

Meritline
Netphone (MeritPhone)
ML210A
User Manual

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1. Introduction

MeritPhone-ML210A is a practical and highly manageable broadband VoIP phone that looks like a regular phone, and uses the broadband Internet for voice communication. It can apply to any enterprise intranet, telecommunication level IP service carrier, and users with Internet connection. It is capable of communicating with regular PSTN phones with the support of telecommunication carriers, at very low costs.

MeritPhone-ML210A can also be a cost-effective communication tool of high stability with traditional feel for any private network. This quick start guide will instruct users to quickly and easily install the MeritPhone-ML210A, and operate it with a soft-switch platform. ML210A is VOIP terminal with two RJ45 connectors.

This product is designed with U.S. FCC standards, and is approved upon FCC testing.

2. Package Contents

- Handset
- Handset Cord
- DC-12V Power Adapter (Input selection: 110V、220V、110/220V)
- User's Manual
- Ethernet Cable

3. Component Illustration

Figure 1——Front View

- 1~9 Keys number keys
- * Key call out
- # Key call out

Function Keys:

- VOL+ volume increase
- VOL- volume decrease
- HOLD call keeping
- PHONEBOOK phone book
- CALL call out
- CLEAR clear
- REDIAL redial
- SPEAKER hand free

Menu Keys:

- ESC exit
- UP page up
- DOWN page down
- SET/OK set/ok



Figure 2—Side View

- 1—RJ-45 input port (LAN)
- 2—RJ-45 output port (PC)
- 3—Power Port



4. Character Strings

Corresponding Keys:

Key	Characters
1	., ' ? ! " 1 -
2	a b c 2 A B C 2
3	d e f 3 D E F 3
4	g h i 4 G H I 4
5	j k l 5 J K L 5
6	m n o 6 M N O 6
7	p q r s 7 P Q R S 7
8	t u v 8 T U V 8
9	w x y z 9 W X Y Z 9
0	() @ 0 - * &
*	*

'*' can be used as radix point if only numbers are to be input.

If you need to enter a character, using the keys to enter the character you want. Press the same key repeatedly will change the character. If you need to enter the same character consecutively, press '#' to confirm the last entry, and then press again to enter the next entry.

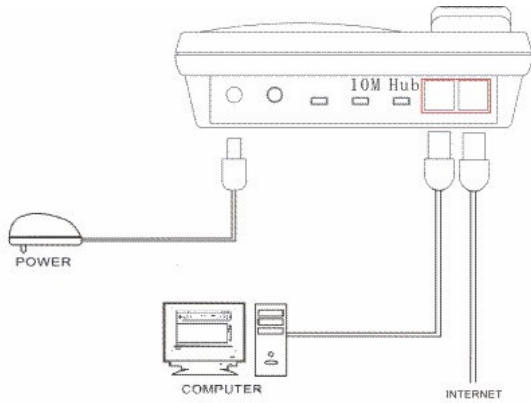
Example: To enter 'aJtU', press '2555558#88888#'.

5. Installation and Settings

5.1 Installation

- (1) Place your MeritPhone-ML210A near a power outlet.
- (2) Plug the RJ-45 connector of the Ethernet 10/100Base-T cable into the MeritPhone-ML210A's side input port①, and plug the other side into a hub or switch, or wall/ground socket of the structuring cable.
- (3) Plug the accessory power-adaptor into the power outlet, and then connect the output-plug to power-port ③ of the MeritPhone-ML210A.

NOTE: If the network is without a HUB, the MeritPhone-ML210A should be connected with other Ethernet equipment (such as XDSL adapter, CABLE modem or PC) by crossing-over cable. Otherwise the direct-connecting cable is applied.



The phone should now be connected as in the diagram above.

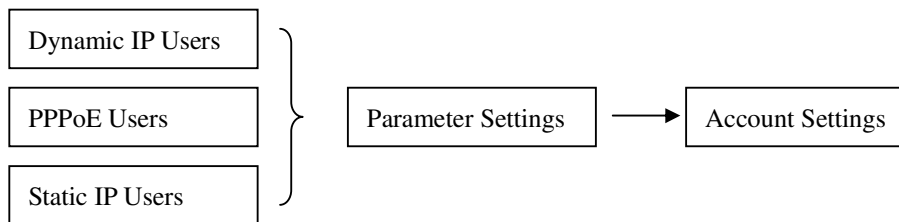
Within 30 seconds of being connected to the Internet your MeritPhone should display “Ready For Calls”. If it does, then no other configuration is necessary – you can make calls. If the phone continues to say “Please Wait” or “Wait Logon” for more than 30 seconds then it has not been able to connect to the Internet – consult the Problems and Solutions section of this guide.

If your service provider has instructed you to configure the MeritPhone you will need to consult the Setting Instructions below.

5.2 Settings

5.2.1 Setting Steps

If your Meritline MeritPhone account has been set up, please skip the section ‘5.2.5 Account settings’.



5.2.2 Dynamic IP Users

If you need to configure DNS IP

Press SET/OK to enter the submenu and select ‘DNS1’ by pressing UP and DOWN.

Press SET/OK to enter setting menu and configure your DNS2.

If a spare DNS is requested, press SET/OK to enter the submenu and select DNS2 by pressing UP and DOWN; or you may press SET/OK to enter setting menu and configure your DNS2.

If the account information has been set up, you may start using as soon as you plug in.

5.2.3 PPPoE Users’ Parameter Settings

Press ‘SET/OK’ to enter the main menu, and use ‘UP’ and ‘DOWN’ to scroll and select ‘TCP/IP Settings’.

A. Do not use DHCP

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Use DHCP'.

Press 'SET/OK' to enter settings. Input 0 to disable DHCP.

B. Use PPPoE

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Use PPPoE'.

Press 'SET/OK' to enter settings. Input 1 to enable PPPoE.

C. Set PPPoE account

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'PPP Identity'.

Press 'SET/OK' to enter settings. Continue pressing a number key to change the letter, and press the '#' key to confirm it.

D. Set PPPoE Password

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'PPP Identity'.

Press 'SET/OK' to enter settings. Continue pressing a number key to change the letter, and press the '#' key to confirm it.

E. If DNS IP is requested

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'DNS1'.

Press 'SET/OK' to enter settings and configure your 'DNS1'.

If a spare DNS is requested, press SET/OK to enter the submenu and select DNS2 by pressing UP and DOWN; or you may press SET/OK to enter setting menu and configure your DNS2.

NOTE: When you finish setting up, press 'SET/OK' to confirm or 'ESC' to cancel. If you input your setting accordingly, the LCD will display the new setting. Otherwise, the LCD will display 'Input Invalid'; press ESC to return to your previous setting.

5.2.4 Static IP Users' Parameter Settings

Press 'SET/OK' to enter the main menu, and use 'UP' and 'DOWN' to scroll and select 'TCP/IP Settings'.

A. Do not use DHCP

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Use DHCP'.

Press 'SET/OK' to enter settings. Input 0 to disable DHCP.

B. Set Local IP

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Local IP'.

Press 'SET/OK' to enter settings. Input the IP address. Use the '*' key for the dot.

C. Set subnet mask

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Subnet Mask'.

Press 'SET/OK' to enter settings. Input the IP address. Use the '*' key for the dot.

D. Set Router IP

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Router IP'.

Press 'SET/OK' to enter settings. Input the IP address. Use '*' key for the dot.

E. Set DNS IP

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select DNS IP.

Press 'SET/OK' to enter settings. Input the IP address. Use '*' key for the dot.

If a spare DNS is requested, press SET/OK to enter the submenu and select DNS2 by pressing UP and DOWN; or you may press SET/OK to enter setting menu and configure your DNS2.

NOTE: When you finish set- up, press 'SET/OK' to confirm or 'ESC' to cancel. If you input your setting accordingly, the LCD will display the new setting. Otherwise, the LCD will display 'Input Invalid'; press ESC to return to your previous setting.

5.2.5 Account Settings

Press 'SET/OK' to the main menu, use 'UP' and 'DOWN' to select 'Account Settings'.

A. Set phone number

Press 'SET/OK' to the submenu, use 'UP' and 'DOWN' to select 'Phone Number'.

Press 'SET/OK', and then, use 0~9 to input the phone number

B. Set user ID

Press 'SET/OK' to the submenu, use 'UP' and 'DOWN' to select 'User Identity'.

Press 'SET/OK', and then, use 0~9 to input the user ID. Continuous press a number key to change the letter and press '#' key to confirm it.

C. Set user password

Press 'SET/OK' to the submenu, use 'UP' and 'DOWN' to select 'User Password'.

Press 'SET/OK', and then, use 0~9 to input the user password. Continuous press a number key to change the letter and press '#' key to confirm it.

6. Major Service Features

- MeritPhone calling MeritPhone
- MeritPhone calling regular phone
- Call Forwarding
- Regular phone to calling MeritPhone (For service areas please refer to the www.meritcall.com)
- MeritPhone conferencing

6.1 MeritPhone Calling MeritPhone

Every MeritPhone will be assigned a MeritPhone number. MeritPhone users can directly call each other dialing the assigned phone number followed by '#' key.

Example: When the user with the number 6667777 calling another user with the number 7778888, the 6667777 user simply picks up the MeritPhone handset, and dials 7778888 and then press “#” key.

6.2 MeritPhone Calling Regular Phone

Every MeritPhone can call any regular or mobile phone anywhere, anytime in the world. Please just follow with the MeritPhone simple dialing rule.

To call a U.S or Canada number, please first dial 1, area code and then the telephone number followed by “#” key.

Example 1: MeritPhone user calling a U.S/Canada regular number 213-000-0000.

Pick up the MeritPhone handset, dial 12130000000 followed by “#” key.

To call other countries' regular numbers, please first dial 011, then the country code (no '0' as prefix), and dial the telephone followed by “#” key.

Example 2: MeritPhone user calling a China regular number 0755-88889999.

Pick up the MeritPhone handset, dial 0118675588889999 followed by “#” key.

6.3 Call Forwarding

Every MeritPhone has call forwarding capability, when the user is not online the incoming call can be

forwarded to a preset telephone number.

Settings:

Go to www.meritcall.com, log into “My account” to set the forwarding number. The number must accord with MeritCall dialing rule.

User Information

User ID	lyx77
IP Phone Number	7777777
Balance(US\$)	222.00
Status	Normal
Payment Option	Prepay

Company	<input type="text" value="234"/>
Contact Telephone Number	<input type="text" value="132132132"/>
Email	<input type="text" value="65465@ncuid.com"/>
Call forwarding number	<input type="text" value="16664747"/>
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

NOTE: Call forwarding number must be a PSTN number, with more than 7 digits.

Example 1: To call a U.S or Canada number, please first dial 1, then the telephone number.

MeritPhone user wants to make a call forward to 213-000-0000. MeritPhone user can fill in 12130000000.

Example 2: To call other countries' regular numbers, please first dial 011, then the country code (no '0' as prefix), and dial the telephone at last.

MeritPhone user wants to make a call forward to 0755-88889999. MeritPhone user can fill in 0118675588889999.

6.4 Regular Phone calling MeritPhone

This is an optional service. Only areas that provide MeritPhone access numbers allow calls from a regular phone to MeritPhone, for detail please refer to 'Access Code Availability' on the www.meritcall.com.

This service is categorized into two types: Once Dialing and Twice Dialing.

Once Dialing: Users with this service will have their MeritPhone numbers bundled with a regular local phone number of a certain place, and people will only have dial that bundled local phone number to reach the subscribing MeritPhone user.

Example: A Mexico MeritPhone user 6667777 bundles with a U.S Los Angeles regular phone number 1-213-000-0000, then friends in the U.S just have to dial 1-213-000-0000 to connect with the 6667777 MeritPhone.

Twice Dialing: People just have to dial any access number listed on the www.meritcall.com, and then dial the MeritPhone number, and they will reach that MeritPhone user.

Examples: A Mexico MeritPhone user 6667777 is subscribed to this service, and its Los Angeles access code is 1-213-000-0000. People only just need to dial 1-213-000-0000, and then dial 6667777 plus “#” key to reach that MeritPhone user in Mexico.

6.5 MeritPhone Conferencing

How it Works

Once the MeritPhone conferencing call feature has been set-up on your account, you can initiate a conference with up to 24 different parties simultaneously. You will act as the “Host” and join “participants” into the call that you initiate.

Setting yourself up for conference calling now

- Go to the “My Account” interface

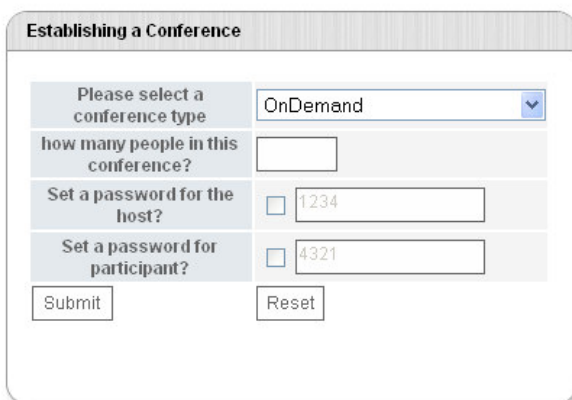


The screenshot shows a login form titled "Login". It contains three input fields: "IP Phone Num", "Password", and a field for a security code. The security code field is labeled "Type in the numbers to the right of this box." and has the number "68527" displayed to its right. Below the input fields are "Submit" and "Reset" buttons. At the bottom, there is a link: "Please click here to retrieve your password."

- Enter your IP Phone Number, Password and the digits displayed then click Submit.

My Home | My Rates | My Bill | My Call Record | My Payment | My Password | My Language | My Conference Call | Log Out

- Click “My Conference Call” in the grey menu bar to view the Conference Call Setup:



The screenshot shows a form titled "Establishing a Conference". It has four rows of configuration options:

- Row 1: "Please select a conference type" with a dropdown menu showing "OnDemand".
- Row 2: "how many people in this conference?" with an empty input field.
- Row 3: "Set a password for the host?" with a checkbox and an input field containing "1234".
- Row 4: "Set a password for participant?" with a checkbox and an input field containing "4321".

At the bottom of the form are "Submit" and "Reset" buttons.

- Enter the maximum number of people you will likely be conferencing with at one time (not more than 24).

- In some circumstances the Host and Participant will require a password to be involved in the conference.
- Click on the check boxes to select the defaults of 1234 and 4321 or change them to something else you will remember. (If you do not click on the check boxes a random password will be chosen and advised to you.)
- Click Submit and your conference feature will be installed.

How to initiate a conference call and invite others

You, as the Host, enter the conference and bring the other participants into the call:

Steps in Detail:

- A. Dial access number, 9090001 followed by # from your MeritPhone.
- B. You will hear a beep tone confirming that you have entered the conference room. Now press # to invite a Participant to the conference room. After hearing the voice prompt 'Please enter the destination phone number followed by the pound key', dial the phone number of the person you want to bring into the conference and then press #. After the Participant answers, press # to add this participant to the conference. Alternatively if you dialed the wrong number or the Participant does not answer just press the "*" key and you will be returned to the conference without the Participant.
- C. To invite another participant, press #, wait for prompt, dial next participant's phone no. followed by #, wait for answer and then press # to join them into conference. Repeat this process to invite more participants into the conference. Remember you can use * if you want to return to the conference without the Participant.

Note: You can conference other MeritPhone users by simply dialing their 7 digits MeritPhone number followed by #. For Participants without MeritPhone just dial the international dialing prefix followed by their regular telephone number and then press #.

How to have participants to enter the conference room themselves

Any participant that has a MeritPhone can dial, 9090002 to enter an active conference him or herself. However the conference call needs to have already been initiated by the Host before the participant can join.

Steps in Detail:

- A. The Host must setup the Participant Password on the "My Account" web site. The Host must then tell the Participants the conference ID (7 digit phone number of Host) and the Participant password.
- B. Host initiates the Conference by dialing, 9090001#.
- C. Participant dials 9090002#. Participant will hear the prompt "To join a conference, press 1. To listen to a conference recording, press 2. To access your messages, press 3. To leave a voice mail, press the * key. Participant should then press 1 and will hear the prompt "Please enter conference ID". Participant should then enter the conference ID (Host's Phone #) followed by #. Finally Participant will hear the prompt "Please enter the conference password followed by the # key" and should then enter the Participant password followed by # to enter the conference.
- D. Other participants can follow the same process as in C. to join the conference.

Note: Participants who only have a regular phone and are located in USA, Hong Kong or Taiwan can enter the conference from their regular phone by dialing the local access number (contact us for details) and once connected can dial 9090002# as above. Otherwise the Host can only bring regular phone users into the conference.

7. Functions

7.1 Redial

After the phone is hung up, pick up the handset, and press 'REDIAL' to dial the last dialed number.

7.2 Adjusting Handset and Speaker Volumes

During the phone call, press 'VOL+' to increase the volume and press 'VOL-' to lower the volume.

NOTE: Volume is reset to default volume when the phone is turned off or restarted

7.3 Review Incoming and Outgoing Call Information

Press 'SET/OK' to enter the main menu, and use 'UP' and 'DOWN' to scroll and select 'PhBook Settings' to view incoming and dialed calls information.

7.3.1 Review Missed Calls

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Missed Call'.

Press 'SET/OK' to enter, and use 'UP' and 'DOWN' to select the phone number. Press 'CALL' to launch.

When the missed number is displayed on the screen, press SET/OK and then input contact person information, press SET/OK to save this number.

7.3.2 Review Received Calls

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Received Calls'.

Press 'SET/OK' to enter, and use 'UP' and 'DOWN' to select the phone number. Press 'CALL' to launch.

You could check your call duration.

When the received call number is displayed on the screen, press SET/OK and then input contact person information, press SET/OK to save this number.

7.3.3 Review Dialed Number

Press 'SET/OK' to enter the submenu, and use 'UP' and 'DOWN' to select 'Dialed Number'.

Press 'SET/OK' to enter, and use 'UP' and 'DOWN' to select the phone number. Press 'CALL' to launch

You could check your call duration.

Note: For Missed calls, Received calls and Dialed number, you can at most store 80 pieces records under each menu. When the record has reached this limit, the earliest records would be removed automatically. In case of power break or system reboot, all records would be lost.

7.4 Use PhoneBook

Press SET/OK to the main menu and use UP and DOWN to select 'PhBook Settings'

7.4.1 Query PhoneBook

Press SET/OK to the submenu and use UP and DOWN to select 'Query PhoneBook'.

Press SET/OK and use UP and DOWN to do query.

7.4.2 Add new numbers

Press SET/OK to the submenu and use UP and DOWN to select 'Add PhoneNumber'.

Press SET/OK to add new numbers.

Note: The limit is 112 pieces records.

7.4.3 Delete Phone Number in the PhoneBook

A prompt to delete your phone number would pop up if you press SET/OK after entering your PhoneBook.

Press SET/OK to add new numbers.

7.5 Hold

Press HOLD to block the voice.

7.6 Back Space

If entered a wrong number or letter, press the 'CLEAR' button to delete the last entry.

7.7 Hand Free Function

Press the 'SPEAKER' button can enable hand free conversation.

7.8 Upgrade

Press 'SET/OK' to enter the main menu, and use 'UP' and 'DOWN' to scroll and select 'Advcd Settings'.

Press SET/OK to the submenu and use UP and DOWN to select 'Upgrade Now!'.

Press SET/OK to upgrade.

NOTE: If no notice, please do not change the contents of 'Upgrade Now!'.

7.9 AbbrDialPlan

Press 'SET/OK' to enter the main menu, and use 'UP' and 'DOWN' to scroll and select 'Advcd Settings'.

7.9.1 Use AbbrDialPlan

Press SET/OK to the submenu and use UP and DOWN to select 'Use AbbrDialPlan';

Press SET/OK and then input 1.

7.9.2 Cancel AbbrDialPlan

Press SET/OK to the submenu and use UP and DOWN to select 'Use AbbrDialPlan';

Press SET/OK and then input 0.

7.9.3 Query AbbrDial

Press SET/OK to the submenu and use UP and DOWN to select 'Query AbbrDial';

Press SET/OK and then use UP and DOWN to check. There are altogether 10 pieces records in AbbrDial.

[ShortNumber form 0 to 9, LongNumber is what the specific short number stands for.]

7.9.4 Add AbbrDialPlan

Press SET/OK to the submenu and use UP and DOWN to select 'Add AbbrDialPlan'.

Press SET/OK to add AbbrDialPlan.

7.9.5 Delete AbbrDialPlan

Press SET/OK to the submenu and use UP and DOWN to select 'Query AbbrDial';

Press SET/OK and use UP and DOWN to choose the particular piece of record you want to delete, press SET/OK to delete. Press ESC to cancel.

8. Frequent Problems and Answer

Problem	Possible Cause	Solution
Low Voice Quality	Your network connection bandwidths is less than 30Kbps	Please use the R-100 under the best network and connection conditions possible.
	Unstable network connection: Network delay > 500ms or network trembling > 100ms or network packet loss > 10%	
Can not log in to server (message 'Please Wait' displayed)	Login is obstructed by firewall	Please contact the MeritPhone customer center at www.meritcall.com .
	You are using a proxy network which is blocking the login	

	You did not enter the correct account password or phone number	Please reset your username, password and phone number according to your original account information. If you have changed password, please contact the MeritPhone customer service center at www.meritcall.com
	You did not enter the correct server address	If you have changed the server login settings, please contact the MeritPhone customer service center at www.meritcall.com

9. Others

9.1 System Characteristics

- Program memory—1024KB Flash memory
- Ethernet interface—One or two RJ45 connector compatible with IEEE 802.3 10 Base-T
- Keypad—besides the standard keys 0-9,*,#, there are another 12 function keys for operation and setting of MeritPhone-ML1000
- Status indicator—LED to indicate working status and LCD light
- Hand free function—full duplex speakerphone, dial-tone, speaker and loudspeaker volume can be digitally adjusted independently
- AC/DC adapter— input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Log on Soft-switch
- Automatic find Soft-switch
- Support DHCP: Automatically obtain local IP, subnet mask, router IP
- Support PPPoE
- Voice active detection
- Comfortable noise generation
- 16ms echo cancellation
- Dynamic buffer management—minimize effect to voice quality caused by audio delay jitter

9.2 Standard and Protocol

- IEEE 802.3 10 Base-T
- G.711A, G.711 μ , G.723.1 5.3K/6.3 Kbps and G.729 audio codec
- H.323
- Abbreviation dial plan
- TCP/IP: Internet Transport and Control Protocol
- RTP: Real-time Transport Protocol
- RTCP: Real-time Control Protocol
- G.723.1、 G.729 VAD/CNG economical bandwidth
- G.165 16ms Echo cancel
- DTMF: DTMF Tone Generate and Detection
- DHCP: Dynamic Host Configuration Protocol
- DNS: Domain Name Server
- FTP File Transfer Protocol
- NTS: Network Time service
- HTTP: Hyper Text Transfer protocol

- Build in H323 proxy support

9.3 Specification

- 222 x 154 x 60 mm (L x W x H)

9.4 Electric Characteristics

- Voltage: 12V DC, 500mA
- Power adapter: AD/DC input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Network interface: IEEE 802.3 10 Base-T
- EMC: FCC Part15 CLASS B

9.5 Operational Environment

- Operational temperature: 0 to 50° C (32° to 122° F)
- Storage temperature: -30° to 65° C (-22° to 149° F)
- Humidity: 10% to 90% no dew

9.6 Recommend usage net condition

- Delay: Less than 400ms
- Jitter: Less than 100ms
- Package lost percent: Less than 10%
- Bandwidth: More than 30Kbps

Safety Warning: Please do not place this product under fire and high temperature. Avoid heavy impact, and do not leave the product in rainy or highly humid environments!