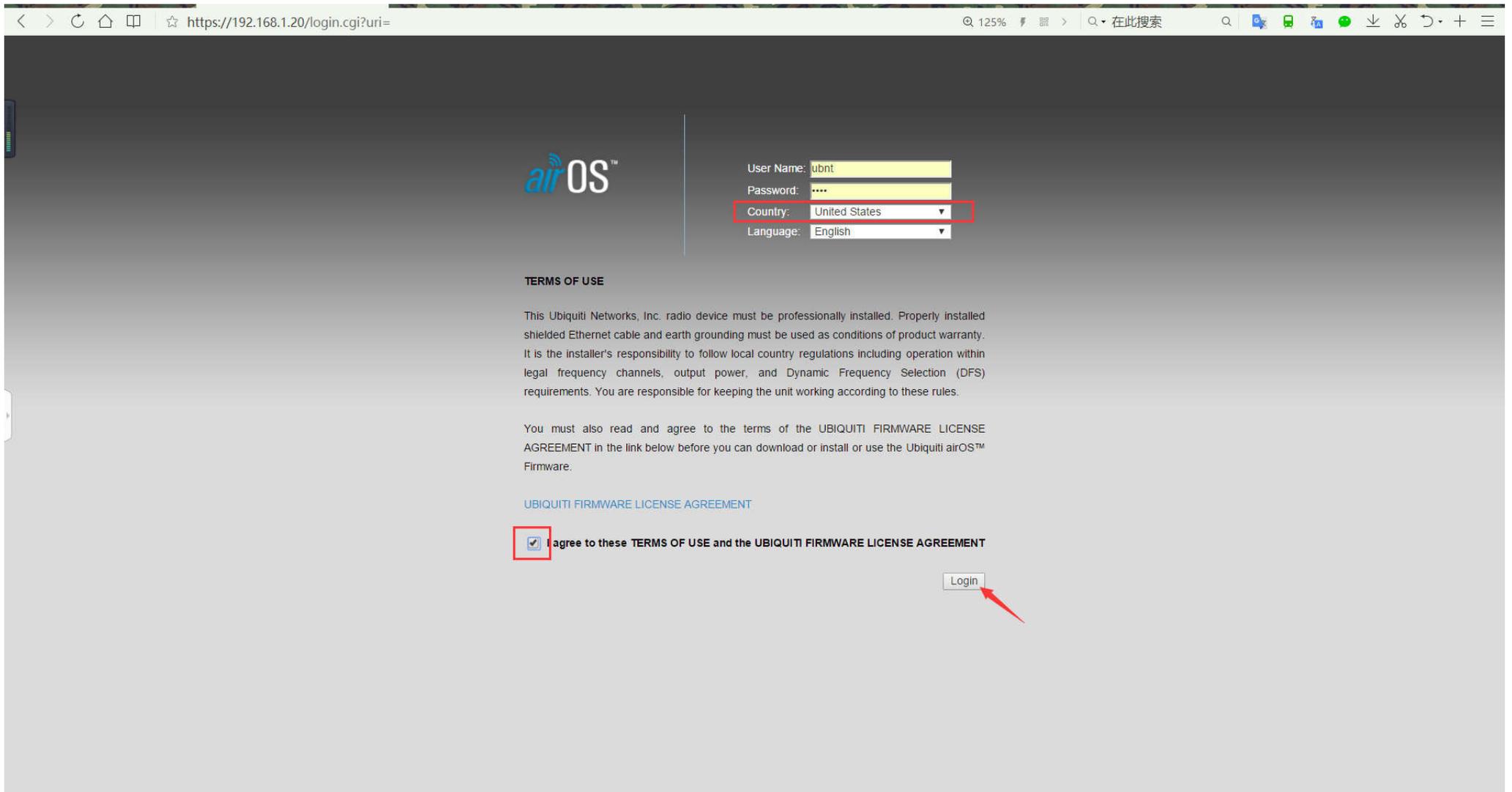


UBNT airMAX M 系列网桥点对点配置教程

PS: UBNT 网桥默认登录用户名和密码都是 `ubnt`, 默认 IP 地址为 `192.168.1.20/24`, 配置设备前请将电脑的 IP 地址手动指定为同网段静态 IP, 例如 IP: `192.168.1.10`, 掩码: `255.255.255.0`

发射端配置

1. 浏览器登录 `192.168.1.20`, 填入默认用户名和密码, 选择所需国家代码 (注意, 不同国家对应的可用频率不同, 且根据当地无线法规, 设备会自行限制发射功率, 使其符合当前国家标准) 本例国家代码选择为 `united states` (美国, 功率受限较少), 然后勾选下方同意协议, 点击 `Login` 进入主界面



2.首先请修改 IP 地址，避免默认地址造成 IP 冲突，在 **NETWORK** 菜单下修改，此处发射端修改地址为 192.168.1.22（网桥上的 IP 地址仅供管理登录作用，可与本地网络不在同一子网网段，不影响数据传输），然后点击 **change** 更改配置

rocket M2 airOS™

MAIN WIRELESS NETWORK ADVANCED SERVICES SYSTEM

Tools: Logout

Network Role

Network Mode: Bridge
Disable Network: None

Configuration Mode

Configuration Mode: Simple

Management Network Settings

Management IP Address: DHCP Static

IP Address: 192.168.1.22
Netmask: 255.255.255.0
Gateway IP: 192.168.1.1

IPv6: Enable

Primary DNS IP:
Secondary DNS IP:
MTU: 1500

Management VLAN: Enable
Auto IP Aliasing: Enable
STP: Enable

Change

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You are using the default Administrator password.
Please change it in [System](#) page.

Dismiss

3.新版固件需强制客户修改登录密码，加强了安全性，依次按下图要求新建密码，右边显示 **strong** 字母，新密码才达到安全要求，点 **change** 更改即可

The screenshot displays the Ubiquiti Rocket M2 web interface. At the top, the browser address bar shows <https://192.168.1.20/network.cgi>. The interface includes a navigation menu with tabs for MAIN, WIRELESS, NETWORK, ADVANCED, SERVICES, and SYSTEM. A notification bar at the top indicates "Configuration contains changes. Apply these changes?" with buttons for Test, Apply, and Discard. The main content area shows configuration options for Network Role (Network Mode: Bridge, Disable Network: None) and Configuration Mode. A "Change Password" dialog box is open, displaying a red warning: "Default Password must be changed to apply configuration changes!". The dialog contains three password fields: Current Password (ubnt), New Password (新密码), and Verify New Password (确认新密码). A green "Strong" indicator is visible next to the New Password field. At the bottom of the dialog, there are "Cancel" and "Change" buttons, with a red arrow pointing to the "Change" button. In the bottom right corner, an orange notification box states: "You are using the default Administrator password. Please change it in System page." with a "Dismiss" button.

4. 配置的保存都需两步，上方点击 change 之后，点击 **Apply** 应用更改即可。

The screenshot displays the Ubiquiti Rocket M2 airOS web interface. At the top, there is a navigation menu with tabs for MAIN, WIRELESS, NETWORK, ADVANCED, SERVICES, and SYSTEM. A notification bar at the top center reads "Configuration contains changes. Apply these changes?" with buttons for "Test", "Apply", and "Discard". A red arrow points to the "Apply" button. Below the notification bar, the "Network Role" section includes "Network Mode" (Bridge) and "Disable Network" (None). The "Configuration Mode" section shows "Configuration Mode" (Simple). The "Management Network Settings" section includes "Management IP Address" (DHCP/Static), "IP Address" (192.168.1.22), "Netmask" (255.255.255.0), "Gateway IP" (192.168.1.1), "Primary DNS IP", "Secondary DNS IP", "MTU" (1500), "Management VLAN" (Enable), "Auto IP Aliasing" (checked), and "STP" (Enable). A "Change" button is located at the bottom right of the settings area. At the bottom left, there is a "GENUINE PRODUCT" logo. At the bottom right, an orange warning box contains the text "You are using the default Administrator password. Please change it in System page." and a "Dismiss" button. The browser address bar shows "https://192.168.1.20/network.cgi".

5.接下来点击 **WIRELESS** 菜单，选择无线模式为 **Access Point**（接入点），勾选 **WDS** 使数据透传，**SSID** 自行修改，便于区分同一场地的多个发射端设备，点击 **change** 再点击上方蓝色部分的 **Apply**。**Frequency**（频率）选项默认为自动，若环境有干扰或多对网桥设备，建议手动选择指定合适的频率。**Antenna**（天线）选项为计算设备的 **EIRP**，一般天线选择越大，发射功率最大值就会越小，所以一般建议此选项选最小。

rocket M2

airOS™

MAIN WIRELESS NETWORK ADVANCED SERVICES SYSTEM

Tools: Logout

Basic Wireless Settings

Wireless Mode: Access Point

WDS (Transparent Bridge Mode): Enable

SSID: ubnt-22 Hide SSID

Country Code: United States

IEEE 802.11 Mode: B/G/N mixed

Channel Width: 40 MHz

Frequency, MHz: auto

Extension Channel: None

Frequency List, MHz: Enable

Calculate EIRP Limit: Enable

Antenna: RD-2G-24 (2x2) - 24 dB

Output Power: 24 dBm

Data Rate Module: Default

Max TX Rate, Mbps: MCS 15 - 270/300 Auto

Wireless Security

Security: none

RADIUS MAC Authentication: Enable

MAC ACL: Enable

3

Change

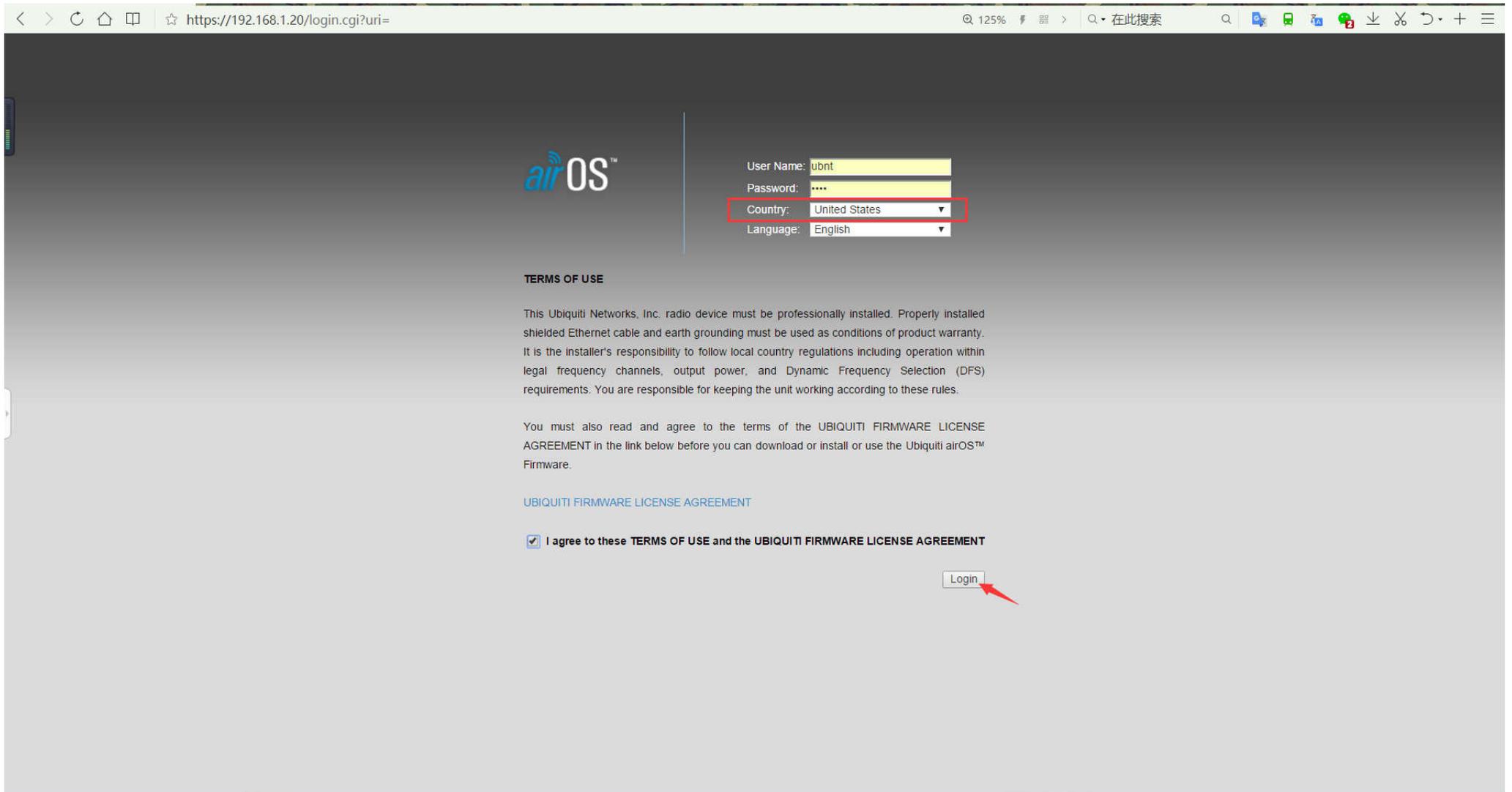


The screenshot shows the Ubiquiti Rocket M2 web interface. At the top, there is a navigation menu with tabs for MAIN, WIRELESS, NETWORK, ADVANCED, SERVICES, and SYSTEM. The WIRELESS tab is selected. A blue notification bar at the top of the configuration area says "Configuration contains changes. Apply these changes?" with buttons for Test, Apply, and Discard. A red arrow points to the Apply button. Below the notification bar, the "Basic Wireless Settings" section is visible. It includes fields for Wireless Mode (Access Point), WDS (Transparent Bridge Mode) (checked), SSID (ubnt-22), Country Code (United States), IEEE 802.11 Mode (B/G/N mixed), Channel Width (40 MHz), Frequency (auto), Extension Channel (None), Frequency List (unchecked), Calculate EIRP Limit (checked), Antenna (RD-2G-24 (2x2) - 24 dB), Output Power (24 dBm), Data Rate Module (Default), and Max TX Rate (MCS 15 - 270/300, Auto checked). The "Wireless Security" section below shows Security (none), RADIUS MAC Authentication (unchecked), and MAC ACL (unchecked). A "Change" button is at the bottom right of the configuration area. The footer includes a "GENUINE PRODUCT" logo and copyright information for Ubiquiti Networks, Inc.

至此，发射端配置完成。

接收端配置

1. 初始步骤与发射端一样，浏览器登录 192.168.1.20，注意国家代码选择与发射端一致。



2.同样先修改 IP 地址，此处接收端地址修改为 192.168.1.23，点击 change 之后，弹出初始密码修改，修改完成后点击 change 之后再点击 Apply

Network Role

Network Mode: Bridge
Disable Network: None

Configuration Mode

Configuration Mode: Simple

Management Network Settings

Management IP Address: DHCP Static

IPv6: Enable

IP Address: 192.168.1.23
Netmask: 255.255.255.0
Gateway IP: 192.168.1.1

Primary DNS IP:

Secondary DNS IP:

MTU: 1500

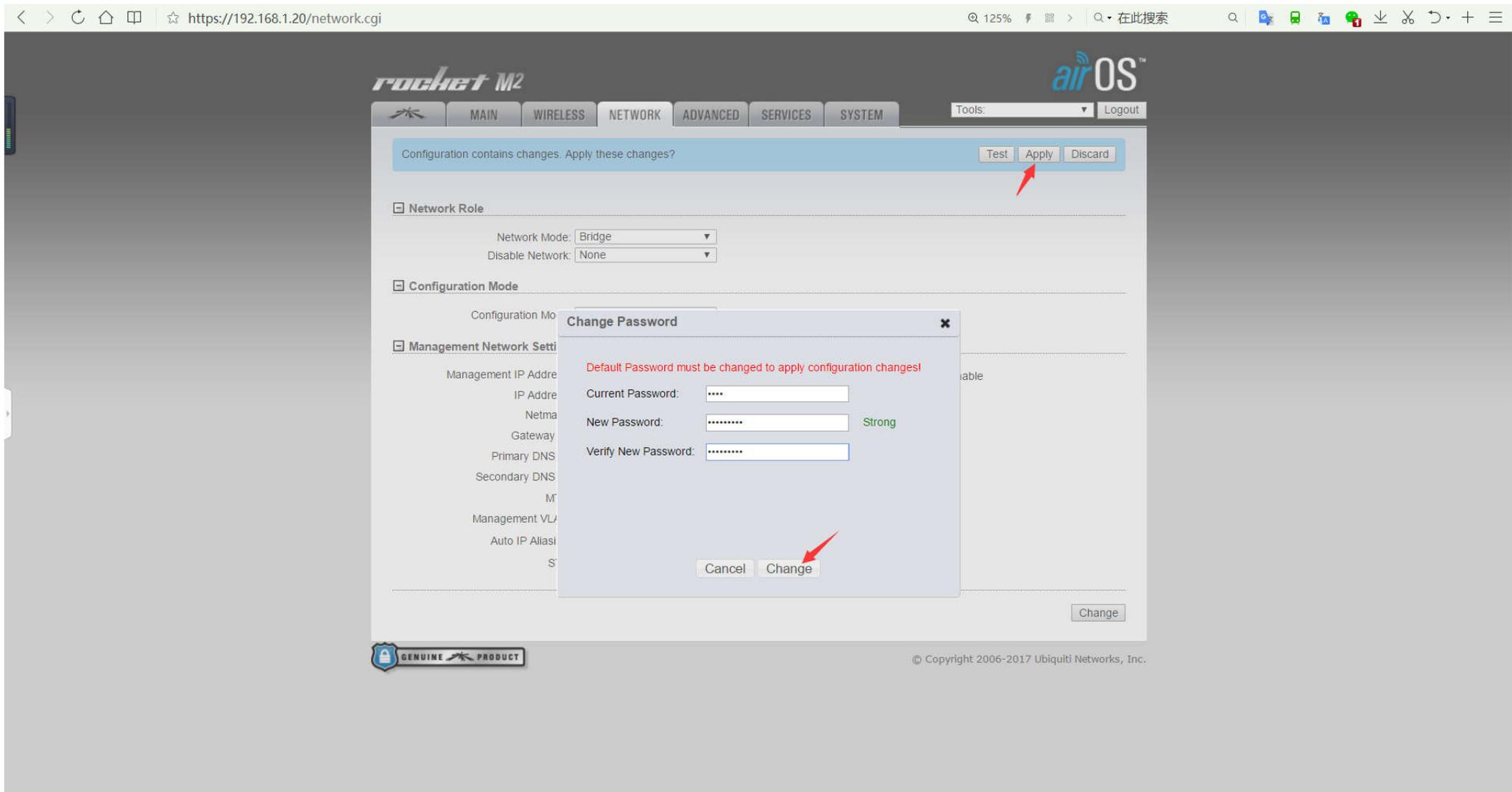
Management VLAN: Enable

Auto IP Aliasing: Enable

STP: Enable

Change





3.接着进入 **WIRELESS**，此次无线模式选择为 **station**（站），勾选 **WDS** 透传。然后点击 **SSID** 旁的 **Select** 按钮

The screenshot shows the 'Basic Wireless Settings' page in the Ubiquiti Rocket M2 web interface. The 'WIRELESS' tab is active. The 'Wireless Mode' is set to 'Station'. The 'WDS (Transparent Bridge Mode)' checkbox is checked. The SSID is 'ubnt'. A 'Select...' button is highlighted with a red arrow and the number 3. The 'Lock to AP' field is empty. The 'Security' is set to 'none'. A 'Change' button is at the bottom right.

4.弹出扫描 web 页，会扫描周围无线环境的发射端设备，找到刚刚发射端设置的 SSID（ubnt-22），选择之后点击 Lock to AP 锁定 AP

Site Survey

Scanned Frequencies:
2.412GHz 2.414GHz 2.417GHz 2.419GHz 2.422GHz 2.424GHz 2.427GHz 2.429GHz 2.432GHz 2.434GHz 2.437GHz 2.439GHz 2.442GHz
2.444GHz 2.447GHz 2.449GHz 2.452GHz 2.454GHz 2.457GHz 2.459GHz 2.462GHz 2.464GHz

MAC Address	SSID	Device Name	Radio Mode	Encryption	Signal / Noise, dBm	Frequency, GHz / Channel
02:27:22:F1:28:95	JAVA-UniFi		802.11n	NONE	-67 / -82	2.412 / 1
82:2A:A8:4A:FF:C2	UniFi-OKProtal		802.11n	NONE	-65 / -82	2.412 / 1
D6:CA:6D:12:3C:3D	ubnt	D4CA6D123C3D	802.11n	NONE	-65 / -82	2.412 / 1
D6:CA:6D:12:3C:3E	TEST-55G	D4CA6D123C3D	802.11n	NONE	-65 / -82	2.412 / 1
00:0C:42:FC:98:D3	AolKee11111	000C42FC98D3	802.11n	NONE	-35 / -82	2.412 / 1
6C:3B:6B:9F:E2:86	Mi-12	6C3B6B9FE286	802.11g	NONE	-41 / -82	2.412 / 1
D4:CA:6D:12:3C:3D	MikroTik	D4CA6D123C3D	802.11n	NONE	-66 / -82	2.412 / 1
D6:CA:6D:2F:F7:9F	vap	D4CA6D2FF79F	802.11n	WPA	-76 / -82	2.412 / 1
80:2A:A8:4A:FF:C2	EDCwifi		802.11n	WPA2	-65 / -82	2.412 / 1
D4:CA:6D:2F:F7:9F	EDC123	D4CA6D2FF79F	802.11n	WPA	-44 / -82	2.412 / 1
E6:8D:8C:44:1B:F5	Training2	training-2G	802.11n	WPA	-81 / -86	2.422 / 3
6C:3B:6B:14:0F:FB	CAPsMan-2.4G	6C3B6B140FFB	802.11n	WPA	-53 / -82	2.427 / 4
D4:CA:6D:2E:10:F3	2G	D4CA6D2E10F3	802.11n	NONE	-32 / -81	2.432 / 5
E6:8D:8C:BF:0C:91	AP33	E48D8CBF0C8F	802.11n	NONE	-58 / -81	2.437 / 6
E4:8D:8C:BF:0C:8F	Java-test	E48D8CBF0C8F	802.11n	NONE	-57 / -81	2.437 / 6
E6:8D:8C:BF:0C:8F	Java2-test	E48D8CBF0C8F	802.11n	NONE	-60 / -81	2.437 / 6
E6:8D:8C:BF:0C:90	AP22	E48D8CBF0C8F	802.11n	NONE	-57 / -81	2.437 / 6
82:2A:A8:84:0E:BD	UniFi-OKProtal		802.11n	NONE	-38 / -83	2.462 / 11
56:D9:E7:69:55:04	UniFi-OKProtal		802.11n	NONE	-81 / -83	2.462 / 11
68:72:51:62:6C:DD	ubnt-22	Rocket M2	802.11n airMAX	NONE	-38 / -83	2.464 / 41
80:2A:A8:84:0E:BD	EDCwifi		802.11n	WPA2	-43 / -83	2.462 / 11
46:D9:E7:69:55:04	EDCwifi		802.11n	WPA2	-75 / -83	2.462 / 11

Selectable SSID's must be visible and have compatible channel bandwidth and security settings.

Lock to AP Select Scan

5. 之后跳转回到 WIRELESS，可以看到原本空白的 Lock to AP 选项，已经填入了发射端的 MAC 地址，最后点击 change→Apply。

到此接收端配置完成。

点对点配置成功之后，点击 MAIN 页可看到一些运行信息，下方红框处为设备两个极化方向的信号值，此值在**建议在-70 内**，-50 左右算是非常好了，且**两个信号值相差不要超过 5**，否则请进一步微调设备天线角度。下方两个彩条代表了**通讯质量和容量**，**建议在 80%以上**，如果此数值较低，在确认信号值良好的情况下，请切换发射端的工作频率，使其工作在更好的无线信道。

Browser address bar: <https://192.168.1.23/index.cgi>

Page Title: **rocket M2** | **airOS™**

Navigation: MAIN | WIRELESS | NETWORK | ADVANCED | SERVICES | SYSTEM

Tools: [Dropdown] | Logout

Status

Device Model: Rocket M2	CPU: 19 %
Device Name: Rocket M2	Memory: 31 %
Network Mode: Bridge	AP MAC: 68:72:51:62:6C:DD
Wireless Mode: Station WDS	Signal Strength: -31 dBm
SSID: ubnt-22	Chain0 / Chain1: -32 / -34 dBm
Security: none	Noise Floor: -83 dBm
Version: v6.0.4 (XM)	Transmit CCQ: 94.2 %
Uptime: 00:36:34	TX/RX Rate: 243 Mbps / 240 Mbps
Date: 2017-05-05 16:01:26	airMAX: Enabled
Channel/Frequency: 41 / 2464 MHz	airMAX Priority: Base
Channel Width: 40 MHz (Lower)	airMAX Quality: 88 %
Frequency Band: 2434 - 2474 MHz	airMAX Capacity: 68 %
Distance: 0.1 miles (0.2 km)	
TX/RX Chains: 2X2	
TX Power: 24 dBm	
Antenna: RD-2G-24 - 24 dBi	
WLAN0 MAC: 68:72:51:62:33:D3	
LAN0 MAC: 68:72:51:63:33:D3	
LAN0: 10Mbps-Full	

Monitor

[Throughput](#) | [AP Information](#) | [Interfaces](#) | [ARP Table](#) | [Bridge Table](#) | [Routes](#) | [Log](#)

WLAN0

RX: 9.21kbps
TX: 4.87kbps

Interface	Rate (kbps)
RX	9.21
TX	4.87

LAN0

RX: 8.06kbps
TX: 20.8kbps

Interface	Rate (kbps)
RX	8.06
TX	20.8

Refresh

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点对点配置完成后，也可通过连通的无线登录对端设备，下面是发射端的主信息页，可以点击下方 **station** 选项，查看接入的接收端数量以及一些基础的参数



MAIN WIRELESS NETWORK ADVANCED SERVICES SYSTEM Tools: Logout

Status

Device Model: Rocket M2	CPU: 2 %
Device Name: Rocket M2	Memory: 32 %
Network Mode: Bridge	AP MAC: 68:72:51:62:6C:DD
Wireless Mode: Access Point WDS	Connections: 1
SSID: ubnt-22	Noise Floor: -84 dBm
Security: none	Transmit CCQ: 96.7 %
Version: v6.0.4 (XM)	airMAX: Enabled
Uptime: 00:38:42	airMAX Quality: 89 %
Date: 2017-05-05 16:03:34	airMAX Capacity: 68 %
Channel/Frequency: 41 / 2464 MHz	airSelect: Disabled
Channel Width: 40 MHz (Lower)	
Frequency Band: 2434 - 2474 MHz	
Distance: 0.1 miles (0.2 km)	
TX/RX Chains: 2X2	
TX Power: 24 dBm	
Antenna: RD-2G-24 - 24 dBi	
WLAN0 MAC: 68:72:51:62:6C:DD	
LAN0 MAC: 68:72:51:63:6C:DD	
LAN0: Unplugged	

Monitor [Throughput](#) | [Stations](#) | [Interfaces](#) | [ARP Table](#) | [Bridge Table](#) | [Routes](#) | [Log](#)

Station MAC	Device Name	TX Signal, dBm Combined	RX Signal, dBm Combined	Noise, dBm	Latency, ms	Distance, miles	TX/RX, Mbps	CCQ, %	Connection Time	Last IP	Action
68:72:51:62:33:D3	Rocket M2	-32	-28	-84	2	0.1	240 / 240	96	00:01:55	192.168.1.23	kick



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