

## Procedure to upgrade the Boot Code, program firmware and Web image by using console port & TFTP

- **Command explanation:**

While reboot AP in console mode to press “x” , it will into command mode like as “<NetARM>”.

Pressing “F” \ “f”, it will showing

1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:

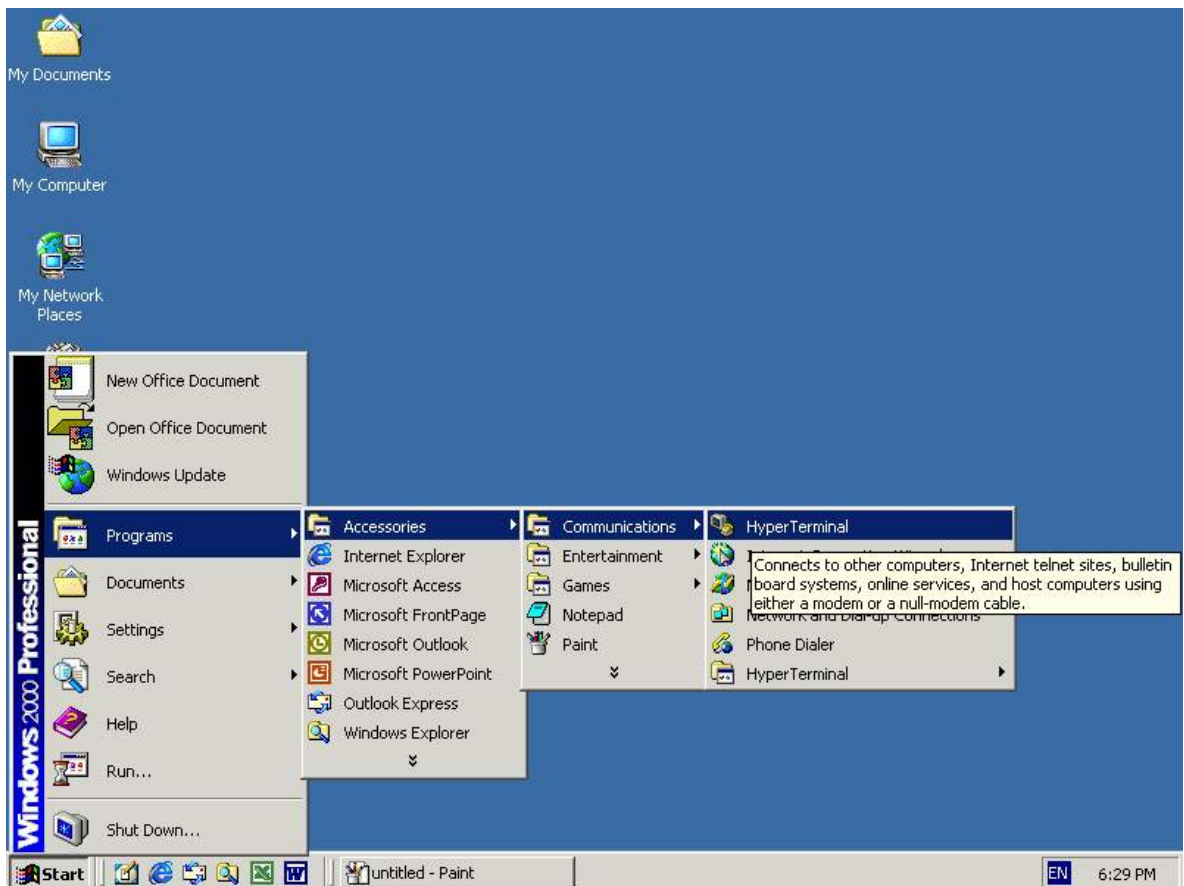
### BOOT

- 1 Download AP Boot Code.
- 3 Download program image file.
- 4 Download Web image file.
- 5 Download APFW image file.

- **BE CAREFUL!!** If you failed in any command, please **DO NOT** “Power Off” or “Reboot” the machine!! You must **RETRY** this command until it succeeds!

- **Procedure:**

1. Connect "power core" to Inline Power Injector and power outlet.
2. Connect "MIL-C-5015 style Ethernet cable" into Special Ethernet port at AP.
3. Connect "RJ-45 Ethernet connector (another end of MIL-C-5015 style Ethernet cable)" into Power & Data Output Port at Inline Power Injector.
4. Connect "MIL-C-5015 style RS232 Console Port cable" into PC COM port and AP special serial port.
5. Use HyperTerminal to upgrade software: Click **Start** and then select **Programs** -> **Accessories** -> **Communications** -> **HyperTerminal**.



6. After Hyper Terminal window appears:
  - a. Give this new connection a name. Ex:AP8100.



- b. Select correct COM port. Ex:COM1.

**Connect To** [?] [X]

 AP8100

Enter details for the phone number that you want to dial:

Country/region:

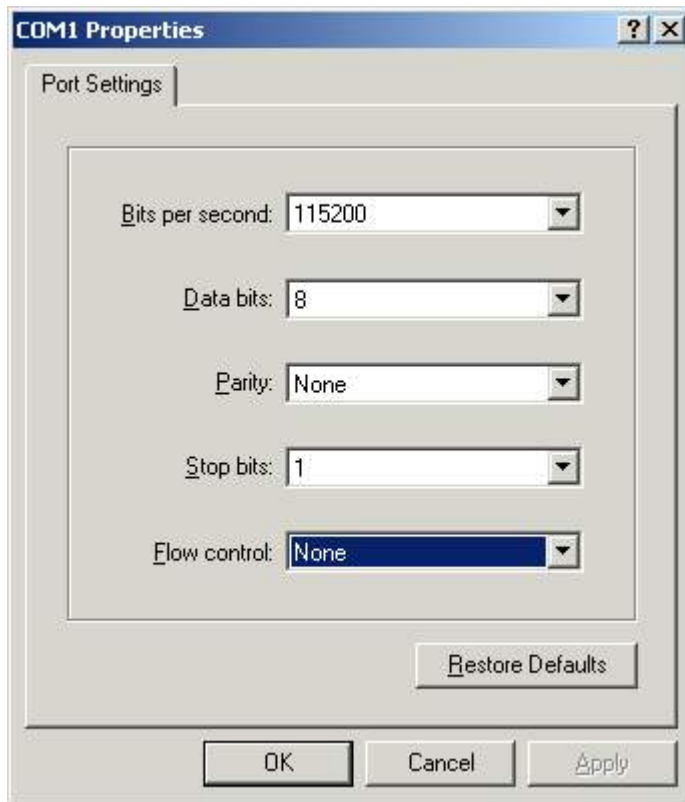
Area code:

Phone number:

Connect using:

- COM1
- COM2
- TCP/IP (Winsock)

- c. Set baud rate as "115200", and flow control as "None". Then press "OK" to bring up the HyperTerminal window.



7. Press **Esc** to reboot AP8100.

8. After reboot, and when showing "**now rebooting....**", press **X** to enter console

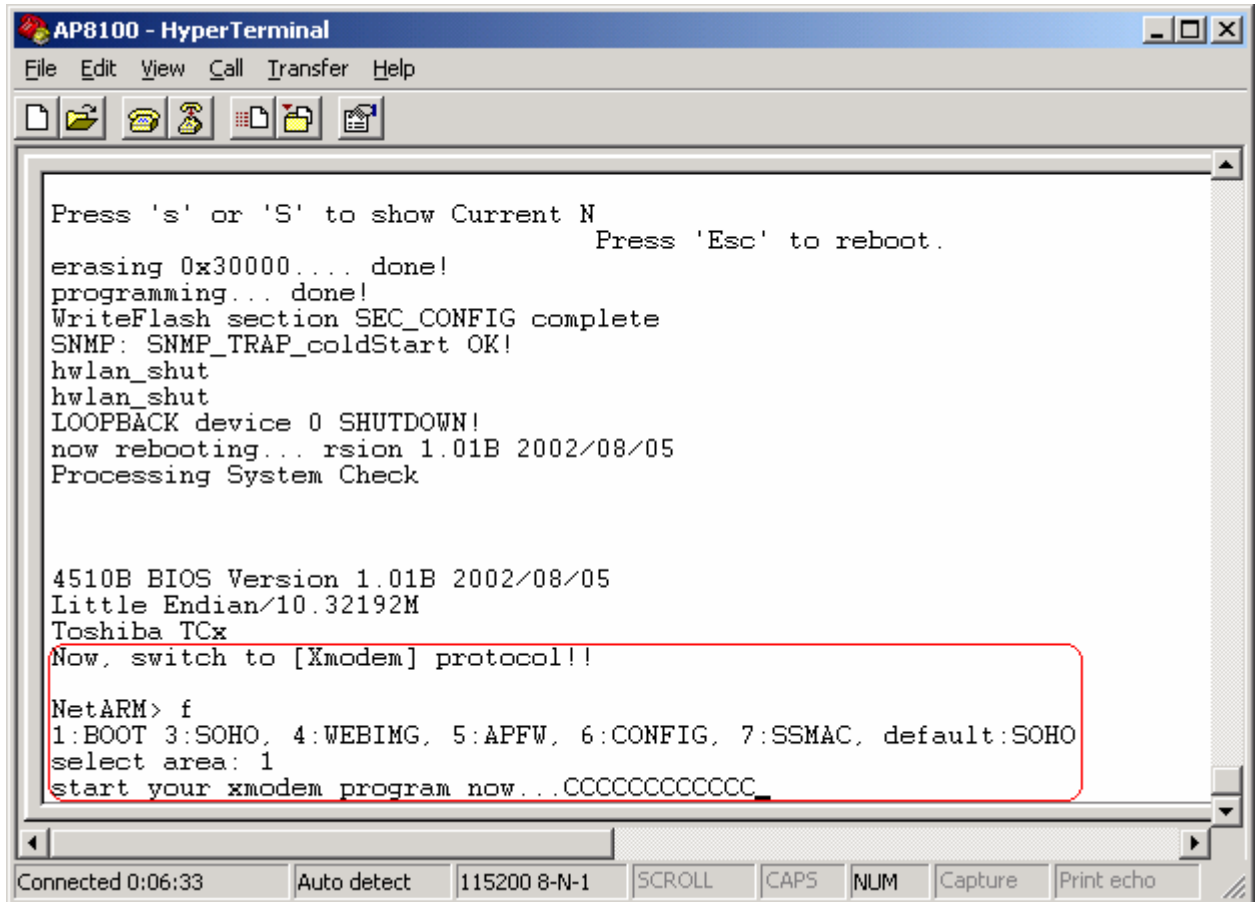
mode.

```
AP8100 - HyperTerminal
File Edit View Call Transfer Help
Wireless Interfac.10.3
MAC Address = [00-02-6F-03-0F-AC]
Press 's' or 'S' to show Current N
Press 'Esc' to reboot.
erasing 0x30000.... done!
programming... done!
WriteFlash section SEC_CONFIG complete
SNMP: SNMP_TRAP_coldStart OK!
hwlan_shut
hwlan_shut
LOOPBACK device 0 SHUTDOWN!
now rebooting... rsion 1.01B 2002/08/05
Processing System Check
4510B BIOS Version 1.01B 2002/08/05
Little Endian/10.32192M
Toshiba TCx
Now, switch to [Xmodem] protocol!!
NetARM>
Connected 0:03:42 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

9. In command mode <NetARM> key-in “F” 、 “f” and update boot code choose “1”, to ready to upgrade boot code. While “CCC...” appears, select Transfer ->

## Send File.

- a. Set Protocol as "1K Xmodem".
- b. Filename (**boot.sf**) and setting the file path then choose **Send** to start boot code upgrade.



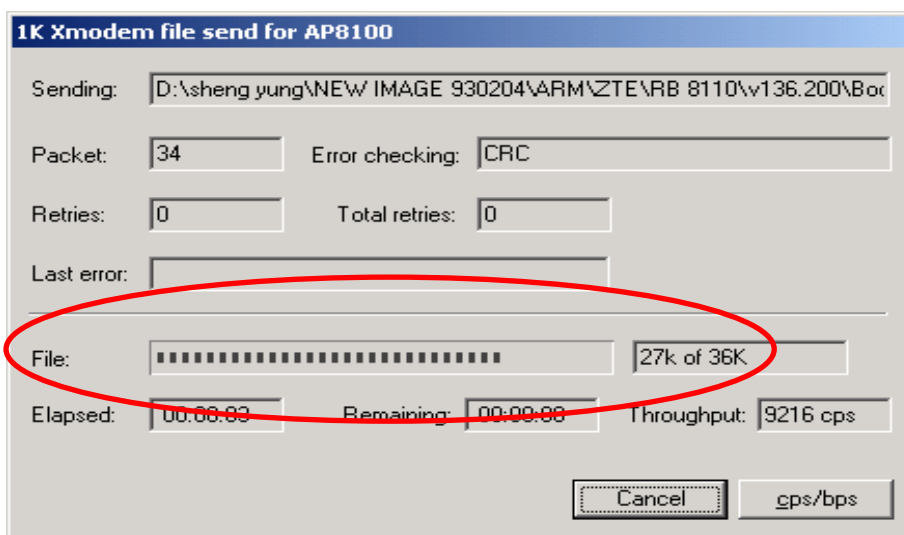
```
AP8100 - HyperTerminal
File Edit View Call Transfer Help

Press 's' or 'S' to show Current N
Press 'Esc' to reboot.
erasing 0x30000.... done!
programming... done!
WriteFlash section SEC_CONFIG complete
SNMP: SNMP_TRAP_coldStart OK!
hwan_shut
hwan_shut
LOOPBACK device 0 SHUTDOWN!
now rebooting... rsion 1.01B 2002/08/05
Processing System Check

4510B BIOS Version 1.01B 2002/08/05
Little Endian/10.32192M
Toshiba TCx
Now, switch to [Xmodem] protocol!!

NetARM> f
1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:SOHO
select area: 1
start your xmodem program now...CCCCCCCCCCCCC_

Connected 0:06:33 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```



```
1K Xmodem file send for AP8100

Sending: D:\sheng yung\NEW IMAGE 930204\ARM\ZTE\RB 8110\v136.200\Box
Packet: 34 Error checking: CRC
Retries: 0 Total retries: 0
Last error:
File: ████████████████████████████████████████ 27k of 36K
Elapsed: 00:00:00 Remaining: 00:00:00 Throughput: 9216 cps

Cancel cps/bps
```

- c. When "XMODEM End of Transfer" & "BIG/LITTLE ENDIAN transformation? (y/[N]):" appears, type **N** then "Start flash operation?"

(y/[N]):” appears, type **Y** to start update Flash.

d. After successes, you will see “**data received ok**” displayed on the screen.

```
AP8100 - HyperTerminal
File Edit View Call Transfer Help

SNMP: SNMP_TRAP_coldStart OK!
hwlان_shut
hwlان_shut
LOOPBACK device 0 SHUTDOWN!
now rebooting... rsion 1.01B 2002/08/05
Processing System Check

4510B BIOS Version 1.01B 2002/08/05
Little Endian/10.32192M
Toshiba TCx
Now, switch to [Xmodem] protocol!!

NetARM> f
1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:SOHO
select area: 1
start your xmodem program now...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC36864

data recieved ok.
BIG/LITTLE ENDIAN transformation? (y/[N]) n
start flash operation? (y/[N])

Connected 0:08:26 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

```
AP8100 - HyperTerminal
File Edit View Call Transfer Help

4510B BIOS Version 1.01B 2002/08/05
Little Endian/10.32192M
Toshiba TCx
Now, switch to [Xmodem] protocol!!

NetARM> f
1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:SOHO
select area: 1
start your xmodem program now...
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX36864

data recieved ok
BIG/LITTLE ENDIAN transformation? (y/[N]) n
start flash operation? (y/[N]) y
erasing 0x0.... done!
erasing 0x10000.... done!
erasing 0x20000.... done!
programming..... done!

NetARM> _

Connected 0:09:10 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

10. Key-in “r” reboots to let the new boot code activate.



```

AP8100 - HyperTerminal
File Edit View Call Transfer Help
Little Endian/10.32192M
Toshiba TCx
Now, switch to [Xmodem] protocol!!

NetARM> f
1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:SOHO
select area: 1
start your xmodem program now...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC36864

data recieved ok.
BIG/LITTLE ENDIAN transformation? (y/[N]) n
start flash operation? (y/[N]) y
erasing 0x0.... done!
erasing 0x10000.... done!
erasing 0x20000.... done!
programming..... done!

NetARM> r

4510B BIOS Version 1.01B 2002/08/05
Processing System Check._

Connected 0:10:11 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

```

- a. In console mode will showing “Write Flash selection SEC\_CONFIG complete” means the boot code update successfully.
- b. Keep rebooting again to press “ESC” key and when showing "now rebooting....", press **X** to enter console mode again.

```
AP8100 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
RUNTASK id=8 hwlan_mib_task...
RUNTASK id=9 dhcp_daemon...
Packet Filter Rules Initialized !!!
RUNTASK id=12 httpd_timer_task...
RUNTA dnsproxy...
Starting Multitask...

Software Version : HWLAN 1.36b5.200

Cubased Central Wireless Router

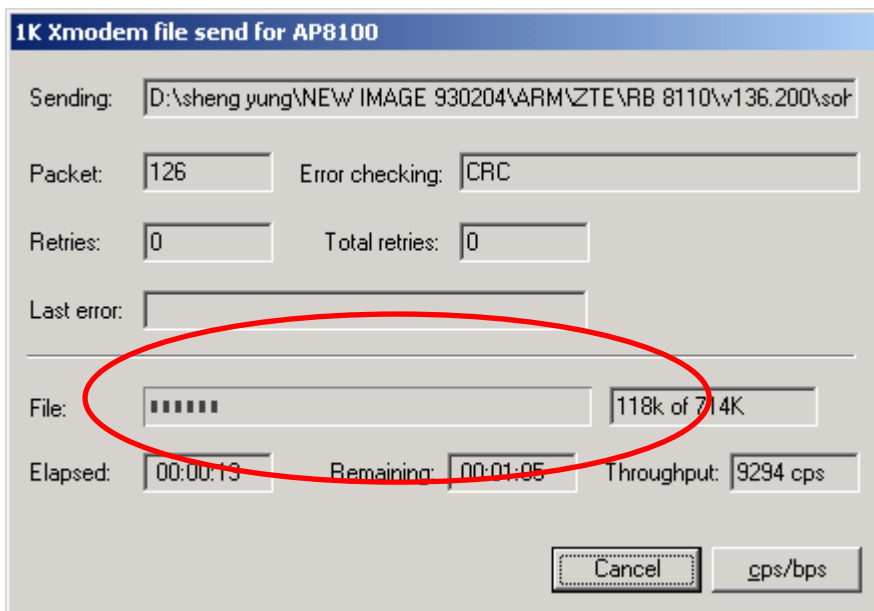
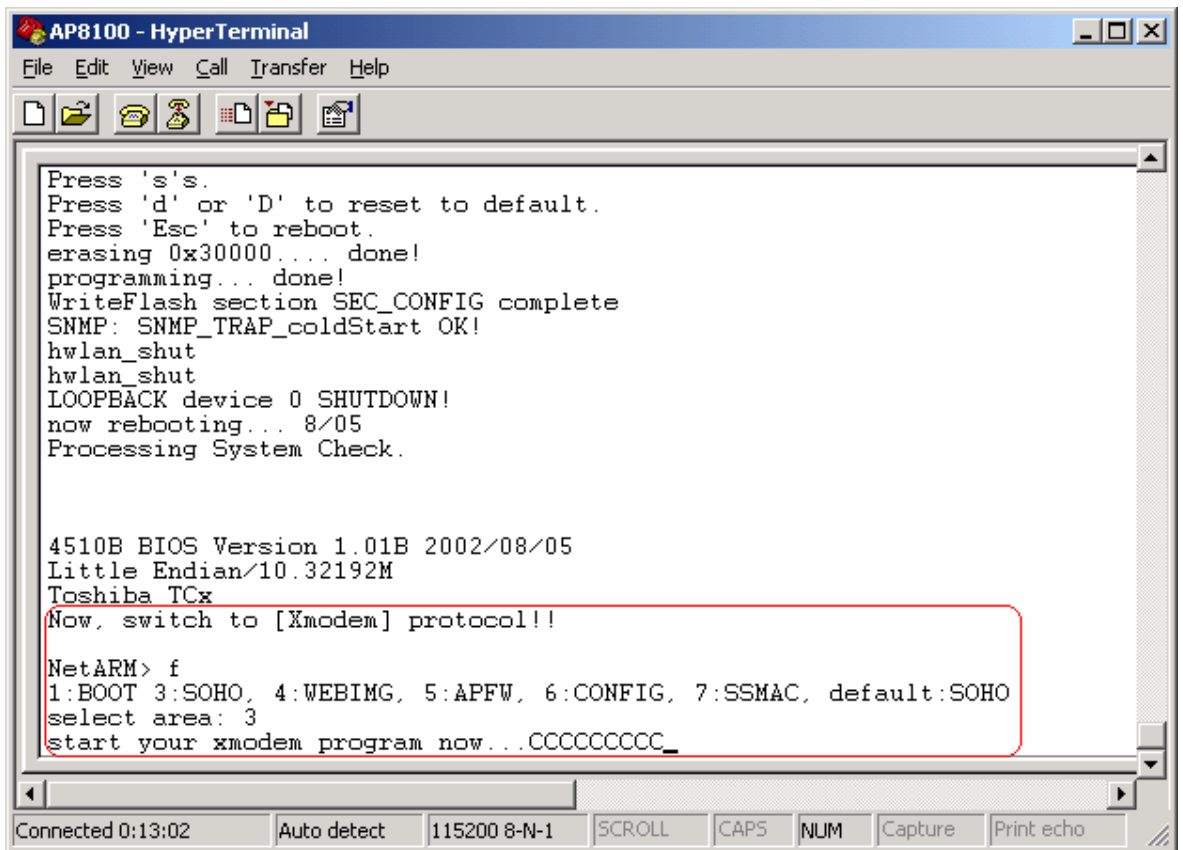
Wireless LAN Channel : 9 SSID : testws

Wirernet Interface IP = 192.168.10.3
MAC Address = [00-02-6F-03-0F-AC]

Press 's's.
Press 'd' or 'D' to reset to default.
Press 'Esc' to reboot.
erasing 0x300000... done!
programming... done!
WriteFlash section SEC_CONFIG complete
SNMP: SNMP_TRAP_coldStart OK!

Connected 0:12:21 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

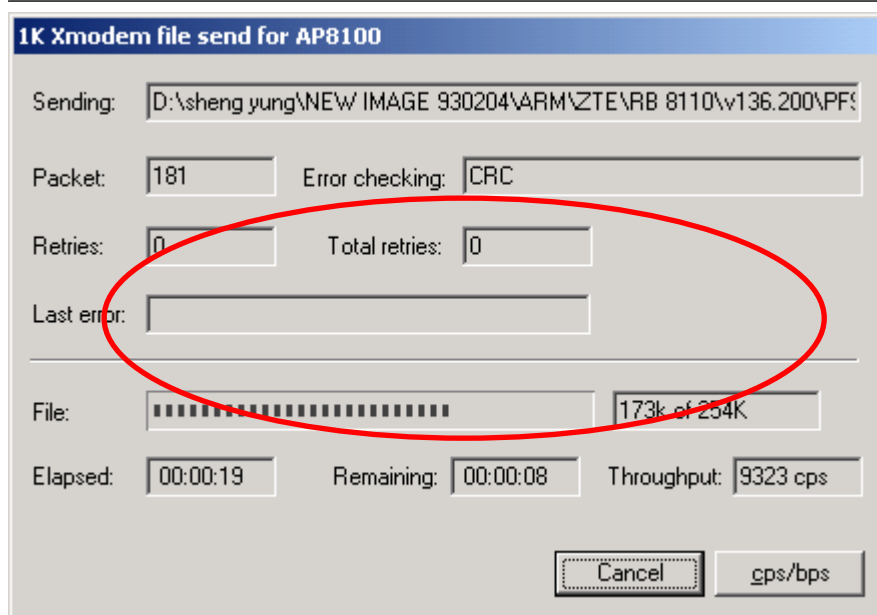
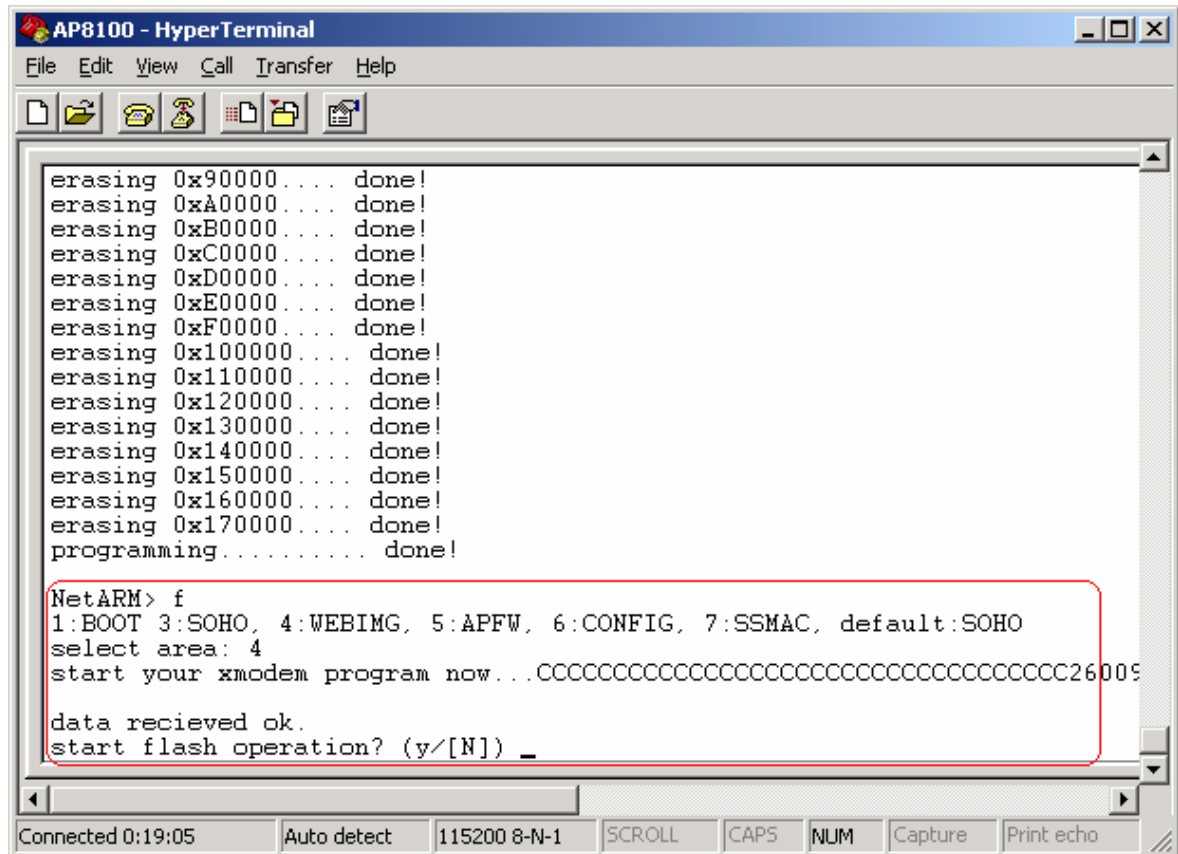
11. In command mode <NetARM> key-in “F”、“f” and update program choose “3”, to ready to upgrade program image file. While “CCC...” appears, select Transfer -> **Send File**.
- Set Protocol as "1K Xmodem".
  - Filename (**soho.bin**) and setting the file path then choose **Send** to start program image upgrade.



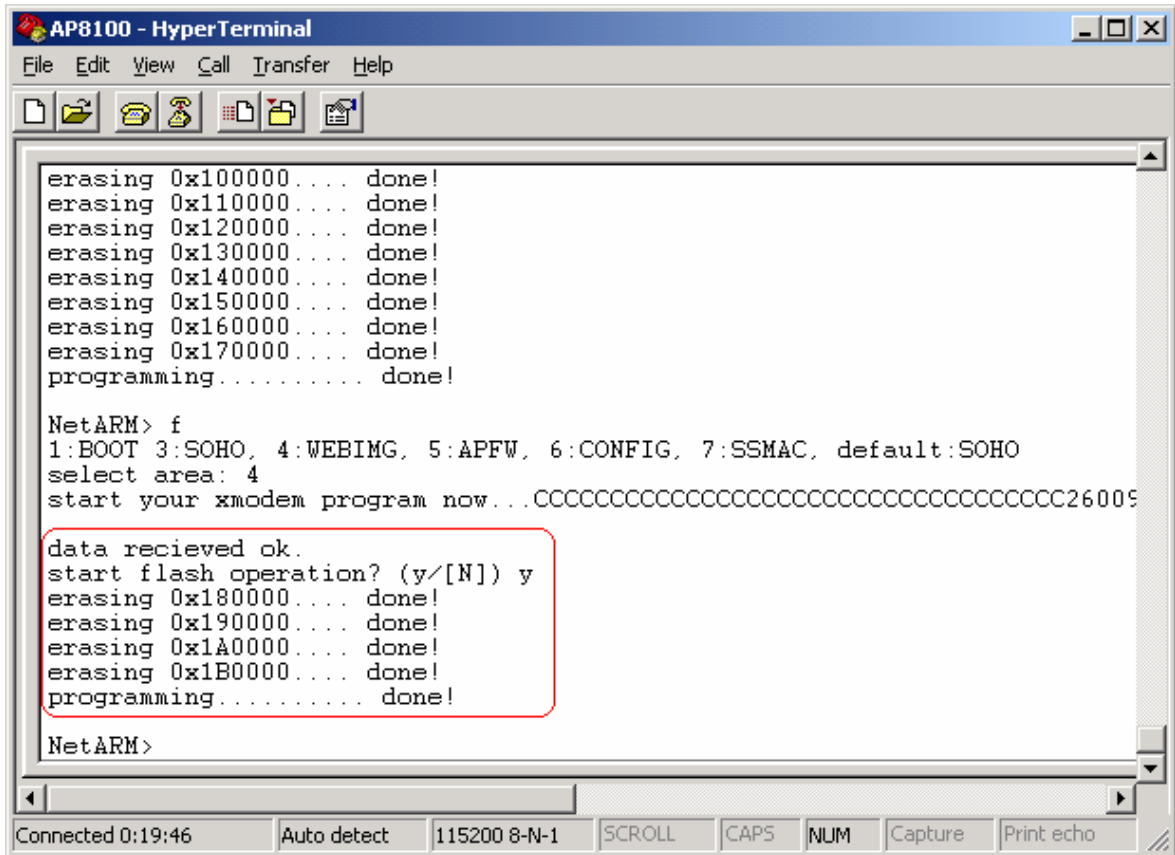
C. After sending file, press “Y” to start flash operation

```
AP8100 - HyperTerminal
File Edit View Call Transfer Help
start flash operation? (y/[N]) y
erasing 0x40000.... done!
erasing 0x50000.... done!
erasing 0x60000.... done!
erasing 0x70000.... done!
erasing 0x80000.... done!
erasing 0x90000.... done!
erasing 0xA0000.... done!
erasing 0xB0000.... done!
erasing 0xC0000.... done!
erasing 0xD0000.... done!
erasing 0xE0000.... done!
erasing 0xF0000.... done!
erasing 0x100000.... done!
erasing 0x110000.... done!
erasing 0x120000.... done!
erasing 0x130000.... done!
erasing 0x140000.... done!
erasing 0x150000.... done!
erasing 0x160000.... done!
erasing 0x170000.... done!
programming..... done!
NetARM>
Connected 0:15:31 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

12. In command mode <NetARM> key-in “F” 、 “f” and update web choose “4”, to ready to upgrade web image file. While “CCC...” appears, select Transfer -> **Send File**.
- Set Protocol as "1K Xmodem".
  - Filename (**pfs.img**) and setting the path, then choose **Send** to start Web image upgrade.



C. After sending file, press “Y” to start flash operation



```
AP8100 - HyperTerminal
File Edit View Call Transfer Help

erasing 0x100000.... done!
erasing 0x110000.... done!
erasing 0x120000.... done!
erasing 0x130000.... done!
erasing 0x140000.... done!
erasing 0x150000.... done!
erasing 0x160000.... done!
erasing 0x170000.... done!
programming..... done!

NetARM> f
1:BOOT 3:SOHO, 4:WEBIMG, 5:APFW, 6:CONFIG, 7:SSMAC, default:SOHO
select area: 4
start your xmodem program now...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC26009

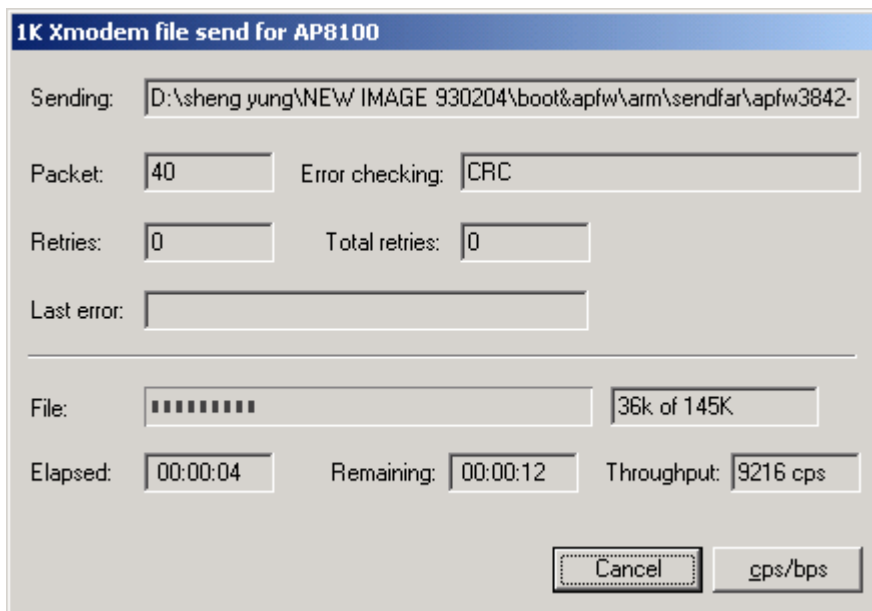
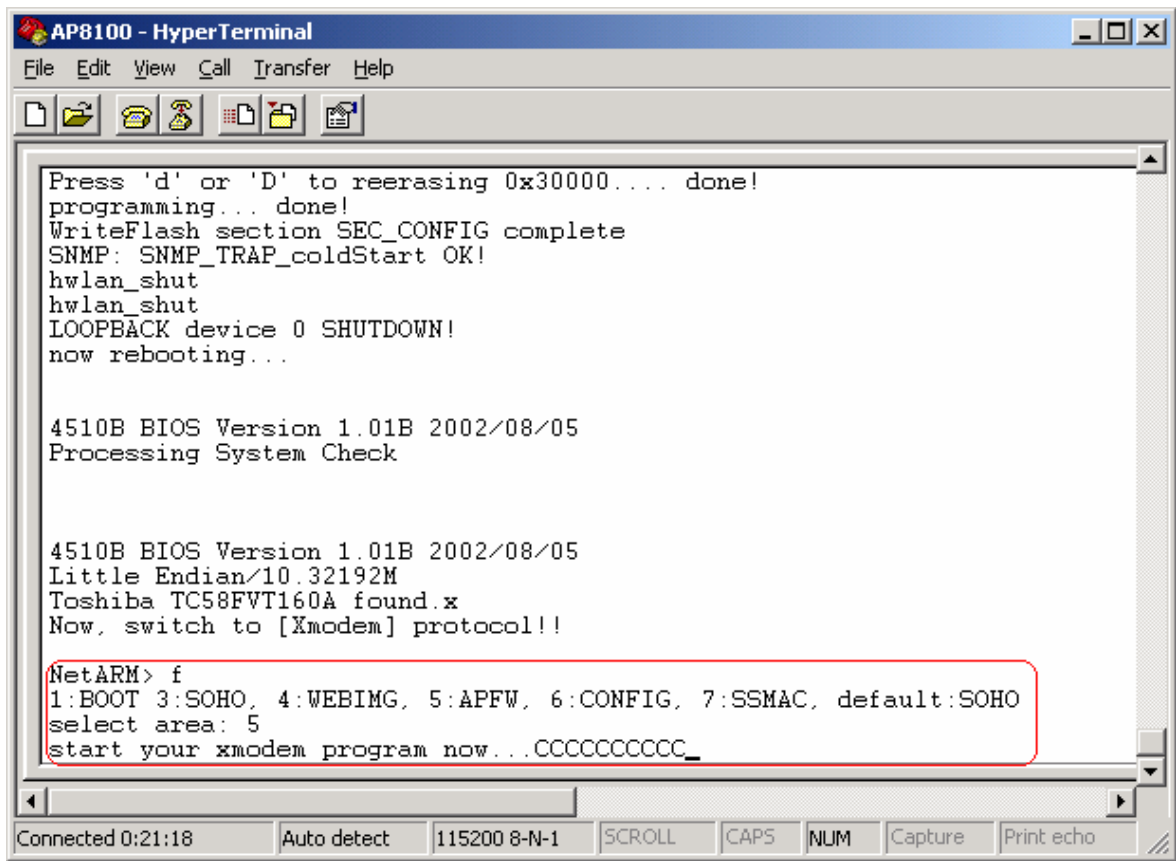
data recieved ok.
start flash operation? (y/[N]) y
erasing 0x180000.... done!
erasing 0x190000.... done!
erasing 0x1A0000.... done!
erasing 0x1B0000.... done!
programming..... done!

NetARM>
```

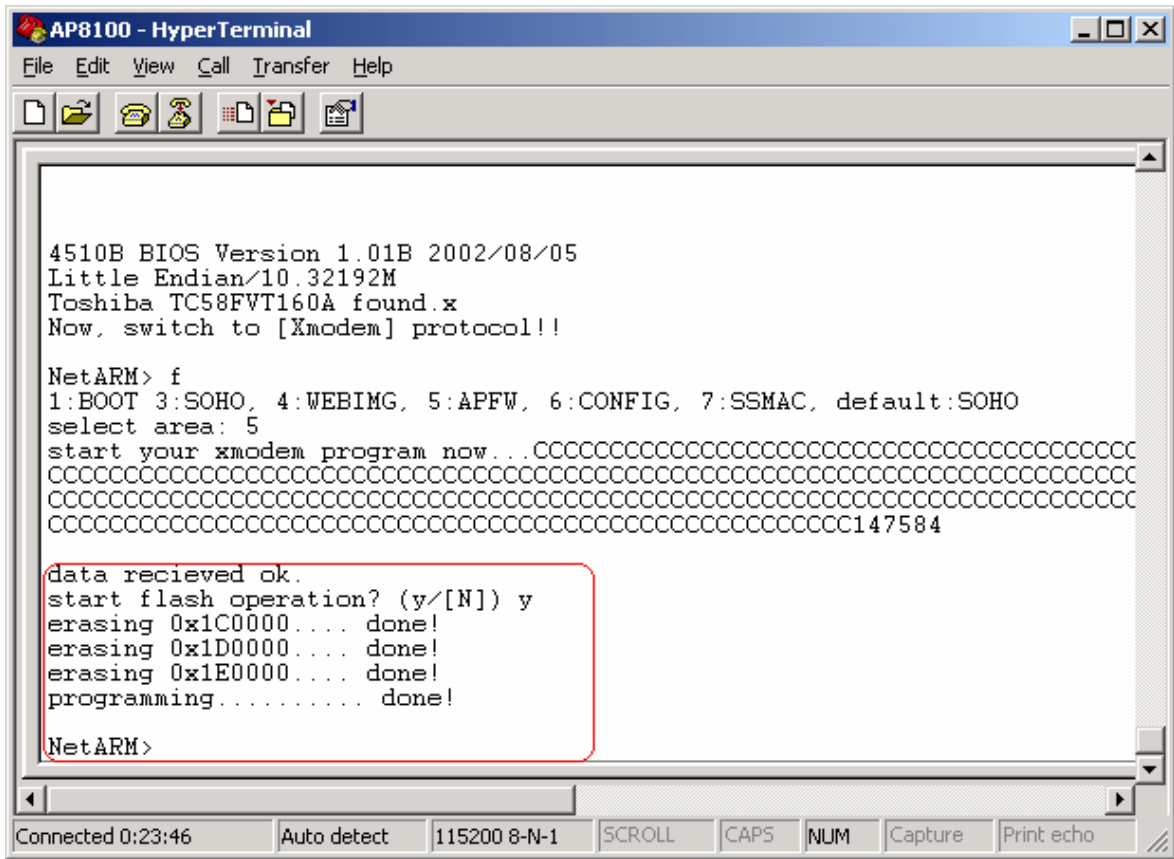
Connected 0:19:46   Auto detect   115200 8-N-1   SCROLL   CAPS   NUM   Capture   Print echo

13. In command mode <NetARM> key-in “F” 、 “f” and update wireless card firmware choose “5”, to ready to upgrade wireless card firmware file. While “CCC...” appears, select Transfer -> **Send File**.

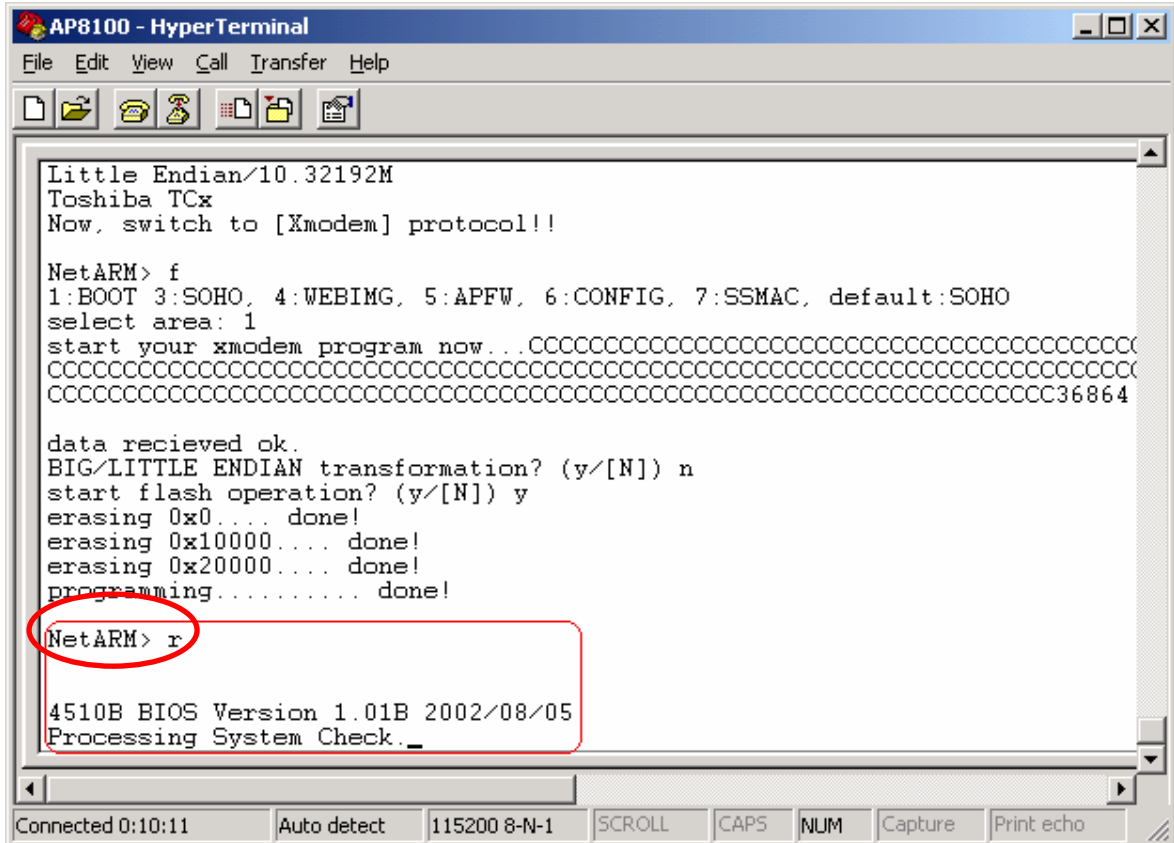
- a. Set Protocol as "1K Xmodem".
- b. Filename (**apfw3842-138.hex**) and setting the path, then choose **Send** to start wireless card firmware image upgrade.



C. After sending file, press “Y” to start flash operation



#### 14. Key-in "r" to restart AP8100





**15. TFTP upgrade** the firmware & program

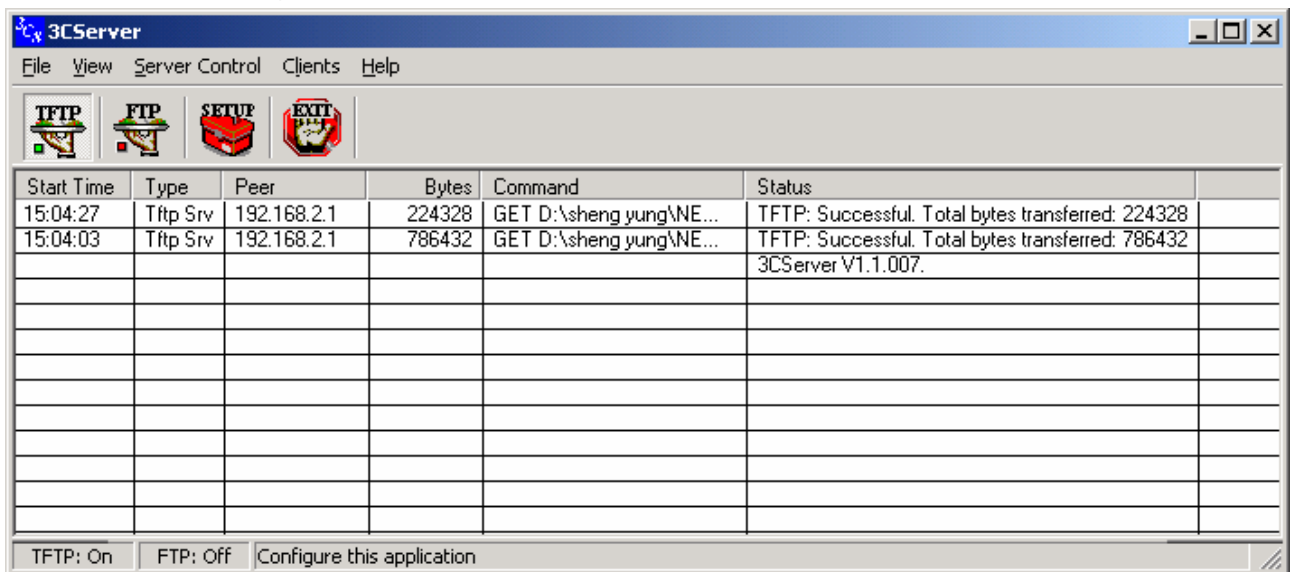
- Change your PC's IP to 192.168.2.100 / 255.255.255.0
- Connect your AP 8100 with crossover Ethernet cable
- "Ping 192.168.2.1" to make sure this device is alive or not
- Setup 3com TFTP server software into your PC & launch it.
- From [Setup -> [TFTP Configuration], change the TFTP server file directory to the program file that you located.
- Connect the AP 8100 using the web browser (http://192.168.2.1) and click the [Utility] -> [Software Upgrade] to choose the software upgrade page and specify the correct filename and TFTP server IP address to starting the firmware upgrade procedure.

**TFTP server IP: 192.168.2.100**

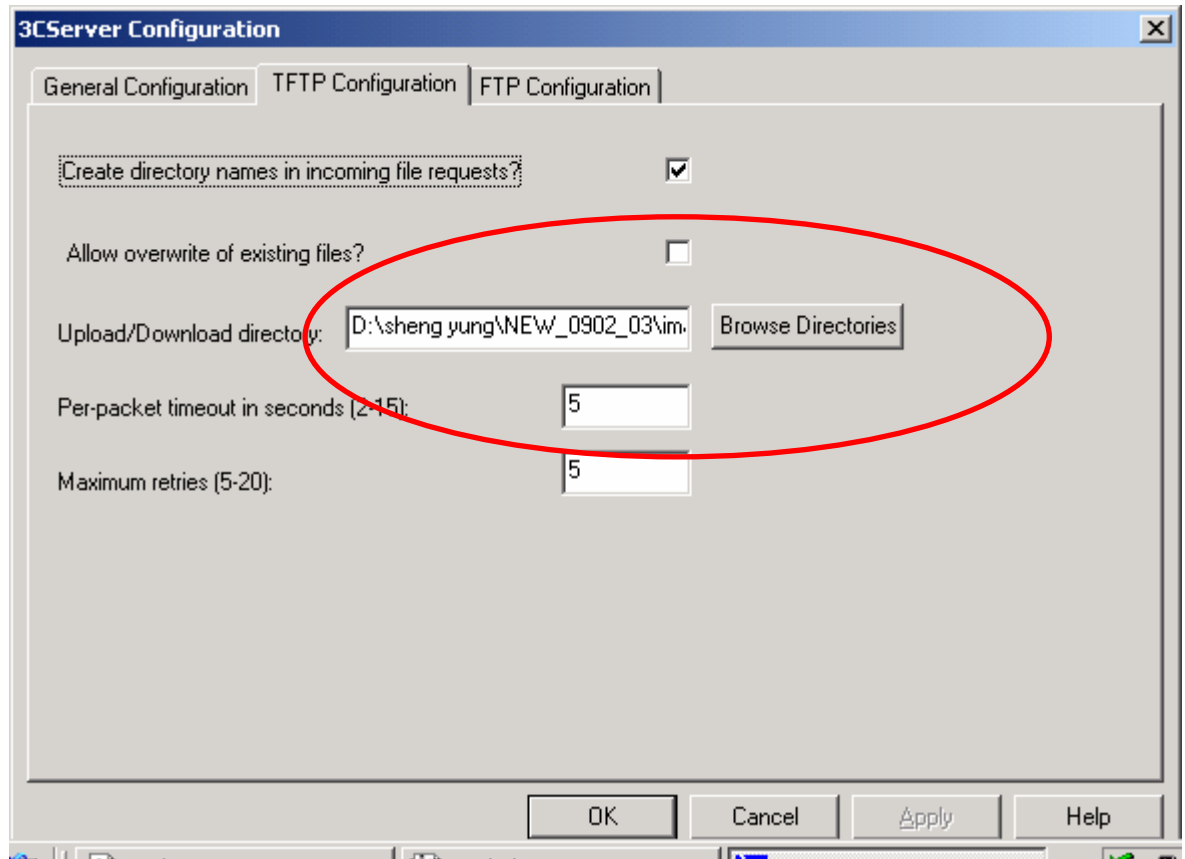
**Program firmware: soho.bin**

**Web image firmware: pfs.img**

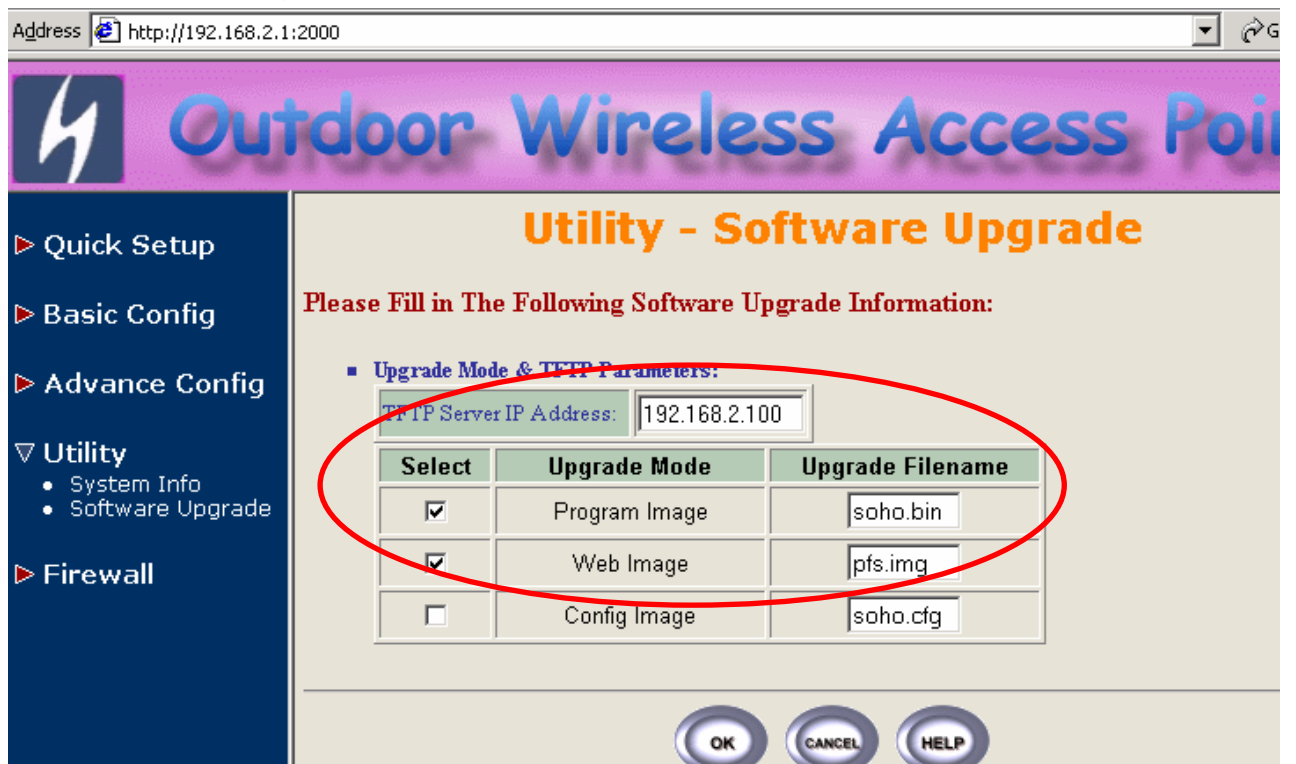
Picture 1. According the step d.



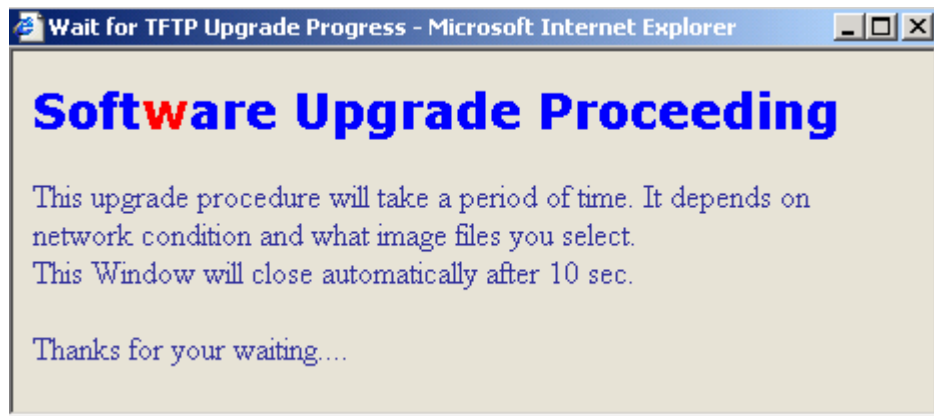
Picture 2. According the step e.



Picture 3. According the step f.



Picture 4. During upgrade procedure show out a dialog



Picture 5. The software upgrades and the web page will display success message.

