

# **Application Note**

## **AP Factory-Reset Tool**

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Version 1.2  
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## 1. Introduction

Altai AP factory-reset tool is designed for users to easily restore AP devices to default settings without a physical touch of the devices, i.e. hard reset button. It is particularly useful when it comes to the following situations:

- The AP is installed in some locations where physical access to it is restricted, e.g. tower
- Hard reset button is not available for some AP models, i.e. CX200

With this handy tool, you can perform factory reset for an AP remotely and effortlessly.

## 2. Supported AP Models and Firmware Versions

The button-less AP reset tool (version 2.2) is compatible with the following AP models, hardware versions and firmware versions.

AP Models	H/W Versions	Firmware Versions
AX500 Series	All	v3.1.3.1314 or above
IX500	All	v3.1.3.1314 or above
CX200	All	v3.1.3.1314 or above

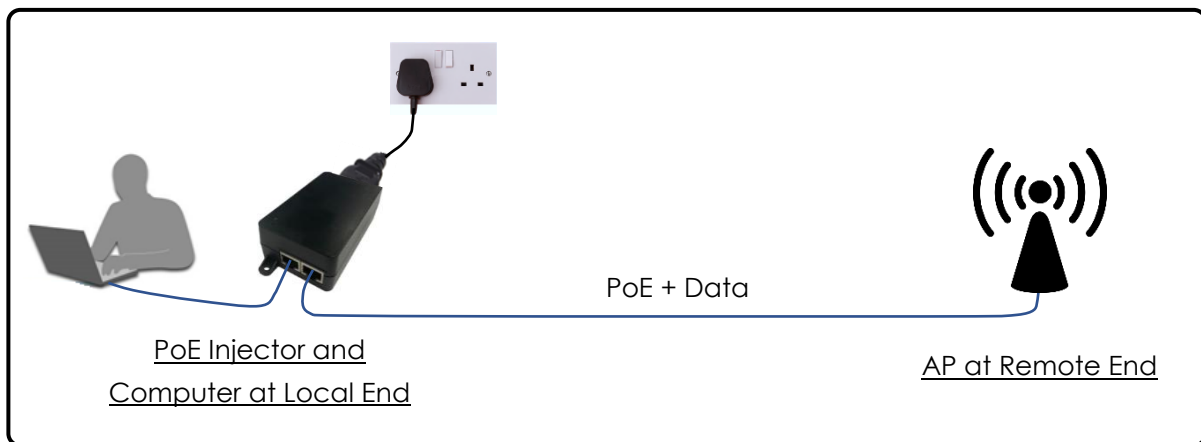
## 3. Setup Requirement and Preparation

The tool can only be used in certain conditions in order to reset the target AP successfully.

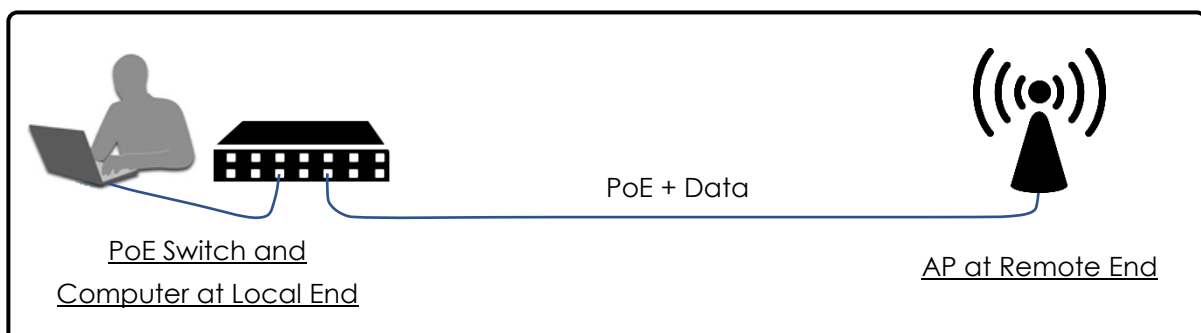
1. Knowledge of your AP's **Ethernet MAC address**. This is required to identify the AP to be reset.
2. **Layer 2 network environment**. You are required to connect the computer that you run the tool on to the same local subnet as the target AP's. If VLAN is implemented on the local network environment, the computer should be connected to the management VLAN so as to let the tool discover the target.
3. Physical/software access to where you can **power-cycle the device**. This is required during the AP reset process. You may use one of the following options to power up your AP device.

**Case 1: Power via PoE Injector**

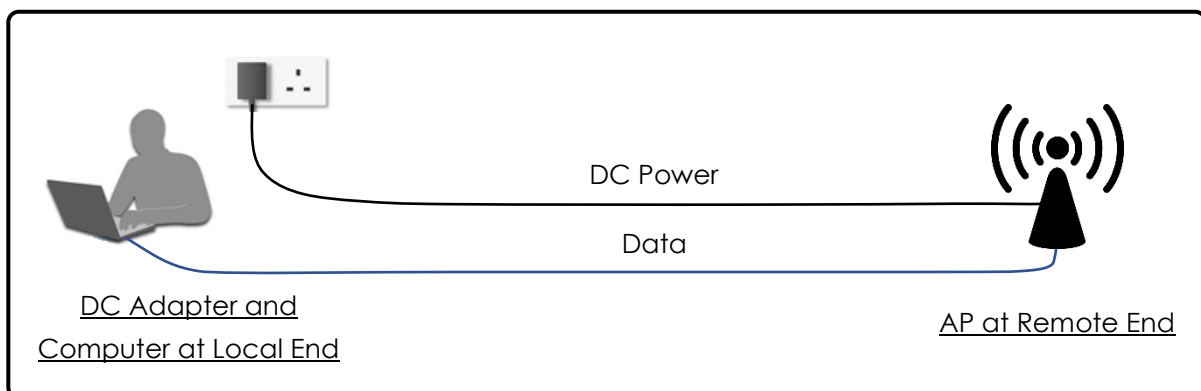
In this case, you are required to get physical access to the PoE injector in order to power cycle the AP.

**Case 2: Power via PoE Switch**

In this case, you can get access to the PoE switch user interface in order to power cycle the AP remotely, but the computer is still required to be attaching to the same subnet as AP's for the tool to discover the target.

**Case 3: Power via DC Adapter**

In this case, you are required to get physical access to the DC adapter in order to power cycle the AP.



## 4. Instruction Guide for Windows OS

### 4.1. Required Software

The following software is required if your computer is working on Windows OS environment.

- WinPcap

For download, please visit <https://www.winpcap.org/install/default.htm>

- Altai AP Reset Tool (Windows OS)

For download, please visit <https://www.altaittechnologies.com/tools-and-utilities/>



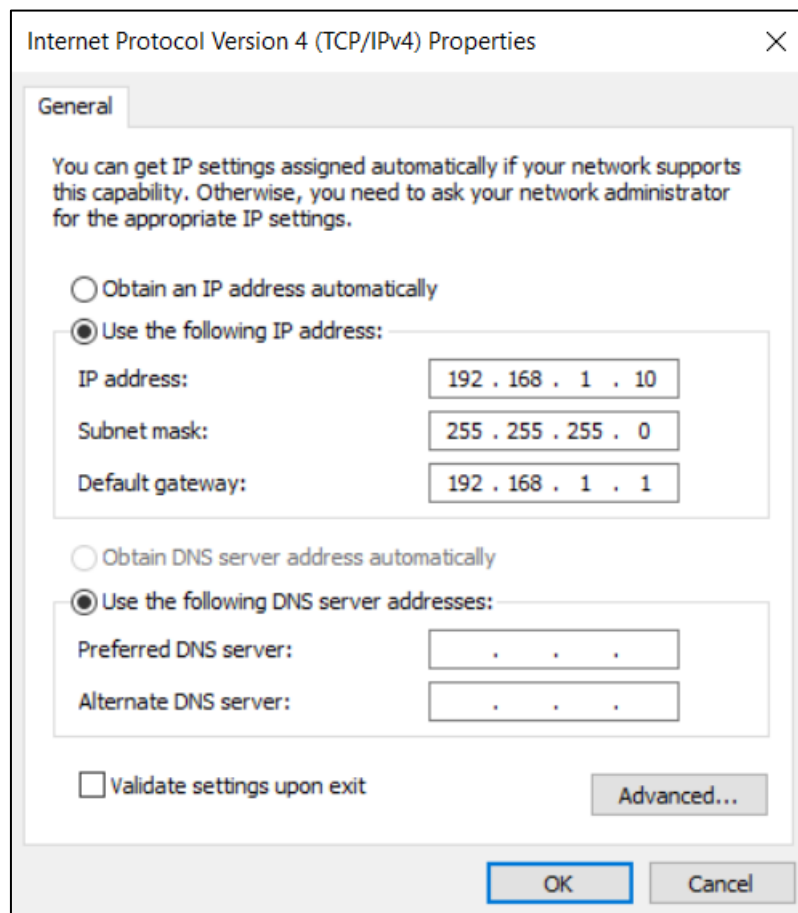
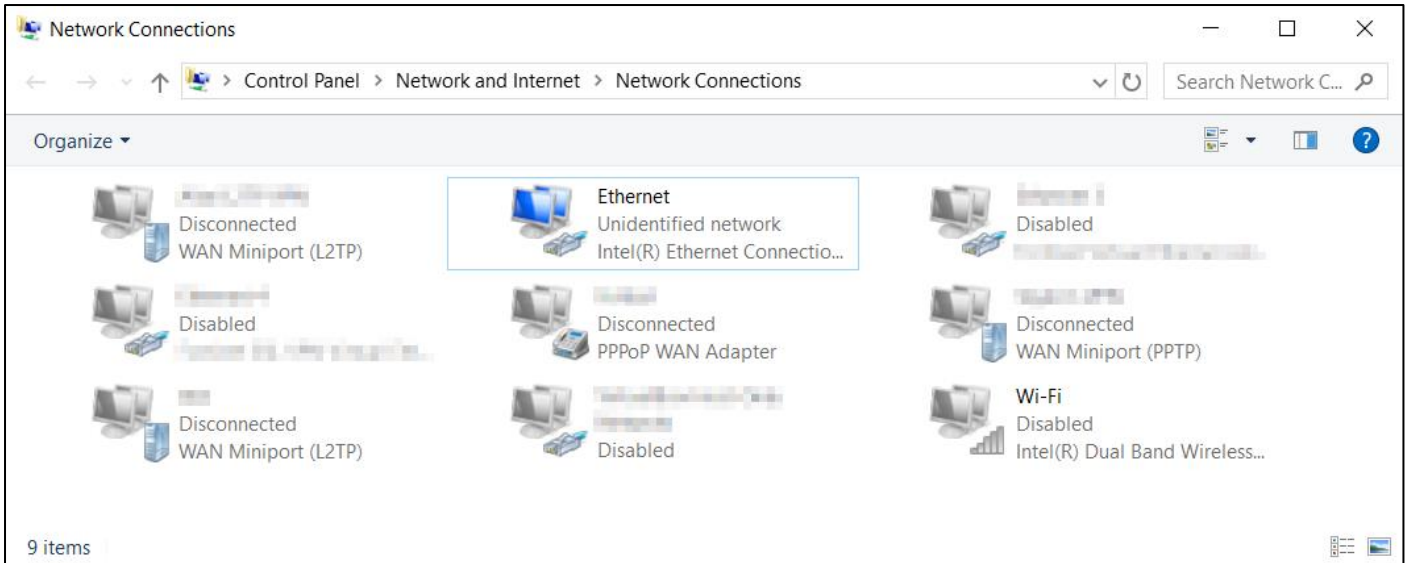
**Note:** The tool is packaged in .zip format. You may use a built-in archive utility to decompress it and get the tool.

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### 4.2. Recommended Settings for Windows OS

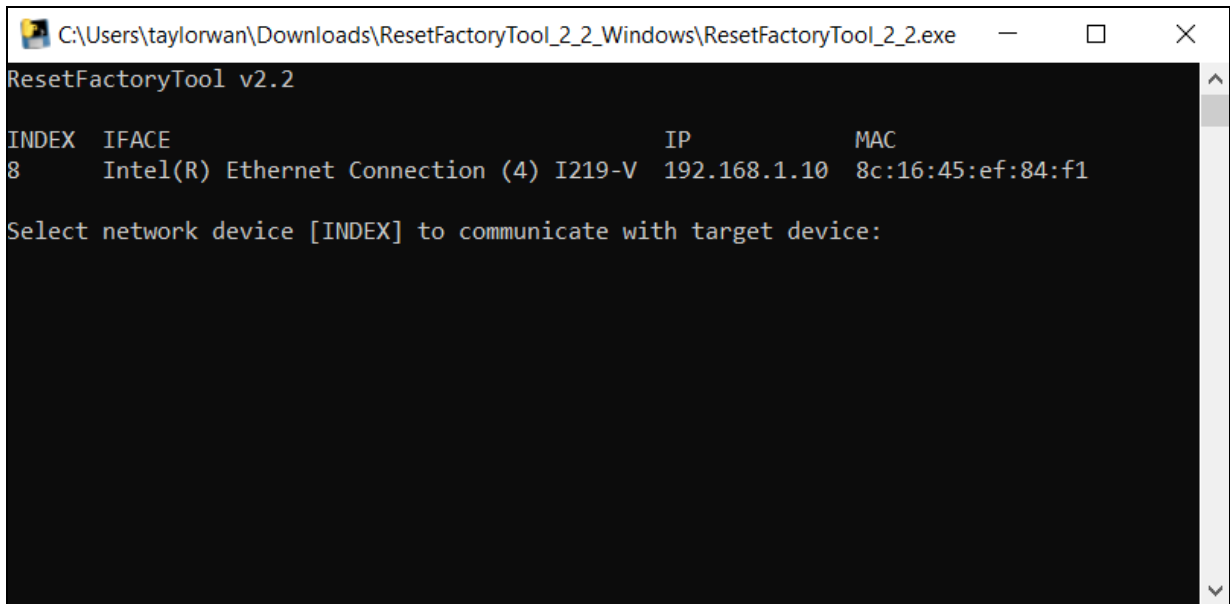
To ensure a successful reset operation, we recommend you have the following settings on your computer when using the tool.

- Disable firewall
- Disable/Disconnect all the network adapters but keep the Ethernet one enabled. To do so, go to **Control Panel > Network and Internet > Network and Sharing Center > Change adapter settings**. Below is a screenshot to show that only the Ethernet adapter is enabled while all the others are either disabled or disconnected.
- If using static IP for the Ethernet adapter, make sure to put default gateway as well. In this example, we configure IP Address to 192.168.1.10, Subnet Mask to 255.255.255.0, and Default Gateway to 192.168.1.1. With this IP configuration, we can get access back to the AP with its default IP: 192.168.1.222 if the factory reset operation is completed successfully.



### 4.3. Operation Steps

**Step 1** Double click the executable file, i.e. ResetFactoryTool\_2\_2.exe, to launch the tool as shown below.

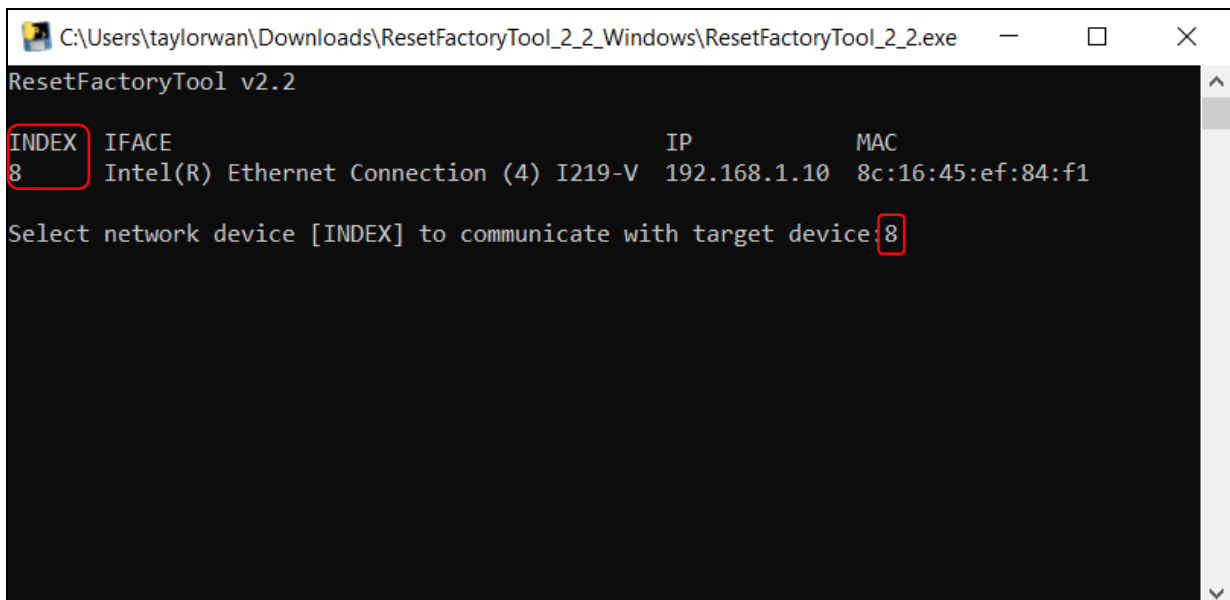


```
ResetFactoryTool v2.2

INDEX  IFACE                                IP      MAC
8      Intel(R) Ethernet Connection (4) I219-V 192.168.1.10 8c:16:45:ef:84:f1

Select network device [INDEX] to communicate with target device:
```

**Step 2** The tool detects and displays all the available network adapters; each of which is associated with its own index. Input the index of the adapter that you want to use to communicate with the target AP. In this example, we disable all the interfaces but leave the Ethernet adapter enabled, so the tool shows only the Ethernet adapter which is given to an index "8". Therefore, we input "8" here.



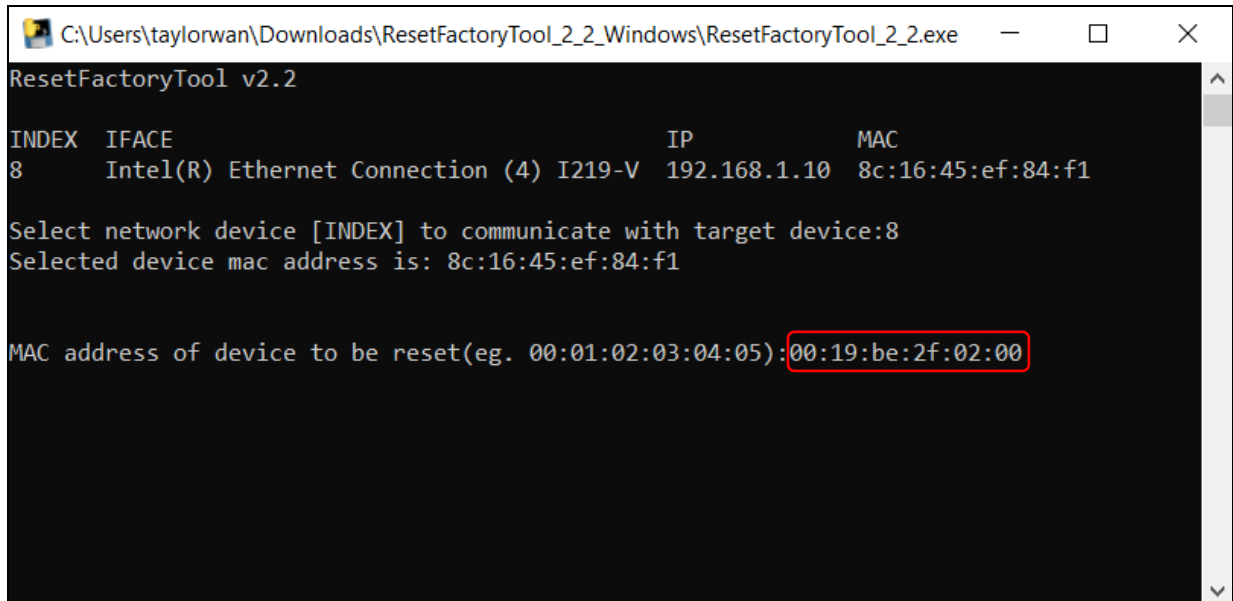
```
ResetFactoryTool v2.2

INDEX  IFACE                                IP      MAC
8      Intel(R) Ethernet Connection (4) I219-V 192.168.1.10 8c:16:45:ef:84:f1

Select network device [INDEX] to communicate with target device: 8
```



**Step 3** Input Ethernet MAC address of the target AP in a colon-separated format, e.g. AA:BB:CC:DD:EE, or aa:bb:cc:dd:ee



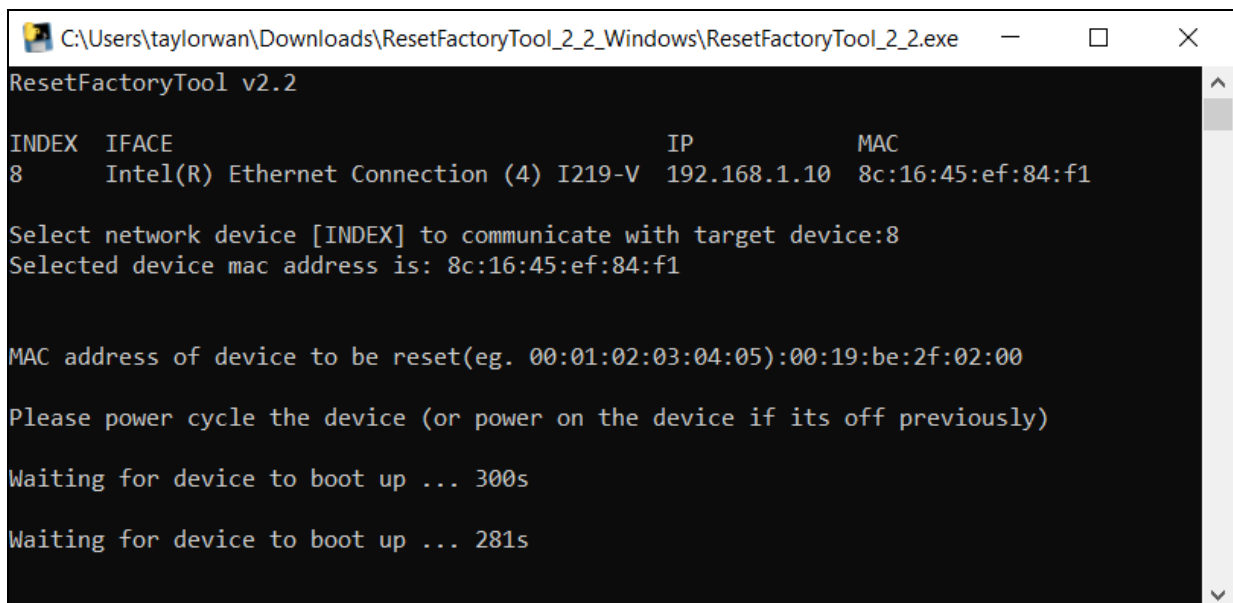
```
ResetFactoryTool v2.2

INDEX  IFACE                                IP            MAC
8      Intel(R) Ethernet Connection (4) I219-V  192.168.1.10  8c:16:45:ef:84:f1

Select network device [INDEX] to communicate with target device:8
Selected device mac address is: 8c:16:45:ef:84:f1

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00
```

**Step 4** Power cycle the target AP. The tool should show a couple of countdown timers waiting for AP discovery and its response back.



```
ResetFactoryTool v2.2

INDEX  IFACE                                IP            MAC
8      Intel(R) Ethernet Connection (4) I219-V  192.168.1.10  8c:16:45:ef:84:f1

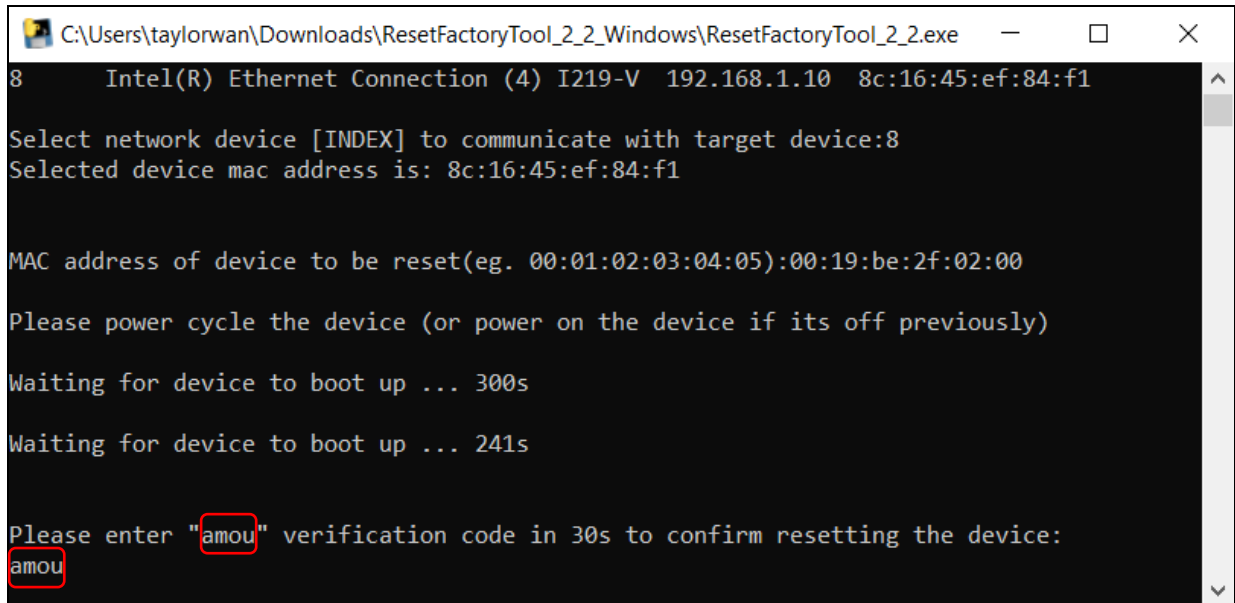
Select network device [INDEX] to communicate with target device:8
Selected device mac address is: 8c:16:45:ef:84:f1

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00

Please power cycle the device (or power on the device if its off previously)

Waiting for device to boot up ... 300s
Waiting for device to boot up ... 281s
```

**Step 5** Once the AP boots up, it returns a verification code to you. Type the code and hit "Enter" in 30 seconds to confirm to reset the target AP device.

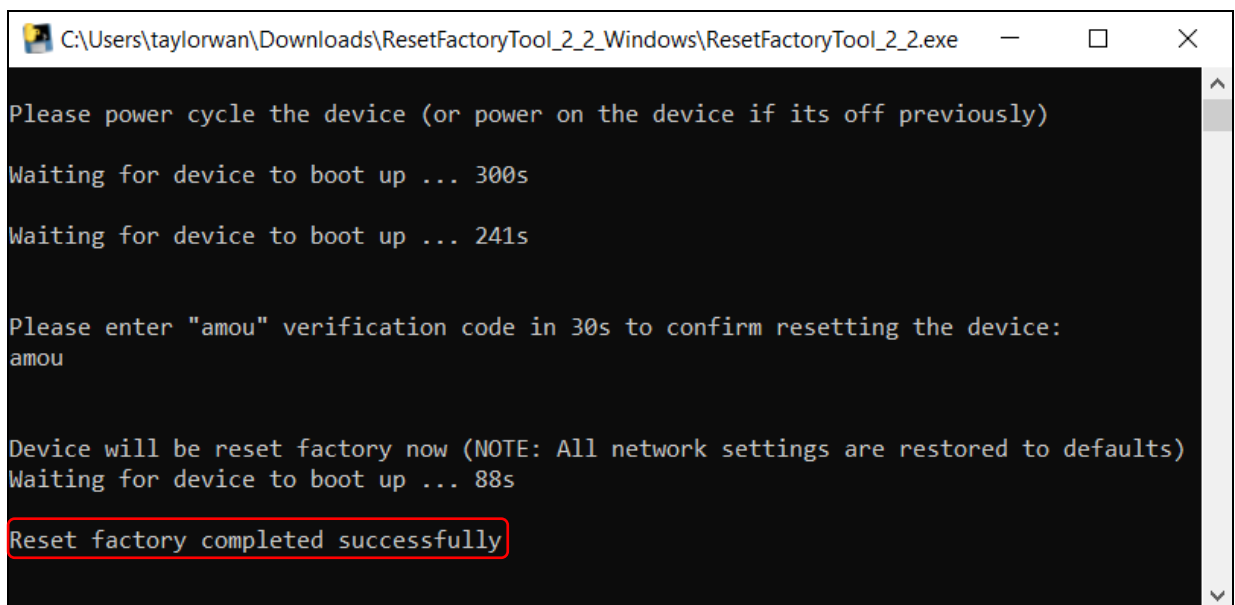


```
C:\Users\taylorwan\Downloads\ResetFactoryTool_2_2_Windows\ResetFactoryTool_2_2.exe
8 Intel(R) Ethernet Connection (4) I219-V 192.168.1.10 8c:16:45:ef:84:f1
Select network device [INDEX] to communicate with target device:8
Selected device mac address is: 8c:16:45:ef:84:f1

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00
Please power cycle the device (or power on the device if its off previously)
Waiting for device to boot up ... 300s
Waiting for device to boot up ... 241s

Please enter "amou" verification code in 30s to confirm resetting the device:
amou
```

**Step 6** If the reset is successful, you should get a message as below. Now you should be able to use the default IP address: 192.168.1.222 and login credentials: admin/admin to access the AP device.



```
C:\Users\taylorwan\Downloads\ResetFactoryTool_2_2_Windows\ResetFactoryTool_2_2.exe
Please power cycle the device (or power on the device if its off previously)
Waiting for device to boot up ... 300s
Waiting for device to boot up ... 241s

Please enter "amou" verification code in 30s to confirm resetting the device:
amou

Device will be reset factory now (NOTE: All network settings are restored to defaults)
Waiting for device to boot up ... 88s

Reset factory completed successfully
```

## 5. Instruction Guide for macOS

### 5.1. Required Software

The following software is required if your computer is working on macOS environment.

- Altai AP Reset Tool (macOS)

For download, please visit <https://www.altaittechnologies.com/tools-and-utilities/>



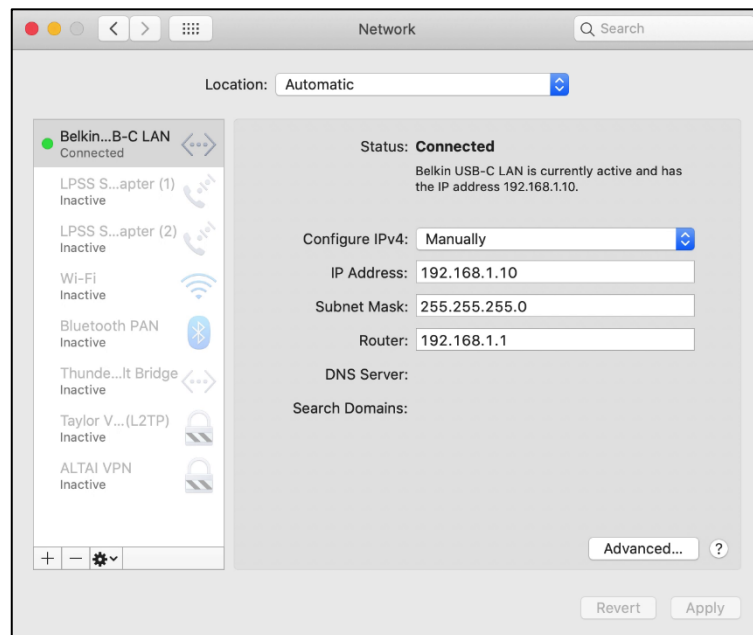
**Note:** The tool is packaged in .zip format. If you use Safari browser to download the file, it will automatically help you decompress it to show the tool for you. If you use Google Chrome browser, you may need to use a built-in archive utility to decompress it and get the tool.

---

## 5.2. Recommended Settings for macOS

To ensure a successful reset operation, we recommend you have the following settings on your computer when using the tool.

- Disable firewall
- Disable/Disconnect all the network adapters but keep the Ethernet one enabled. To do so, go to **System Preferences > Network**. Select the adapters to be disabled on the left pane. Click the cog wheel icon at the bottom and select "Make Service Inactive". Below is a screenshot to show that only the Ethernet adapter is enabled while all the others are all inactive.
- If using static IP for the Ethernet adapter, make sure to put default gateway on the field "Router" as well. In this example, we configure IP Address to 192.168.1.10, Subnet Mask to 255.255.255.0, and Router to 192.168.1.1. With this IP configuration, we can get access back to the AP with its default IP: 192.168.1.222 if the factory reset operation is completed successfully.



## 5.3. Operation Steps

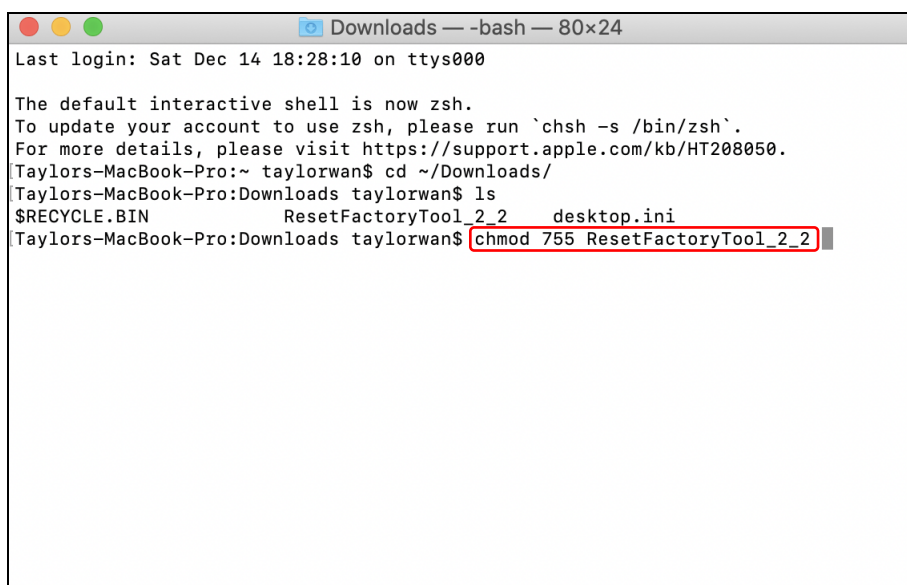
**Step 1** Trust the software tool manually. To do so, go to the folder where the tool is placed. Right click the file and select "Open". It may pop up a message warning that the system cannot verify the developer. For this case, simply click "Open" to trust the file. A text file should open with encrypted codes. You can close it now.

**Step 2** Open "Terminal" (Press "Command ⌘ + Space Bar" to launch Spotlight and type "Terminal"). Go to the directory where the tool is placed. In our example, we put the file in the Downloads folder, so we use command "cd" to change directory, e.g. `cd ~/Downloads`

To check whether the file "ResetFactoryTool\_2\_2" is in the directory, use command "ls".

**Step 3** Use command "chmod" to change mode to 755 to make the file executable, i.e.

```
chmod 755 ResetFactoryTool_2_2
```

A screenshot of a macOS Terminal window titled "Downloads — -bash — 80x24". The window shows the following text: "Last login: Sat Dec 14 18:28:10 on ttys000", "The default interactive shell is now zsh.", "To update your account to use zsh, please run `chsh -s /bin/zsh`.", "For more details, please visit <https://support.apple.com/kb/HT208050>.", "Taylors-MacBook-Pro:~ taylorwan\$ cd ~/Downloads/", "Taylors-MacBook-Pro:Downloads taylorwan\$ ls", "\$RECYCLE.BIN ResetFactoryTool\_2\_2 desktop.ini", and "Taylors-MacBook-Pro:Downloads taylorwan\$ chmod 755 ResetFactoryTool\_2\_2". The command "chmod 755 ResetFactoryTool\_2\_2" is highlighted with a red box.

```
Downloads — -bash — 80x24
Last login: Sat Dec 14 18:28:10 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Taylors-MacBook-Pro:~ taylorwan$ cd ~/Downloads/
Taylors-MacBook-Pro:Downloads taylorwan$ ls
$RECYCLE.BIN      ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
```

**Step 4** Now, type the following command to run the tool.

```
sudo ./ResetFactoryTool_2_2
```

You will be prompted for a password, which is the exact same one that you use to log in macOS system.

```

Downloads — sudo — 80x24
Last login: Sat Dec 14 18:28:10 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Taylors-MacBook-Pro:~ taylorwan$ cd ~/Downloads/
Taylors-MacBook-Pro:Downloads taylorwan$ ls
$RECYCLE.BIN      ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
Taylors-MacBook-Pro:Downloads taylorwan$ sudo ./ResetFactoryTool_2_2
Password:
  
```

**Step 5** The tool detects and displays all the available network adapters; each of which is associated with its own index. Input the index of the adapter that you want to use to communicate with the target AP. In this example, we disable all the interfaces but leave the Ethernet adapter enabled, so the tool shows only the Ethernet adapter which is given to an index “1”. Therefore, we input “1” here.

```

Downloads — ResetFactoryTool - sudo — 80x24
Last login: Sat Dec 14 18:28:10 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Taylors-MacBook-Pro:~ taylorwan$ cd ~/Downloads/
Taylors-MacBook-Pro:Downloads taylorwan$ ls
$RECYCLE.BIN      ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
Taylors-MacBook-Pro:Downloads taylorwan$ sudo ./ResetFactoryTool_2_2
Password:
ResetFactoryTool v2.2

INDEX  IFACE      IP           MAC
1      en8        192.168.1.10 30:23:03:8d:e8:7d

Select network device [INDEX] to communicate with target device: 1
  
```

**Step 6** Input Ethernet MAC address of the target AP in a colon-separated format, e.g. AA:BB:CC:DD:EE, or aa:bb:cc:dd:ee

```

Downloads — ResetFactoryTool • sudo — 80x24
Last login: Sat Dec 14 18:28:10 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Taylors-MacBook-Pro:~ taylorwan$ cd ~/Downloads/
Taylors-MacBook-Pro:Downloads taylorwan$ ls
$RECYCLE.BIN      ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
Taylors-MacBook-Pro:Downloads taylorwan$ sudo ./ResetFactoryTool_2_2
Password:
ResetFactoryTool v2.2

INDEX      IFACE      IP           MAC
1          en8        192.168.1.10 30:23:03:8d:e8:7d

Select network device [INDEX] to communicate with target device:1
Selected device mac address is: 30:23:03:8d:e8:7d

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00

```

**Step 7** Power cycle the target AP. The tool should show a couple of countdown timers waiting for AP discovery and its response back.

```

Downloads — ResetFactoryTool • sudo — 80x24
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Taylors-MacBook-Pro:~ taylorwan$ cd ~/Downloads/
Taylors-MacBook-Pro:Downloads taylorwan$ ls
$RECYCLE.BIN      ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
Taylors-MacBook-Pro:Downloads taylorwan$ sudo ./ResetFactoryTool_2_2
Password:
ResetFactoryTool v2.2

INDEX      IFACE      IP           MAC
1          en8        192.168.1.10 30:23:03:8d:e8:7d

Select network device [INDEX] to communicate with target device:1
Selected device mac address is: 30:23:03:8d:e8:7d

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00

Please power cycle the device (or power on the device if its off previously)

Waiting for device to boot up ... 298s
Waiting for device to boot up ... 300s

```

**Step 8** Once the AP boots up, it returns a verification code to you. Type the code and hit "Enter" in 30 seconds to confirm to reset the target AP device.

```

Downloads — ResetFactoryTool - sudo — 80x24
$RECYCLE.BIN          ResetFactoryTool_2_2  desktop.ini
Taylors-MacBook-Pro:Downloads taylorwan$ chmod 755 ResetFactoryTool_2_2
Taylors-MacBook-Pro:Downloads taylorwan$ sudo ./ResetFactoryTool_2_2
Password:
ResetFactoryTool v2.2

INDEX    IFACE      IP           MAC
1         en8        192.168.1.10 30:23:03:8d:e8:7d

Select network device [INDEX] to communicate with target device:1
Selected device mac address is: 30:23:03:8d:e8:7d

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00

Please power cycle the device (or power on the device if its off previously)

Waiting for device to boot up ... 298s

Waiting for device to boot up ... 243s

Please enter "vjgl" verification code in 30s to confirm resetting the device:
vjgl

```

**Step 9** If the reset is successful, you should get a message as below. Now you should be able to use the default IP address: 192.168.1.222 and login credentials: admin/admin to access the AP device.

```

Downloads — ResetFactoryTool - sudo — 80x24

Select network device [INDEX] to communicate with target device:1
Selected device mac address is: 30:23:03:8d:e8:7d

MAC address of device to be reset(eg. 00:01:02:03:04:05):00:19:be:2f:02:00

Please power cycle the device (or power on the device if its off previously)

Waiting for device to boot up ... 298s

Waiting for device to boot up ... 243s

Please enter "vjgl" verification code in 30s to confirm resetting the device:
vjgl

Device will be reset factory now (NOTE: All network settings are restored to defaults)
Waiting for device to boot up ... 89s
Reset factory completed successfully

```



**End of Document**