

Guide to Flash the Test Code Firmware

1. Unzip the “SENSOPER DEVICE NAME.zip” package.

For example, the “SENSOPERT DEVICE NAME” may be “SENSOPER SC-SE-I8-T08”.

2. Open the Python 3.6.0 folder and run the setup.
Make sure that you tick the “Add python 3.6 to PATH” option during the installation.



3. After Installing python, open cmd (choose **run as administrator** option) from the search bar and type python to confirm the installed version of python.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

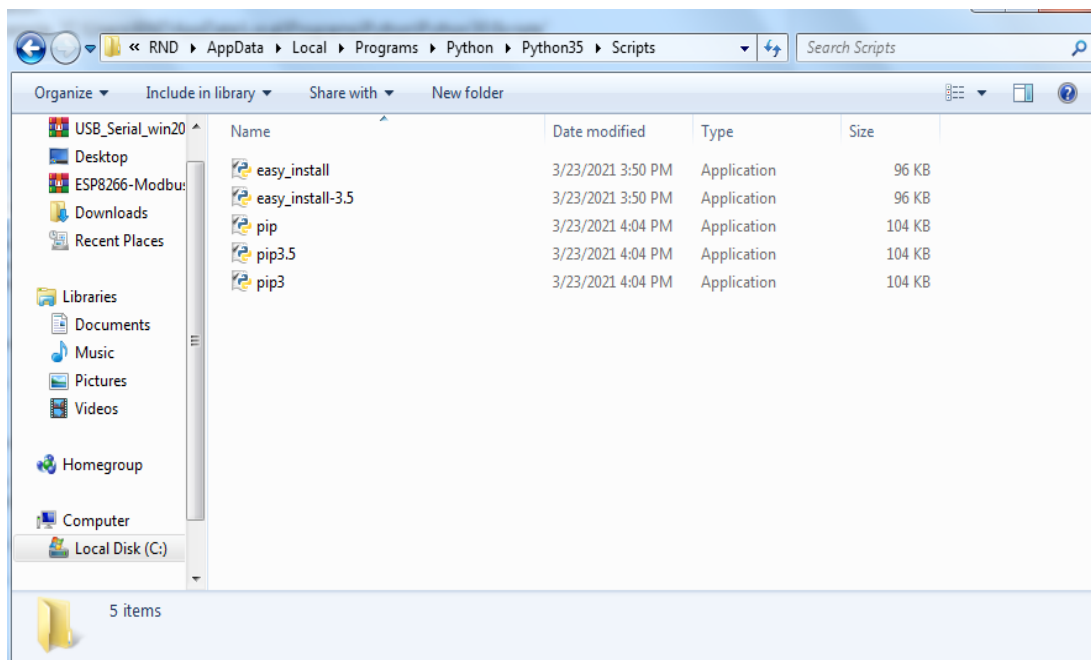
C:\Users\RND>python
```

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

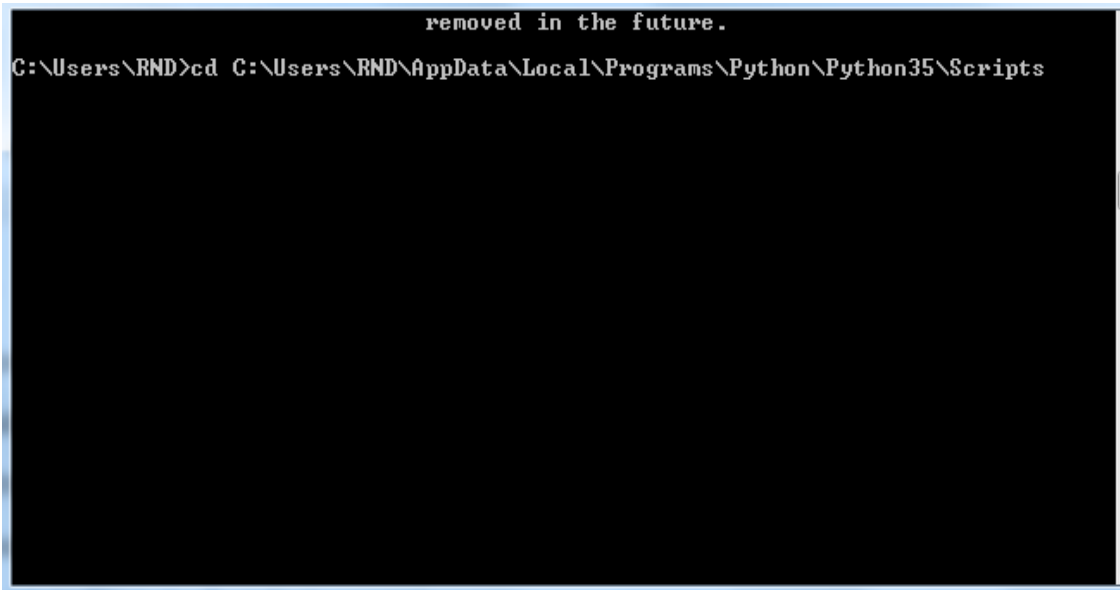
C:\Users\RND>python
Python 3.6.0 (v3.6.0:41df79263a11, Dec 23 2016, 08:06:12) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

4. Next, copy the python **Scripts** folder path. The Scripts folder should be located within the python application folder.

For example, "C:\Users\RND\AppData\Local\Programs\Python\Python35\Scripts"



5. Add the above path after typing "**cd**" in cmd and press enter.



```
removed in the future.  
C:\Users\RND>cd C:\Users\RND\AppData\Local\Programs\Python\Python35\Scripts
```

6. Next, upgrade pip, using the command "**python -m pip install --upgrade pip**". Once the upgrade is successful, the updated version of pip will be displayed.



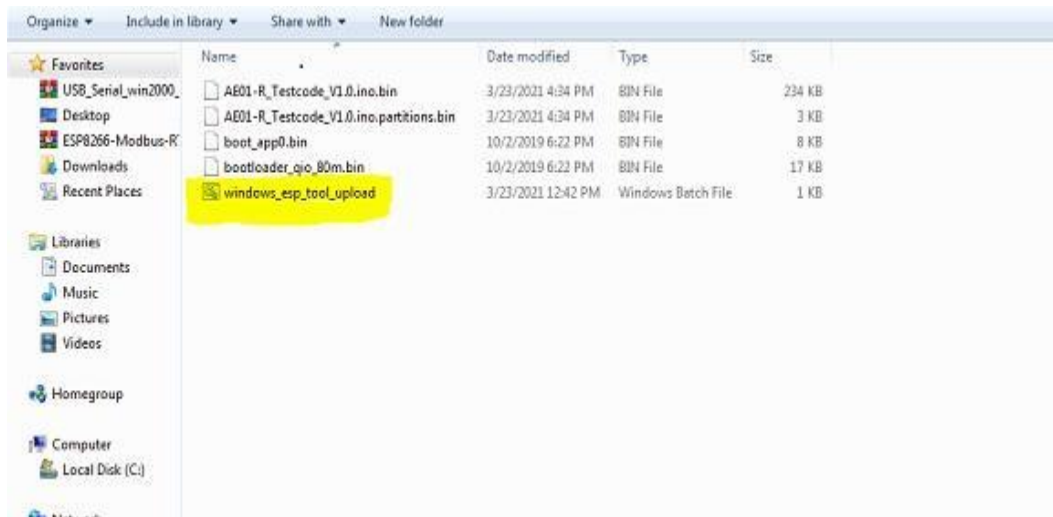
```
Collecting pip==19.2.3  
  Using cached https://files.pythonhosted.org/packages/30/db/9e38760b32e3e7f40cce46dd5fb107b8c73840df38f0046d8e6514e675a1/pip-19.2.3-py2.py3-none-any.whl  
Installing collected packages: pip  
  Found existing installation: pip 18.0  
    Uninstalling pip-18.0:  
      Successfully uninstalled pip-18.0  
Successfully installed pip-19.2.3
```

- Now, type the command **"pip install esptool"** and press enter to install the esptool library.

```
ograms\python\python36\lib\site-packages <from esptool> (3.1.7)
Requirement already satisfied: cryptography>=2.1.4 in c:\users\rnd\appdata\local\
\programs\python\python36\lib\site-packages <from esptool> (3.4.6)
Requirement already satisfied: ecdsa>=0.16.0 in c:\users\rnd\appdata\local\progr
ams\python\python36\lib\site-packages <from esptool> (0.16.1)
Requirement already satisfied: pyserial>=3.0 in c:\users\rnd\appdata\local\progr
ams\python\python36\lib\site-packages <from esptool> (3.5)
Requirement already satisfied: reedsolo<=1.5.4,>=1.5.3 in c:\users\rnd\appdata\l
ocal\programs\python\python36\lib\site-packages <from esptool> (1.5.4)
Requirement already satisfied: cffi>=1.12 in c:\users\rnd\appdata\local\programs
\python\python36\lib\site-packages <from cryptography>=2.1.4->esptool> (1.14.5)
Requirement already satisfied: pycparser in c:\users\rnd\appdata\local\programs\
python\python36\lib\site-packages <from cffi>=1.12->cryptography>=2.1.4->esptool
> (2.20)
Requirement already satisfied: six>=1.9.0 in c:\users\rnd\appdata\local\programs
\python\python36\lib\site-packages <from ecdsa>=0.16.0->esptool> (1.15.0)

C:\Users\RND>
C:\Users\RND>pip install esptool
```

- Now, open the previous unzipped folder and run the windows batch file named, **"windows_esp_tool_upload"**, inside the folder **"DEVICE NAME_Testcode_V1.0"** .



```
PROGRAMING TOOL CREATED BY BCS  
SOURCE CODE FILES COLLETING. . . . .
```

9. Connect the SENSOPER device with the PC using USB cable. Then press enter in the appeared window. It will ask for the COM port number as below.

```
PROGRAMING TOOL CREATED BY BCS  
SOURCE CODE FILES COLLETING. . . . .  
  
If change COM port type new port :-<Default COM port:- 12>?:
```

10. Select the right COM port and press enter. In our case the COM port number is "3". This can be found out from the "Device Manager" section in your OS.

```
PROGRAMING TOOL CREATED BY BCS
SOURCE CODE FILES COLLETING. . . . .

If change COM port type new port :-<Default COM port:- 12>?:3

setup COM port :- 3
sourceCode file    :- AE01-R_Testcode_U1.0.ino.bin
sourceCode partitions :- AE01-R_Testcode_U1.0.ino.partitions.bin

PROGRAMING TOOL Rady to upload
Press Enter to Process.....
```

11. Once you press enter, a message appears in cmd saying, "Connecting....". At this point, connect the **Boot pin (pin 5)** and the **Gnd pin (pin 9)** in the expansion port of the device using a jumper. Once the code is flashed you can observe the display of the SENSOPER device getting on.

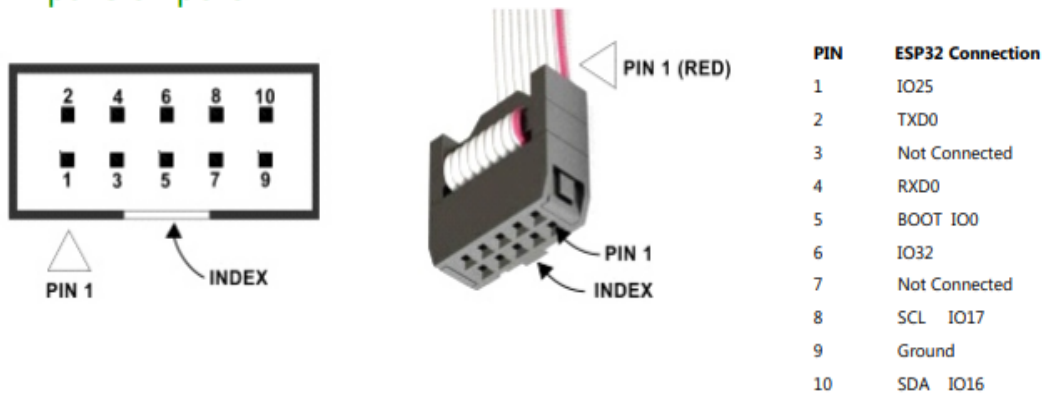
```
PROGRAMING TOOL CREATED BY BCS
SOURCE CODE FILES COLLETING. . . . .

If change COM port type new port :-<Default COM port:- 12>?:3

setup COM port :- 3
sourceCode file    :- AE01-R_Testcode_U1.0.ino.bin
sourceCode partitions :- AE01-R_Testcode_U1.0.ino.partitions.bin

PROGRAMING TOOL Rady to upload
Press Enter to Process.....
esptool.py v3.0
Serial port COM3
Connecting.....
```

Expansion port



```

Changing baud rate to 921600
Changed.
Configuring flash size...
Auto-detected Flash size: 4MB
Compressed 8192 bytes to 47...
Wrote 8192 bytes (47 compressed) at 0x0000e000 in 0.1 seconds (effective 753.2 k
bit/s)...
Hash of data verified.
Compressed 17392 bytes to 11186...
Wrote 17392 bytes (11186 compressed) at 0x00001000 in 0.3 seconds (effective 541
.4 kbit/s)...
Hash of data verified.
Compressed 238736 bytes to 123049...
Wrote 238736 bytes (123049 compressed) at 0x00010000 in 2.8 seconds (effective 6
77.5 kbit/s)...
Hash of data verified.
Compressed 3072 bytes to 128...
Wrote 3072 bytes (128 compressed) at 0x00008000 in 0.1 seconds (effective 282.5
kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
PROGRAMMING END..
  
```