

## Scope

This guide assists you in the operation of switch between the **Access Point** mode and **Station/Bridge** mode.

## Introduction

The Access Point can be switched between the **Access Point** mode and the **Station/Bridge** mode. Each mode plays a different role in the network. Access Point is the primary central controller in wireless LAN. Bridge/Station can bridge wired LAN to wireless LAN. Figure 1 shows the roles that Access Point and Bridge/Station play in the network.

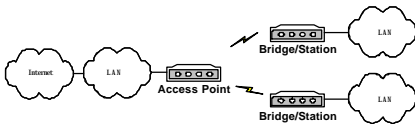


Figure 1: Network Connection

## System Requirements

- The Access Point with **Access Point** or **Station/Bridge** mode.
- PC, with **Ethernet** interface, **TFTP** client software (for Windows 98 only), and **ping** software.
- Crossover RJ45 LAN cable.
- Program packets:  
wlan\_ap\_upgrade\_xxxxx.zip  
wlan\_bridge\_upgrade\_xxxxx.zip

**Note:** xxxxxx displays the information on version.

## Check the Present Mode

To learn which mode the PCB is currently operating, please follow the steps below:

- Use crossover LAN cable to connect the Access Point with PC.
- Connect the power adapter to the power jack on the Access Point.
- Press the **Set to Default** button at the edge of the Access Point.
- Set the **IP address** of PC to 192.168.1.10, and **Subnet mask** to 255.255.255.0.
- Type **ping 192.168.1.90** in Dos console mode of PC. If the echo message is "**Reply from 192.168.1.90...**", the Access Point is operating in the **Access Point** mode.
- Type **ping 192.168.1.99** in Dos console mode of PC. If the echo message is "**Reply from 192.168.1.99...**", the Access Point is operating

## Upgrade Firmware of Access Point

To upgrade the Access Point under the **Access Point** mode, please follow the steps below:

- During the upgrade, all LEDs on the equipment flash. Note that the sudden loss of power may cause serious problems at the moment. Please keep regular power supply during the process.**
- Use crossover LAN cable to connect the Access Point with the PC.
- Connect the power adapter to the power jack on the Access Point.
- Press the **Set to Default** button at the edge of the Access Point.
- Set the **IP address** of PC, for example, to 192.168.1.10, and **Subnet mask** to 255.255.255.0.
- Unzip **wlan\_ap\_upgrade\_xxxx.zip** to the directory **c:\**, and then you can see the **wlan\_ap** directory.
- Execute **apselfug.bat**, which is in the directory **wlan\_ap/upgrade**. The Dos console mode is shown as below.

```
----- This procedure does 2 step program.
----- Both steps need RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet 192/16 in PC.
----- 1. Elf image program
----- 2. Web page program
----- Attention: If either step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board
----- (From Station/Bridge mode upgrade to AP mode)
----- 1. Before program: IP: 192.168.1.90
----- 2. Processing of Program Step:Step2: IP: 192.168.1.90
----- 3. After program: IP: 192.168.1.90
----- Press any key to continue . . . . .
```

Figure 2

The screen demonstrates the operation of this procedure. If there is no inquiry, press any key to continue.

- After pressing a key, you will see the screen shown as below. This step writes firmware base images to the Access Point. After the action of writing is complete, the screen will inform the message **Done**. Press any key to leave.

```
----- This procedure does 2 step program.
----- Both steps need RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet 192/16 in PC.
----- 1. Elf image program
----- 2. Web page program
----- Attention: If either step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board
----- (From Station/Bridge mode upgrade to AP mode)
----- 1. Before program: IP: 192.168.1.90
----- 2. Processing of Program Step:Step2: IP: 192.168.1.90
----- 3. After program: IP: 192.168.1.90
----- Press any key to continue . . . . .
----- 1. Programming Elf image . . . . .
C:\wlan_ap\upgrade>ftp -i 192.168.1.90 put ap-bios.bin /
Transfer successful: 10734 bytes in 8 seconds, 13429 bytes/s
----- 2. Programming Web page . . . . .
C:\wlan_ap\upgrade>ftp -i 192.168.1.90 put ap-wb.bin /
Transfer successful: 116751 bytes in 8 seconds, 14468 bytes/s
Done . . . . .
----- Press any key to continue . . . . .
```

Figure 3

- \* If any inaccuracy appears, please check Ethernet RJ45 cable connection and IP address settings of PC.
- \* After the upgrade procedure is complete, the default IP of the Access Point is 192.168.1.90.

## Upgrade Firmware of Station/Bridge

To upgrade the Access Point from **Access Point** mode to **Station/Bridge** mode, please follow the steps below:

During the upgrade, all LEDs on the equipment flash. Note that the sudden loss of power may cause serious problems at the moment. Please keep regular power supply during the process.

- ) Use crossover LAN cable to connect the Access Point with PC.
- ) Connect the power adapter to the power jack on the Access Point.
- ) Press the **Set to Default** button at the edge of the Access Point.
- ) Set the **IP address** of PC, for example, to 192.168.1.10, and **Subnet mask** to 255.255.255.0.
- ) Unzip **wlan\_bridge\_upgrade\_xxxx.zip** to the directory c:\ and then you can see the **wlan\_bridge** directory.
- ) Execute **staselfug.bat**, which is in the directory **wlan\_bridge/upgrade**. The Dos console mode is shown as below.

```

----- This procedure does 1 step program.
----- * Elf image and WEB page program *
----- This step needs RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- Attention: If other step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board before
----- program: (From Station mode to Station mode)
----- IP: 192.168.1.99
-----
----- Press any key to continue . . . . .
  
```

g) Figure 4

The screen demonstrates the operation of this procedure. If there is no inquiry, press any key to continue.

- ) After pressing any key, you will see the screen shown as below. This step writes firmware base images to Access Point. After the action of writing is complete, the screen will inform the message **Done**. Press any key to leave.

```

----- This procedure does 1 step program.
----- * Elf image and WEB page program *
----- This step needs RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- Attention: If other step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board before
----- program: (From Station mode to Station mode)
----- IP: 192.168.1.99
-----
----- Press any key to continue . . . . .
----- Programming Elf image . . . . .
C:\wlan_bridge\upgrade>ftp -i 192.168.1.99 put station-boot.bin /
Transfer successful: 103783 bytes in 8 seconds, 12972 bytes/s
Done
----- Press any key to continue . . . . .
  
```

Figure 5

If any inaccuracy appears, please check Ethernet RJ45 cable connection and IP address settings of PC. After the upgrade procedure is complete, the default IP of the Access Point is 192.168.1.99.

## Switch from Access Point Mode to Station/Bridge Mode

To upgrade the Access Point from **Access Point** mode to **Station/Bridge** mode, please go along with the steps below:

- During the upgrade, all LEDs on the equipment flash. Note that the sudden loss of power may cause serious problems at the moment. Please keep regular power supply during the process.

- a) Use crossover LAN cable to connect the Access Point with PC.
- b) Connect the power adapter to the power jack on the Access Point.
- c) Press the **Set to Default** button at the edge of the Access Point.
- d) Set the **IP address** of PC, for example, to 192.168.1.10, and **Subnet mask** to 255.255.255.0.
- e) Unzip **wlan\_bridge\_upgrade\_xxxx.zip** to the directory c:\ and then you can see the **wlan\_bridge** directory.
- f) Execute **ap2sta.bat**, which is in the directory **wlan\_bridge/upgrade**. The Dos console mode is shown as below.

```

----- This procedure does 1 step program.
----- * Elf image and WEB page program *
----- This step needs RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- Attention: If other step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board before
----- program: (From AP mode to Station mode)
----- IP: 192.168.1.90
-----
----- Press any key to continue . . . . .
  
```

g) Figure 6

The screen demonstrates the operation of this procedure. If there is no inquiry, press any key to continue.

- a) After pressing any key, you will see the screen shown as below. This step writes image to Access Point. After the action of writing is complete, the screen will inform the message **Done**. Press any key to leave.

```

----- This procedure does 1 step program.
----- * Elf image and WEB page program *
----- This step needs RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- Attention: If other step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board before
----- program: (From AP mode to Station mode)
----- IP: 192.168.1.90
-----
----- Press any key to continue . . . . .
----- Programming Elf image . . . . .
C:\wlan_bridge\upgrade>ftp -i 192.168.1.90 put station-boot.bin /
Transfer successful: 103783 bytes in 7 seconds, 14826 bytes/s
Done
----- Press any key to continue . . . . .
  
```

Figure 7

- \* If any inaccuracy appears, please check Ethernet RJ45 cable connection and IP address settings of PC.
- \* After the upgrade procedure is complete, the default IP of the Access Point is 192.168.1.99.
- \* During the upgrade, all LEDs on the equipment flash. Note that the sudden loss of power may cause serious problems at the moment. Please keep regular power supply during the process.

## Switch from Station/Bridge Mode to Access Point Mode

To upgrade the Access Point from **Station /Bridge** mode to **Access Point** mode, please go along with the steps below:

- During the upgrade, all LEDs on the equipment flash. Note that the sudden loss of power may cause serious problems at the moment. Please keep regular power supply during the process.
- a) Use crossover LAN cable to connect the Access Point with PC.
- b) Connect the power adapter to the power jack on the Access Point.
- c) Press the **Set to Default** button at the edge of the Access Point.
- d) Set the **IP address** of PC, for example, to 192.168.1.10, and **Subnet mask** to 255.255.255.0.
- e) Unzip **wlan\_ap\_ug\_XXXX.zip** to the directory **c:\**, and then you can see the **wlan\_ap** directory.
- f) Execute **sta2ap.bat**, which is in the directory **wlan\_ap/upgrade**. The Dos console mode is shown as below:

```
----- This procedure does 2 step program.
----- Both steps need RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- 1. ELF image program
----- 2. Web page program
----- Attention: If either step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board
----- (From Station/Bridge mode upgrade to AP mode)
----- 1. Before program
----- IP: 192.168.1.99
----- 2. Processing of Program
----- Step 1Step2 : IP: 192.168.1.90
----- 3. After program: IP: 192.168.1.90
-----
Press any key to continue .....
```

g)

Figure 8

The screen demonstrates the operation of this procedure. If there is no inquiry, press any key to continue.

- a) After pressing a key, you will see the screen shows as below. This step writes firmware base image and Web page image Access Point. After the action of writing is complete, the screen will inform the message **Done**. Press any key to leave.

```
----- This procedure does 2 step program.
----- Both steps need RJ45 cross over line
----- connected to PC and properly setting
----- of Ethernet TCP/IP in PC.
----- 1. ELF image program
----- 2. Web page program
----- Attention: If either step appears error
----- message, check RJ45 and Ethernet
----- setting.
----- Default Setting of Target Board
----- (From Station/Bridge mode upgrade to AP mode)
----- 1. Before program
----- IP: 192.168.1.99
----- 2. Processing of Program
----- Step 1Step2 : IP: 192.168.1.90
----- 3. After program: IP: 192.168.1.90
-----
Press any key to continue .....
```

```
----- 1. Programming ELF image .....
```

```
C:\wlan_ap\upgrade>Hftp -i 192.168.1.99 put ap-boot.bin /
Transfer successful: 107434 bytes in 8 seconds, 13429 bytes/s
```

```
----- 2. Programming Web page .....
```

```
C:\wlan_ap\upgrade>Hftp -i 192.168.1.90 put ap-web.bin /
Transfer successful: 115751 bytes in 8 seconds, 14468 bytes/s
Done .....
```

```
Press any key to continue .....
```

Figure 9

- \* If any inaccuracy appears, please check Ethernet RJ45 cable connection and IP address settings of PC.
- \* After the procedure of upgrading completes, the default IP of the Access Point is 192.168.1.90.