Quick Start

Use the ELA products with Linux

The ELA softwares only run on Windows. To communicate to our reader from a Linux system, you need to use a terminal in a serial mode or IP mode, depending on the reader.

In the rest of this tutorial, we will use Putty under Ubuntu.

1   Install Putty

- **Open a console** (under Ubuntu, press *Alt* and *F2*, then type *xterm* and confirm with *Enter* key).
- **Type** *sudo apt-get install putty*.
  Enter the password: *root*. Under Ubuntu, the characters do not appear on the screen.
- The console will ask you to confirm with *y* ou *n* key. **Tap *y*** to accept.
- Once installation is completed, move on to the next step.

2   Launch and Putty settings

- In the console previously opened, **enter *sudo putty &*** to open Putty in a new window.
- In the Putty window, **go to the *Session* section** (which should be already selected when the program starts.)
- **Enter the connection information:**
    o   For a reader with **IP communication** (Ethernet or Wifi), **check the box *Raw*** then **enter its IP address in the *Host name (or IP address)*** field, and its communication **port**: ***10001***. The latter value is the default port for ELA's products.
    o   For a reader with a **serial** communication, **check the box *Serial*** then **enter** the **port name** in the ***Serial Line*** field. To get the port name, please refer to paragraph 3 *Get the port name*. In the ***Speed*** field, **enter the reader speed**. It is set to ***9600 bauds*** by default.
- **Click on the *Terminal* section** in Putty, and select ***Force on*** for the ***Local echo*** and ***Local line editing*** fields. Those options allow to see what is written in the serial terminal.
- **Click on *Open*** to establish the communication with the reader; then send commands via the terminal which just opened.
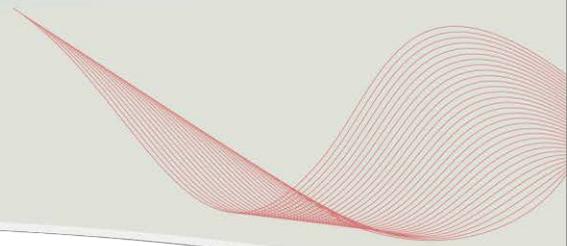
3   Get the serial port's name

- **Open a console** (press *Alt* and *F2*, then type *xterm* and confirm with *Enter* key).
- **Type** *sudo ll /dev/serial/by-id* to display the COM ports available on the computer. Find the line containing *Silicon Labs CP210x*.
- At the end of this line, the reader COM port name appears. For instance: [...]Silicon Labs CP210x[...] **-> ../../ttyUSB0**. The port name is: **ttyUSB0**

- In the *Serial Line* field of Putty, enter */dev/port_name* (here, the COM port is *ttyUSB0* : you have to enter */dev/*ttyUSB0).

4   Reminders on ELA's structure and use of commands

For a complete list of the ELA's commands, refer to our Software Datasheet MCHD: Reader Communication & setup protocol, available on our website
http://www.rfid-ela.eu/download.html

All commands have the same syntax:

[AABBCC]

- A command starts by "[„ and finishes by „]"
- *"AA"*: Command number
- *"BB"*: Command parameter
    - 6 hex characters for commands A1 and A3
    - 2 hex characters for all other commands
- *"CC"*: Reader ID
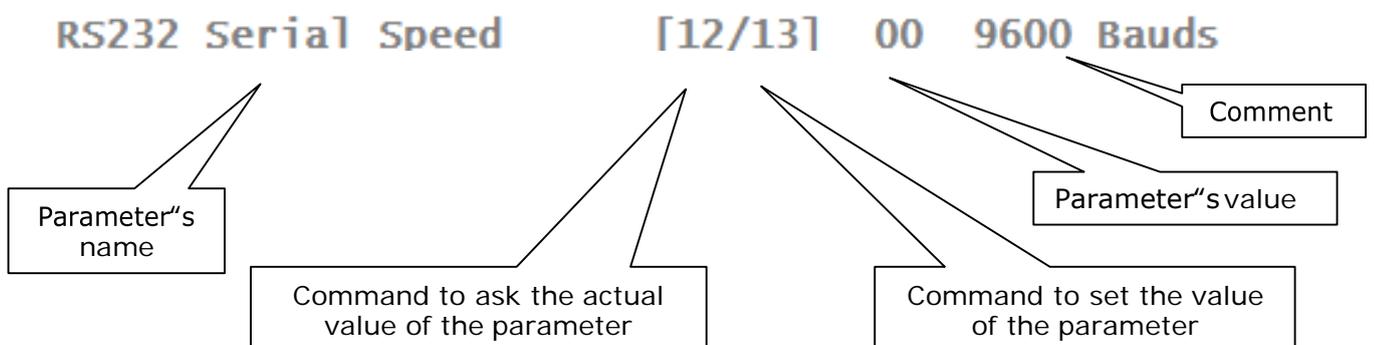   - **Broadcast** to all readers: 00

If the reader understands the command, it will answer *[**OK**AABBCC]*.

If you want to get some **help** about a command, replace the closing bracket "**]**"by „**?**".

The more important command is: *[990101]*.
It shows the list of all the commands available for the reader, and the actual value for the corresponding parameters.
You can see below a sample line from the *[990101]* command:

RS232 Serial Speed   [12/13]   00   9600 Bauds

Comment

Parameter"s value

Parameter"s name

Command to ask the actual value of the parameter

Command to set the value of the parameter

For example, if you want some help about the speed command, send *[130000?*, you will get the answer alongside.

To get the actual speed of the SCIEL CARD, you must send *[120001]*. It will answer *[120001]* because we are at 9600 bauds.

To set the SCIEL CARD"s speed to 115200 bauds, you must send *[130401]*. The reader will answer *[OK130401]*, but you won't see it because the Lantronix module is still at 9600 bauds, so it won't understand the SCIEL CARD"s message (this is a particular case; usually you will get the answer message because the speed stays the same).

```
-------RS232 Serial Speed-------
Serial port Communication
Speed.

get: [12xx01]
set: [13xx01]
 -00h 9600 Bauds
 -01h 19200 Bauds
 -02h 38400 Bauds
 -03h 57600 Bauds
 -04h 115200 Bauds
-------------------------------
```