



ESP8266 Modem Simulator

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September 18, 2018

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Parte I

Manual em Português

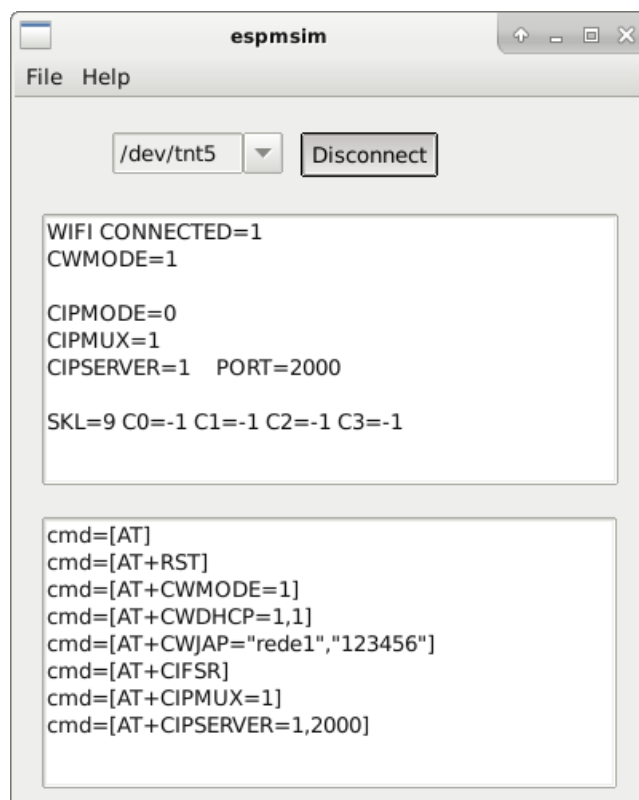
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Capítulo 1

Introdução

ESP8266 Modem Simulator



Capítulo 2

Comunicação Serial

Para utilizar o a porta serial do simulador, instale um emulador NULL-MODEM:

- Windows: com0com <http://sourceforge.net/projects/com0com/>
- Linux: tty0tty <https://github.com/lcgamboa/tty0tty>

Para comunicação o PICSimLab deve ficar conectado em uma porta do emulador NULL-MODEM e o outro aplicativo conectado na outra porta. Exemplos de configuração ligando o PICSimLab ao [Cutecom](#) para comunicação serial:

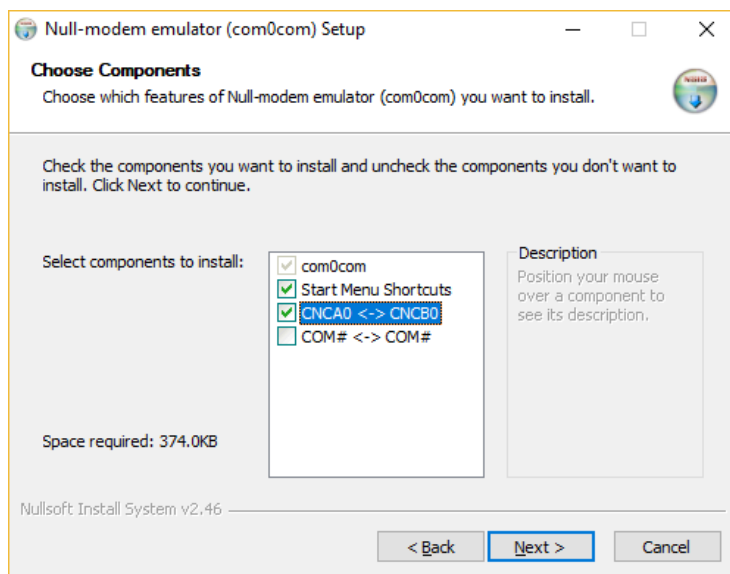
OS	porta PICSimLab	porta Cutecom	NULL-Modem prog.	Conexão
Windows	com1	com2	com0com	com1<=>com2
Linux	/dev/tnt2	/dev/tnt3	tty0tty	/dev/tnt2<=>/dev/tnt3

2.1 Instalação e Configuração do com0com (Windows)

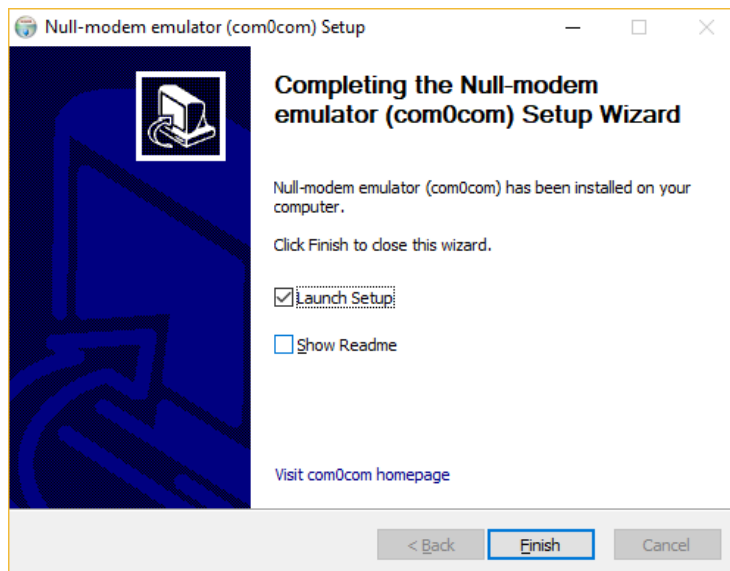
Faça o download da versão assinada do [com0com](#).

Descompacte o arquivo .zip baixado e execute o instalador específico de seu sistema operacional, x86 para windows 32 bits ou x64 para windows 64 bits.

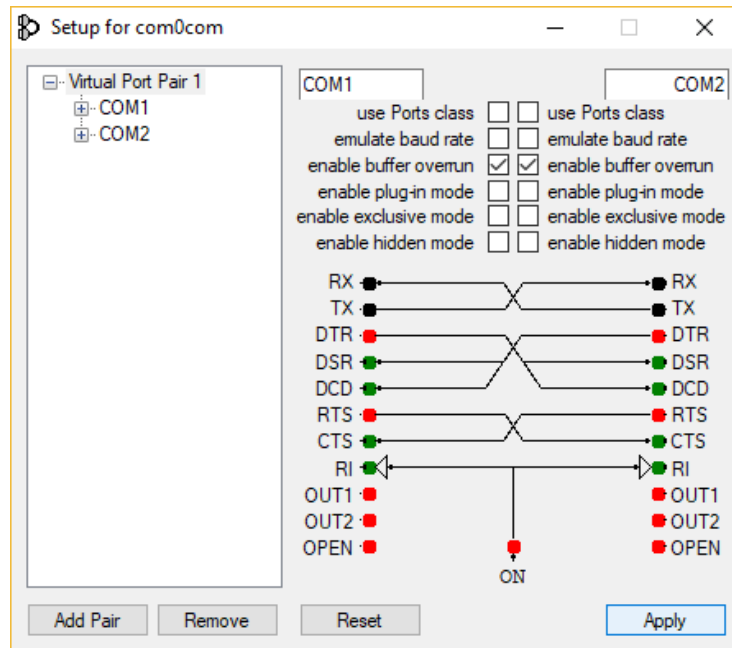
Configure a janela “choose components” como a figura abaixo:



Na última janela da configuração, marque a opção “Launch setup”:



Na janela do setup, troque os nomes das portas para COM1, COM2, COM3.... Marque apenas a opção “enable buffer overrun” nas duas portas, clique no botão “Apply” e feche o setup. Na configuração mostrada na figura abaixo, as portas COM1 e COM2 formam uma conexão NULL-MODEM, onde uma porta deve ser utilizada pelo PICSimLab e outra pela aplicação com comunicação serial.



2.2 Instalação e Configuração do tty0tty (Linux)

Faça o download do [tty0tty](https://github.com/0x00b/tty0tty). Descompacte a pasta baixada.

Abra um terminal e entre na pasta `tty0tty/module` e digite os comandos na sequência:

```
sudo apt-get update
sudo apt-get -y upgrade
sudo apt-get -y install gcc make linux-headers-`uname -r`
make
sudo make install
```

O usuário deve estar no grupo **dialout** para poder acessar as portas. Para adicionar seu usuário ao grupo **dialout** use o comando:

```
sudo usermod -a -G dialout your_user_name
```

depois disso é necessário fazer logout e login para as permissões do grupo tenham efeito.

Depois de instalado, o módulo cria 8 portas interconectadas da seguinte forma:

```
/dev/tnt0 <=> /dev/tnt1
/dev/tnt2 <=> /dev/tnt3
/dev/tnt4 <=> /dev/tnt5
/dev/tnt6 <=> /dev/tnt7
```

a conexão entre cada par é da forma:


```
TX    ->  RX
RX    <-   TX
RTS   ->  CTS
CTS   <-   RTS
DSR   <-   DTR
CD    <-   DTR
DTR   ->  DSR
DTR   ->  CD
```

Qualquer par de portas formam uma conexão NULL-MODEM, onde uma porta deve ser utilizada pelo PICSimLab e outra pela aplicação com comunicação serial.

Capítulo 3

Comandos Suportados

- AT
- AT+RST
- AT+GMR
- AT+CWMODE=1
- AT+CWDHCP=1,1
- AT+CWLAP
- AT+CWJAP="rede1","123456"
- AT+CIFSR
- AT+CIPMUX=1
- AT+CIPSERVER=1,2000
- AT+CIPSEND=0,10
- AT+CIPCLOSE=0

Part II

English Manual

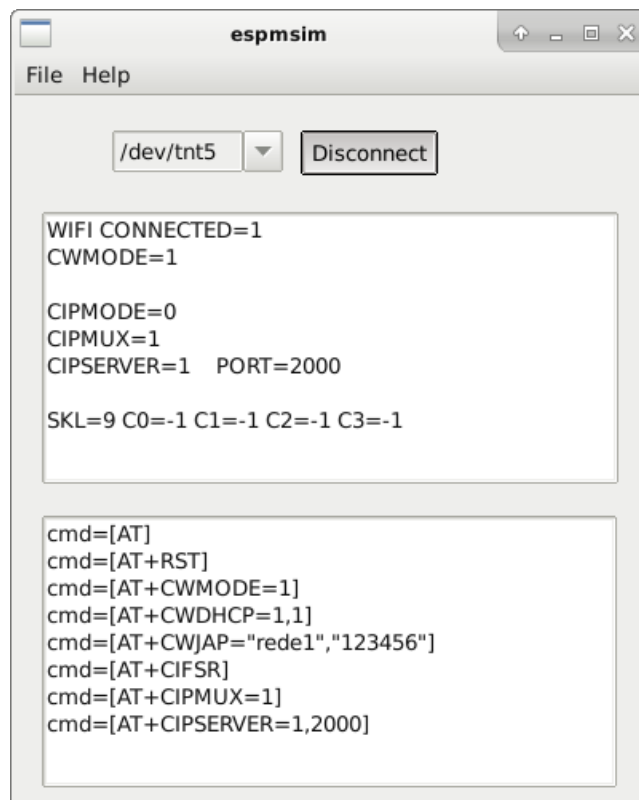
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Chapter 1

Introduction

ESP8266 Modem Simulator



Chapter 2

Serial Communication

To use the simulator serial port, install a NULL-MODEM emulator:

- Windows: com0com <http://sourceforge.net/projects/com0com/>
- Linux: tty0tty <https://github.com/lcgamboa/tty0tty>

For communication the PICSimLab should be connected in one port of the NULL-MODEM emulator and the other application connected in the other port. Configuration examples linking PICSimLab to [Cutecom](#) for serial communication:

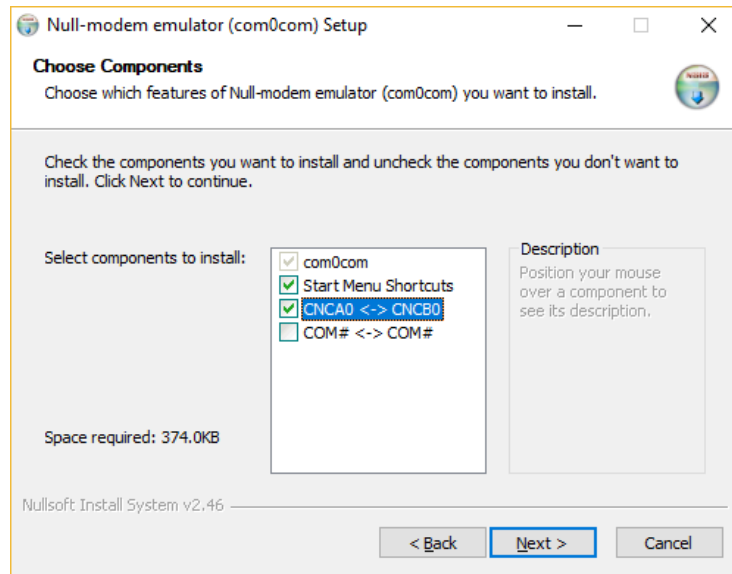
OS	PicsimLab port	Cutecom port	NULL-Modem prog.	Connection
Windows	com1	com2	com0com	com1<=>com2
Linux	/dev/tnt2	/dev/tnt3	tty0tty	/dev/tnt2<=>/dev/tnt3

2.1 Com0com Installation and Configuration(Windows)

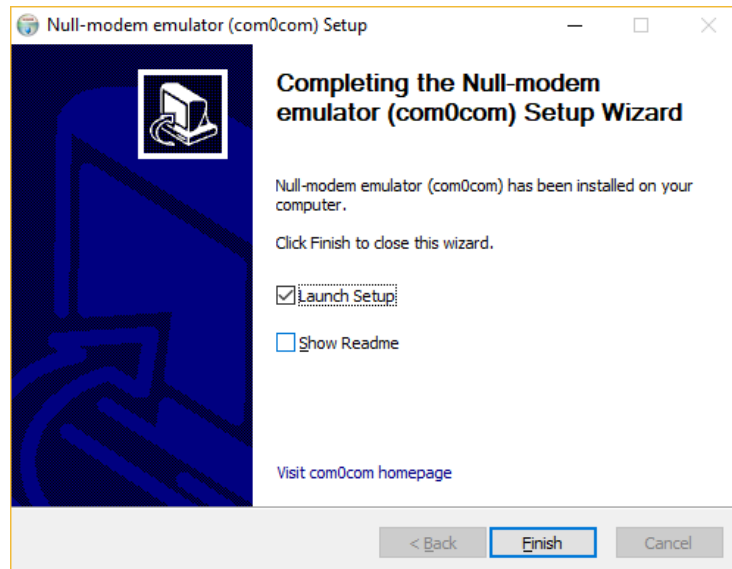
Download the signed version of [com0com](#).

Unzip the downloaded .zip file and run the specific installer of your operating system, x86 for windows 32-bit or x64 for windows 64-bit.

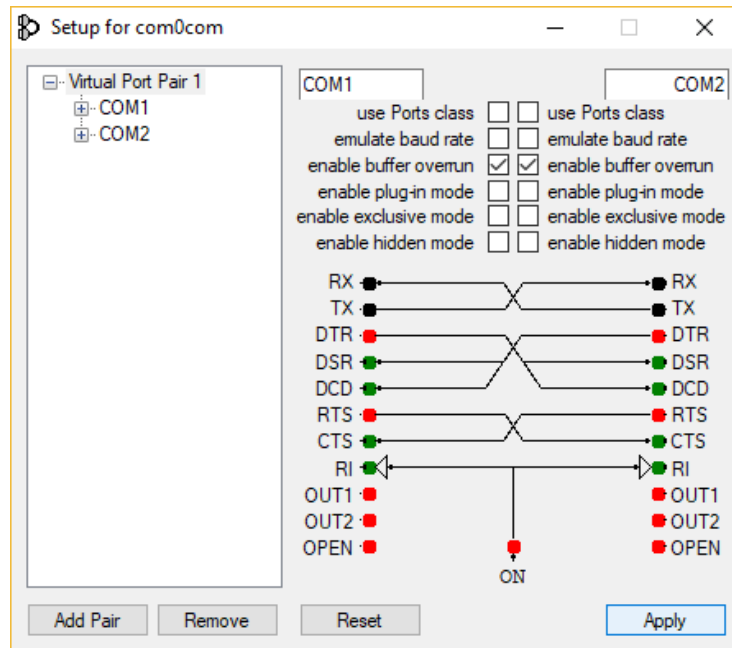
Configure the “choose components” window as the figure below:



In the last configuration window, check the “Launch setup” option:



In the setup window, change the port names to COM1, COM2, COM3 Just check the “enable buffer overrun” option on the two ports, click in the “Apply” button and close the setup. In the configuration shown in the figure below, the COM1 and COM2 ports form a NULL-MODEM connection, where one port must be used by the PICSimLab and another by the application with serial communication.



2.2 tty0tty Installation and Configuration (Linux)

Download the [href https://github.com/lcgamboa/tty0tty/archive/master.zip](https://github.com/lcgamboa/tty0tty/archive/master.zip) tty0tty. Unzip the downloaded folder.

Open a terminal and enter in the tty0tty/module/ folder and enter the following commands:

```
sudo apt-get update
sudo apt-get -y upgrade
sudo apt-get -y install gcc make linux-headers-`uname -r`
make
sudo make install
```

The user must be in the **dialout** group to access the ports. To add your user to **dialout** group use the command:

```
sudo usermod -a -G dialout your_user_name
```

after this is necessary logout and login to group permissions take effect.

Once installed, the module creates 8 interconnected ports as follows:

```
/dev/tnt0 <=> /dev/tnt1
/dev/tnt2 <=> /dev/tnt3
/dev/tnt4 <=> /dev/tnt5
/dev/tnt6 <=> /dev/tnt7
```


the connection between each pair is of the form:

```
TX    ->  RX
RX    <-   TX
RTS   ->  CTS
CTS   <-   RTS
DSR   <-   DTR
CD    <-   DTR
DTR   ->  DSR
DTR   ->  CD
```

Any pair of ports form a NULL-MODEM connection, where one port must be used by the PICSimLab and another by the application with serial communication.

Chapter 3

Supported Commands

- AT
- AT+RST
- AT+GMR
- AT+CWMODE=1
- AT+CWDHCP=1,1
- AT+CWLAP
- AT+CWJAP="rede1","123456"
- AT+CIFSR
- AT+CIPMUX=1
- AT+CIPSERVER=1,2000
- AT+CIPSEND=0,10
- AT+CIPCLOSE=0

Part III

License

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