

# UTILINX

## PROCAN+ manual

Version: 1.0.4

Professional CAN BUS Simulator



## Index

.....	1
Safety considerations .....	3
Electrical Characteristics .....	3
Description .....	4
Connections.....	5
Connector DB9 .....	5
LED.....	6
Information .....	6
Protection circuit.....	6
Software .....	7
System Requirements .....	7
Drivers USB.....	7
Installing drivers .....	7
Windows Update.....	7
Installation through the FTDI executable.....	8
Graphical User Interface PROCAN+ software .....	11
Errors.....	13
Image 1 – PROCAN+ DB9 connector. ....	5
Image 2 - PROCAN+ LED.....	6
Image 3 - Windows Update driver installation. ....	7
Image 4 - Download do driver through the FTDI website.....	8
Image 5 - FTDI driver executable. ....	8
Image 6 - Instaling FTDI driver. ....	8
Image 7 - Completing the FTDI driver installation. ....	9
Image 8 - Windows device manager.....	10
Image 9 - Communication window in software PROCAN+. ....	11
Image 10 - PROCAN+ software.....	11
Image 11 - Hidden Itens. ....	14
Table 1 - Connections of connectorr DB9. ....	5
Table 2 - State of the LEDs. ....	6
Table 3 - Graphical User Interface.....	12
Table 4 - Diagnostics.....	13



## *Safety considerations*

Please read the information below before using the equipment.

Failure to follow these considerations during the use of the equipment may cause the equipment to malfunction and *UTILINX* assumes no responsibility for the equipment.

### *Electrical Characteristics*

- Do not power the unit with a voltage greater than 15V;
- Do not feed the *CAN BUS* with a voltage greater than 12V;
- Do not use the equipment in places with water;
- Do not attempt to open the device.

## Contents

- Unit *PROCAN+*;
- Cable mini *USB*;
- Cable *DB9*;
- Carrying case.

## *Description*

This equipment is a device that helps the repair of dashboards and steering columns it works with several brands. The unit generate *CAN* commands to simulate actual operation without the part being connected to the vehicle.



## Connections

PROCAN+ equipment consists of three connectors. A mini *USB* that communicates with the software, a DC jack to power the equipment and a *DB9* connector that allows to connection to the *CAN bus* and to power the devices under test. *Table 1 - DB9 Connector Connections* contains the *DB9* connector connections.

### Connector DB9

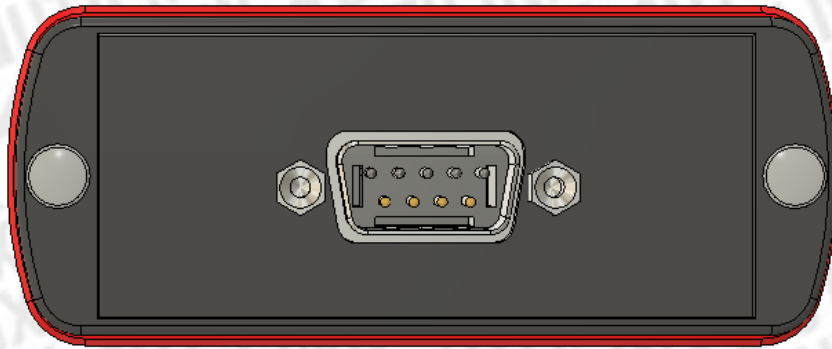


Table 1 - Connections of connector DB9.

Pin	Connector	Cable DB9
1	<b>CAN BUS Low</b>	<b>White</b>
2		
3	<b>NC</b>	<b>NC</b>
4	<b>CAN BUS High</b>	<b>Yellow</b>
5		
6	<b>GND</b>	<b>Black</b>
7		
8	<b>12V</b>	<b>Red</b>
9		

## LED

The *PROCAN+* device contains four *LEDs* that indicate the state of the equipment during operation. The conditions of the *LEDs* can be found in *Table 2 - State of the LEDs*.

### Information



Image 2 - PROCAN+ LED

Table 2 - State of the LEDs.

LED	ON	OFF	Toggle
<b>POWER (Red)</b>	Device on	Device off	NA
<b>CAN BUS (Green)</b>	Error on <i>CAN BUS</i>	No communication	Transmit data
<b>USB (Yellow)</b>	NA	<i>USB</i> disable	Transmit data
<b>LOAD(Red)</b>	Overcurrent, overvoltage or undervoltage	Working correct	NA

### Protection circuit

If occur a problem in the load or power supply of *PROCAN+*. It has a circuit that will turn off the system for half a second and then it reboots. The circuit is enabled in the follow situation happens:

- Load current higher than 3.6A;
- Power supply voltage higher than 15V;
- Power supply voltage lower than 10V.



## Software

### System Requirements

To run PROCAN + software you need the following:

- Microsoft .NET Framework 4.6.1;
- FTDI driver;
- Microsoft Windows 7(x86, x64) or Microsoft Windows 10(x86, x64).

### Drivers USB

For communication between the software and the PROCAN+ device, the drivers must be installed for the FTDI integrated circuit. The FTDI driver is available for download on the following website:

<http://www.ftdichip.com/FTDrivers.htm>

### Installing drivers

Connect the PROCAN+ device to a USB port on your Windows 10, 7 or XP computer.

### Windows Update

If your computer has an internet connection, Windows will establish a connection to Windows Update and install an available driver for the device.

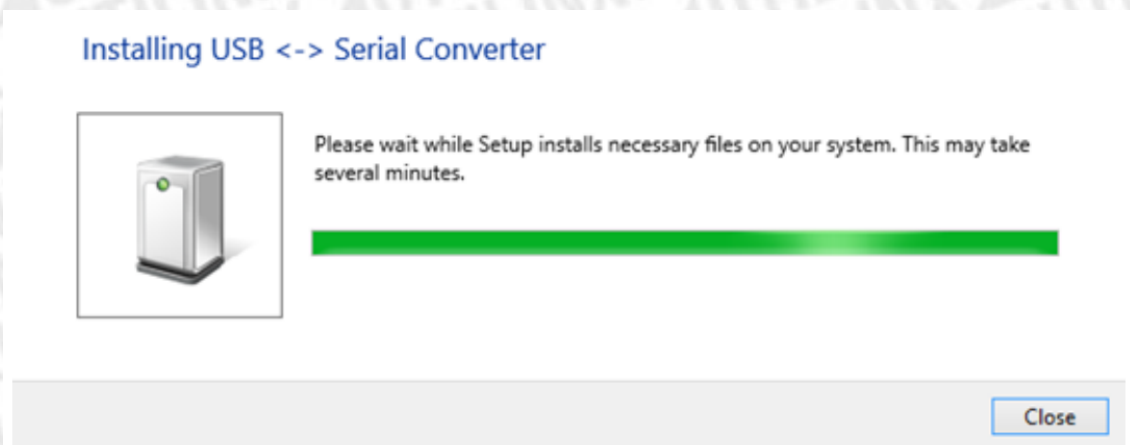


Image 3 - Windows Update driver installation.

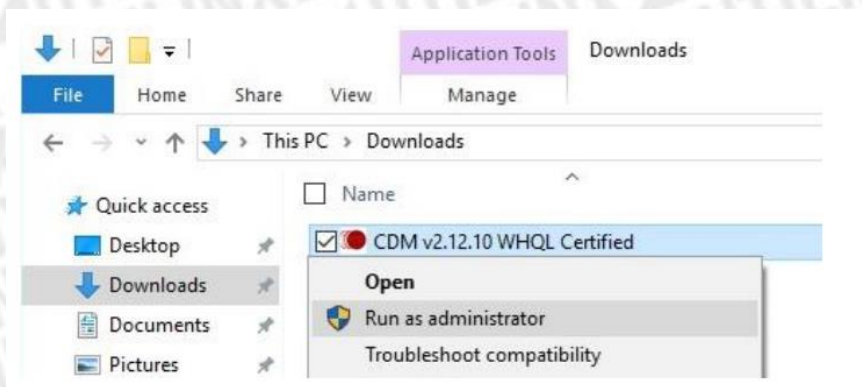
*Installation through the FTDI executable*

Through the previous link it is possible to download the executable as indicated in yellow in *Image 4 - Download the driver through the FTDI website.*

Operating System	Release Date	Processor Architecture				Comments	
		x86 (32-bit)	x64 (64-bit)	ARM	MIPS		SH4
Windows*	2017-08-30	2.12.28	2.12.28	-	-	-	WHQL Certified. Includes VCP and D2XX. Available as a setup executable. Please read the Release Notes and Installation Guides.

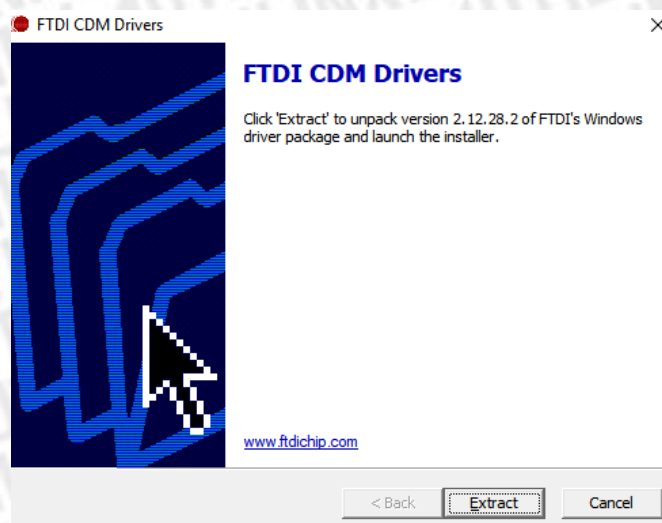
*Image 4 - Download do driver through the FTDI website.*

After you download the executable, right-click the executable icon and select Run as Administrator.



*Image 5 - FTDI driver executable.*

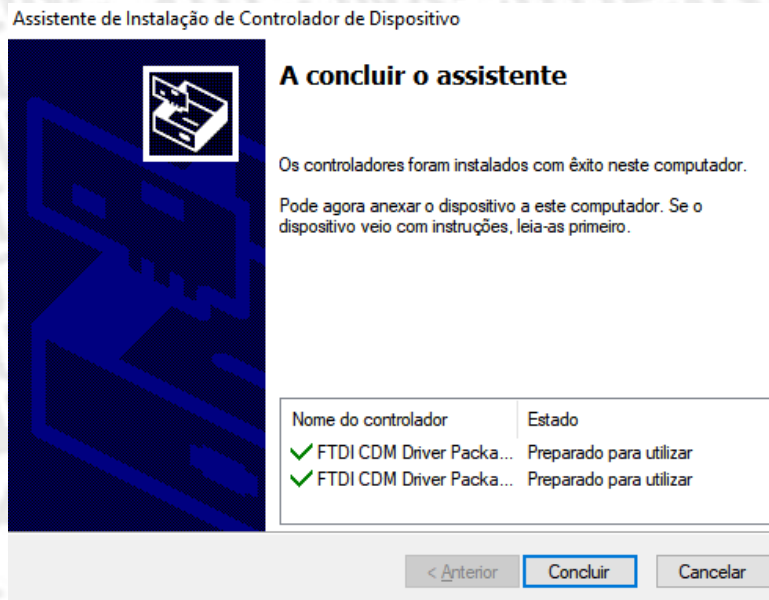
When the User Account Control message appears asking if you want to make changes to your computer, select yes to proceed.



*Image 6 - Instalng FTDI driver.*

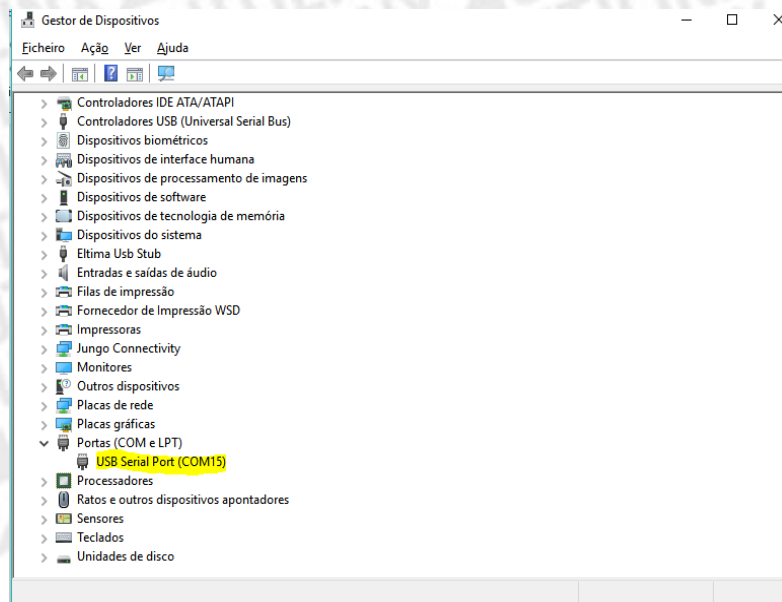


Proceed with the installation of the driver it will be installed automatically on your computer.  
*Image 7 - Completing the FTDI driver installation, shows a successful installation of the driver.*



*Image 7 - Completing the FTDI driver installation.*

After the successful installation of the driver, when the *PROCAN+* device is connected to the computer it will be listed in the *Windows* device manager, as shown in *Image 8 - Windows Device Manager*.



*Image 8 - Windows device manager.*

You must know the serial port number to establish the connection between the software and the *PROCAN+* device. However, in the software, the word *PROCAN+* (COMx-*PROCAN+*)<sup>1</sup> is shown next to the port number as shown in *Image 9 - Communication window in software PROCAN+*.

<sup>1</sup> When there is more than one FTDI device running in Windows the *PROCAN+* software only shows Port: (COMx).



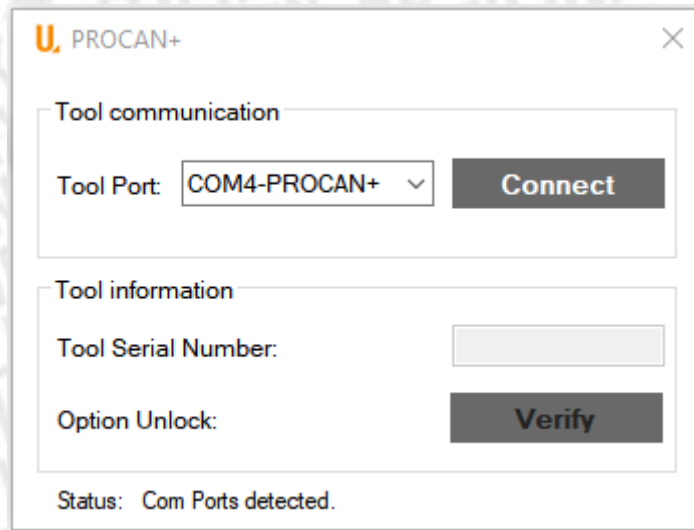


Image 9 - Communication window in software PROCAN+.

Graphical User Interface PROCAN+ software

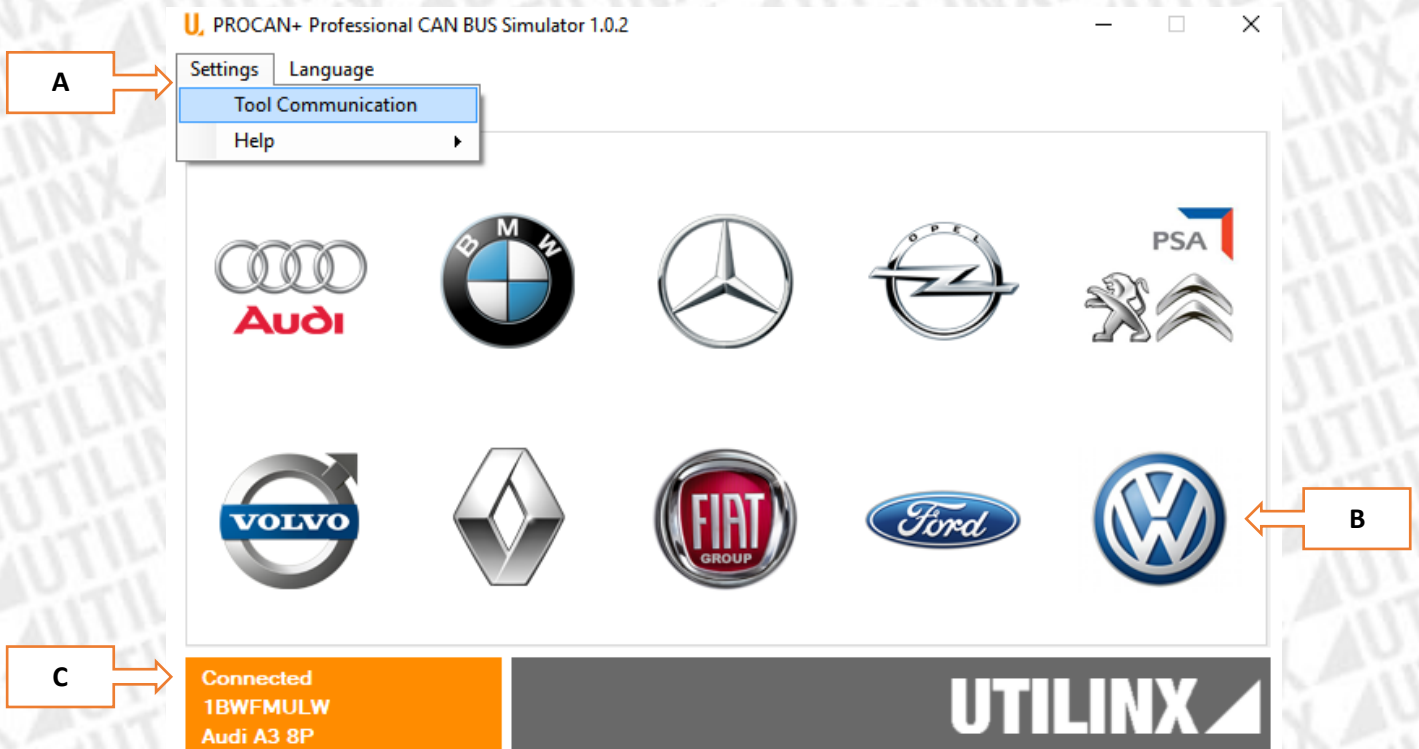


Image 10 - PROCAN+ software.

Table 3 - Graphical User Interface.

<b>A-Settings</b>	<ul style="list-style-type: none"> <li>• Establish communication between hardware and software.</li> <li>• See manual.</li> </ul>
<b>B-Manufacturer</b>	Selection of manufacturer.
<b>C-Hardware Information</b>	<ul style="list-style-type: none"> <li>• Indicate the state of communication between the hardware and the software.</li> <li>• Hardware serial number.</li> <li>• Enable module.</li> </ul>



## Errors

In case of an error when using the equipment see *Table 4 – Diagnostics*

Table 4 - Diagnostics.

Problem	Solution
<b>The serial port does not appear in the PROCAN +</b>	<ul style="list-style-type: none"> <li>• After powering on the equipment do not turn on the LEDs</li> <li>• Disconnect other USB devices and check again.</li> <li>• Restart the <i>hardware</i>.</li> </ul>
<b>Cannot establish communication between hardware and software</b>	<ul style="list-style-type: none"> <li>• Verify if the software is running and connected to the hardware.</li> <li>• Check that the serial port is open in other software.</li> <li>• Restart the hardware.</li> </ul>
<b>The dashboard or steering is not responding to CAN commands</b>	<ul style="list-style-type: none"> <li>• Check the CAN bus if the yellow conductor connected to the CAN High and the white conductor to the CAN Low.</li> <li>• Turn on or turn off the 120-ohm resistor.</li> </ul>
<b>After powering on the equipment, the red LED stay off</b>	<ul style="list-style-type: none"> <li>• Check the voltage with a multimeter in the <i>DB9</i> cable.</li> <li>• Check the polarity of the 12 volts.</li> <li>• Connect a USB cable to the product and verify that the hardware starts.</li> </ul>

If the problem is not in *Table 4 - Diagnostics*, or if the problem persists send an email to [geral@utilinx.pt](mailto:geral@utilinx.pt).

This email should contain the description of the problem and the attached Procan.log file that is on the directory *C:\Users\{username}\AppData\Roaming\Utilinx*. You must enable hidden items in Windows Explorer as in *Image 11 - Hidden Items*.

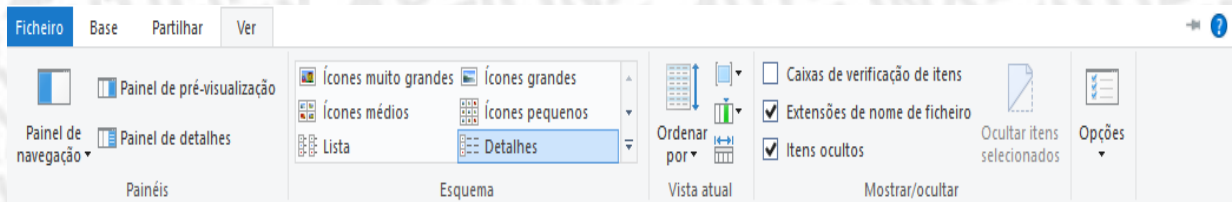


Image 11 - Hidden Items.