AC1200 Dual-Band Wireless LAN Repeater

User Manual

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Federal Communication Commission Interference Statement

FCC Part 15

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1. Reorient or relocate the receiving antenna.
- 2. Increase the separation between the equipment and receiver.
- 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4. Consult the dealer or an experienced radio technician for help.

FCC Caution

This equipment must be installed and operated in accordance with provided instructions and a minimum 20 cm spacing must be provided between computer mounted antenna and person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The equipment version marketed in US is restricted to usage of the channels 1-11 only.

For operation within $5.15 \sim 5.25$ GHz frequency range, it is restricted to indoor environment.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of March 9, 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

EU Countries Intended for Use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

EU Countries Not intended for use

None.

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The setup images used in this manual are for reference only. The contents of these images may vary according to firmware version. The official image contents are based on the newest firmware version.

Chapter I : Product Information

1-1 Introduction and safety information

Thank you for purchasing this 802.11ac/a/b/g/n wireless repeater!

The compact design with power built-in allows you to install this repeater everywhere, and still providing excellent network performance to extend the Wi-Fi signal and wireless coverage.

Other features of this wireless repeater including:

- Extend the wireless signal inside your home or office.
- Compact design while maintaining excellent network performance.
- Support 802.11a/b/g/n and 802.11ac standards, it can provide up to 300Mbps for 2.4Ghz on 11n mode and 866Mbps for 5Ghz on 11ac mode.
- LED signal indicator to easily realize the best location placement to extend WiFi signal and secure better wireless performance.
- The device can support Repeater mode, AP mode and AP client mode
- Hardware switch button for user to change operation mode quickly without logging into web firmware.
- WPS (Wi-Fi Protected Setup) hardware button for easy installation and secure wireless security.

1-2 Safety Information

In order to keep the safety of users and your properties, please follow the following safety instructions:

1. This wireless repeater is designed for indoor use only. DO NOT expose this device to direct sun light, rain, or snow.

2. DO NOT put this at or near hot or humid places, like kitchen or bathroom. Also, do not left this Wireless repeater in the car in summer.

3. Do not allow kids to put any small parts of this wireless repeater in their mouth, and it could cause serious injury or could be fatal. If they throw this wireless repeater, it will be damaged. PLEASE KEEP THIS WIRELESS REPEATER OUT THE REACH OF CHILDREN!

4. This Wireless repeater will become hot when being used for long time (*This is normal and is not a malfunction*). DO NOT put the Wireless repeater on a paper, cloth, or other flammable objects after the Wireless repeater has been used for a long time.

5. There's no user-serviceable part inside the Wireless repeater. If you found that the Wireless repeater is not working properly, please contact your dealer of purchase and ask for help. DO NOT disassemble the Wireless repeater by yourself, warranty will be void.

6. If the Wireless repeater falls into water, DO NOT USE IT AGAIN BEFORE YOU SEND THE CARD TO THE DEALER OF PURCHASE FOR INSPECTION.

1-3 System Requirements

- Wireless network card which is compatible with 802.11a/b/g/n and 802.11 ac wireless network standard.
- Windows XP, Windows 7, Windows 8 or MAC OS or Linux operating system.
- CD-ROM drive

1-4 Package Contents

Before you start to use this wireless repeater, please check if there's anything missing in the package, and contact your dealer of purchase to claim for missing items:

D Wireless Repeater (1 pcs)	1
Quick Installation Guide User Manual CDROM (1 pcs)	2



1-5 Familiar with your new wireless repeater



Interface Descriptions

Item	Item Name	Description
Α	LAN	10/100/1000M Ethernet LAN Port with
		Auto-MDI/MDI-X. Connecting to computer,
		switch or hub for local network sharing.
В	Reset / WPS	Reset the repeater to factory default settings
		(clear all settings) or start WPS function.
		Press this button and hold for 10 seconds to
		restore all settings to factory defaults, and
		press this button for less than 5 seconds to
		start WPS function.
C	AP/Repeater/Client	Switch the button to change operating mode
		to Access Point or Repeater or Client mode.

LED Definitions



LED	Color	LED Status	Description
		Steady ON	Good signal reception (signal strength 100%~50%).
Signal (G)	Amber	Blinking	Normal signal reception Slow blinking (50%~25%) Poor signal reception Quick blinking (<25%)
		Off	Out of signal or disconnected/ or LED off mode.
		Steady ON	1. Good signal (RSSI 100%~50%)
Signal Status (2.4G)	Green	Blinking	 Poor signal Slow blinking (RSSI <50%~25%) Quick blinking (RSSI <25%)
		Off	1. No signal/ or LED off mode.
WLAN	Green	Blinking	Connect to wireless Router/or AP, wireless function is active (transferring or receiving data)
		Off	Wireless network is switched off/ or LED off mode.
Power	Green	Steady ON	Power is turned on. In LED off mode. (except power LED is on, other LEDs are off *)

			*If user selects to enable "LED OFF mode", power LED On/Off depends on user's selection, user can select to leave only power LED on or turn off all LEDs including this power LED.
		Slow Blinking	Ready for "Reset to factory default", power LED is blinking.
		Off	power is turned off.
WPS	Green	Blinking	WPS is in progress of waiting another WPS device's connection, blinking (0.2 second on, 0.1 second off) for 2 minutes.
		Quick blinking	WPS error, blinking (0.1 second on, 0.1 second off)
		Off	NO WPS is in progress/ LED off mode
		Steady ON	LAN port is connected.
LAN	Green	Blinking	LAN port is active (transferring or receiving data).
		Off	LAN port is not connected/ or LED off mode

CHAPTER II : Repeater mode

Repeater mode is your Wi-Fi range extender!

It can extend your wireless signal and coverage and help you to solve wireless dead zone problem.

This chapter will show you how to quickly install this device by using quick setup and show you the each detailed setting on web UI page of repeater mode.

2-1 Repeater mode Quick Installation Guide

For the first time setup and easy installation, you can move this device close to the Wireless Broadband Router or Access point you wish to connect, after installation done and wireless connection is built, you can move this repeater device to the place you wish to use.

Switch mode selector to 'Repeater'.



Insert this device into power outlet on the wall, and you should see *Power*' LED light up in few seconds. If not, please check if the power outlet you're using is working.



You can build wireless connection via 'Hardware WPS button' or 'Software web browser'.

If your broadband router or access point also supports 'WPS button', we recommend you to use WPS button to establish connection, it is the fast and secure way without computer.

Using WPS button	- please go to section 2-1-1
Using Web browser	- please go to section 2-1-2

2-1-1 Hardware WPS button setup

1. Press and hold *WPS button* on repeater for 2 seconds, '*WPS*' LED will start flashing.



2. Press WPS button on the wireless broadband router or access point you wish to connect within 2 minutes.



NOTE: this WPS button position on access point is for example, different device may have different WPS button position.

TIP: If the access point you wish to connect does not have hardware WPS button, you can also use its web configuration menu's WPS function to establish connection. Or you can login this repeater web UI to have quick setup (detailed setup refers to '2-1-2 Web browser quick setup' manual)

3. If WPS connection is successfully established, the repeater will reboot immediately to make your setting effect ; if 'WPS' LED flashes fast, there's something error, please wait for 2 minutes until 'WPS' LED off, and try from step(1) again.

When quick installation is successfully done, 'Signal" LED will turn on.



4. Please move repeater to the place you wish to use (a better place will be the center of your house) and insert this repeater into power outlet on the wall, the wireless connection will be established automatically.

You can check 'Signal' LED status to understand signal reception level.

Steady light: Excellent, Flash: Good, Fast flash: poor.

If the Signal LED is off, it means this place is out of wireless signal of your wireless broadband router or access point, please move this repeater closer to broadband router until repeater device can receive signal from broadband router and extend its signal.

The quick installation setup is completely done, you can refer to '2-2 Repeater mode Advanced Settings' to login in web UI for other advanced settings.

2-1-2 Web browser quick setup

Before you can connect to the repeater and start configuration procedures, your computer must be able to get an IP address automatically (use dynamic IP address). If it's set to use static IP address, or you're unsure, please refer to '*Chapter X: Appendix, 5-1 Configuring TCP/IP on PC*' to set your computer to use dynamic IP address.

1. Use Ethernet cable to connect your computer's Ethernet port and wireless repeater's Ethernet port.



Or use your computer's wireless configuration utility to search for

access point named '**repeater0003**' and get connected. (The default SSID of this repeater device is '**repeater0003**', 0003 is an example, it is *the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.*)



NOTE: this default SSID 'repeater0003" is for example, different device may have different last 4 digits.

If you are using wireless connection in Windows 7 and encountered the following screen, please click "<u>Connect the network without</u> <u>setting it up</u>" on the blue line then you can successfully link to repeater. Do NOT click "OK ".

In case you click 'OK', Windows 7 will ask for security key, please click "Cancel" to back to this page.



NOTE: this 'repeater0003" is for example, 0003 is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.) You can also input default IP

'http://192.168.2.254 instead of repeaterxxxx if your PC is not Windows OS.

2. Open web browser, it will redirect to web UI setting page. (or you can input the default IP address 'http://repeater0003' in address bar)



3. Wireless repeater will prompt you to input username and password. Default username is 'admin' and password is '1234'. Click 'OK' button to continue.

Windows Security		×
The server 192.168.2 password.	2.254 at Default: admin/1234 requires a username a	nd
Warning: This serve sent in an insecure connection).	er is requesting that your username and password b manner (basic authentication without a secure	e
	ser name assword Remember my credentials	× •
	OK Canc	el

4. All wireless access points nearby will be displayed on the list. Select one access point you want to connect and click 'Next' button to continue. If the access point you wish to connect does not appear here, please click 'Refresh' until it appears on the list, or try to move wireless repeater closer to the access point you wish to connect.

0	5G	HQ_5G	44	NONE	13
0	5G	HQ_5G	44	NONE	34
0	5G	HQ_5G	44	NONE	31
0	5G	HQ_5G	52	WPA2PSK	0
0	5G	OBM-SMB-5G	64	WPA2PSK	13
0	5G	IOBM-SMB-5G	64	WPA2PSK	5
0	5G	HQ_5G	149	WPA2PSK	29
0		HQ_5G	149	WPA2PSK	24
۲	5G	Xiaomi_F343_5G	153	WPA2PSK	100
	2.4G 🗸		Setup repeate	r manually	

If you want to connect to a hidden access point, you can select "**Setup repeater manually**" to input wireless setting manually.

					-
0	5G	OBM-Celeno-5G	52	WPA2PSK	5
0	5G	OBM-SMB-5G	64	WPA2PSK	2
0	5G	IOBM-SMB-5G	64	WPA2PSK	2
0	5G	OBM-6208AC-5G	149	WPA2PSK	13
0	5G	!OBM-6208AC-5G	149	WPA2PSK	18
0	5G	Xiaomi_F343_5G	153	WPA2PSK	57
۲	2.4G 🗸		Setup repeate	r manually	
					Refresh

WLAN 2.4G settings		
Please setup your Device.		
SSID :		
Encryption : Disable		
Channel : 11 🗸		
	Back	Next

5. You'll be prompted to input access point's wireless security key, input it in 'KEY' field and click 'Next' to continue.

ecurity				
lease input wireless	security key of vo	ur connected Acce	ss Point.	
ioneo mpar moreo	coccanty noy or yo			
	KEY :	wxyz6789		

6. It will start to verify the wireless key with your associated access point and show you result within 20 seconds. Please follow the instruction to continue setup.

Key is verifying, please wait for result within 20 seconeds

7. When key is correct, this Range Extender will display the information for you, you can press "Yes" button to setup another band, or press "No" to the bridge setup



8. When you done to setup dual band success (or setup single band manually), you will see the page on the below, press "Next" to continue.



9. After settings successfully, wireless repeater will display the connection information for you. Please press "APPLY" to end the setting or press "Back" to return the setup page.

Save settings successfully!
Please press APPLY button to restart the system to make the changes take effect.
2.4G Setting Connected Access Point SSID : Xiaomi_F343
Device SSID : Xiaomi_F343_2.4Gre
Security : WPA pre-shared key
5G Setting Device SSID : Xiaomi_F343_5G_5Gre
Security : WPA pre-shared key
Bridge to 2.4G and 5G Wireless connection:Enabled
Add the URL to your bookmark(my favorite list): http://repeater.setup Save v
(we recommend you to save it for quick access to the Web setting page next time)
(Supports IE and Firefox only. Please add the access key to the bookmark manually if you use other browsers)
Back APPLY

'Device SSID' will be the same of the access point's SSID you connected in this step. You can change it to a different SSID if you want.

Note: we recommend you not to change this SSID, it can have the less configuration setting between this repeater and your existing notebook/PC or other wireless client devices.

We recommend you to copy your 'firmware URL' (for example: <u>http://repeater0003</u>) to you bookmark for quickly login into setting page next time.

NOTE: this 'repeater0003" is for example, 0003 is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.)

If you use other browser rather than IE and Firefox browser, you have to copy this firmware URL and add it to bookmark manually.

10. Please wait for few seconds for wireless repeater to reboot.



11. After reboot complete, you can close browser and use your computer to connect to this repeater by the SSID you set in last step and start using network.

NOTE: After the wireless connection of this repeater and wireless broadband router is built, repeater is DHCP client and will get IP address from broadband router automatically. If you want to login Web UI of repeater, please refer to '2-2 Repeater mode Advanced Settings' for more functions or learn how to login web UI again.

2-2 Repeater mode Advanced Settings

2-2-1 Connect to web configuration menu

Please open web browser (IE, firefox, chrome etc.) and find '300N Wireless Repeaterxxxx Web UI' firmware link on your bookmark list if you have agreed to save it when you installed this device first time. Or you can directly input 'http://repeaterxxxx', (xxxx is the last 4 digits of repeater device MAC address, you can check this number on device label) in address bar then press ENTER key:



NOTE: The default IP of repeater mode is 192.168.2.253, you can also input 'http://192.168.2.253 instead of repeaterxxxx if your PC is not Windows OS.

Wireless repeater will prompt you to input username and password. Default username is '**admin**' and password is '**1234**'. Click 'OK' button to continue.

Windows Security
The server 192.168.2.254 at Default: admin/1234 requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection)
User name
Password
OK Cancel

You should be able to see the configuration manual of Wireless repeater in very short time:

Home	Status and Informatio	n
Ouick Setus	Visu can infer to Inference others	ation to check the MAC address, metting code, batwais service and
dince acmb	its network configuration status of	I this device
WPS Setting		
Advanced Settings	System	and the second se
	Uptime	Eday Oh Dm 426
	Hardware Version	Rev. A
	Rontime Code Verson	v1.10
	Made	Universal Repeater
	Wirebess 2.4G Configuration	
	ESSID	Xaomi_F343_2.4Gre
	Channel Number	3
	Security	WPA-shared key
	BISSID(MAC)	00 161666 20 00
	Associated Clients	8 Dev Acres Classe
	State	Connected
	Window SG Configuration	
	ESSID	Xiaomi_F343_6Q_5Qre
	Charinel Number	163
	Security	WPA-shared key
	BBBID(MAC)	00 16 1668 20-04
	Associated Chenty	B They Active Cleans
	State	Cornected
	LAN Configuration	
	iP Adidress	192 168 31 208
	Subnet Mask	265.255.255.0
	Default Gateway	192 168 31 1
	MAC Address	00.1E1E68.20.00

Detailed operation instructions will be given to following manual.

2-2-2 Home

The status and information of this wireless repeater will be displayed here. To access 'Home' menu, please click 'Home' on the left.



You should see the screen looks like this (the contents will vary depending on your actual setting):

System	
Uptime	Oday On Om 42s
Hardware Version	Rev. A
Runtime Code Version	v1.10
Mode	Universal Repeater
Wireless 2.4G Configuration	
£55/D	Xiacmi_F343_2.4Gre
Channel Number	1
Security	WPA-shared key
BSSID(MAC)	00:161668-20-00
Associated Clients	0 Show Active Climits
State	Connected
Wireless 5G Configuration	
ESSID	Xiaomi_F343_5G_5Ges
Channel Number	153

You can click 'Show Active Clients' button to show all connected wireless clients.

Please note: By clicking 'Show Active Clients' button, a new browser window will appear. If your browser prevents pop-up window from appearing, please disable this function or you will not be able to use 'Show Client' function.

2-2-3 WPS Setting

You can configure WPS (Wi-Fi Protected Setup) here. By using WPS, you can establish secure connection between this wireless repeater with other wireless devices which also support WPS in a fast and secure manner.

To access 'WPS Setting' menu, click 'WPS Settings' on the left.



The following setup page will appear:



The description of every setup item is listed as follow:

Item	Description
WPS Status	Shows the security setting status of WPS. If the
	wireless security (encryption) function of this
	device is properly set, you'll see 'Configured'
	message here. If wireless security function has
	not been set, you'll see 'unConfigured'.
Self PinCode	Here displays an 8-digit number for WPS
	PIN-style configuration. When other
	WPS-compatible device wish to connect to this
	wireless repeater and supports Self-PIN type
	WPS, input this number to the wireless device to
	establish connection.
SSID	Shows the SSID of this wireless repeater.
Authentication	Shows the authentication mode of this wireless
Mode	repeater.
Passphrase Key	Here shows asterisks (*) to indicate wireless
	security is properly set.
WPS Setting	You can select which band(2.4G or 5G) you want
	to build wireless connection via 'Start PBC'
	button. Default is '2.4G'.
Config Mode	There are 'Registrar' and 'Enrollee' modes for the
	WPS connection. When 'Registrar' is enabled,
	the wireless clients will follow the repeater's
	wireless settings for WPS connection. When
	'Enrollee' mode is enabled, the repeater will
	follow the wireless settings of wireless router for
	WPS connection.
Start PBC	Click 'Start PBC' to start Push-Button style WPS
	setup procedure. This wireless repeater will wait
	for WPS requests from another wireless device
	for 2 minutes.
	The 'WPS' LED on the wireless repeater will be
	blinking for 2 minutes when this wireless repeater
	is waiting for incoming WPS request.
Start PIN	Please input the PIN code of the wireless client
	you wish to connect, and click 'Start PIN' button.

The 'WPS' LED on the wireless repeater will be
blinking when this wireless repeater is waiting for
incoming WPS request.

NOTE: For WPS2.0 compliance specification, WEP and WPA-PSK can't support WPS connection, some of wireless devices may follow this latest WPS2.0 specification, so we recommend you not to use WEP and WPA-PSK to avoid WPS interoperability problem.

2-2-4 Advanced Settings

You can configure advanced wireless settings in this page. Please note that these settings are not safe to be configured by novice users. Configure these settings only when you understand what you're doing.

To access 'Advanced Setting' menu, click 'Advanced Setting' on the left.



The following setup page will appear:

Advanced Settings

These settings are only for more technical users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your repeater device.

Fragment Threshold:	2346 (256-2346)
RTS Threshold:	2347 (0-2347)
Beacon Interval:	100 (20-1024 ms)
DTIM Period:	3 (1-10)
Preamble Type:	Short Preamble O Long Preamble
Broadcast ESSID:	Enable O Disable
CTS Protect:	Auto O Always O None
TX Power:	100 % 🗸
 Enable LED OFF mode Turn off all LED Turn off all LED except Potential 	DWER LED

The description of every setup item is listed as follow:

Item	Description
Fragment Threshold	Set the Fragment threshold of wireless radio.
	Threshold. Do not modify default value if you
	don't know what it is, default value is 2346.
RTS Threshold	Set the RTS threshold of wireless radio. Do not
	modify default value if you don't know what it is,
	default value is 2347.
Beacon Interval	Set the beacon interval of wireless radio. Do not
	modify default value if you don't know what it is,
	default value is 100.
DTIM Period	Configures DTIM (Delivery Traffic Indication
	Message) send period. Default value is 3.
Preamble Type	Set the type of preamble of wireless radio, Do not
	modify default value if you don't know what it is,
	default setting is 'Short Preamble'.
Broadcast ESSID	When set to 'enabled', every wireless devices can
	scan and found this wireless repeater; when set to

	'disabled', only wireless clients who know exact
	SSID can get connected with this wireless
	repeater. Set to disabled will help to improve
	security.
CTS Protect	This function provides CTS (Clear to Send)
	protection when transferring data. It's
	recommended to select 'Auto' for this option.
TX Power	Select wireless transmitting power level, from
	10% to 100%. When wireless clients are not too
	far from this wireless repeater, you don't have to
	select a higher power level, since this may cause
	some people to try to break into your wireless
	network when you have a bad password or no
	password.
Enable LED off	You can enable or disable LED lights. Check
mode	'Enable LED OFF' mode to setup LED
	behavior:
	Turn off all LED: disabled all LED lights.
	Turn off all LED except POWER LED: all LED
	lights will be disabled, except 'POWER' LED.

When you finish settings in this page, click 'Apply' button. You'll see the following message:



If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button.

System Res	tarting! Please wait for a while !	
OK(48)		

System Res	starting! Please wait for a while !
ОК	

You'll be prompted to wait for 50 seconds before you can reconnect to this wireless repeater.

2-2-5 WLAN 2.4G settings

To access 2.4GHz Wireless menu, click 'WLAN 2.4G settings' on the left.



The following setup page will appear, it is the settings that you have setup:

WLAN 2.4G settings	
Please setup your Device.	
Device SSID : Xiaomi_F343_2.4Gre	
Encryption : WPA pre-shared key 🗸	
WPA Unicast Cipher Suite : O WPA(TKIP) O WPA2(AES)	
Pre-shared Key Format : Passphrase	
KEY : 1234554321	
Channel : 1 🗸	
	APPLY CANCEL

Please Note : If your repeater working properly, please do not changes the setting here.

The description of every setup item is listed as follow:

Item	Description
Device SSID	This is the current SSID name of repeater. SSID
	is used to identify your own repeater from others
	when there are other wireless devices in the same
	area. You can type any alphanumerical characters
	to change SSID here, maximum 32 characters.
Encryption	This is the current security setup of repeater. You
	can select an encryption method from dropdown
	menu, there are three options.
WPA Unicast	This is the current security setup of repeater.
Cipher Suite	Please select a type of WPA cipher suite.
	Available options are: WPA (TKIP) and WPA2
	(AES). You can select one of them, but you have
	to make sure your wireless client support the
	cipher you selected.
Pre-shared Key	This is the current security setup of repeater. You
Format	can select the type of pre-shared key, you can
	select Passphrase (8 or more alphanumerical
	characters, up to 63), or Hex (64 characters of

	0-9, and a-f).
Key	This is the current security setup of repeater. You
	can change the WPA passphrase here. It's not
	recommended to use a word that can be found in
	a dictionary due to security reason.
Channel	This is the current channel of repeater.

2-2-6 WLAN 5G settings

To access 5GHz Wireless menu, click 'WLAN 2.4G settings' on the left.



The following setup page will appear, it is the settings that you have setup:
WLAN 5G settings			
Please setup your Device.			
Device SSID :	Xiaomi_F343_5G_5Gre		
Encryption :	WPA pre-shared key 🗸		
WPA Unicast Cipher Suite :	○ WPA(TKIP) ● WPA2(AES)		
Pre-shared Key Format :	Passphrase V		
KEY :	1234554321		
Channel :	153 🗸		
		APPLY	CANCEL

Please Note : If your repeater working properly, please do not changes the setting here.

The description of every setup item is listed as follow:

Item	Description
Device SSID	This is the current SSID name of repeater. SSID
	is used to identify your own repeater from others
	when there are other wireless devices in the same
	area. You can type any alphanumerical characters
	to change SSID here, maximum 32 characters.
Encryption	This is the current security setup of repeater. You
	can select an encryption method from dropdown
	menu, there are three options.
WPA Unicast	This is the current security setup of repeater.
Cipher Suite	Please select a type of WPA cipher suite.
	Available options are: WPA (TKIP) and WPA2
	(AES). You can select one of them, but you have
	to make sure your wireless client support the
	cipher you selected.
Pre-shared Key	This is the current security setup of repeater. You
Format	can select the type of pre-shared key, you can
	select Passphrase (8 or more alphanumerical
	characters, up to 63), or Hex (64 characters of
	0-9, and a-f).

Key	This is the current security setup of repeater. You
	can change the WPA passphrase here. It's not
	recommended to use a word that can be found in
	a dictionary due to security reason.
Channel	This is the current channel of repeater.

2-2-7 MAC Address Filtering

Besides using wireless security to only allow permitted wireless users to use this wireless repeater, you can also use MAC address filter to allow wireless users with certain MAC address to use this wireless repeater.

This will enhance security because you can make a 'white list' to allow users on the list to use this wireless repeater only in advance. For those clients who don't list on this white list can't get connected, even he or she know the password.

To access 'MAC Filtering' menu, click 'MAC Filtering' on the left.



The following setup page will appear:

MAC Address Filtering	
For security reason, the device support MAC Address Addresses associating to the device.	Filtering allows authorized MAC
MAC Address Filtering Table It allows to entry 20 sets address only.	
NO. MAC Address	Comment Select
1 11:22:33:44:55:66	Allowed client
Delete Selected Delete All Reset	
New MAC Address:	Comment: Add Clear
	APPLY CANCEL

The description of every setup item is listed as follow:

Item	Description
Enable Wireless	Check this box to enable MAC filtering. If you
Access Control	didn't check this box, anyone who knows the
	wireless password can get connected to this
	wireless repeater.
MAC Address	Input the MAC address of the clients you wish to
	deny or accept to access the repeater into the
	MAC address list. Please input 12 HEX
	characters here, and you don't have to add :
	(colon) or - (dash) characters every 2 characters.
	If you don't know how to get the MAC address of
	a network client, see tips below.
Comment	Input any descriptive text about this rule, so you
	can remember the purpose of this rule. You can
	input up to 20 alphanumerical characters in this
	field.

Add	Add this MAC address to the list.
Clear	Clear 'MAC Address' and 'Comment' field.
Delete Selected	Delete MAC address(es) you selected which
	'Select' box is checked.
Delete All	Delete all MAC addresses in the list. You'll be
	prompted to confirm deletion first.
Reset	Uncheck all checked boxes.
Select	All existing MAC addresses will be listed here.
	To delete a MAC address from the list, check the
	box of the MAC address you wish to delete first.
	You can select more than one MAC addresses
	here.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.

CONTINUE APPLY

If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button. You'll be prompted to wait for 50 seconds before you can reconnect to this wireless repeater.

2-2-8 How to know the MAC address of your device

If you don't know the MAC address of your computer or wireless device, you can follow the following procedure:

For wireless devices and computers which are connected to this wireless repeater already, you can click 'Show Active Clients' button in 'Home' setting page.

Wireless Configuration	
Mode	Universal Repeater
ESSID	Super
Channel Number	6
Security	WPA-shared key
BSSID(MAC)	80:1f:02:00:00:03
Associated Clients	0 Show Active Clients

Their MAC address will be displayed at 'MAC Address' field.

If you still can't identify the MAC address of computer, you can follow the following procedure:

Click the network icon located at the lower-right corner, then click 'Open Network and Sharing Center'.



Click the connection that you'll be used to connect the wireless repeater (in this example, 'Local Area Connection'):



Click 'Details...' button.

ĺ	🔋 Local Area Connection Status	3
	General	
<	Connection IPv4 Connectivity: No Internet access IPv6 Connectivity: No network access Media State: Enabled Duration: 07:17:01 Speed: 1.0 Gbps Details Iteration	
	Activity	
	Sent — Received	
	Bytes: 71,655 70,247	
	Properties Disable Diagnose	
	Close	

The MAC address of selected network connection will be displayed here as 'Physical Address'.

Property	Value	
Connection-specific DN	VXHOME_WIMAX	
Description	Intel(R) PRO/1000 MT Deskton Adapter	
Physical Address	08-00-27-BB-4D-3F	
DHCP Enabled	Yes	
IPv4 Address	10.0.2.15	
IPv4 Subnet Mask	255.255.255.0	
Lease Obtained	Sunday, June 19, 2011 11:06:40 AM	
Lease Expires	Tuesday, June 21, 2011 2:58:14 AM	
IPv4 Default Gateway	10.0.2.2	
IPv4 DHCP Server	10.0.2.2	
IPv4 DNS Server IPv4 WINS Server	192.168.1.1	
NetBIOS over Tcpip En	Yes	
Link-local IPv6 Address IPv6 Default Gateway	fe80::a83e:603:1e74:c003%11	
IPv6 DNS Server		
•	4	

2-2-9 System Utility

You can change the settings of several system-level parameters in this page, including administrator's password, and IP address.

To access 'System Utility' menu, click 'System Utility' on the left.



The following setup page will appear:

System Utility
You can change the default password & device IP address form this setting page. If you want to use DHCP server service, you should enter a unique IP for the Device.
Password Settings
Current Password :
New Password :
Re-Enter Password :
APPLY CANCEL

The description of every setup item is listed as follow:

Password Settings

Default password of this repeater is 1234, and it's displayed on the login prompt when accessed from web browser. There's a security risk if you don't change the default password, since everyone can see it. This is very important when you have wireless function enabled.

Here are descriptions of every setup items:

Item	Description
Current Password	To change password, you have to input current
	password first.
New Password	Input new password here. You can use the
	combination of alphabets, number, and symbols
	for up to 20 characters.
Re-Enter Password	Input new password again for conformation.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

Save settings successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.
CONTINUE APPLY

If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button. You'll be prompted to wait for 50 seconds before you can reconnect to this wireless repeater.

2-2-10 Configuration

You can backup and restore the configuration of this wireless repeater, so you can recall all settings back in very short time, without doing configuration again. This function is especially useful when you need to use this mini Wi-Fi repeater in different places, like home and hotel.

To access 'Configuration' menu, click 'Configuration' on the left.



2-2-10-1 Configuration Tool

The following setup page will appear:

Configuration Tool	
Use the "Backup" tool to save the device's current configurations "config.bin". You can then use the "Restore" tool to restore the s device. Alternatively, you can use the "Restore to Factory Defau to perform System Reset and restore the original factory settings	s to a file named aved configuration to the lt" tool to force the device s.
Backup Settings : Save	
Restore Settings :	Browse Upload
Restore to Factory Default : Reset	

The description of every setup item is listed as follow:

Item	Description
Backup	Click 'Save' button to save the current settings to a file
Settings	on your computer.
Restore	If you want to upload a saved configuration file to
Settings	wireless repeater, please click 'Browse' button to select
	a saved configuration file on your computer. Then
	click 'Upload' button to restore the current settings to
	new one.
Reset to	To reset all settings of this wireless repeater to factory
Factory	defaults, including password. You'll be prompted to
Default	confirm the settings reset:
	Message from webpage
	Do you really want to reset the current settings to default?
	OK Cancel
	Click 'OK' if you really want to restore all settings, or click 'Cancel' to abort.

2-2-10-2 WEB Upgrade

The software running in this wireless repeater (i.e. 'Firmwre') can be upgraded to improve the functionality of this wireless repeater.

You can access our website to look for latest firmware file. Then download the latest firmware file and save on your computer and upload to this wireless repeater.

WEB Upgrade	WEB
This page allows you to upgrade system firmware.It is recommended that upgrading the firmware from wired stations. Enter the path and name of the upgrade file and then click the APPLY button below. You will be prompted to confirm the upgrade.	This pa firmwa Enter tl will be
Browse APPLY CANCEL	

The description of every setup item is listed as follow:

Item	Description
Browse	Select a firmware file saved on your computer.

When you are ready, click 'Apply' button to start firmware upgrade procedure.

2-2-10-3 Reset

When you think this wireless repeater is not working properly, resetting it may help.



To reset this wireless repeater, click 'Apply' button. You'll be prompted to confirm reset:

Message from webpage
Do you really want to reset the Access Point ??
OK Cancel

Click 'OK' button to reset wireless repeater, or click 'Cancel' to abort.

CHAPTER III : Client mode

Client mode can let your networking device have wireless capability; it will become your networking device's wireless network card. You can connect this device to Ethernet port of your existing internet TV or DVD player or game console device with Ethernet cable.

This chapter will show you how to quickly install this device by using quick setup and show you the each detailed setting on web UI page of client mode.

3-1 Client mode Quick Installation Guide

Switch mode selector to 'Client'.



Insert this device into power outlet on the wall. You should see '*Power*' LED light up in few seconds. If not, please check if the power outlet you're using is working.



Connect your wired networking device (wired PC, or internet TV, or game console..etc.) and this device by Ethernet cable.

Please NOTE: You must set your networking device as DHCP client (obtain IP automatically from DHCP server)



You can build wireless connection via 'Hardware WPS button' or 'Software web browser'.

If your broadband router or access point also supports 'WPS button', we recommend you to use WPS button to establish connection, it is the fast and secure way without computer.

Using WPS button - please go to section 3-1-1

3-1-1 Hardware WPS button setup

1. Press and hold *WPS button* on repeater for 2 seconds, '*WPS*' LED will start flashing.



2. Press WPS button on the wireless broadband router or access point you wish to connect within 2 minutes.



NOTE: this WPS button position on access point is for example, different device may have different WPS button position.

TIP: If the access point you wish to connect does not have hardware WPS button, you can also use its web configuration menu's WPS function to establish connection. Or you can login this repeater web UI to have quick setup (detailed setup refers to '3-1-2 Web browser quick setup' manual)

3. If WPS connection is successfully established, the repeater will reboot immediately to make your setting effect ; if 'WPS' LED flashes fast, there's something error, please wait for 2 minutes until 'WPS' LED off, and try from step(1) again.

When quick installation is successfully done, 'Signal' LED will turn on.



4. Please move repeater to the place you wish to use (a better place will be the center of your house) and insert this repeater into power outlet on the wall, the wireless connection will be established automatically. You can check '*Signal*' LED status to understand signal reception level.

Steady light: Excellent, Flash: Good, Fast flash: poor.

If the Signal LED is off, it means this place is out of wireless signal of your wireless broadband router or access point, please move this repeater closer to broadband router until repeater device can receive signal from broadband router and extend its signal.

The quick installation setup is completely done, you can refer to '3-2 Repeater mode Advanced Settings' to login in web UI for other advanced settings.

3-1-2 Web browser quick setup

Before you can connect to the repeater and start configuration procedures, your computer must be able to get an IP address automatically (use dynamic IP address). If it's set to use static IP address, or you're unsure, please refer to '*Chapter X: Appendix, 5-1 Configuring TCP/IP on PC*' to set your computer to use dynamic IP address.

1. Use Ethernet cable to connect your computer's Ethernet port and this wireless repeater's Ethernet port.



2. Open web browser, it will redirect to web UI setting page. (or you can input the default IP address 'http://repeater0003' in address bar)



NOTE: this 'repeater0003" is for example, 0003 is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.) You can also input default IP 'http://192.168.2.253 instead of repeaterxxxx if your PC is not Windows OS.

3. Wireless repeater will prompt you to input username and password. Default username is 'admin' and password is '1234'. Click 'OK' button to continue.

	Windows Security
	The server 192.168.2.253 at Default: admin/1234 requires a username and password.
	Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection)
	User name
*****	Password
	Remember my credentials
	OK Cancel

4. All wireless access points nearby will be displayed on the list. Select one access point you want to connect and click 'Next' button to continue. If the access point you wish to connect does not appear here, please click 'Refresh' until it appears on the list, or try to move this wireless repeater closer to the access point you wish to connect.

	5G	HQ_5G	44	NONE	34	
0	5G	HQ_5G	44	NONE	31	
0	5G	HQ_5G	52	WPA2PSK	0	
0	5G	OBM-SMB-5G	64	WPA2PSK	13	
0	5G	!OBM-SMB-5G	64	WPA2PSK	5	
0	5G	HQ_5G	149	WPA2PSK	29	
0	2	HQ_5G	149	WPA2PSK	24	
۲	5G	Xiaomi_F343_5G	153	WPA2PSK	100	
	2.4G 🗸		Setup repeate	er manually		

Or you want to connect to a hidden access point, please select to input SSID manually.

		•••••			Refresh	Next
۲	2.4G 🗸		Setup repeate	r manually]
••••	5G	Xiaomi_F343_5G	153	WPA2PSK	57	
0	5G	!OBM-6208AC-5G	149	WPA2PSK	18	
0	5G	OBM-6208AC-5G	149	WPA2PSK	13	
0	5G	IOBM-SMB-5G	64	WPA2PSK	2	
0	5G	OBM-SMB-5G	64	WPA2PSK	2	
0	5G	OBM-Celeno-5G	52	WPA2PSK	5	

WLAN 2.4G settings		
Please setup your Device.		
SSID :		
Encryption : Disable		
Channel : 11 🗸		
	Back	Next

5. You'll be prompted to input access point's wireless security key, input it in 'KEY' field and click 'Next' to continue.

Security	
Please input wireless security key of you	ur connected Access Point.
KEY :	
	Next

6. It will start to verify the wireless key with your associated access point and show you result within 20 seconds. Please follow the instruction to continue setup.



7. When key is correct, Wireless repeater will display the connection information for you.

Save settings successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.
Device SSID(5GHz) : Xiaomi_F343_5G
Security : WPA2-shared key
Back APPLY

'Device SSID' is the SSID of your access point that you selected to connect in previous step, please double confirm all information is correct, if you want to change it, you can press 'Back' to select again or press 'APPLY' to take this change effect.

We recommend you to copy your 'firmware URL' (for example: http://repeater0003) to you bookmark for quickly login into setting page next time.

NOTE: this 'repeater0003" is for example, 0003 is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.)

If you use other browser rather than IE and Firefox browser, you have to copy this firmware URL and add it to bookmark manually.

8. Please wait for few seconds for wireless repeater to reboot.

System Res	tarting! Please wait for	a while !
OK(48)		

System Res	arting! Please wait for a while !	
OK		

9. After reboot complete, you can connect to access point and use it to access network / Internet.

NOTE: After wireless connection of this repeater and wireless broadband router is built, this device becomes DHCP client and will get IP address from your broadband router automatically. If you want to login Web UI of this repeater again, please refer to '3-2 Client mode Advanced Settings' for more functions setup or learn how to login web UI again.

3-2 Client mode Advanced Settings

3-2-1 Connect to web configuration menu

Please open web browser (IE, firefox, chrome etc.) and find '300N Wireless Repeaterxxxx Web UI' firmware link on your bookmark list if you have agreed to save it when you installed this device first time. Or you can directly input 'http://repeaterxxxx', (xxxx is the last 4 digits of repeater device MAC address, you can check this number on device label) in address bar then press ENTER key:



NOTE: You can also input default IP 'http://192.168.2.253 instead of repeaterxxxx if your PC is not Windows OS.

Wireless repeater will prompt you to input username and password. Default username is '**admin**' and password is '**1234**'. Click 'OK' button to continue.



You should be able to see the configuration manual of Client mode in very short time:

Detailed operation instructions will be given to following manual.

3-2-2 Home

The status and information of client mode will be displayed here. To access 'Home' menu, click 'Home' on the left.



You should see the screen looks like this (the contents will vary depending on your actual setting):

Status and Information

You can refer to following information to check the MAC address, runtime code, harware version and its network configuration status of this device.

System	
Uptime	0day 0h 4m 13s
Hardware Version	Rev. A
Runtime Code Version	v1.10
Mode	Converter
Wireless 2.4G Configuration	
ESSID	repeater24G
Channel Number	11
Security	Disable
BSSID(MAC)	00:1f.1f.68:20:00
State	Disconnection
Wireless 5G Configuration	
ESSID	Xiaomi_F343_5G
Channel Number	153
Security	WPA-shared key
BSSID(MAC)	00:1F1F68:20:04
State	Connected
LAN Configuration	
IP Address	192 168 31 208
Subnet Mask	255 255 255 0

3-2-3 WPS Setting

You can configure WPS (Wi-Fi Protected Setup) here. By using WPS, you can establish secure connection between this wireless repeater with other wireless devices which also support WPS in a fast and secure manner.

To access 'WPS Setting' menu, click 'WPS Settings' on the left.



The following setup page will appear:

WPS Status:	Configured	
Self PinCode:	35544357	
SSID:	si	
Authentication Mode:	Disable	
Passphrase Key:		
e Configure		
(Device is be a Client)	Config Mode:	Enrollee
Configure via	Push Button:	Start PBC
Input PIN code t	o AP/Router :	35544357 Start PIN

The description of every setup item is listed as follow:

Item	Description
Enable WPS	You can enable or disable WPS function.
	Disabling WPS function is included hardware
	WPS button function.
	Default is 'enable WPS'.
WPS Status	Shows the security setting status of WPS. If the

	wireless security (encryption) function of this
	device is properly set, you'll see 'Configured'
	message here. If wireless security function has
	not been set, you'll see 'unConfigured'.
Self PinCode	Here displays an 8-digit number for WPS
	PIN-style configuration. When other
	WPS-compatible device wish to connect to this
	wireless repeater and supports Self-PIN type
	WPS, input this number to the wireless device to
	establish connection.
SSID	Shows the SSID of this wireless repeater.
Authentication	Shows the authentication mode of this wireless
Mode	repeater.
Passphrase Key	Here shows asterisks (*) to indicate wireless
	security is properly set.
Config Mode	Client mode only supports 'Enrollee' mode, you
	can input this client mode's PIN code to
	AP/Router.
Start PBC	Click 'Start PBC' to start Push-Button style WPS
	setup procedure. This wireless repeater device
	will wait for WPS requests from another wireless
	device for 2 minutes.
	The 'WPS' LED on the wireless repeater will be
	blinking for 2 minutes when this wireless repeater
	is waiting for incoming WPS request.
Start PIN	Please click 'Start PIN' button and input this PIN
	code to the wireless broadband router or Access
	point you wish to connect.
	The 'WPS' LED on the wireless repeater will be
	blinking when this wireless repeater is waiting for
	incoming WPS request.

NOTE: For WPS2.0 compliance specification, WEP and WPA-PSK can't support WPS connection, some of wireless devices may follow this latest WPS2.0 specification, so we recommend you not to use WEP and WPA-PSK to avoid WPS interoperability problem.

3-2-4 Advanced Settings

You can configure advanced wireless settings in this page. Please note that these settings are not safe to be configured by novice users. Configure these settings only when you understand what you're doing.

To access 'Advanced Setting' menu, click 'Advanced Setting' on the left.



The following setup page will appear:

Fragment Threshold:	2346	(256-2346)
RTS Threshold:	2347	(0-2347)
Channel Width:	Auto 20/4	40 MHz 🔿 20 MHz
WMM:	O Enable	Disable
TX Power:	100 % 💌	
 Enable LED OFF mode Turn off all LED Turn off all LED except PC 	WER LED	

The description of every setup item is listed as follow:

Item	Description
Fragment Threshold	Set the Fragment threshold of wireless radio.
	Threshold. Do not modify default value if you
	don't know what it is, default value is 2346.
RTS Threshold	Set the RTS threshold of wireless radio. Do not
	modify default value if you don't know what it is,
	default value is 2347.
Channel Width	Select the wireless channel width, 20MHz or
	40MHz. 40MHz provides better network speed
	for 802.11n wireless clients.
WMM	Enable or disable Wireless Multi-Media. When
	enabled, this device will give priority to
	multimedia related network applications so they
	will have better performance.
TX Power	Select wireless transmitting power level, from
	10% to 100%. When wireless clients are not too
	far from this wireless repeater, you don't have to
	select a higher power level, since this may cause
	some people to try to break into your wireless
	network when you have a bad password or no
	password.
Enable LED off	You can enable or disable LED lights
mode	Check 'Enable LED OFF' mode to setup LED
	behavior:
	Turn off all LED: disabled all LED lights.
	Turn off all LED except POWER LED: all LED
	lights will be disabled, except 'POWER' LED.

When you finish settings in this page, click 'Apply' button. You'll see the following message:



If you still need to configure this device, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button.

System Restarting! Please wait for a while !
OK(48)
System Restarting! Please wait for a while !
ОК

You'll be prompted to wait for 50 seconds before you can reconnect to Web UI of this device.

3-2-5 WLAN 5G(or 2.4G) settings

This repeater provides supports both 2.4GHz and 5GHz wireless bands simultaneously; the wireless settings for both wireless bands are almost the same. The following sections will only highlight the different descriptions between these two selections.

Enter into 'Advanced Settings' page, select 'WLAN 2.4G settings' or 'WLAN 5G settings' to configure the wireless settings for the different wireless radio.



The following setup page will appear, it is the settings that you have setup:

2.4GHz Wireless

WLAN 2.4G settings	
Please setup your Device.	
Device SSID : Xiaomi_F343_2.4Gre	
Encryption : WPA pre-shared key 🗸	
WPA Unicast Cipher Suite : O WPA(TKIP) O WPA2(AES)	
Pre-shared Key Format : Passphrase	
KEY : 1234554321	
Channel : 1 V	
	APPLY CANCEL

5GHz Wireless

WLAN 5G settings	
Please setup your Device.	
Device SSID : Xiaomi_F	343_5G_5Gre
Encryption : WPA pre	shared key 🗸
WPA Unicast Cipher Suite : OWPA(TKIP) • WPA2(AES)
Pre-shared Key Format : Passphra	se 🗸
KEY : 1234554	321
Channel : 153 🗸	
	APPLY CANCEL

The description of every setup item is listed as follow:

Item	Description
Device SSID	This is the SSID of wireless network that you're
	repeater current connected . SSID is used to
	identify your own repeater from others when
	there are other wireless devices in the same area.
	You can type any alphanumerical characters to
	change SSID here, maximum 32 characters.
Encryption	This is the current security setup of repeater. You
	can select an encryption method from dropdown
	menu, there are three options.
WPA Unicast	This is the current security setup of repeater.
Cipher Suite	Please select a type of WPA cipher suite.
	Available options are: WPA (TKIP) and WPA2
	(AES). You can select one of them, but you have
	to make sure your wireless client support the
	cipher you selected.
Pre-shared Key	This is the current security setup of repeater. You
Format	can select the type of pre-shared key, you can
	select Passphrase (8 or more alphanumerical
	characters, up to 63), or Hex (64 characters of
	0-9, and a-f).
Key	This is the current security setup of repeater. You
	can change the WPA passphrase here. It's not
	recommended to use a word that can be found in
	a dictionary due to security reason.
Channel	This is the current channel of repeater.

3-2-6 System Utility

You can change the settings of several system-level parameters in this page, including administrator's password, and IP address.

To access 'System Utility' menu, click 'System Utility' on the left.



The following setup page will appear:

	Current Passv	vord :		
	New Passv	vord		
16	- Enter Dans	uard :		

The description of every setup item is listed as follow:

Password Settings

Default password of this repeater is 1234, and it's displayed on the login prompt when accessed from web browser. There's a security risk if you don't change the default password, since everyone can see it. This is very important when you have wireless function enabled.

Here are descriptions of every setup items:

Item	Description
Current Password	To change password, you have to input current password first.
New Password	Input new password here. You can use the

	combination of alphabets, number, and symbols
	for up to 20 characters.
Re-Enter Password	Input new password again for conformation.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

Save settings successfully!						
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.						
CONTINUE APPLY						

If you still need to configure this device, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button. You'll be prompted to wait for 50 seconds before you can reconnect to Web UI of this device.

3-2-7 Configuration

You can backup and restore the configuration of this device, so you can recall all settings back in very short time, without doing configuration again.

This function is especially useful when you need to use this mini Wi-Fi repeater in different places, like home and hotel.

To access 'Configuration' menu, click 'Configuration' on the left.



3-2-7-1 Configuration Tool

The following setup page will appear:

Configuration Tool						
Use the "Backup" tool to save the device's current configurations to a file named "config.bin". You can then use the "Restore" tool to restore the saved configuration to the device. Alternatively, you can use the "Restore to Factory Default" tool to force the device to perform System Reset and restore the original factory settings.						
Backup Settings : Save						
Restore Settings :	Browse Upload					
Restore to Factory Default : Reset						
The description of every setup item is listed as follow:

Item	Description			
Backup	Click 'Save' button to save the current settings to a file			
Settings	on your computer.			
Restore	If you want to upload a saved configuration file to			
Settings	wireless repeater, please click 'Browse' button to select			
	a saved configuration file on your computer. Then			
	click 'Upload' button to restore the current settings to			
	new one.			
Reset to	To reset all settings of this wireless repeater to factory			
Factory	defaults, including password. You'll be prompted to			
Default	confirm the settings reset:			
	Message from webpage			
	Do you really want to reset the current settings to default?			
	OK Cancel			
	Click 'OK' if you really want to restore all settings, or click 'Cancel' to abort.			

3-2-7-2 WEB Upgrade

The software running in this wireless repeater (i.e. 'Firmwre') can be upgraded to improve the functionality of this wireless repeater.

You can access our website to look for latest firmware file. Then download the latest firmware file and save on your computer and upload to this wireless repeater.

WEB Upgrade	WEB
This page allows you to upgrade system firmware.It is recommended that upgrading the firmware from wired stations. Enter the path and name of the upgrade file and then click the APPLY button below. You will be prompted to confirm the upgrade.	This pa firmwa Enter tl will be
Browse APPLY CANCEL	

The description of every setup item is listed as follow:

Item	Description
Browse	Select a firmware file saved on your computer.

When you are ready, click 'Apply' button to start firmware upgrade procedure.

3-2-7-3 Reset

When you think this wireless repeater is not working properly, resetting it may help.



To reset this wireless repeater, click 'Apply' button. You'll be prompted to confirm reset:

Message from webpage
Do you really want to reset the Access Point ??
OK Cancel

Click 'OK' button to reset wireless repeater, or click 'Cancel' to abort.

CHAPTER IV : AP mode

You can build a wireless networking environment for home or small office, please switch this device to wireless access point mode and connect it to your wired router. Then your wireless client users can access internet by wirelessly connecting to this AP without wired cable burden.

This chapter will show you how to quickly install this device by using quick setup and show you the each detailed setting on web UI page of AP mode.

4-1 AP mode Quick Installation Guide

Switch mode selector to 'AP'.



Insert this device into power outlet on the wall, You should see '*Power*' LED light up in few seconds. If not, please check if the power outlet you're using is working.



You can build wireless connection via 'Hardware WPS button' or 'Software web browser'.

If your wireless client also supports 'WPS button', we recommend you to use WPS button to establish connection, it is the fast and secure way without computer.

Using WPS button	- please go to section 4-1-1
Using Web browser	- please go to section 4-1-2

4-1-1 Hardware WPS button setup

1. Press and hold *WPS button* on repeater for 2 seconds, '*WPS*' LED will start flashing.



2. Press WPS button on the wireless client you wish to connect within 2 minutes.



Please NOTE: this WPS button position on client card is for example, different device may have different WPS button position.

TIP: If your wireless client card does not have hardware WPS button, you can also use its web configuration menu's WPS function to establish connection. Or you can login this repeater web UI to have

quick setup (detailed setup refers to '4-1-2 Web browser quick setup' manual)

3. If WPS connection is successfully established, the repeater will reboot immediately to make your setting effect ; if '*WPS*' LED flashes fast, there's something error, please wait for 2 minutes until '*WPS*' LED off, and try from step(1) again.

When quick installation is successfully done, 'Signal" LED will turn on.



- 4. '*Signal*' LED in AP mode is Steady light to provide wireless clients the best signal.
- 5. Connect this access point to ADSL modem, wired router, or switch/hub in your network through the LAN port of the access point by Ethernet cable.



The quick installation setup is completely done, you can refer to '4-2 AP mode Advanced Settings' to login in web UI for other advanced settings.

4-1-2 Web browser quick setup

Before you can connect to the repeater and start configuration procedures, your computer must be able to get an IP address automatically (use dynamic IP address). If it's set to use static IP address, or you're unsure, please refer to '*Chapter X: Appendix, 5-1 Configuring TCP/IP on PC*' to set your computer to use dynamic IP address.

1. Use Ethernet cable to connect your computer's Ethernet port and wireless repeater's Ethernet port.



Or use your computer's wireless configuration utility to search for access point named '**repeater0003**' and get connected. (The default SSID of this repeater device is '**repeater0003**', 0003 is an example, it is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.)



NOTE: this default SSID 'repeater0003" is for example, different device may have different last 4 digits.

If you are using wireless connection in Windows 7 and encountered the following screen, please click "Connect the network without setting it up" on the blue line then you can successfully link to repeater. Do NOT click "OK ".

In case you click 'OK', Windows 7 will ask for security key, please click "Cancel" to back to this page.



2. Open web browser, it will redirect to web UI setting page. (or you can input the default IP address 'http://repeater0003' in address bar)

(÷)	🔰 🥌 http://repeater0003	$\rho \rightarrow \times$	🥌 Blank Page
*****	Google Suggestions	********************	Г
	Turn on suggestions (send keystr	okes to Google)	

NOTE: this 'repeater0003" is for example, 0003 is the last 4 digits of device MAC number. Each device has different MAC number, please find it on your device label.) You can also input default IP 'http://192.168.2.1 instead of repeaterxxxx if your PC is not Windows OS.

3. Wireless repeater will prompt you to input username and password. Default username is 'admin' and password is '1234'. Click 'OK' button to continue.

Windows Security	
The server 192.168.2.1 at Default: admin/1234 requires a username and password.	
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).	
User name Password Remember my credentials	
OK Cancel]

4. Please input a SSID (a name used to identify this access point) in 'Device SSID(2.4GHz)' and 'Device SSID(5GHz)' field, then click 'Next' button. Default SSID is repeaterxxxx, you can change this default SSID if you want.

Quick Setup	
This quick setup helps you build wireless connection. You can change default device SSID.	
Device SSID(2.4GHz): repeater0002	
✓ Device SSID(5GHz): repeater0004	
	Next

5. Select security type of wireless link include 2.4Ghz and 5Ghz : Encryption: Disable (no security), WEP, WPA pre-shared key, or WPA RADIUS

2.4GHz Wireless

2.4G Security			
Please input wireless security key of yo	our connected Access	Point	
Encryption :	Disable	•	
Hidden SSID :	NO 👻		
			Back Next

2.4G Security

Please input wireless security key of your connected Access Point

Encryption :	WEP -
Key Length :	64-bit 👻
Key Format :	Hex (10 characters) 🔻
Default Tx Key :	Key 1 👻
KEY :	******
Hidden SSID :	NO 🗸
	Back Next

2.4G Security			
Please input wireless security key of yo	ur connected Access Point		
Encryption :	WPA pre-shared key 💌		
WPA Unicast Cipher Suite :	● WPA(TKIP) ○ WPA2(AES)		
Pre-shared Key Format :	Passphrase 👻		
KEY :			
Hidden SSID :	NO 🔻		
		Back	Next

5GHz Wireless

_					
lease input wireless	security key of yo	ur connected Acc	ess Point		
	Encryption :	Disable	~		
	Hidden SSID :	NO 🗸			
				Back	Novt

5G Security			
Please input wireless security key of your	connected Access Point		
Encryption :	WEP 🗸		
Key Length :	64-bit 🗸		
Key Format :	Hex (10 characters) 🗸		
Default Tx Key :	Key 1 🗸		
KEY : *	*****		
Hidden SSID :	NO 🗸		
		Back	Next

5G Security		
Please input wireless security key of your connected Access Point		
Encryption : WPA pre-shared key 🗸		
WPA Unicast Cipher Suite :		
Pre-shared Key Format : Passphrase		
KEY :		
Hidden SSID : NO 🗸		
	Back	Next

Note: WEP encryption: Select key length (64 or 128bit), key format (Hex or ASCII characters), Default Tx Key (usually use 'Key 1'), and input key characters (refer to 'Key Format' you selected for number of characters)

WPA pre-shared key: Select one WPA Unicast Cipher Suite (usually use default setting 'WPA(TKIP)'), Pre-shared Key Format: Passphrase (alphanumeric characters) or Hex (64 Hex Characters), and input key characters in 'KEY' field. WPA RADIUS: Only use this option if you have RADIUS authentication server on your LAN. You have to input RADIUS server's parameters (Server IP, port number, and password).

6. Please recheck settings you made, and click 'Apply' to continue.

Save settings successfully!
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.
Device SSID(2.4GHz) : repeater0002
Security : Disable
Device SSID(5GHz): repeater0004
Security : Disable
Back APPLY

7. Please wait for few seconds for device to reboot.

System Restarting! Please wait for a while ! OK(48)	
System Restarting! Please wait for a while !	
OK	

8. After reboot complete, you can close browser to finish this quick setup and connect this access point to ADSL modem, wired router, or

switch/hub in your network through the LAN port of the access point by Ethernet cable.

NOTE: After quick installation is successfully finished and you want to login Web UI of repeater, please refer to '4-2 AP mode Advanced Settings' for more functions or learn how to login web UI again.

4-2 AP mode Advanced Settings

4-2-1 Connect to web configuration menu

Please open web browser (IE, firefox, chrome etc.) and find '300N Wireless Repeaterxxxx Web UI' firmware link on your bookmark list if you have agreed to save it when you installed this device first time. Or you can directly input 'http://repeaterxxxx', (xxxx is the last 4 digits of repeater device MAC address, you can check this number on device label) in address bar then press ENTER key:



NOTE: You can also input default IP 'http://192.168.2.1 instead of repeaterxxxx if your PC is not Windows OS.

Wireless repeater will prompt you to input username and password. Default username is '**admin**' and password is '**1234**'. Click 'OK' button to continue.



You should be able to see the configuration manual of this Access Point mode in very short time:

Detailed operation instructions will be given to following manual.

4-2-2 Home

The status and information of this access point will be displayed here.

To access 'Home' menu, click 'Home' on the left.



You should see the screen looks like this (the contents will vary depending on your actual setting):

Status and Information

You can refer to following information to check the MAC address, runtime code, harware version and its network configuration status of this device.

System	
Uptime	0day:0h:1m:17s
Hardware Version	Rev. A
Runtime Code Version	v1.10
Mode	Access Point
Wireless 2.4G Configuration	
ESSID	repeater0002
Channel Number	11
Security	Disable
BSSID(MAC)	00:1f:1f:68:20:00
Associated Clients	0 Show Active Clients
Wireless 5G Configuration	
ESSID	repeater0004
Channel Number	36
Security	
Security	Disable
BSSID(MAC)	Disable 00:1f:1f:68:20:04
BSSID(MAC) Associated Clients	Disable 00:1f:1f:68:20:04 0 Show Active Clients
BSSID(MAC) Associated Clients	Disable 00:1f:1f:68:20:04 0 Show Active Clients
BSSID(MAC) Associated Clients LAN Configuration IP Address	Disable 00:1f:1f:68:20:04 0 Show Active Clients 192.168.2.1
BSSID(MAC) Associated Clients LAN Configuration IP Address Subnet Mask	Disable 00:1f:1f:68:20:04 0 Show Active Clients 192.168.2.1 255.255.255.0
BSSID(MAC) Associated Clients LAN Configuration IP Address Subnet Mask Default Gateway	Disable 00:1f:1f:68:20:04 0 Show Active Clients 192.168.2.1 255.255.255.0 0.0.0
BSSID(MAC) Associated Clients LAN Configuration IP Address Subnet Mask Default Gateway MAC Address	Disable 00:1f:1f:68:20:04 0 Show Active Clients 192.168.2.1 255.255.255.0 0.0.0 00:1f:1f:68:20:00

You can click 'Show Active Clients' button to show all connected wireless clients.

Please note: By clicking 'Show Active Clients' button, a new browser window will appear. If your browser prevents pop-up window from appearing, please disable this function or you will not be able to use 'Show Client' function.

4-2-3 WPS Setting

You can configure WPS (Wi-Fi Protected Setup) here. By using WPS, you can establish secure connection between this wireless repeater with other wireless devices which also support WPS in a fast and secure manner.

To access 'WPS Setting' menu, click 'WPS Settings' on the left.



The following setup page will appear:

WPS(Wi-Fi Protected	d Setup) Settings	
This page allows you to chang wireless client automatically co	e the setting for WPS(Wi-Fi Protected Setup).WPS can help yo onnect to the Access Point.	ur
• 2.4G Wi-Fi Protected Setup In	nformation	
WPS Status:	Configured	
Self PinCode:	68239367	
SSID:	Xiaomi_F343_2.4Gre	
Authentication Mode:	WPA pre-shared key	
Passphrase Key:	*****	
Device Configure		
	WPS Setting: Enable 2.4G WPS OEnable 5G WPS 	
(Device is as a AP/router)	Config Mode: Registrar V	
Configure via	a Push Button: Start PBC	
Input cli	ent PIN code : Start PIN	
	APPLY CA	NCEL

The description of every setup item is listed as follow:

Item	Description
WPS Status	Shows the security setting status of WPS. If the
	wireless security (encryption) function of this
	device is properly set, you'll see 'Configured'
	message here. If wireless security function has
	not been set, you'll see 'unConfigured'.
Self PinCode	Here displays an 8-digit number for WPS
	PIN-style configuration. When other
	WPS-compatible device wish to connect to this
	wireless repeater and supports Self-PIN type
	WPS, input this number to the wireless device to
	establish connection.
SSID	Shows the SSID of this wireless repeater.
Authentication	Shows the authentication mode of this wireless
Mode	repeater.
Passphrase Key	Here shows asterisks (*) to indicate wireless
	security is properly set.
WPS Setting	You can select which band(2.4G or 5G) you want
	to build wireless connection via 'Start PBC'
	button. Default is '2.4G'.
Config Mode	There are 'Registrar' and 'Enrollee' modes for the
	WPS connection. When 'Registrar' is enabled,
	the wireless clients will follow the repeater's
	wireless settings for WPS connection. When
	'Enrollee' mode is enabled, the repeater will
	follow the wireless settings of wireless router for
	WPS connection.
Start PBC	Click 'Start PBC' to start Push-Button style WPS
	setup procedure. This wireless repeater will wait
	for WPS requests from another wireless device
	for 2 minutes.
	The 'WPS' LED on the wireless repeater will be
	blinking for 2 minutes when this wireless repeater
	is waiting for incoming WPS request.
Start PIN	Please input the PIN code of the wireless client
	you wish to connect, and click 'Start PIN' button.
	The 'WPS' LED on the wireless repeater will be
	blinking when this wireless repeater is waiting for

incoming wrs iequest.

NOTE: For WPS2.0 compliance specification, WEP and WPA-PSK can't support WPS connection, some of wireless devices may follow this latest WPS2.0 specification, so we recommend you not to use WEP and WPA-PSK to avoid WPS interoperability problem.

4-2-4 Advanced Settings

You can configure advanced wireless settings in this page. Please note that these settings are not safe to be configured by novice users. Configure these settings only when you understand what you're doing.

To access 'Advanced Setting' menu, click 'Advanced Setting' on the left.



The following setup page will appear:

Advanced Settings

These settings are only for more technical users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your repeater device.

Fragment Threshold:	2346 (256-2346)
RTS Threshold:	2347 (0-2347)
Beacon Interval:	100 (20-1024 ms)
DTIM Period:	3 (1-10)
Channel Width:	 Auto 80 MHz(5G Only) Auto 20/40 MHz 20 MHz
Preamble Type:	Short Preamble O Long Preamble
Broadcast ESSID:	Enable O Disable
WMM:	O Enable
CTS Protect:	● Auto ○ Always ○ None
TX Power:	100 % 🗸
 Enable LED OFF mode Turn off all LED Turn off all LED except PO 	
	APPLY CANCEL

The description of every setup item is listed as follow:

Item	Description
Fragment Threshold	Set the Fragment threshold of wireless radio.
	Threshold. Do not modify default value if you
	don't know what it is, default value is 2346.
RTS Threshold	Set the RTS threshold of wireless radio. Do not
	modify default value if you don't know what it is,
	default value is 2347.
Beacon Interval	Set the beacon interval of wireless radio. Do not
	modify default value if you don't know what it is,
	default value is 100.
DTIM Period	Configures DTIM (Delivery Traffic Indication

	Message) send period. Default value is 3.
Channel Width	Set channel width of wireless radio. You can
	modify default value if you know what channel
	width is you need, default setting is 'Auto
	80MHz'.
Preamble Type	Set the type of preamble of wireless radio, Do not
	modify default value if you don't know what it is,
	default setting is 'Short Preamble'.
Broadcast ESSID	When set to 'enabled', every wireless devices can
	scan and found this wireless repeater; when set to
	'disabled', only wireless clients who know exact
	SSID can get connected with this wireless
	repeater. Set to disabled will help to improve
	security.
WMM	Enable or disable Wireless Multi-Media. When
	enabled, wireless repeater will give priority to
	multimedia related network applications so they
	will have better performance.
CTS Protect	This function provides CTS (Clear to Send)
	protection when transferring data. It's
	recommended to select 'Auto' for this option.
TX Power	Select wireless transmitting power level, from
	10% to 100%. When wireless clients are not too
	far from this wireless repeater, you don't have to
	select a higher power level, since this may cause
	some people to try to break into your wireless
	network when you have a bad password or no
	password.
Enable LED off	You can enable or disable LED lights. Check
mode	'Enable LED OFF' mode to setup LED
	behavior:
	Turn off all LED: disabled all LED lights.
	Turn off all LED except POWER LED: all LED
	lights will be disabled, except 'POWER' LED.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

Save settings successfully!	
You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect	
CONTINUE	

If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button.

System Restarting! Please wait for a while !
OK(48)
System Restarting! Please wait for a while !
ОК

You'll be prompted to wait for 50 seconds before you can reconnect to Web UI of this access point.

4-2-5 WLAN 2.4G settings

To access 2.4GHz Wireless menu, click 'WLAN 2.4G settings' on the left.



The following setup page will appear, it is the settings that you have setup:

WLAN 2.4G settings			
Please setup your Device.			
Device SSID :	Xiaomi_F343_2.4Gre		
Encryption :	WPA pre-shared key 🗸		
WPA Unicast Cipher Suite :	○ WPA(TKIP)		
Pre-shared Key Format :	Passphrase V		
KEY :	1234554321		
Channel :	1 🗸		
		APPLY	CANCEL

Please Note : If your repeater working properly, please do not changes the setting here.

The description of every setup item is listed as follow:

Item	Description
Device SSID	This is the current SSID name of repeater. SSID

	is used to identify your own repeater from others
	when there are other wireless devices in the same
	area. You can type any alphanumerical characters
	to change SSID here, maximum 32 characters.
Encryption	This is the current security setup of repeater. You
	can select an encryption method from dropdown
	menu, there are three options.
WPA Unicast	This is the current security setup of repeater.
Cipher Suite	Please select a type of WPA cipher suite.
	Available options are: WPA (TKIP) and WPA2
	(AES). You can select one of them, but you have
	to make sure your wireless client support the
	cipher you selected.
Pre-shared Key	This is the current security setup of repeater. You
Format	can select the type of pre-shared key, you can
	select Passphrase (8 or more alphanumerical
	characters, up to 63), or Hex (64 characters of
	0-9, and a-f).
Key	This is the current security setup of repeater. You
	can change the WPA passphrase here. It's not
	recommended to use a word that can be found in
	a dictionary due to security reason.
Channel	This is the current channel of repeater.

4-2-6 WLAN 5G settings

To access 5GHz Wireless menu, click 'WLAN 2.4G settings' on the left.



The following setup page will appear, it is the settings that you have setup:

WLAN 5G settings		
Please setup your Device.		
Device SSID : Xiaomi_F343_5G_5Gre		
Encryption : WPA pre-shared key 🗸		
WPA Unicast Cipher Suite : O WPA(TKIP) O WPA2(AES)		
Pre-shared Key Format : Passphrase		
KEY : 1234554321		
Channel : 153 🗸		
	APPLY	CANCEL

Please Note : If your repeater working properly, please do not changes the setting here.

The description of every setup item is listed as follow:

Item	Description
Device SSID	This is the current SSID name of repeater. SSID
	is used to identify your own repeater from others

	when there are other wireless devices in the same
	area. You can type any alphanumerical characters
	to change SSID here, maximum 32 characters.
Encryption	This is the current security setup of repeater. You
	can select an encryption method from dropdown
	menu, there are three options.
WPA Unicast	This is the current security setup of repeater.
Cipher Suite	Please select a type of WPA cipher suite.
	Available options are: WPA (TKIP) and WPA2
	(AES). You can select one of them, but you have
	to make sure your wireless client support the
	cipher you selected.
Pre-shared Key	This is the current security setup of repeater. You
Format	can select the type of pre-shared key, you can
	select Passphrase (8 or more alphanumerical
	characters, up to 63), or Hex (64 characters of
	0-9, and a-f).
Key	This is the current security setup of repeater. You
	can change the WPA passphrase here. It's not
	recommended to use a word that can be found in
	a dictionary due to security reason.
Channel	This is the current channel of repeater.

4-2-7 MAC Address Filtering

Besides using wireless security to only allow permitted wireless users to use this wireless access point, you can also use MAC address filter to allow wireless users with certain MAC address to use this access point.

This will enhance security because you can make a 'white list' to allow users on the list to use this wireless repeater only in advance. For those clients who don't list on this white list can't get connected, even he or she know the password.

To access 'MAC Filtering' menu, click 'MAC Filtering' on the left.



The following setup page will appear:

MAC Addr	ess Filtering		
For security rea Addresses asso	son, the device support MAC Address ociating to the device.	s Filtering allows authorized MAC	
• MAC A It allows	ddress Filtering Table to entry 20 sets address only.		
NO.	MAC Address	Comment Select	
1	11:22:33:44:55:66	Allowed client	
Delete	Selected Delete All Reset		
New	MAC Address:	Comment: Add Clear	
		APPLY CANCEL]

The description of every setup item is listed as follow:

Item	Description
Enable Wireless	Check this box to enable MAC filtering. If you
Access Control	didn't check this box, anyone who knows the
	wireless password can get connected to this
	access point.
MAC Address	Input the MAC address of the clients you wish to
	deny or accept to access this AP into the MAC
	address list. Please input 12 HEX characters here,
	and you don't have to add : (colon) or - (dash)
	characters every 2 characters.
	If you don't know how to get the MAC address of
	a network client, see tips below.
Comment	Input any descriptive text about this rule, so you
	can remember the purpose of this rule. You can
	input up to 20 alphanumerical characters in this
	field.
Add	Add this MAC address to the list.
Clear	Clear 'MAC Address' and 'Comment' field.
Delete Selected	Delete MAC address(es) you selected which
	'Select' box is checked.
Delete All	Delete all MAC addresses in the list. You'll be
	prompted to confirm deletion first.
Reset	Uncheck all checked boxes.
Select	All existing MAC addresses will be listed here.
	To delete a MAC address from the list, check the
	box of the MAC address you wish to delete first.
	You can select more than one MAC addresses
	here.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

Save settings successfully!

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.

CONTINUE	APPLY
----------	-------

If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button. You'll be prompted to wait for 50 seconds before you can reconnect to this access point.

TIPS: If you don't know the MAC address of your computer or wireless device, you can follow the following procedure:

For wireless devices and computers which are connected to this wireless repeater already, you can click 'Show Active Clients' button in 'Home' setting page.

Vireless Configuration	
Mode	AP
ESSID	repeater
Channel Number	10
Security	WEP
BSSID(MAC)	80:1f.02:00:00:03
Associated Clients	0 Show Active Clients

Their MAC address will be displayed at 'MAC Address' field.

4-2-8 How to know the MAC address of your device

If you still can't identify the MAC address of computer, you can follow the following procedure: Click the network icon located at the lower-right corner, then click 'Open Network and Sharing Center'.



Click the connection that you'll be used to connect the wireless AP (in this example, 'Local Area Connection'):



Click 'Details...' button.



The MAC address of selected network connection will be displayed here as 'Physical Address'.

Property	Value
Connection-specific DN	VXHOME WIMAX
Description	Intel(R) PRO/1000 MT Desktop Adapte
Physical Address	08-00-27-BB-4D-3F
DHCP Enabled	Yes
IPv4 Address	10.0.2.15
IPv4 Subnet Mask	255.255.255.0
Lease Obtained	Sunday, June 19, 2011 11:06:40 AM
Lease Expires	Tuesday, June 21, 2011 2:58:14 AM
IPv4 Default Gateway	10.0.2.2
IPv4 DHCP Server	10.0.2.2
IPv4 DNS Server	192.168.1.1
IPv4 WINS Server	
NetBIOS over Tcpip En	Yes
Link-local IPv6 Address	fe80::a83e:603:1e74:c003%11
IPv6 Default Gateway	
IPv6 DNS Server	
•	111

4-2-9 System Utility

You can change the settings of several system-level parameters in this page, including administrator's password, and IP address.

To access 'System Utility' menu, click 'System Utility' on the left.



The following setup page will appear:

System Utility				
You can change the default password & device IP address form this setting page. If you want to use DHCP server service, you should enter a unique IP for the Device.				
Password Settings				
Current Password :				
New Password :				
Re-Enter Password :				

Management IP			
Obtain an IP address	automatically :		
\bigcirc Use the following IP a	address :		
IP Address :	192.168.2.1		
Subnet Mask :	255.255.255.0		
Gateway Address :	0.0.0.0		
DHCP Server			
DHCP Server :	Disable V		
Default Gateway IP :	192.168.2.1		
Domain Name Server IP :	0.0.0.0		
Start IP :	192.168.2.100		
End IP :	192.168.2.200		
Domain Name :			
Lease Time :	Forever V		
		APPLY C	CANCEL

The description of every setup item is listed as follow:

4-2-9-1 Password Settings

Default password of this repeater is 1234, and it's displayed on the login prompt when accessed from web browser. There's a security risk if you don't change the default password, since everyone can see it. This is very important when you have wireless function enabled.
Password Settings	
Current Password :	
New Password :	
Re-Enter Password :	

Here are descriptions of every setup items:

Item	Description
Current Password	To change password, you have to input current
	password first.
New Password	Input new password here. You can use the
	combination of alphabets, number, and symbols
	for up to 20 characters.
Re-Enter Password	Input new password again for conformation.

4-2-9-2 Management IP

The default is set to DHCP client to obtain IP address automatically from your broadband router.

To set up the IP address of this wireless repeater, please see the following description.

Management IP	
Obtain an IP address	automatically :
\odot Use the following IP a	address :
IP Address :	192.168.2.1
Subnet Mask :	255.255.255.0
Gateway Address :	0.0.0.0

Here are descriptions of every setup items:

Item	Description
IP Address	Input the IP address of LAN / Wi-Fi port of this access point. (Default IP of AP mode is 192.168.2.1)
	NOTE: If you enable DHCP server, please input one static IP address here. Please remember this IP address or you can open browser to input the default value 'http://repeaterxxxx' (refer to 4-2-1 setting) to login Web UI page or reset to default.(Press WPS button and hold for 10 seconds to restore all settings to factory defaults)
Subnet Mask	Input the subnet mask of the IP address you're using.
Gateway Address	Input the gateway's IP address of your network. Generally you can use '0.0.0.0' (default value) since this wireless repeater will access Internet via WAN port.

4-2-9-3 DHCP Server

This wireless access point is capable to act as a DHCP server for your network, and it's disabled by default. If you want to activate this function, please select 'Enabled' in 'DHCP Server' option, and see next detailed instructions; if you don't want to use DHCP server function of this wireless access point, or there's another DHCP server on the network this access point connects to, please select 'Disable'.

NOTE: If you select 'Disable' in 'DHCP Server' option, all DHCP-related fields will be grayed out, and you will not be able to input any DHCP parameter.

DHCP Server		
DHCP Server :	Disable V	
Default Gateway IP :	192.168.2.1	
Domain Name Server IP :	0.0.0.0	
Start IP :	192.168.2.100	
End IP :	192.168.2.200	
Domain Name :		
Lease Time :	Forever V	

Here are descriptions of every setup item:

DHCP Server	If you want to activate DHCP server function of
	this router, select 'Enabled', or set it to 'Disabled'.
Default Gateway	Please input the IP address of default gateway of
IP	your network here.
Domain Name	Please input the IP address of domain name server
Server IP	(DNS) here.
Start IP	Please input the start IP address of the IP range.
End IP	Please input the end IP address of the IP range.
Domain Name	If you wish, you can also optionally input the
	domain name for your network. This is optional.
Lease Time	Please choose a lease time (the duration that every
	computer can keep a specific IP address) of every
	IP address assigned by this access point from
	dropdown menu.

When you finish settings in this page, click 'Apply' button. You'll see the following message:

Save settings successfully!

You may press CONTINUE button to continue configuring other settings or press APPLY button to restart the system to make the changes take effect.

CONTINUE	APPLY
----------	-------

If you still need to configure this wireless repeater, click 'CONTINUE' button; if you want to save changes and make it work now, click 'APPLY' button. You'll be prompted to wait for 50 seconds before you can reconnect to this device.

4-2-10 Configuration

You can backup and restore the configuration of this access point, so you can recall all settings back in very short time, without doing configuration again.

This function is especially useful when you need to use this mini Wi-Fi AP in different places, like home and hotel.

To access 'Configuration' menu, click 'Configuration' on the left.



4-2-10-1 Configuration Tool

The following setup page will appear:

Configuration Tool	
Jse the "Backup" tool to save the device's current configurations to a file named config.bin". You can then use the "Restore" tool to restore the saved configuration to the levice. Alternatively, you can use the "Restore to Factory Default" tool to force the device o perform System Reset and restore the original factory settings.	
Backup Settings : Save	
Restore Settings : Upload	
Restore to Factory Default : Reset	

The description of every setup item is listed as follow:

Item	Description
Backup	Click 'Save' button to save the current settings to a file
Settings	on your computer.
Restore	If you want to upload a saved configuration file to this
Settings	device, please click 'Browse' button to select a saved
	configuration file on your computer. Then click 'Upload'
	button to restore the current settings to new one.
Reset to	To reset all settings of this device to factory defaults,
Factory	including password. You'll be prompted to confirm the
Default	settings reset:
	Message from webpage
	Do you really want to reset the current settings to default?
	OK Cancel

	Click 'OK' if you really want to restore all settings, or
	click 'Cancel' to abort.

4-2-10-2 WEB Upgrade

The software running in this device (i.e. 'Firmwre') can be upgraded to improve the functionality of this access point.

You can access our website to look for latest firmware file. Then download the latest firmware file and save on your computer and upload to this wireless AP.

This page allows you to upgrade system firmware.It is recommended that upgrading the firmware from wired stations. Enter the path and name of the upgrade file and then click the APPLY button below. You will be promoted to confirm the upgrade.	WEB Upgrade			
	This page allows you to upgrade system firmware. firmware from wired stations. Enter the path and name of the upgrade file and the will be prompted to confirm the upgrade.	t is recommende en click the APPL	d that upgrading the _Y button below. You	
Browse APPLY CANCEL	Browse	APPLY	CANCEL	

The description of every setup item is listed as follow:

Item	Description
Browse	Select a firmware file saved on your computer.

When you are ready, click 'Apply' button to start firmware upgrade procedure.

4-2-10-3 Reset

When you think this wireless AP is not working properly, resetting it may help.



To reset this wireless repeater, click 'Apply' button. You'll be prompted to confirm reset:

Message from webpage
Do you really want to reset the Access Point ??
OK Cancel

Click 'OK' button to reset wireless repeater, or click 'Cancel' to abort.

Chapter V : Appendix

5-1 Configuring TCP/IP on PC

5-1-1 Windows XP IP address setup:

 Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click *Network and Internet Connections* icon, click *Network Connections*, then double-click *Local Area Connection, Local Area Connection Status* window will appear, and then click 'Properties'

🕹 Local Area Connection Properties 🛛 🔹 🛛
General Authentication Advanced
Connect using:
AMD PCNET Family PCI Ethernet Ad
This connection uses the following items:
 Client for Microsoft Networks Given and Printer Sharing for Microsoft Networks Given Scheduler
I <u>n</u> stall <u>U</u> ninstall <u>Properties</u>
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
 Show icon in notification area when connected Notify me when this connection has limited or no connectivity
OK Cancel

2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click 'OK'.



5-1-2 Windows Vista/Windows 7 IP address setup:

 Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Click View Network Status and Tasks, and then click Manage Network Connections. Right-click Local Area Network, then select 'Properties'. Local Area Connection Properties window will appear, select 'Internet Protocol Version 4 (TCP / IPv4), and then click 'Properties'

Intel(R) PRO/1	000 MT Network Conne	ection
		Configure
This connection uses	the following items:	
Hie and Print A Internet Prote A Internet Prote A Internet Prote	ter Sharing for Microsoft ocol Version 6 (TCP/IP) ocol Version 4 (TCP/IP)	Networks r6) r4)
Install	ter Sharing for Microsoft ocol Version 6 (TCP/IP) ocol Version 4 (TCP/IP) opology Discovery Ma opology Discovery Res	Networks (6) (4) per I/O Driver Sonder Properties

2. Select 'Obtain an IP address automatically' and 'Obtain DNS server address automatically', then click 'OK'.

Concrue Alternate Conliguration			
You can get IP settings assigned a this capability. Otherwise, you nee	automatically if you ed to ask your net	ur network su work adminis	ppor
for the appropriate IP settings.		,	
Obtain an IP address automa	atically		
Use the following IP address		•••••	
IP address:	31.3	é é	
Sybnet mask:		÷	
Default gateway:			
		·····:	
Obtain DNS server address a	automatically		
Dreferred DNS cerver			
Alternate DNS server:		¥	
		Advan	rad
		Auvan	iceu.

5-2 Specification

- SoC + RF: Mediatek MT7620A+MT7610E
- ♦ Flash: 4MB
- SDRAM: 64MB
- ◆ LAN Port: 10/100M UTP Port x 1
- Power: 5VDC, 1.2A Switching Power Module Inside
- Dimension: 59(W) x 91(H) x 40(D) mm excluding power plug
- Transmit Power:
 - ➤ 2.4GHz:
 - 11b(11M): 16±1.5 dBm 11g(54M): 14±1.5 dBm 11n(20MHz, MCS7): 14±1.5 dBm 11n(40MHz, MCS7): 13±1.5 dBm
 - ► 5GHz:
 - 11a(54M): 13±1.5 dBm 11n(20MHz, MCS7): 13±1.5 dBm 11n(40MHz, MCS7): 13±1.5 dBm
 - 11ac(80MHz, VHTMCS9): 13±1.5 dBm
- Receive Sensitivity
 - ➤ 2.4GHz:
 - 11b(11M): -79±2dBm
 - 11g(54M): -65±2dBm
 - 11n(20MHz, MCS7): -64±2dBm
 - 11n(40MHz, MCS7): -61±2dBm
 - ➤ 5GHz:
 - 11a(54M): -65±2dBm 11n(20MHz, MCS7): -64±2dBm 11n(40MHz, MCS7): -61±2dBm 11ac(80MHz, VHTMCS9): -51±2dBm
- Temperature: $32 \sim 104$ °F (0 ~ 40 °C)
 - ➢ Operating: 32~104°F (0~40°C)
 - ➢ Storage: -4~140°F (-20~60°C)
- Humidity: 10-90% (NonCondensing)
 - Operating: 10~90% (NonCondensing)
 - Storage: Max. 95% (NonCondensing)
- Certification: FCC, CE

5-3 Glossary

1. What is the IEEE 802.11g standard?

802.11g is the new IEEE standard for high-speed wireless LAN communications that provides for up to 54 Mbps data rate in the 2.4 GHz band. 802.11g is quickly becoming the next mainstream wireless LAN technology for the home, office and public networks. 802.11g defines the use of the same OFDM modulation technique specified in IEEE 802.11a for the 5 GHz frequency band and applies it in the same 2.4 GHz frequency band as IEEE 802.11b. The 802.11g standard requires backward compatibility with 802.11b.

The standard specifically calls for:

- A. A new physical layer for the 802.11 Medium Access Control (MAC) in the 2.4 GHz frequency band, known as the extended rate PHY (ERP). The ERP adds OFDM as a mandatory new coding scheme for 6, 12 and 24 Mbps (mandatory speeds), and 18, 36, 48 and 54 Mbps (optional speeds). The ERP includes the modulation schemes found in 802.11b including CCK for 11 and 5.5 Mbps and Barker code modulation for 2 and 1 Mbps.
- B. A protection mechanism called RTS/CTS that governs how 802.11g devices and 802.11b devices interoperate.

2. What is the IEEE 802.11b standard?

The IEEE 802.11b Wireless LAN standard subcommittee, which formulates the standard for the industry. The objective is to enable wireless LAN hardware from different manufactures to communicate.

3. What does IEEE 802.11 feature support?

The product supports the following IEEE 802.11 functions:

- CSMA/CA plus Acknowledge Protocol
- Multi-Channel Roaming
- Automatic Rate Selection
- RTS/CTS Feature
- Fragmentation
- Power Management

4. What is Ad-hoc?

An Ad-hoc integrated wireless LAN is a group of computers, each has a Wireless LAN card, Connected as an independent wireless LAN. Ad hoc wireless LAN is applicable at a departmental scale for a branch or SOHO operation.

5. What is Infrastructure?

An integrated wireless and wireless and wired LAN is called an Infrastructure configuration. Infrastructure is applicable to enterprise scale for wireless access to central database, or wireless application for mobile workers.

6. What is BSS ID?

A specific Ad hoc LAN is called a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSS ID.

7. What is WEP?

WEP is Wired Equivalent Privacy, a data privacy mechanism based on a 40 bit shared key algorithm, as described in the IEEE 802 .11 standard.

8. What is TKIP?

TKIP is a quick-fix method to quickly overcome the inherent weaknesses in WEP security, especially the reuse of encryption keys. TKIP is involved in the IEEE 802.11i WLAN security standard, and the specification might be officially released by early 2003.

9. What is AES?

AES (Advanced Encryption Standard), a chip-based security, has been developed to ensure the highest degree of security and authenticity for digital information, wherever and however communicated or stored, while making more efficient use of hardware and/or software than previous encryption standards. It is also included in IEEE 802.11i standard. Compare with AES, TKIP is a temporary protocol for replacing WEP security until manufacturers implement AES at the hardware level.

10. Can Wireless products support printer sharing?

Wireless products perform the same function as LAN products. Therefore, Wireless products can work with Netware, Windows 2000, or other LAN operating systems to support printer or file sharing.

11. Would the information be intercepted while transmitting on air? WLAN features two-fold protection in security. On the hardware side, as with Direct Sequence Spread Spectrum technology, it has the inherent security feature of scrambling. On the software side, WLAN series offer the encryption function (WEP) to enhance security and Access Control. Users can set it up depending upon their needs.

12. What is DSSS? What is FHSS? And what are their differences? Frequency-hopping spread-spectrum (FHSS) uses a narrowband carrier that changes frequency in a pattern that is known to both transmitter and receiver. Properly synchronized, the net effect is to maintain a single logical channel. To an unintended receiver, FHSS appears to be short-duration impulse noise. Direct-sequence spread-spectrum (DSSS) generates a redundant bit pattern for each bit to be transmitted. This bit pattern is called a chip (or chipping code). The longer the chip is, the greater the probability that the original data can be recovered. Even if one or more bits in the chip are damaged during transmission, statistical techniques embedded in the radio can recover the original data without-the need for retransmission. To an unintended receiver, DSSS appears as low power wideband noise and is rejected (ignored) by most narrowband receivers.

13. What is Spread Spectrum?

Spread Spectrum technology is a wideband radio frequency technique developed by the military for use in reliable, secure, mission-critical communication systems. It is designed to trade off bandwidth efficiency for reliability, integrity, and security. In other words, more bandwidth is consumed than in the case of narrowband transmission, but the trade off produces a signal that is, in effect, louder and thus easier to detect, provided that the receiver knows the parameters of the spread-spectrum signal being broadcast. If a receiver is not tuned to the right frequency, a spread –spectrum signal looks like background noise. There are two main alternatives, Direct Sequence Spread Spectrum (DSSS) and Frequency Hopping Spread Spectrum (FHSS).

14. What is WPS?

WPS stands for Wi-Fi Protected Setup. It provides a simple way to establish unencrypted or encrypted connections between wireless clients and access point automatically. User can press a software or hardware button to activate WPS function, and WPS-compatible wireless clients and access point will establish connection by themselves. There are two types of WPS: PBC (Push-Button Configuration) and PIN code.