

# SBC6410 WIFI User manual

Ver 0.1

---

Date: 2011-7-05

[www.armdesigner.com](http://www.armdesigner.com)



Rev	Date	Description
V0.1	2011-7-05	Initial version

## **1. Introduction**

### **1.1. About this Manual**

This manual is intended to provide the user with an overview of the board and benefits, complete features specifications, and set up procedures. It contains important safety information as well.

### **1.2. Feedback and Update to this Manual**

To help our customers make the most of our products, we are continually making additional and updated resources available on the Boardcon website ([www.armdesigner.com](http://www.armdesigner.com)).

These include manuals, application notes, programming examples, and updated software and hardware. Check in periodically to see what's new!

When we are prioritizing work on these updated resources, feedback from customers is the number one influence. If you have questions, comments, or concerns about your product or project, please do not hesitate to contact us at [support@armdesigner.com](mailto:support@armdesigner.com).

### **1.3. Limited Warranty**

Boardcon warrants this product to be free of defects in material and workmanship for a period of one year from date of buy. During this warranty period Boardcon will repair or replace the defective unit in accordance with the following process:

A copy of the original invoice must be included when returning the defective unit to Boardcon. This limited warranty does not cover damages resulting from lightning or other power surges, misuse, abuse, abnormal conditions of operation, or attempts to alter or modify the function of the product.

This warranty is limited to the repair or replacement of the defective unit. In no event shall Boardcon be liable or responsible for any loss or damages, including but not limited to any lost profits, incidental or consequential damages, loss of business, or anticipatory profits arising from the use or inability to use this products.

Repairs made after the expiration of the warranty period are subject to a repair charge and the cost of return shipping. Please contact Boardcon to arrange for any repair service and to obtain repair charge information.

# Catalogue

<b>SBC6410 WIFI User manual.....</b>	<b>1</b>
1. Kernel support method.....	5
2. Add the WiFi module to rootfs.....	5
3. WPA_suppllicant support .....	6

# 1. Kernel support method

Configure the kernel support the Packet socket

Run the follow command to configure the kernel

```
# make menuconfig
```

```
[*] Networking support --->
```

```
Networking options --->
```

```
<*> Packet socket
```

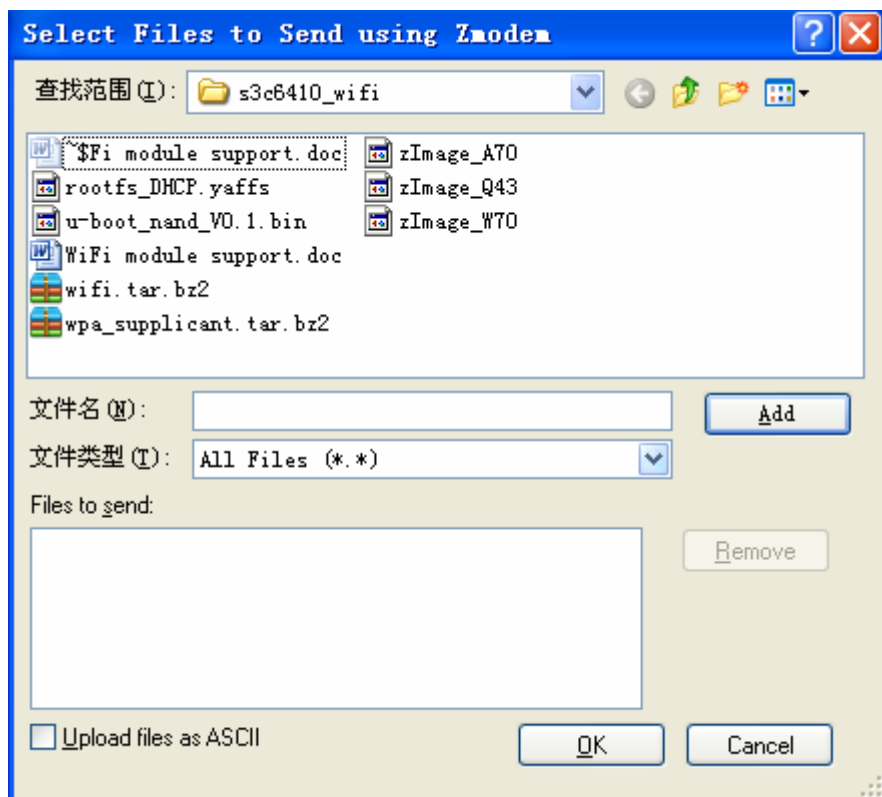
Notice: the attached file zImage had been configured for wifi.

## 2. Add the WiFi module to rootfs

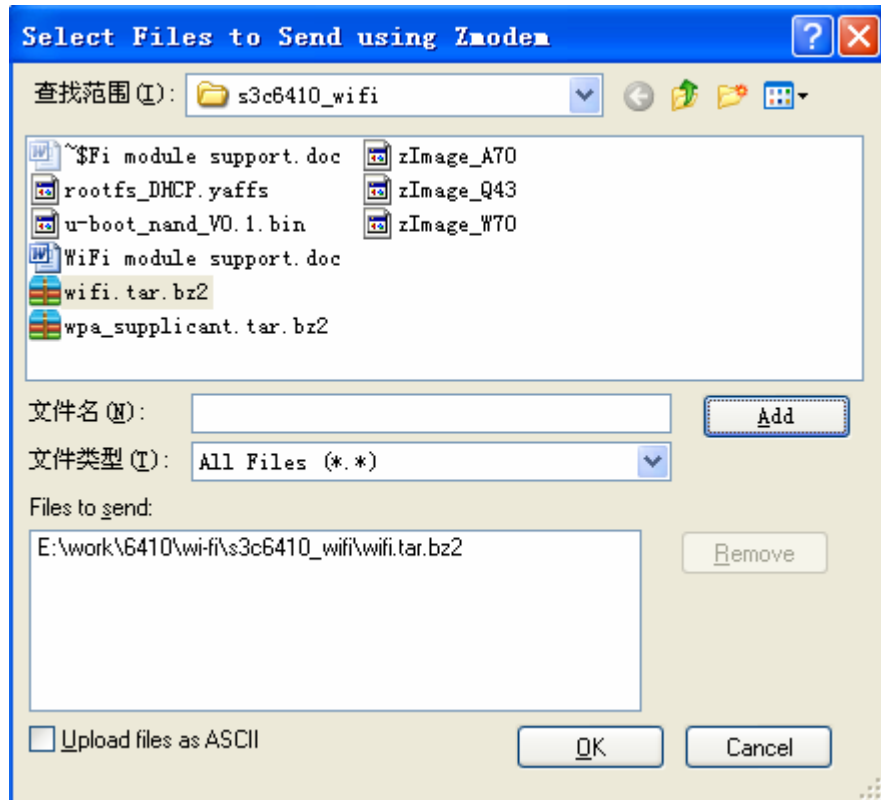
a).Open the **SecureCRT** software, copy **wifi.tar.bz2** to the target board(sbc6410) as follow.

```
[root@EmbedSky /]# rz
```

Then you will see a dialog box as below:



Select **wifi.tar.bz2**, and **Add** it.



Finally, click on the **OK** button

Then uncompress the wifi.tar.bz2 as follow:

```
[root@EmbedSky /]# tar xvjf wifi.tar.bz2 -C /
```

b). Insmod the driver for the wifi:

```
[root@EmbedSky /]# insmod /lib/modules/libertas.ko
[root@EmbedSky /]# insmod /lib/modules/libertas_sdio.ko
```

Then the wifi module have been add to the system/.

### 3. WPA\_supplicant support

a). Copy the **wpa\_supplicant.tar.bz2** to the target board.(sbc6410)

Then uncompress the wifi.tar.bz2 as follow:

```
[root@EmbedSky /]# tar xvjf wpa_supplicant.tar.bz2 -C /
```

b). Configure the AP name and password.

```
[root@EmbedSky /]# wpa_passphrase boardcon
```

```
# reading passphrase from stdin---> then input the AP password
boardcon321
network={
    ssid="boardcon"
    #psk="boardcon321"

    psk=ec9413b282dcd231cbc2c66683f794ccd6b18a047dd043a66f384c47ba25ccd3
}
```

Notice: **boardcon** is the AP name

**Boardcon321** is the AP wifi password

Then remember the ssid and psk word.,

c). Edit the file /etc/wpa\_supplicant.conf, add the ssid and psd to the wpa\_supplicant.conf file.

```
vi /etc/wpa_supplicant.conf
#####WPA-PSK ok
network={
    ssid="boardcon"

    psk=ec9413b282dcd231cbc2c66683f794ccd6b18a047dd043a66f384c47ba25ccd3
    proto=WPA
    key_mgmt=WPA-PSK
    pairwise=TKIP
    group=CCMP TKIP WEP104 WEP40
    priority=5
}
```

d). Configure IP of the WIFI.

```
[root@EmbedSky /]# ifconfig eth1 192.168.0.123
```

e). OK! Follow the command, you can connect the AP.

```
[root@EmbedSky /]# wpa_supplicant -Dwext -ieth1 -c/etc/wpa_supplicant.conf
-B
```

f). Test the WIFI.

```
[root@EmbedSky /]# ping 192.168.0.1
PING 192.168.0.1 (192.168.0.1): 56 data bytes
64 bytes from 192.168.0.1: seq=0 ttl=255 time=18.869 ms
64 bytes from 192.168.0.1: seq=1 ttl=255 time=2.517 ms
64 bytes from 192.168.0.1: seq=2 ttl=255 time=5.622 ms
64 bytes from 192.168.0.1: seq=3 ttl=255 time=3.766 ms
^C
```



Boardcon  
Embedded design

[www.armdesigner.com](http://www.armdesigner.com)

```
--- 192.168.0.1 ping statistics ---  
4 packets transmitted, 4 packets received, 0% packet loss  
round-trip min/avg/max = 2.517/7.693/18.869 ms  
[root@EmbedSky /]#
```