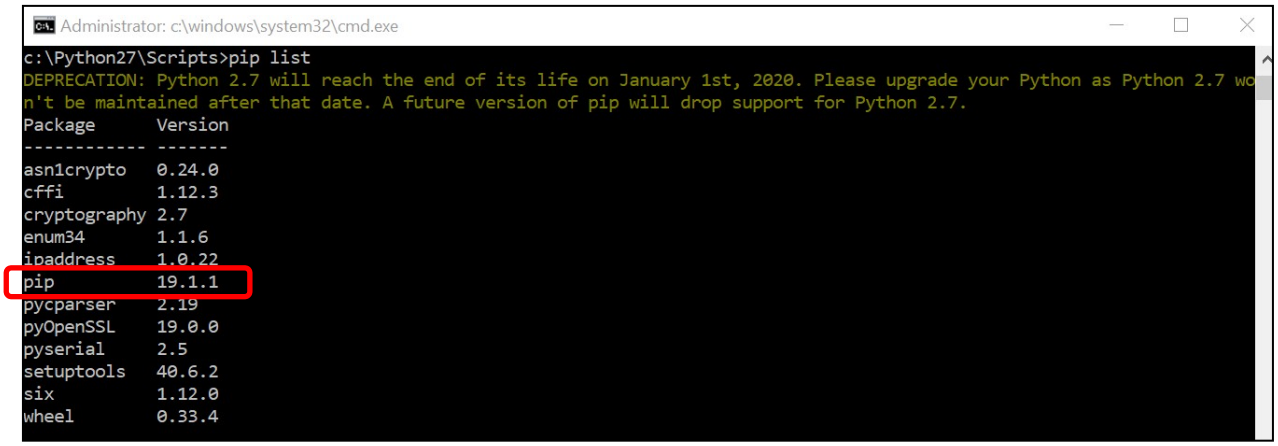
**Setting up and using Cperf to transmit UDP packets**

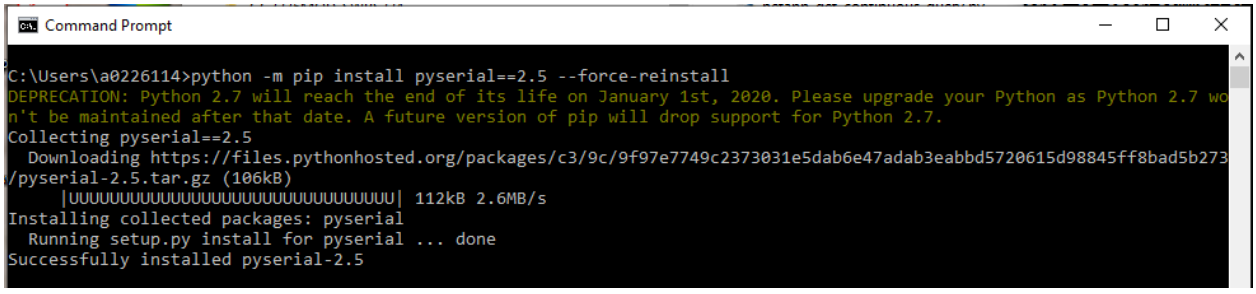
1) Install Python 2.7.16 (32-bit). Download the "Windows x86 MSI Installer". This is the 32-bit version.

2) Pip should already be installed with Python. You can check by opening the Command Prompt, navigating to C:\Python27\Scripts and entering the following command:
*pip list*

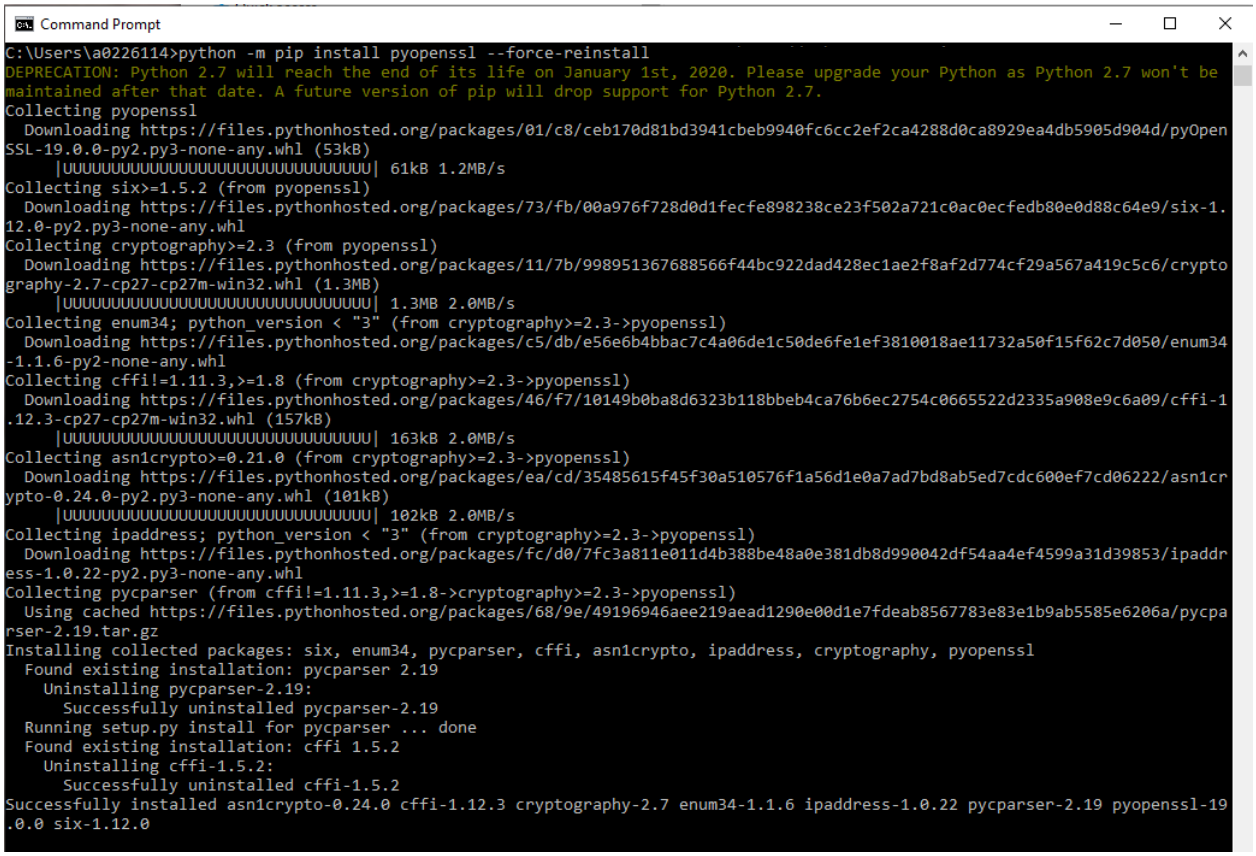



3) If it is not installed, install pip by downloading the "get-pip.py" installer script. Open the Command Prompt and navigate to the "get-pip.py" file. Run the following command:
*python get-pip.py*

4) Install pyserial (v2.5) using the following command on Command Prompt
*python –m pip install pyserial==2.5 --force-reinstall*



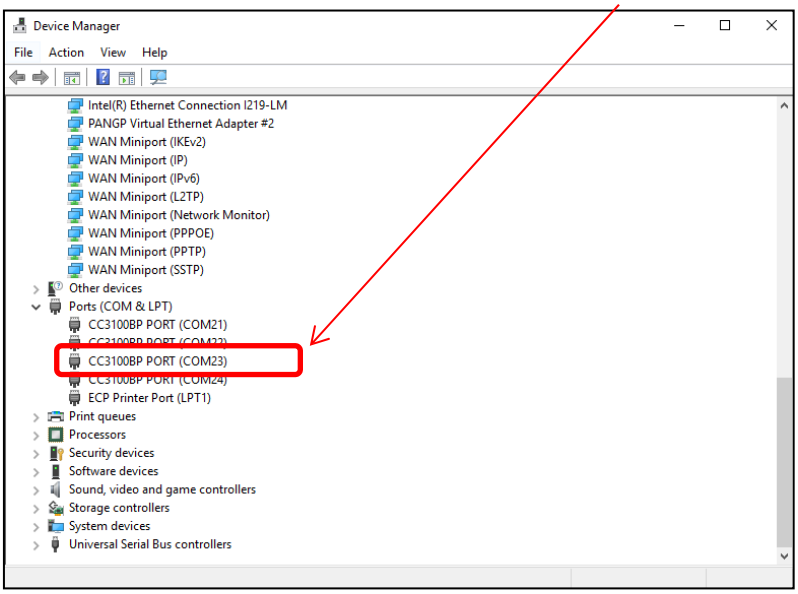

5) Install pyopenssl using the following command on Command Prompt
*python –m pip install pyopenssl --force-reinstall*



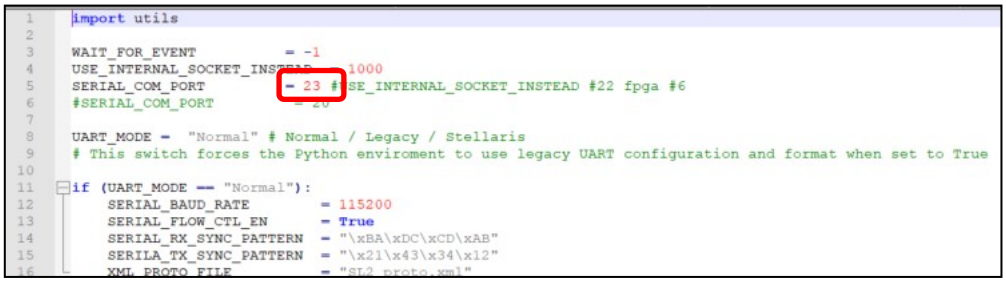

6) Download python_script.zip and extract it.

7) Connect the CC3xxx board to the computer.

8) Open the device manager. See under Ports (COM & LPT). Note the third COMxx number. In this example shown below, the third of this list is COM**23**. This is the UART port.



9) Edit the “configurations.py” file from the **python_script** folder. Change the SERIAL_COM_PORT to the UART port number found from step 7 above. Save the file after making the modification.



```
import utils

WAIT_FOR_EVENT          = -1
USE_INTERNAL_SOCKET_INSTEAD = 1000
SERIAL_COM_PORT         = 23 #SE_INTERNAL_SOCKET_INSTEAD #22 fpga #6
#SERIAL_COM_PORT        = 20

UART_MODE =  "Normal" # Normal / Legacy / Stellaris
# This switch forces the Python enviroment to use legacy UART configuration and format when set to True

if (UART_MODE == "Normal"):
    SERIAL_BAUD_RATE        = 115200
    SERIAL_FLOW_CTL_EN      = True
    SERIAL_RX_SYNC_PATTERN  = "\xBA\xDC\xCD\xAB"
    SERILA_TX_SYNC_PATTERN  = "\x21\x43\x34\x12"
    XML_PROTO_FILE          = "SL2_proto.xml"
```

**10)** Open a new command prompt and navigate to the directory where the **python_script** folder was saved and extracted.

11) Enter the following command to set the CC3xxx device to a default STA mode configuration

*set_ip_config_to_flash.py*

12) Restart the CC3xxx device after the script finishes to load the new configuration
13) Enter the following command to connect the CC3xxx to an AP
*wlan_connect.py -n <Insert AP SSID> -x <Insert security type: 0=Open, 1= WEP, 2=WPA/WPA2>*

**Example)** For an open AP called “myAP”:

*wlan_connect.py -n myAP -x 0*

14) Wait for the device to be successfully connected to the AP and then press “Esc” to return on the CMD line in order to run another command

15) Enter the following command to transmit UDP packets
*cperf.py –u –p 5001 –c <gateway IP> -l 1400 –b 20000000 –i 2 –t 60*

**“-u”** – UDP mode
**“-p”** – the port number
**“-c”** – client mode
**“-l”** – length of buffer
**“-b”** – Set target bandwidth to n bits/sec
**“-i”** – set the information interval time (in seconds)
**“-t”** – the time we wish to transmit (in seconds)

16) If the AP's gateway IP is unknown, you can find out by connecting your PC to the AP. Open the command prompt and enter "ipconfig". The "Default Gateway" IP is shown here.