550000AA0000000	1122334455
EPC code feedback format	Mode 3		•		

3- Encoding the value 1122334455 on 5 bytes in secure mode



ID no. 1122334455

	Encoded value on 16 bytes encrypted.	Value ascended by the SPECTRE
☑ User ID security (EPC)	789C9B12C733B3657EF030CE17F250BE	1122334455
Private key definition (16 bytes)		
676AB9819CD0523B1D01BD448545A9E2		



#### REVISION

Date	Version	Description
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