

# Quick User Guide

# SPECTRE ATX & ATX4





86	$(\mathbf{x}_{i})$	$\mathbb{R}^{2}$	(0)	$(\mathbf{r})$	$(\bullet)$	(0)	(0)	18	13	16	$(\mathbf{x})$	2	38	$(\mathbf{r})$	010		${\mathbb P}_{i}^{(n)}$	$(\cdot)$	(0)	$(\mathbf{x})$	$\mathbb{R}^{2}$	[0]	(0)	$(\mathbf{e})$		$(\theta)$	18
55	83	$\mathbb{R}^{2}$	(2)	20	$(\cdot, \cdot)$	35	(2)	$\{ \pi \}$	35	65	13	12	22	25	. • 0		53	13	55	33	83	$\left\{ \mathbf{x} \right\}$	22	25	$(\mathbf{r})$	35	15
73	22	12	23				22	88		63		33	25	3	10		$\mathbb{S}^{2}$		11	10	22	23		1		22	15
۰.	$\mathcal{T}_{\mathcal{T}}$	÷		$(\mathbf{r})$						1	17	1				*	۰.				÷	1	τ.				$(\mathbf{r})$

# **CONTENTS**

Quick User Guide	0
Factory settings	2
Changing the communication mode	3
Changing the regulation	5
Operating modes	7
TCP operation	8
Searching for the IP address of the reader	8
Reset and reconfiguration of the Ethernet module	.10
Communication test	.13
Keyboard emulation operation	.14



85	33	8	80			3	35	15	25	16	08	2	3		10		52	12	85	33	22	31	10	8	10	18
55	83	22		2		8	11	1	85	65	25	12	22				53	11	55	55	83		22		S.	15
55	22	12						8	2	15	1	32	2	1	10	1	53		<u>t</u> .	10	2	8			2	1
÷.,	21	÷.	Ξ.	Ψ.	-	Ξ.	2	۰.		Υ.	17	8				÷.,	٠.	۰.	1		-	11	۰.	Υ.		2

# **Factory settings**

Communication mode			Eth	ernet	
Baud rate			115	200	
RS485 address				0	
Hardware configuration outputs (OutputConf)	n of the		Output ● V+ ○ OC	type	
Status of the outputs (OutputConf)			State © Cl O O	e osed pened	
Autonomous_Output			Autonomous_Output EPC output @ MSB @ LSB Output Len 12 EPC TID lea	NoLeadingZeros	x
RF settings ATX4 Uppe	er-band	A 0	ScanDuration x10ms 20	Power 269	Antenna 1
Lowe	er-band	A 0	ScanDuration x10ms 20	Power 274	Antenna 1
RF settings ATX Uppe	er-band	A 0	ScanDuration x10ms 20	Power 310	Antenna 1
Lowe	er-band	A 0	ScanDuration x10ms 20	Power 325	Antenna 1



## Changing the communication mode

1- Connect the reader with the internal USB-C connector.





To access the interface card of the ATX reader, unscrew the 4 nuts of the antenna plate, gently lift the plate so as not to damage the cable.

- 2- Open STid SESProUHF. (v 1.0.0.847 or higher).
- 3- On the "SSCP" tab, enter the following settings and the number of the communication port to which the reader is connected:

STid - SESPro - Options/SSCP	-	- 🗆 X
= Options Home	SSCP	SSCP Security mode Plain ~
Preferences	Communication mode	Change Keys OnlySoftKeys
SSCP	RS232 ~ AutoConnect	Signature 2087754875474810948E !
Firmware		E74A540FA07C4DB1B46421126DF7AD36
<ul> <li>B Reader</li> <li>■ MIFARE Classic / Plus</li> </ul>	Baudrate 115200 V	
MIFARE DESFire EvX MIFARE Ultra Light / C CPS3	Reader Nb 0	Authenticate ConfAuthenticate
Biometrics Image Scan	Timeouts (ms)	Signature -1 Mode None ~
Bluetooth / NFC     125 kHz     LEGIC	Total read 2000	
Beader	Byte read 2000	ResetAuthenticate
Reader InOut		SetAllowedCommModes
Reader RF	Console 🖸 Spy 🗗	Plain Signed Encryption
Mandatory		
Custom	Results	Activity
Async/Auto/EPCMap	result	
		Quit



- 4- On the "Reader" tab:
  - enter "LinkBudget 0...3":

- 00000000 pour ATX - 90909090 pour ATX4

- Select the required type of communication: RS232 or RS485 or TCP.
- Click "SetSerial&HWType".
- Check that the command has been executed in the "Results" window, which displays OK.

🕸 STid - SESPro - UHF/Reader		– – ×
= Options		
Home	GetReaderType	SSRelayConfig4 INC1 INC2 INC3 INC4
Preferences	GetSerialNumber	Save1 Save2 Save3 Save4
SSCP	(0000)	SSPalavAction4
Firmware	GetInfos SetBaudRate	Action1 Action2 Action3 Action4
Reader	AutoBaud Baudrate	SSRelayState4
MIFARE Classic / Plus  MIFARE DESFire EvX	AutoPort 38400 ~	
MIFARE Ultra Light / C		
CPS3		
Biometrics	BuzzerSoundLevel Level 10	OutputRGB
⊞ Image Scan	Save	Red Green Blue
Bluetooth / NFC		FF FF FF
■ 125 kHz	Туре	hex values
	SetSerial&HVVType       RS232	
	LinkBudget 03 SASASASA ORS485	
Reader		
Reader InOut	Dataln	LED duration Buzzer duration Spectre LED Adr
Reader RF	Transceive	
Mandatory		
Custom	Results	 ∆rtivāv
Async/Auto/EPCMap	result	N <sup>1</sup> /2
■ OSDP		212
		Quit



26	20	35	(0)			3	(0)	18	25	18	18	9	28	. •	110		5	$\{\cdot\}$	20	23	83	[0,1]	10				3
55	83	22				15	11	$(\pi)$	35	65	35	12	22				23	13	20	35	83	(2)	32	22		St	3
55	22	53						8	2	10	17	32	2	3	120		53		<u>*</u> 1	50	22	8				2	1
÷.	27	-	2	Ψ.	-	Ξ.	2	Ψ.	1	1	17	8	1			*	٠.	۰.			-	÷1	•	Υ.	•		ŝ

## **Changing the regulation**

1- Connect the reader with the internal USB-C connector.





To access the interface card of the ATX reader, unscrew the 4 nuts of the antenna plate, gently lift the plate so as not to damage the cable.

- 2- Open STid SESProUHF.
- 3- On the "SSCP" tab, enter the following settings and the number of the communication port to which the reader is connected:

STid - SESPro - Options/SSCP		– 🗆 X
Options		
Home	SSCP	SSCP Security mode
Preferences		
	Communication mode	Change Keys
SSCP	RS232 V AutoConnect	Signature 2087754B7547481094BE !
Firmware		Encryption E74A540FA07C4DB1B46421126DF7AD36
I Reader	Port COM ?	
MIFARE Classic / Plus	Baudrate 115200 V	
MIFARE DESFire EvX	Deadea Mile D	CarfAuthantianta
MIFARE Ultra Light / C	Reader Nb 0	Authenticate
€ CPS3		Key Index
Biometrics		Signature -1 🍯 Mode None 🗸
∎ Image Scan	Timeouts (ms)	
Bluetooth / NFC	Long	Encryption -1 Value 1
125 kHz	Total read 2000 📮 –	
■ LEGIC		
	Byte read 2000 🖨	ResetAuthenticate
Reader		
Reader InOut		SetAllowedCommModes Signed AND Encipher
Reader RF	Console 🖸 Spy 🗗	Plain Signed Encryption
Mandatory		
Custom	Results	A strike
Async/Auto/EPCMap	command	S <sup>1</sup> /2
	LESUI0	202
( ■ OSDP		
		Quit
		Quit



4- On the "Reader RF" tab, select the required regulation according to the table below:

Reader reference	Authorized / accepted regulation
	FCC
ATX/ATX4-W <b>5</b> x (Upper-band)	Australia
	New Zealand
ATY/ATY/, M/Ay (Lower band)	ETSI- Lower-band
	Morocco

A Lower-band reader will refuse the FCC/Australia/New Zealand regulations. An Upper-band reader will refuse the ETSI-Lower-band / Morocco regulations.

ChangeRegulation
FCC ~
Reboot

- 5- Tick the "Reboot" box
- 6- Click "ChangeRegulation".

Note: The reader must be restarted to apply changes to the regulation.

This command must only be used to adjust the regulation of the reader to the regulation in force in the country of use.

The "Custom" setting must only be used with the prior agreement/support of STid. Otherwise, deterioration or malfunctions may occur, or the emissions may not comply with the regulation in force.

The agreement/support of STid for the definition of the "Custom" regulation settings does not relieve the user of its obligation to check the technical and administrative compliance with the regulation of the territory where the product is used.



20	30	$\mathbb{R}^{2}$	(0)	$(\mathbf{r})$	$(\mathbf{s})$	(0)	(0)	1%	25	16	$\mathbb{R}$	22	28	$(\mathbf{r})$	0.50		${\mathbb S}^{\times}_{2}$	$(\cdot)$	(0)	(0,0)	$\mathbb{R}^{2}$	(0)	$ 0\rangle$	$(\mathbf{r})$		(0)	18
55	$\mathbb{R}^{2}$	$\mathbb{R}^{2}$	(2)			$\mathbb{S}^{2}$	35	$(\pi)$	$\mathbb{C}^{n}$	65	$\mathbb{R}^{n}_{0}$	$\leq 2$	32		10		$\mathbb{S}^{2}$	$\mathbb{S}^{2}$	50	33	83	(2)	32	$(\mathbf{z})$		33	(2)
59	22	.73					2	88	2	63	12	32	$\mathbb{C}^{n}$	1			53		<u>†1</u>	50	22	33				22	15
1	27	-		$(\mathbf{r})$			$\langle T \rangle$	Ψ.			17	2	1.1			*	1				-	11	τ.		-		ġ.

# **Operating modes**



TCP / RS232 / RS485 Operation according to the SSCP protocol

(SSCP\_UHF\_INDUS\_US\_Vxx)

USB-C

Keyboard emulation operation



26	$(\mathbf{x}_{i})$	$\mathbb{R}^{2}$	(0)	$(\mathbf{r})$	$(\mathbf{r})$	(0)	(0)	18	25	18	$\mathbb{R}$	2	2	. •	0.10		12	$\{\cdot\}$	(0)	(0,0)	35	31	$\langle t \rangle$	$(\mathbf{r})$	$(\mathbf{r})$	(0)	3
55	$\mathbb{R}^{2}$	$\mathbb{R}^{2}$	(2)	$\mathbb{R}^{2}$	$(\cdot, \cdot)$	$\mathbb{S}^{2}$	35	(2)	35	65	$\mathbb{R}^{n}_{\mathcal{O}}$	$\mathbb{C}^{n}$	32		10		$\mathbb{S}^{2}$	$\mathbb{S}^{2}$	50	33	83	(2)	32	(2)	$\sim$	33	3
59	22	12					22	88	25	10	12	32	$\sim$	3			53		51		5	33				22	1
	27	-	2	Ψ.	-		2	Υ.	1	1	17	2	1.1			*	1		7	-	-	1	5		-		ŝ

## **TCP operation**

Refer to the specifications of the SSCP\_UHF\_INDUS\_US\_Vxx protocol for the commands.

### Searching for the IP address of the reader

- 1- Open STid SESProUHF.
- 2- On the "SSCP" tab, click

STid - SESPro - Options/SSCP		- 🗆 X
Options		
Home	SSCP	SSCP Security mode Plain ~
Preferences	Communication mode	Change Keys OnlySoftKeys
SSCP	TCP -> AutoConnect	Signature
Firmware	IP dest	Encryption E748540FA07C4DB1B46421126DF7AD36
Reader		
Settings	SSCP TCP	ConfAuthenticate
ARC	Server Port	Authenticate Key Index
ARC Conf UHF	Timeouts (ms)	Signature 1 Mode None ~
ARC Screen	Long	Encryption -1 Value 1
Autonomous	Bute road 2000	ResetAuthenticate
Autonomous Conf		
Asynchronous		SetAllowedCommModes
Private	Console 🖸 Spy 🗹	Plain Signed Encryption
RSA PKCS		
MIFARE Classic / Plus		
Security Level 0	Command	Activity
Classic / SL1	result	
SL1 Contents		Quit
SL1 Tests	• L	

3- The window below opens. Click "Search for IP devices" to detect the reader.

SESPro -IP discovery tool
Search for IP devices UDP services for device discovery are : Digiconnect devices use ADDP (UDP:2632) service Lantronix devices use UDP:30718 service
✓ Lantronix devices found : 1
Devicel:ID=A8,@MAC=00204AD64A03,@IP=10.106.0.150
Digiconnect devices found



4- The list of detected readers appears.

SESPro -IP discovery tool							
Search for IP devices	UDP services for device discovery are : - Digiconnect devices use ADDP (UDP:2632) service - Lantronix devices use UDP:30718 service						
<ul> <li>Lantronix devices four</li> </ul>	nd : 2						
Devicel:ID=6X,@MAC=	0080A3E23804,@IP=10.106.0.52						
Device2:ID=A8,@MAC=	00204AD64A03,@IP=10.106.0.150						
Digiconnect devices f	ound						

**Note**: if no devices appear, refer to "Reset and reconfiguration of the Ethernet module" section.

5- Check that the MAC address matches the address of the connected module.



6- Enter the IP address retrieved above in SESProUHF. Enter "10001" in the "TCP Client Port" field.

IP dest	10.1	06.0.52	ď
TCP Clie	ent Port	10001	
SSCP T Server P	CP ort	2102	



10	85	8	8	8		8	3	9	15	3	8	$\mathbb{R}^{2}$	9	2		10		${\mathbb P}^{(n)}_{i}$	63	85	3	8	81	8			8	2
15	25	83	2		5		35	15		25	65	35	2	22				53	13	55	35	83		32			35	8
1	55	22	<b>7</b> 2						8	2	10	12	32	2	1	10	1	5		51	10	2	8				2	1
Ŧ.;	10	20	÷.,	÷.	Ψ.	-	Ξ.	2	Υ.	1	Ξ.	17	с.	1.1				÷	•	1		-	11	τ.	ч.	-		ġ

## Reset and reconfiguration of the Ethernet module



- 1- Put the J7-INIT jumper in the 1-2 position, then put the J6-RESET jumper in the 1-2 position.
- 2- Return the J6-RESET jumper to the initial 2-3 position.



The orange Ethernet LED flashes once a second (500ms ON / 500MS OFF). Wait for 5 seconds.

3- Return the J7-INIT jumper to the initial 2-3 position.



The orange Ethernet LED flashes. As soon as it remains permanently on, the module has been reset.

- 4- Repeat steps 1, 2 and 3.
- 5- Double-click on the device.



6- The window below opens. Click "Open a session".



Ouvrir une sess	on		
http://10.106.0.51			
Votre connexion à	e site n'est pas pri	ivée	
Nom d'utilisateur			
Mot de passe			
	[	Ouvrir une session	Annuler

7- Go to "Channel 1 / Serial settings".

xPico°	110				
<u>ቆ</u>		Device Status			
Network					
Serial Tunnel					
Hostlist	Product Information				
Serial Settings	Firmware Version:	V6.11.0.10			
Connection	Build Date:	29-Dec-2017			
Channel 2	Network Settings				
Serial Settings	MAC Address:	00-80-A3-D5-66-95			
Configurable Pins	Network Mode:	Wired			
Apply Settings	DHCP HostName:	< None >			
rippiy ootango	IP Address:	10.106.0.51			
	Default Gateway:	10.106.0.250			
Apply Dofaulte	DNS Server:	10.106.0.101			
Apply Delauits	MTU:	1400			
	Line settings				
	Line 1:	RS232, 9600, 8, None, 1, None.			
	Line 2:	RS232, 9600, 8, None, 1, None.			

8- Change the baud rate to 115200 and click "OK".

<i>₼</i>	Seria	al Settings
Network	Channel 1	
Server	Disable Serial Port	
Serial Tunnel		
Hostlist Channel 1	Port Settings	
Serial Settings	Protocol: RS232	Flow Control: None
Connection	Baud Rate: 115200 🗸 Data Bits: 8 🗸	Parity: None 🗸 Stop Bits: 1 🗸
Channel 2 Serial Settings Connection	Pack Control	
Configurable Pins	Enable Packing	
Apply Settings	Idle Gap Time: 12 msec 🗸	
	Match 2 Byte Sequence: Yes No	Send Frame Immediate: O Yes No
Apply Defaults	Match Bytes: 0x 00 0x 00 (Hex)	Send Trailing Bytes: None One Two
	Flush Mode	
	Flush Input Buffer	Flush Output Buffer
	With Active Connect: O Yes 💿 No	With Active Connect: O Yes  No
	With Passive Connect: Oyes ON0	With Passive Connect: O Yes O No
	At Time of Disconnect: O Yes O No	At Time of Disconnect: O Yes O No
	0 163 0 100	
		OK



- 9- Go to "Channel 2 / Serial settings" and repeat the same operation.



10- Click "Apply Settings".

xPico°	110 LANTRONIX°
企 Network Server	Please wait while the configuration is saved
Serial Tunnel Hostlist Channel 1 Serial Settings Connection Channel 2 Serial Settings	The unit will reboot in order for the settings to be applied.
Configurable Pins Configurable Pins Apply Settings Apply Defaults	

11- Check that the baud rates are 115200.

xPico° (	110	
<b>ຜ</b>		Device Status
Network		
Server		
Senal Tunnel Hostlist		
Channel 1	Product Information	
Serial Settings	Firmware Version:	V6.11.0.10
Connection	Build Date:	29-Dec-2017
Channel 2	Network Settings	
Connection	MAC Address:	00-80-A3-D5-66-95
Configurable Pins	Network Mode:	Wired
Apply Settings	DHCP HostName:	< None >
rippij ootango	IP Address:	10.106.0.51
	Default Gateway:	10.106.0.250
Apply Defaulte	DNS Server:	10.106.0.101
Apply Delauits	MTU:	1400
	Line settings	
	Line 1:	RS232, 115200, 8, None, 1, None.
	Line 2:	RS232, 115200, 8, None, 1, None.



### **Communication test**

In STid - SESProUHF, enter the IP address, enter "10001" in "TCP Client Port" and set the Timeout to "Long".

STid - SESProUHF - Options/S	SCP	– 🗆 X
= Options		
Home	SSCP	SSCP Security mode Plain ~
Preferences	Communication mode	Change Keys
SSCP	TCP V AutoConnect	Signature A087754B7547481094BE !
Firmware	-	Encryption E74A540FA07C4DB1B46421126DF7AD36
∎ Reader	IP dest 10.106.0.51	
MIFARE Classic / Plus	TCP Client Port 10001	
MIFARE DESFire EvX	SSCP TCP	ConfAuthenticate
MIFARE Ultra Light / C	Server Port 2102	Authenticate
CPS3		Key Index
Biometrics	Time such (ma)	Signature -1 Mode None ~
Image Scan	- Timeouts (ms)	Encountion
	Long	
E LEGIC	lotal read 2000	
UHF	Byte read 2000 🖨	ResetAuthenticate
Reader		
Reader InOut		SetAllowedCommModes
Reader RF	Console 🗹 Spy 🗗	Plain Signed Encryption
Mandatory		
Custom	Results	Activity
Async/Auto/EPCMap	result	
I OSDP		
		Quit

Run a "GetInfos" in the "Reader" tab. The response from the reader appears in the "Results" window.

STID - SESPROUHF - UHF/Reader		– 🗆 X
Options		
Home	GetReaderType	SSRelayConfig4
Preferences	GetSerialNumber	Save1 Save2 Save3 Save4
SSCP	00000	✓ OpenD1 ✓ OpenD2 ✓ OpenD3 ✓ OpenD4
		SSRelayAction4
Firmware	GetInfos SetBaudRate	Action1 Action2 Action3 Action4
Reader	AutoBaud Baudrate	SSRelayState4
MIFARE Classic / Plus	AutoPort 38400 V	
MIFARE DESFire EvX		
MIFARE Ultra Light / C		
E CPS3	BuzzerSoundLevel 10	OutputPGB
H Image Scan		Outputteb
Bluetooth / NFC	Save	Red Green Blue
■ 125 kHz		FF FF FF
■ LEGIC	SetSerial&HWType	hex values
UHF	United Budent 0, 2 (2000000) ORS485	
Reader		
Reader InOut	Datain	LED duration Buzzer duration Spectre LED Adr
Reader RF	Transceive	
Mandatory		
Custom	Results	Activity
Async/Auto/EPCMap	Version is 11	2 days
■ OSDP	Baudrate is 115200 bit/s Address 485 is 0	
	Power supply (Volt) : 29.4	
		Quit



## **Keyboard emulation operation**

As soon as a USB cord is connected between the USB-C output and a host, the reader switches to an autonomous mode, in which it performs inventories and sends all the EPCs of every detected tag in an active window.

The keyboard emulation settings can be configured using the internal USB-C connector:

- Using a terminal capable of sending ASCII characters on the serial connection of the internal USB-C. The commands must end with CR/LF (0x0D 0x0A). The reader responds "o" and "k" in ASCII when the frame is successfully retrieved.
- Using the STid USB Wedge tool supplied on the USB key. Refer to Appendix 1.

ASCII command	Hexa data	Description of the command	Default settings
language	1 byte of data: AZERTY → 0x00 QWERTY → 0x01	Changes the keyboard layout.	AZERTY
casing	1 byte of data: Uppercase → 0x00 Lowercase → 0x01	Chooses whether the alphabetical characters are displayed on the screen in uppercase or lowercase.	Uppercase
numloc	1 byte of data: Num keypad → 0x00 Num key → 0x01	Chooses which numerical keys are used: those on the numerical keypad or those above the alphabetical keys.	Num keypad
info	No data	Shows the current configuration (version, baud rate, etc.).	
charreturn	1 byte of data: Deactivated → 0x00 Activated → 0x01	Switches the carriage return on or off.	Activated
reset	No data	Restores the default settings.	

List of the configurable settings:

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