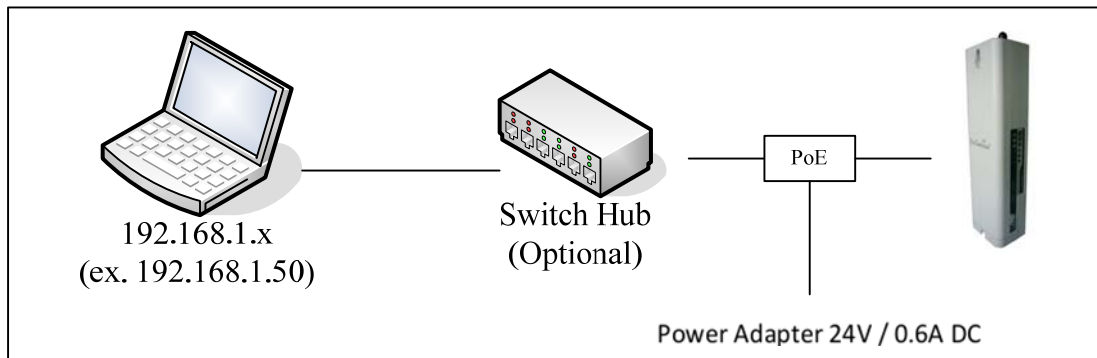


Firmware Update by Telnet

This document describes how to update firmware via telnet connection for EOC-2610/EOC-1650/EOC-3500/EAP-3660/EOC-5610 products.

Architecture:



Procedures

1. Set up your environment as architecture above, but keep device power off first.
2. Open two DOS command windows.
3. Continue to ping device in one of the command windows.

```
命令提示字元 - ping 192.168.1.1 -t
C:\>ping 192.168.1.1 -t
Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

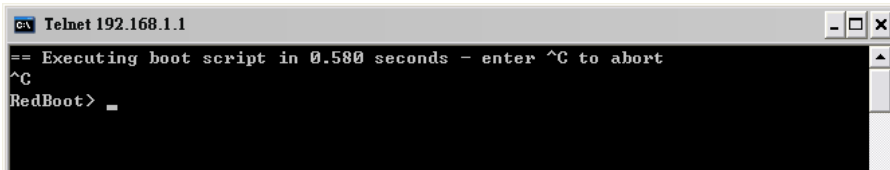
4. Power on the device, and quickly connect to device by typing telnet with port 9000 as picture below when first ping response is showed on another DOS window.

```
命令提示字元 - ping 192.168.1.1 -t
C:\>ping 192.168.1.1 -t
Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
```



```
ca Telnet 192.168.1.1
C:\>telnet 192.168.1.1 9000
正連線到 192.168.1.1..._
```

5. Keep press Ctrl + C in telnet DOS window until the “ReBoot>” prompt appears.



```
ca Telnet 192.168.1.1
== Executing boot script in 0.580 seconds - enter ^C to abort
^C
ReBoot> _
```

6. Please make sure the TFTP server is running in your PC, and firmware files are at TFTP base directory.
7. Execute the following commands to flash firmware for different models:

EOC-2610:

```
ip_address -l 192.168.1.1 -h 192.168.1.50

fis init -f

load -r -b % {FREEMEMLO} jffs2.eoc-2610.bin
fis create256 -f 0xa8030000 -l 0x3f0000 -e 0 rootfs

load -r -b % {FREEMEMLO} vmlinux.ap51.bin.l7
fis create256 -l 0xa0000 -f 0xa8420000 -e 0x80041798 -r 0x80041000
vmlinux.bin.l7

load -r -b % {FREEMEMLO} cfg.jffs2
fis create256 -l 0x10000 -f 0xa84c0000 -e 0 cfg
```

EOC-1650:

```
ip_address -l 192.168.1.1 -h 192.168.1.50

fis init -f

load -r -b % {FREEMEMLO} jffs2.eoc-1650.bin
fis create256 -f 0xa8030000 -l 0x3f0000 -e 0 rootfs

load -r -b % {FREEMEMLO} vmlinux.ap51.bin.l7
fis create256 -l 0xa0000 -f 0xa8420000 -e 0x80041798 -r 0x80041000
vmlinux.bin.l7

load -r -b % {FREEMEMLO} cfg.jffs2
fis create256 -l 0x10000 -f 0xa84c0000 -e 0 cfg
```

EOC-3500:

```
ip_address -l 192.168.1.1 -h 192.168.1.50

fis init -f

load -r -b % {FREEMEMLO} jffs2.eoc-3500.bin
fis create256 -f 0xa8030000 -l 0x3f0000 -e 0 rootfs

load -r -b % {FREEMEMLO} vmlinux.ap51.bin.l7
fis create256 -l 0xa0000 -f 0xa8420000 -e 0x80041798 -r 0x80041000
vmlinux.bin.l7

load -r -b % {FREEMEMLO} cfg.jffs2
fis create256 -l 0x10000 -f 0xa84c0000 -e 0 cfg
```

EAP-3660:

```
ip_address -l 192.168.1.1 -h 192.168.1.50

fis init -f

load -r -b % {FREEMEMLO} jffs2.eap-3660.bin
fis create256 -f 0xbfc30000 -l 0x2f0000 -e 0 rootfs

load -r -b % {FREEMEMLO} vmlinux.eap-3660.bin.l7
fis create256 -l 0xa0000 -f 0xbff20000 -e 0x80170040 -r 0x80041000 vmlinux.bin.l7

load -r -b % {FREEMEMLO} cfg.jffs2
fis create -l 0x20000 -f 0xbffc0000 -e 0 cfg
```

EOC-5610:

```
ip_address -l 192.168.1.1 -h 192.168.1.50

fis init -f

load -r -b % {FREEMEMLO} jffs2.eoc-5610.bin
fis create -f 0xbe030000 -l 0x3f0000 -e 0 rootfs

load -r -b % {FREEMEMLO} vmlinux.ap48.bin.l7
fis create -l 0xa0000 -f 0xbe420000 -e 0x8016c040 -r 0x80002000 vmlinux.bin.l7
```

```
load -r -b % {FREEMEMLO} cfg.jffs2
fis create -l 0x10000 -f 0xbe4c0000 -e 0 cfg
```

Example:

```

Telnet 192.168.1.1
== Executing boot script in 1.510 seconds - enter ^C to abort
^C
RedBoot> ^C
RedBoot> ip_address -l 192.168.1.1 -h 192.168.1.50
IP: 192.168.1.1/255.255.255.0, Gateway: 0.0.0.0
Default server: 192.168.1.50
RedBoot>
RedBoot> fis init -f
About to initialize [format] FLASH image system - continue (y/n)? y
*** Initialize FLASH Image System
... Erase from 0xa8030000-0xa87e0000: .....
.....
... Erase from 0xa87e0000-0xa87f0000: .
... Program from 0x80ff0000-0x81000000 at 0xa87e0000: .
RedBoot> load -r -b % {FREEMEMLO} jffs2.ap51.bin
Using default protocol (TFTP)
Raw file loaded 0x80041000-0x80430fff, assumed entry at 0x80041000
RedBoot> fis create256 -f 0xa8030000 -l 0x3f0000 -e 0 rootfs
... Erase from 0xa8030000-0xa8420000: .....
.....
... Program from 0x80041000-0x80431000 at 0xa8030000: .....
.....
... Erase from 0xa87e0000-0xa87f0000: .
... Program from 0x80ff0000-0x81000000 at 0xa87e0000: .
RedBoot>
RedBoot> load -r -b % {FREEMEMLO} vmlinux.ap51.bin.17
Using default protocol (TFTP)
Raw file loaded 0x80041000-0x800e0fff, assumed entry at 0x80041000
RedBoot>
nux.bin.17is create256 -l 0xa0000 -f 0xa8420000 -e 0x80041798 -r 0x80041000 vmlin
... Erase from 0xa8420000-0xa84c0000: .....
... Program from 0x80041000-0x800e1000 at 0xa8420000: .....
... Erase from 0xa87e0000-0xa87f0000: .
... Program from 0x80ff0000-0x81000000 at 0xa87e0000: .
RedBoot>
RedBoot> load -r -b % {FREEMEMLO} cfg.jffs2
Using default protocol (TFTP)
Raw file loaded 0x80041000-0x80050fff, assumed entry at 0x80041000
RedBoot> fis create256 -l 0x20000 -f 0xa84c0000 -e 0 cfg
... Erase from 0xa84c0000-0xa84e0000: ..
... Program from 0x80041000-0x80051000 at 0xa84c0000: .
... Erase from 0xa87e0000-0xa87f0000: .
... Program from 0x80ff0000-0x81000000 at 0xa87e0000: .
RedBoot>

```

The command [fis list] can display partition distribute.

```

Telnet 192.168.1.1
RedBoot> fis list
Name          FLASH addr  Mem addr    Length     Entry point
RedBoot       0xA8000000  0xA8000000  0x00030000 0x00000000
rootfs        0xA8030000  0xA8030000  0x003F0000 0x00000000
vmlinux.bin.17 0xA8420000  0x80041000  0x000A0000 0x80041798
cfg           0xA84C0000  0xA84C0000  0x00020000 0x00000000
FIS directory 0xA87E0000  0xA87E0000  0x0000F000 0x00000000
RedBoot config 0xA87EF000  0xA87EF000  0x00001000 0x00000000
RedBoot>
RedBoot>
RedBoot>

```

8. If the auto boot script is changed by **third party firmware**, please type “fconfig” to write back the following script for Engenius firmware.

EOC-2610/EOC-1650/EAP-3660/EOC-3500:

```
fconfig
>> fis load -l vmlinux.bin.l7
>> go
```

EOC-5610:

```
fconfig
>> fis load -l vmlinux.bin.l7
>> exec -c "root=/dev/mtdblock2"
```

9. Reboot the device, and after wait for around 60 seconds, the device should be alive again.

Appendix-1: TFTP32 TFTP Server

Run Tftpd32. First, click setting button for entry settings window, as Figure I , Figure II shown. Second, click browse button for set base directory. The setting directory window as Figure III shown. Click OK button to finish done setting.

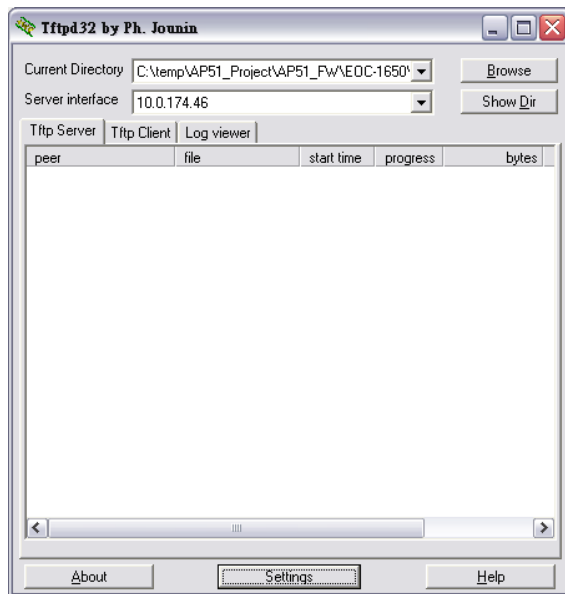


Figure I , Tftpd32 Main Window

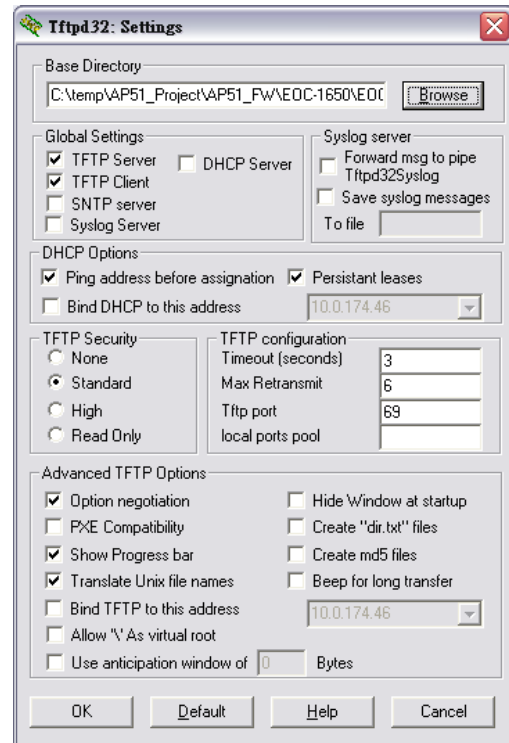


Figure II , Tftpd32 Setting Window



Figure III, Tftpd32 Setup Directory Window

Reference:

[1]. TFTP Server, <http://tftpd32.jounin.net/>

[2]. Telnet Dos command help document



```
命令提示字元
C:\Documents and Settings\Greg>
C:\Documents and Settings\Greg>
C:\Documents and Settings\Greg>telnet /h

telnet [-a][-e escape char][-f log file][-l user][-t term][host [port]]
-a      嘗試自動登入。除了使用目前的登入使用者名稱之外，它和 -l 選項是相同的。
-e      進入 telnet 用戶端提示的逸出字元。
-f      用戶端記錄的檔案名稱
-l      指定在遠端系統上所使用的登入使用者名稱。
        遠端系統必須能夠支援 TELNET ENVIRON 選項。
-t      指定終端機類型。
        僅支援 vt100、vt52、ansi 及 vtnt 終端機類型。
host    指定要連線的遠端電腦的主機名稱或 IP 位址。
port    指定一個連接埠號碼或服務名稱。

C:\Documents and Settings\Greg>
```

History:

- 2009-06-02 Preliminary release.
- 2009-07-15 Add EAP-3660
- 2009-07-22 Add EOC-3500