XtendLan

VIP-150W

VoIP WiFi Phone

User's Guide

Contents:

1. Introduction,

This VoIP WiFi Phone is an innovation of combining the most popular communication technology, WLAN and VoIP.

The VoIP use the most popular standard that could easily connect with other VoIP service (ITSP, Voice over Broadband) or VoIP components (IP PBX, IP Centrex, SIP Proxy).

The WLAN use the IEEE802.11b, which is most wide deployed everywhere.

The user interface designs just same as the Cellules phone. So, user could easily use without any learning curve. It is also as stable and powerful like the mobile phone. The phone comes with 2.2 inch TFT LCD display that can bring a very nice user interface. The phone builds in the Java virtual machine. It can download any J2ME shareware from the internet.

Description:

Display	Speaker/Receiver
Side key	3 Soft key
Ear set Jack	Navigation Key
Off-Hook	On-hook
Microphone	Numeric key
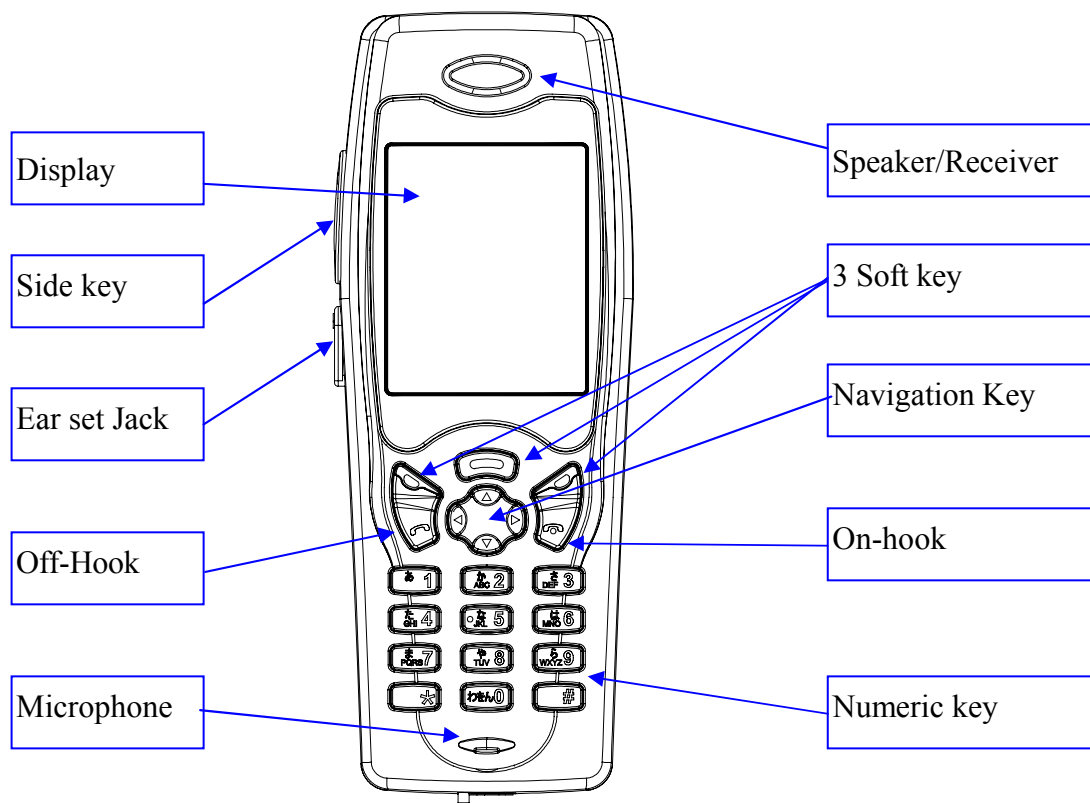
2. Setup

2.1 Install the battery

- Pull down the battery cap by push the battery cap lock.
- Then move battery cap upward to open.
- Put in the battery.
- Put back the battery cap while the top of the cap is 3mm gap.
- Push the cap toward to the top until you hear the click from the lock.

2.2 Power on

The first time battery should be fully charged. Usually it will take 2 hours for normal charge. Turn on the power by press the [on-hook/PWR] key for more than 3 sec. It will show the boot up sequence. (Scan AP/ Network Initializing/ DHCP Initializing/ DSP Initializing). When the phone boots up ok, it will show the following screen.

WLAN signal strength

Battery status
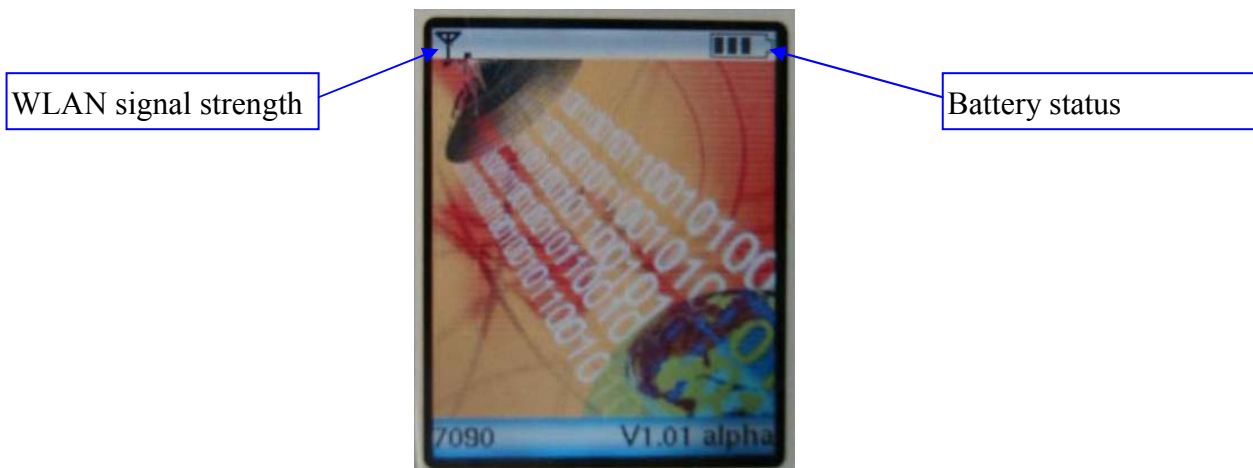
2.3 Setup the necessary parameter

Setup mode, press middle Softkey in the standby display, it will show 9 icons. Press [Select] while move the icon to {Settings}. It will show the following screen.

Main menu   Settings

-4-

2.3.1 Setup Wireless

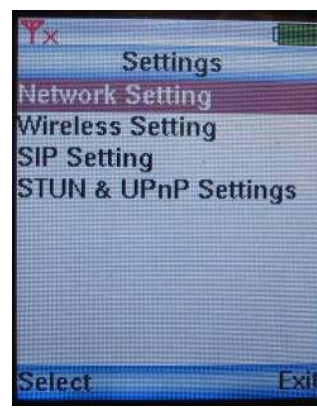- The 1st time when you boot up the phone, it will automatically search for the available AP. You can also select by yourselves by following Step.
- Select <Wireless Setting>, use up/down navigation key by scroll in the Setting Menu and press [Select] Softkey.
- Select <SSID>, select {ESSID} in the wireless setting menu.
- It will show available AP. Then, select the one you want to connect.
- Press [Select] to connect. When go back to the <Wireless Setting>, press [Exit] to exit.

2.3.2 Setup IP address

- Default IP address is DHCP. You can also setup manually.
- Select <Network Setting>, use up/down navigation key by scroll in the Setting Menu and press [Select] Softkey.
- Select <IP Address> by press [Select].
- Input IP address, press [OK] to go back to Network setting menu.
- Do it in as the same way to the Subnet Mask and Default Gateway.

2.3.3 SIP Setting

- Use the same way as 2.4.2. to input the SIP display name/SIP Account Name/ SIP Password/SIP Port/ SIP Server.
- The UP key stand for toggle of the number and English character.

2.3.4 STUN & UPnP Setting

- When you are behind the NAT. you should setup the STUN or UPnP to enable the NAT traversal function.
- The UPnP will support in some NAT router. Enable the UPnP function of router by reference to the operation manual of your router.

3. Make/Receive a call

3.1 Make a call by number

Dial number and press [off-hook], if you have already registered to the SIP server. When the call is valid, then it will show the ringback. You could hear the ring back tone and wait for the callee to answer the call.

Once the callee answers the call, it will show the talking. At this moment, you will not hear the ring back tone and begin to talk each other.

3.2 Make a call by IP address

You could dial by IP address as well. Dial IP address, "*" stand for "." in the IP address.

3.3 Received a call

When hear ring Melody, press [off-hook] to answer.

4. Advance setup

This VoIP WiFi Phone equipped with web server for system configuration. User could use the most popular web browser (e.g. Microsoft IE, Netscape) to setup this WiFi phone.

Use browser by typing

http://IP_address:9999

in the URL to begin the setup procedure. Some of the advanced function could be done by only

4.1 Login

It will popup a new window for user to input the ID and password. After enter the correct ID and password then press enter.

Default ID and password are blank.

After input the correct ID and password it will show the main page for the web configuration as below.

You could click the item to setup on the left menu. Some of the item (Management) will extend to the submenu when you click the on the icon. Click again on the item to collapse the submenu.
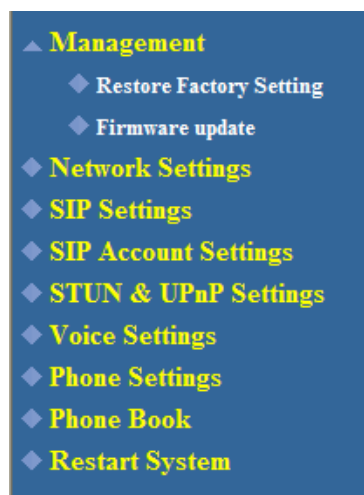
4.2 Management Setting

Web Login Setting	
User Name	
Password	Change
Date/Time	
NTP Server IP	216.133.140
Time Zone	(GMT+08:00) Beijing, Singapore, Taipei ▼ ☐ Daylight Saving

Submit Reset

User Name   Configuration menu login name.

Password   Configuration menu login password.

NTP Server IP   Network Time Protocol (NTP) is a protocol used to help match your system
                       clock with an accurate time source (such as atomic clock, time server). It is
                       good practice to have all your networked computers synchronized with one
                       server.

Time Zone   Select your time zone. If there is daylight saving in your area, click the
                       check box.

4.3 Management Setting – Restore Factory Setting
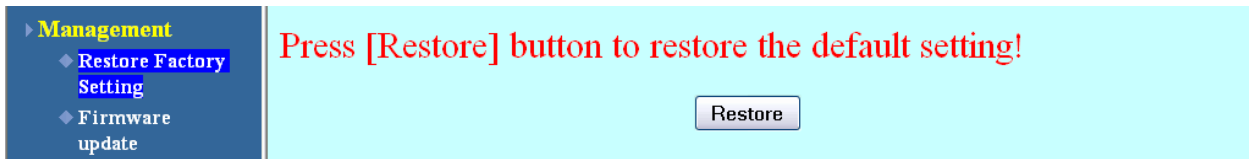
Click on Management. Select Restore Factory Setting and the above screen will display on the screen.

Restore Factory Setting	Restores all the settings back to factory default settings.

4.4 Management Setting – Firmware update

FTP server, login ID, login password and firmware filename are preset when you purchase the phone. These are required to download and update the firmware.

FTP Server	FTP Server address.
Login ID	Login ID provided by your supplier.
Login Password	Login password provided by you supplier.
Firmware Filename	Updated firmware filename. Do not change the file name unless specified by your supplier.

4.5 Network Setting – DHCP

Select DHCP if you have cable internet.

DHCP Server   Dynamic Host Configuration Protocol (DHCP) Server address. This IP address information is obtained automatically from your ISP.

4.6 Network Setting – PPPoE

(* Current version of firmware does not support PPPoE function)

Choose PPPoE if your ISP uses PPPoE. Most DSL users use PPPoE.

PPPoE ID   PPPoE ID/username provided by your ISP.

PPPoE Password PPPoE password.

DNS Server   DNS address provided by your ISP.

4.7 Network Setting – Static IP

Choose Static IP network setting if all Wide Area Network IP is provided to you by your ISP.

IP Address   IP address assigned to you by your ISP.

Router IP   Router IP address.

Subnet Mask   Subnet mask address.

DNS Server   DNS server address provided by your ISP.

4.8 SIP Setting – SIP Phone Setting, Registrar and Outbound Proxy Server

Session Initiation Protocol (SIP) is the most popular Voice over IP standard. It enables two or more people to make phone calls, share multimedia and make multimedia conference over the internet. Please have an administrator setup these settings for you or obtain this information from your SIP service

provider.

SIP Phone Port Number	SIP phone port number.
Registrar Server Domain Name/IP Address	Registrar server domain name or IP address.
Registrar Server Port Number	Registrar server port number.
Authentication Expire Time	The time that the phone waits to connect to the SIP server after the user dialed a number. If still not connected, the phone will disconnect and redial.
Outbound Proxy Domain Name/IP Address	Outbound proxy domain name or IP address.
Outbound Proxy Port Number	Outbound proxy port number.

4.9 SIP Setting – Message Server

Message Server	
MWI Message Server Domain Name/IP Address	
Voice Message Account	

This WiFi Phone supports the Voice Message function. It could be notified by Message Server if someone leaves you a message in the server. It supports the most popular standard, MWI (Message Waiting Indicator). This function should work with server. If you want to use this function you have to check with your server or service if it support the MWI.

MWI Message Server Domain Name/ IP Address	The server Domain Name or IP Address for the Voice Message Server.
Voice Message Account	The account for the voice message server.

4.10 SIP Setting – Others

Others	
Session Timer	1800 — sec.[90 - 99999]
Media Port	41000 — [1024 - 65535]
Prack	○ Disable ⦿ Enable
Session Refresher	⦿ None ○ UAC ○ UAS
Session Timer Method	⦿ Invite ○ Update
UDP/TCP	⦿ UDP ○ TCP

There are many parameter could be adjusted to fit different kind of server. This function is reserve for technician who is familiar with SIP protocol.

Session Timer   The time interval in which the phone periodically refresh SIP sessions by sending repeated INVITE requests. These INVITE requests allow the user agent or proxies to determine the status of the SIP session.

Media Port   Real-time Transport Protocol port number. Provides end-to-end transfer of data with real-time characteristics, such as streaming audio and video.

Prack   Prack ensures that media information is exchanged and that network checks before connecting the call. Select Enable for a more reliable connection.

Session Refresher   Select None to disable SIP session timer support.

Select UAC to initiate SIP request.

Select UAS to receive SIP request and then return a response.

Session Timer Method   Select SIP request method. Default method is Invite.

UDP/TCP   Select the UDP or TCP for the SIP protocol

4.11 SIP Account Settings

SIP Account Setting	
Default Account	Account 1 ▾
Account 1 Setting	
Account Active	○ Disable ⦿ Enable
Display Name	Michael
SIP User Name	608
Authentication User Name	608
Authentication Password	608
Register Status	Register
Account 2 Setting	
Account Active	⦿ Disable ○ Enable
Display Name	
SIP User Name	
Authentication User Name	
Authentication Password	
Register Status	UnRegister

You may have up to 4 accounts. i.e., the IP phone can receive up to four different phone numbers.

Default Account   When you dial a number, the default account is used to dial. User Name of default account is displayed on the receiver's IP phone.

Account Active   Enable or disable this account.

Display Name   Display name on the IP phone.

SIP User Name   User name.

Authentication User Name   Name used to access SIP server.

Authentication Password   User password to access SIP server.

Register Status   Displays if the current phone is registered or unregistered with SIP server.

4.12 STUN Setting – STUN Server Setting, UPnP Setting

STUN Server Setting	
STUN	⊙ Disable ○ Enable
STUN Domain Name/IP Address	
UPnP Setting	
UPnP	⊙ Disable ○ Enable

STUN   Simple Traversal of User Datagram Protocol through Network Address Translators is a protocol that allows applications to determine the types of NATs and firewalls are in between them and the internet. STUN also provides the ability for applications to determine the public IP addresses allocated to them by the NAT.

STUN Domain Name/IP Address   Enter STUN domain name or IP address if STUN is enabled.

UPnP   Enable or disable universal plug and play. Some NAT supports UPnP so STUN is not required and must be disabled.

4.13 Voice Setting and QoS

Voice Setting	
Codec (Priority 1)	G.729A
Codec (Priority 2)	G.711 u-law
Codec (Priority 3)	G.723.1
Codec (Priority 4)	non-used
RTP Packet Length	G.711 μ-Law 20ms G.711 A-Law 20ms G.729A 20ms G.723.1 30ms
VAD	○ On ◉ Off
DTMF Method	○ Out Band ○ In Band ◉ SIP INFO
QoS	
Voice TOS	5 [0 - 7]

Submit   Reset

Codec   Voice Compression Algorithm priority settings. Select from the most used codec to the least used codec.

RTP Packet Length   Real-Time Transfer Protocol (RTP) packet length.

VAD   VAD detects voice activity and adjusts the signal to a target power level. It ensures that background noise or echo does not get amplified to the target power level.

DTMF Method   Select the tone method for IP phone.

Voice TOS   Sets the type of service for this Internet datagram.

4.14 Phone Settings – Phone Setting

Phone Setting	
Do Not Disturb	◉ Disable ○ Enable
Call Waiting	○ Disable ◉ Enable
Anonymous Call	◉ Disable ○ Full URI ○ Display Name
Anonymous Call Reject	◉ Disable ○ Enable
Call Forward	☐ No Answer ☐ Busy ☐ Unconditional

Recall you can only enable or disable call forwarding from the IP phone MENU key. With the web-browser, you can enter the forwarded phone numbers in the Phone Setting menu.

Do Not Disturb   Reject all incoming calls.

Call Waiting   Enable or disable call waiting.

Anonymous Call   If DISABLE is selected, full URI and name are sent to the receiver's phone when the user makes a phone call. The URI and name of the caller are displayed on the receiver's phone.

     When Full URI is selected, only user name is displayed on the receiver's phone when the user makes a phone call.

     When Display Name is selected, only name is displayed on the receiver's phone when the user makes a phone call.

Anonymous Call Reject   Select Enable to reject anonymous calls.

| Call Forward | Click No Answer to enable call forward to another number when no one answers the phone after 180s (default). The timer can be changed from 0-600s. Refer to section 7.14 to change the timer.

Click Busy to enable call forward to another number when user is busy on the phone.

Click Unconditional to transfer all incoming calls to another number.

Enter the call forward number on the text box. |

4.15 Phone Setting – Timer

Timer		
NTP Recycle Timer	1	hour [1 - 24] Network Time Adjustment Period
Inter Digit Timer	4	sec. [0 - 60] 0: Disable
Originating Not Accept Timer	180	sec. [0 - 600] 0: Disable
Incoming No Answer Timer	180	sec. [0 - 600] 0: Disable
Hold Recall Timer	180	sec. [0 - 600] 0: Disable
Auto Speaker Off Timer	30	sec. [0 - 600] 0: Disable

NTP Recycle	NTP recycle time.
Inter Digit	The time interval that the IP phone waits to detect the end of DTMF digits. No more digits are accepted after this period and the phone begins to dial.
Originating Not Accept	The time interval that the caller's phone waits to establish a call. If the receiver fails to answer the phone during this time interval, the caller's phone will automatically disconnect.
Incoming No Answer	The time interval that the receiver's phone will ring. If the receiver fails to answer the phone during this time interval, the phone will automatically disconnect.
Hold Recall	The time interval that the caller is put on hold before the phone automatically disconnect.
Auto Speaker Off	The time interval that the speaker phone is on before turning off automatically (due to inactivity).

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4.16 Phone Book

Phonebook menu allows the user to add, modify and delete phone numbers. To add, type in the name and number then click NEW to add. To modify/delete, select the name from the list and click modify/delete.

Name	Name that you would like to add.
Number	Phone number that corresponds to the name.

5. Advance function

5.1 Phonebook Edit/ Browse

This WiFi phone could store up to 200 records of phonebook. Each record you could store the name/number/E-mail address.

There are 2 items on the phone book menu, New and Browse.

In the browse it will show the phone book list. It will sort by alpha-beta when you enter a new record. You could use up/down to scroll the record. When you want to view, edit or delete a record press [Select]. If you want dial the record just press [off-hook] key.

5.2 Call log

This WiFi phone could store up to 40 records of call log. Those call log include Incoming call, Outgoing call and miss call.

5.3 Phone Setting

Phone setting function could change the wall paper, melody or time by user.

5.3.1 Melody
You could select the ring tone melody by select the Melody function.

5.3.2 Image
You could select the wall paper by select the Image function.

5.3.3 Time
You could setup the time by NTP.

6. Java

6.1 Play JAVA game

   Select the {Entertainment} Icon in the Main Menu to load the Java virtual machine.

Use the up down key to move the scroll bar up and down to select the application you want to execute. Press Middle Softkey to select.

   After press the middle soft key it will begin to play.
   While play games, you can press [Off-Hook] for more than 3 sec to quit JAVA virtual machine.

6.2 JAVA download process

This WiFi Phone could download the J2ME game from Internet.
The key definition of the Java Virtual Machine is a little different than general setting. Left / Right key shows as soft keys functions. Middle key standard for activate key. (It has the same operation method as common JAVA games that define for 2.5/3G mobile.

Select first scroll bar [Download new…]

Press middle Softkey to confirm the download process. Input the download server URL (IP address or Domain).
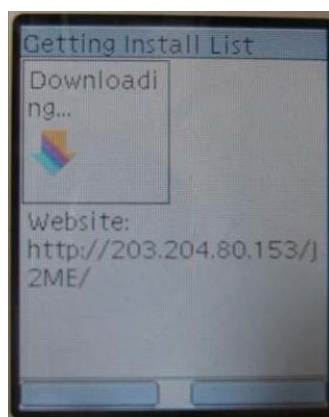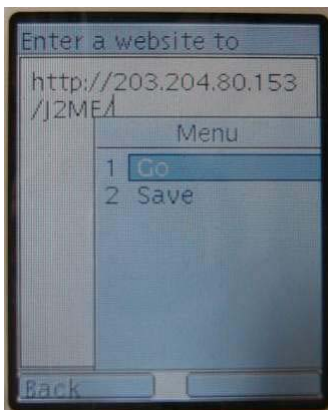
When select the game you can install by press middle key to download.
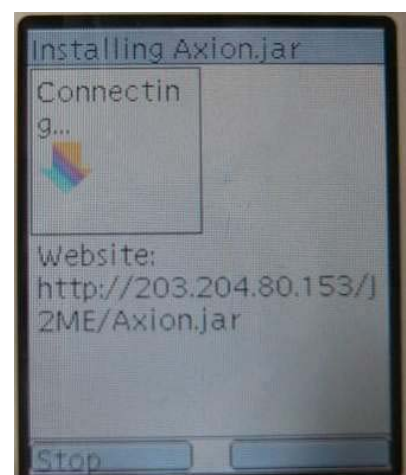
7. 7. Firmware upgrade.

VIP-150W VoIP WiFi Phone builds in a TFTP server for user to upgrade the firmware with latest functions. Any authorized technician could easily download the firmware via TFTP.

Press and hold [Off-hook] before you turn on the power. Wait about 5-7 sec, you can see the following screen.

```
┌─────────────────────────────┐
│ ▼..ıl                  ▥▥▥▷ │
│ ┌─────────────────────────┐ │
│ SSID│ANY                  │ │
│ └─────────────────────────┘ │
│                             │
│ ■  DHCP        □Static      │
│                             │
│ IP                          │
│ Subnet Mask                 │
│ Default Gateway             │
│ Status :                    │
│        Initializing …….     │
│                             │
│                             │
│                             │
│                             │
│ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ │
└─────────────────────────────┘
```
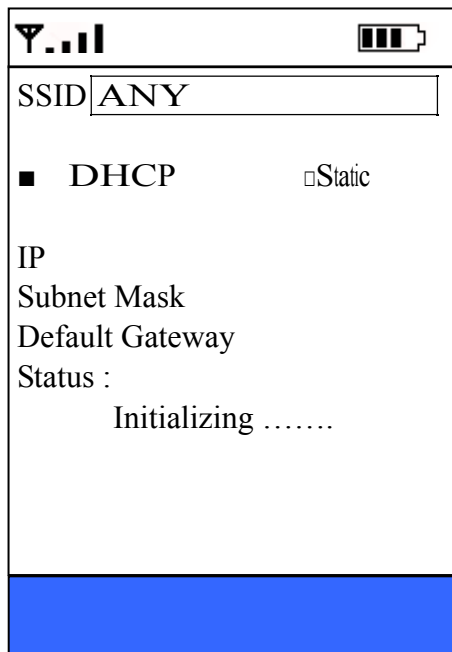
Wait for 20sec, it will search for the available AP, and use DHCP to get an IP address.

```
┌─────────────────────────────┐
│ ▼..ıl                  ▥▥▥▷ │
│ ┌─────────────────────────┐ │
│ SSID│XtendLan             │ │
│ └─────────────────────────┘ │
│                             │
│ ■  DHCP        □Static      │
│                             │
│ IP     192.168.0.100        │
│ Subnet Mask                 │
│        255.255.255.0        │
│ Default Gateway             │
│         192.168.0.100       │
│ Status :                    │
│     Ready to upload         │
│                             │
│ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ │
│ ▓▓▓▓▓▓▓▓▓▓abc▓▓▓▓Reboot▓▓▓▓ │
│ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ │
└─────────────────────────────┘
```
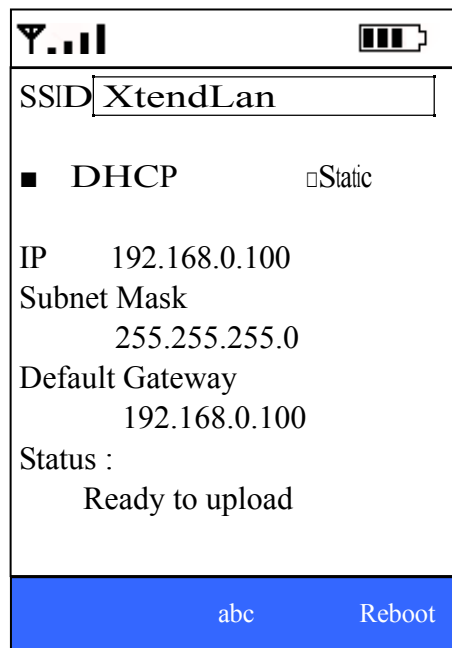
Use up/down select the item you want to modify.

```
Y..■■l                    ▭▭▭▷
SSID XtendLan

□DHCP          ■Static

IP    192.168.0.100
Subnet Mask
      255.255.255.0
Default Gateway
      192.168.0.1
Status :
      Ready to upload


   Apply        abc        Reboot
```

If any item change press [Apply] to change the setting.

```
Y..■■l                    ▭▭▭▷
SSID XtendLan

□DHCP          ■Static

IP    192.168.0.100
Subnet Mask
      255.255.255.0
Default Gateway
      192.168.0.1
Status :
      Ready to upload


                abc        Reboot
```

Use TFTP to upgrade from PC.

- Copy the firmware to the folder c:\ of your PC.
- C:\tftp –i ip_address put App.bin (Where ip_address is the IP address of the wifi-Phone. And, app.bin is the firmware name.)

Phone will show the following screen. Wait for 2-3 min to finish the upgrade
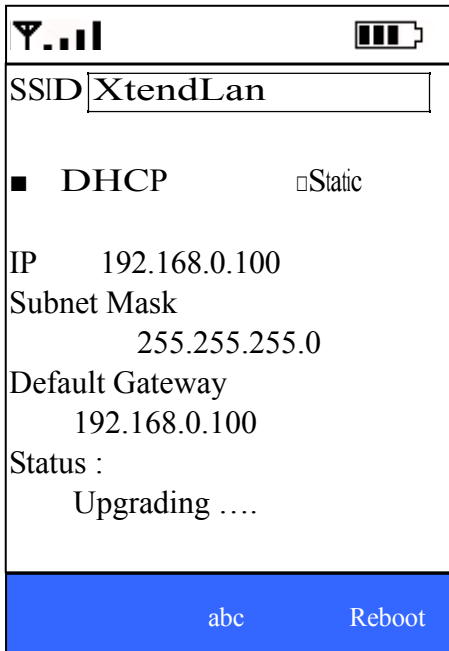
```
┌─────────────────────────────┐
│  ▼..ıl              ▐▮▮▮▯    │
│ ┌──────────────────────────┐│
│ SSID│XtendLan               ││
│ └──────────────────────────┘│
│                             │
│  ■    DHCP        □Static   │
│                             │
│ IP      192.168.0.100       │
│ Subnet Mask                 │
│         255.255.255.0       │
│ Default Gateway             │
│     192.168.0.100           │
│ Status :                    │
│     Upgrading ….            │
│                             │
│                             │
│         abc      Reboot     │
│                             │
└─────────────────────────────┘
```

Press [Reboot] to reboot.

```
┌─────────────────────────────┐
│  ▼..ıl              ▐▮▮▮▯    │
│ ┌──────────────────────────┐│
│ SSID│XtendLan               ││
│ └──────────────────────────┘│
│                             │
│  ■    DHCP        □Static   │
│                             │
│ IP      192.168.0.100       │
│ Subnet Mask                 │
│         255.255.255.0       │
│ Default Gateway             │
│     192.168.0.100           │
│ Status :                    │
│     Upgrading Success       │
│                             │
│         abc      Reboot     │
│                             │
└─────────────────────────────┘
```