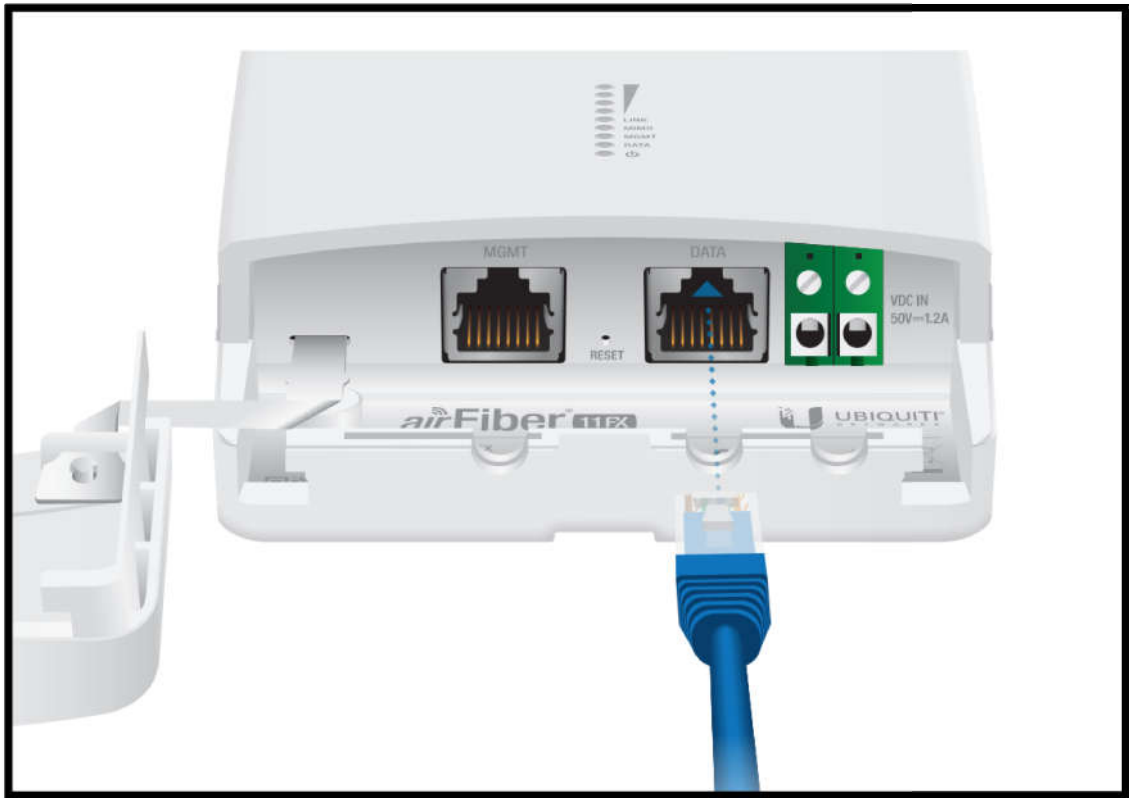
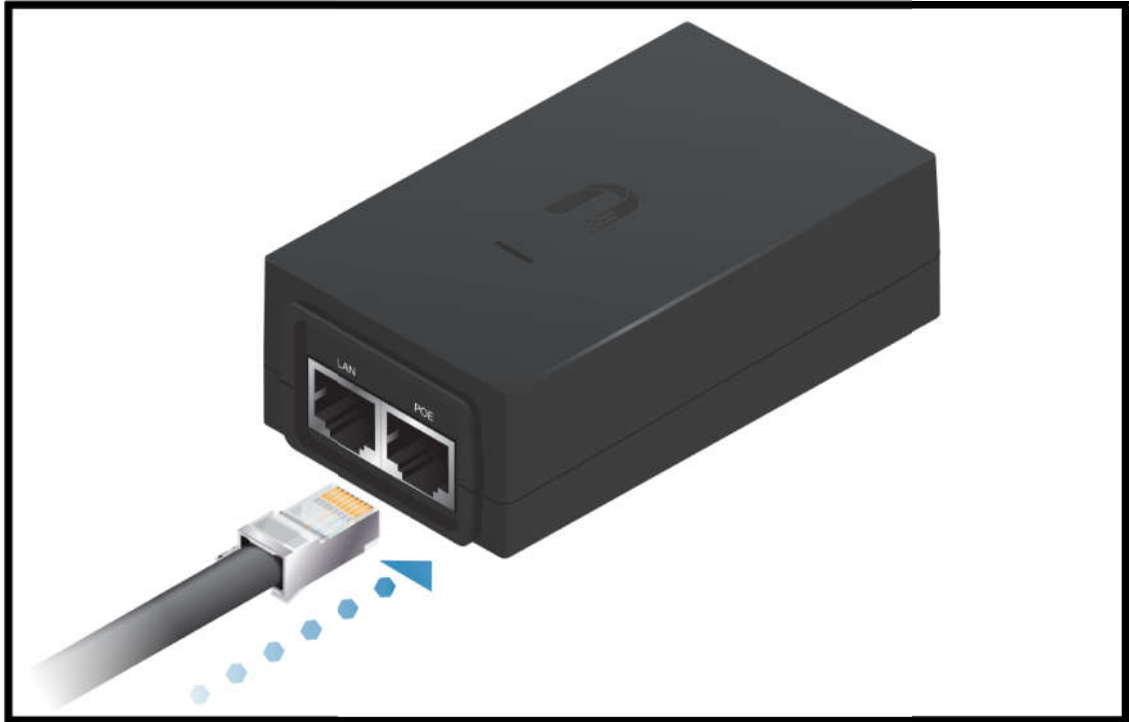


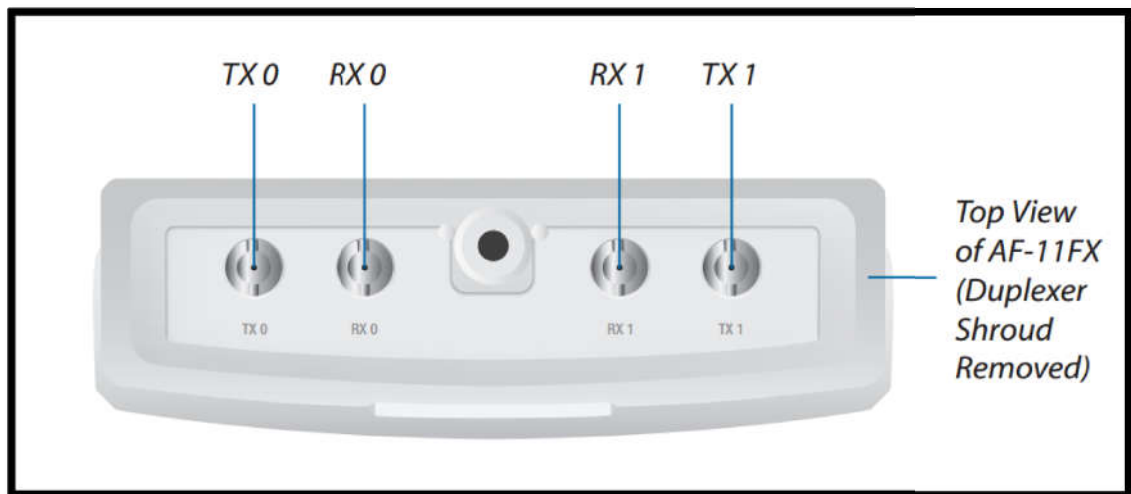
AF 11FX 配对教程

连接部分

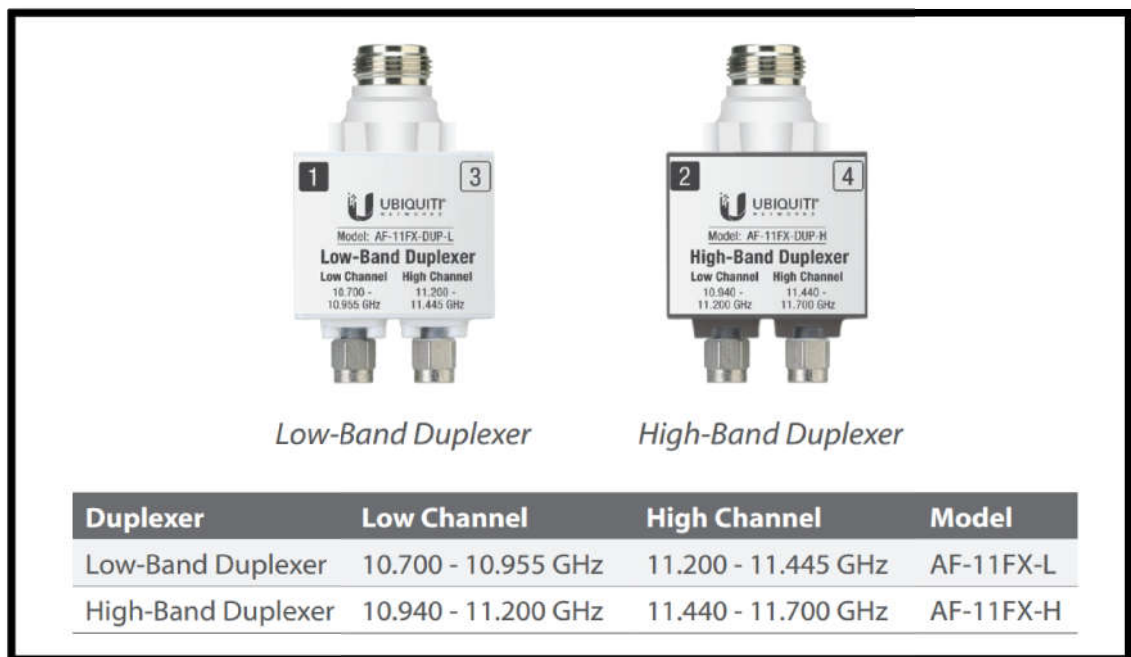
1. POE 电源的 LAN 口连接路由器/交换机/电脑等终端设备，POE 口网线连接 AF 11FX 的 DATA 口



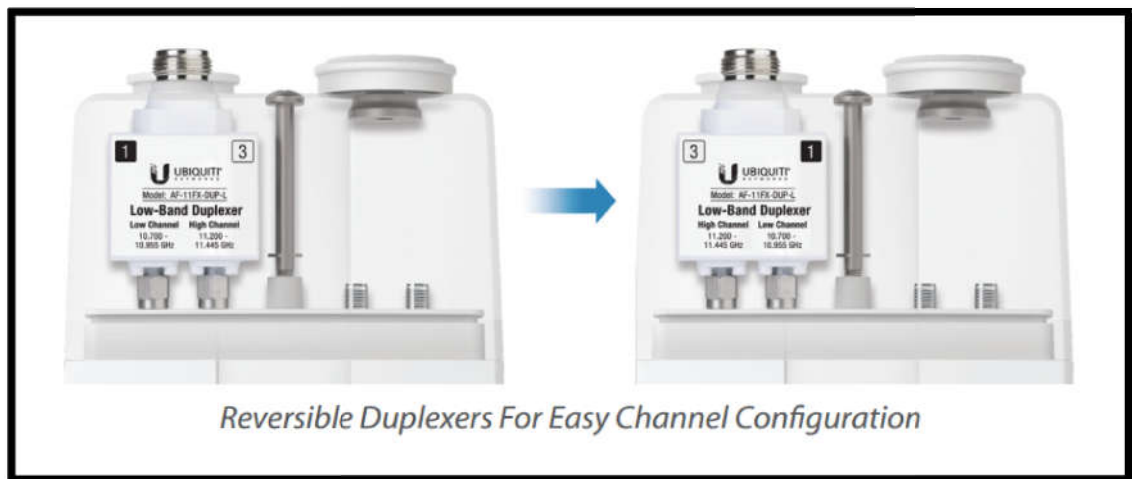
2. 设备上有两对双工器接口，如果使用的 SISO 模式，则使用 TX0/RX0。如果使用 MIMO 模式，则两对接口都需用到



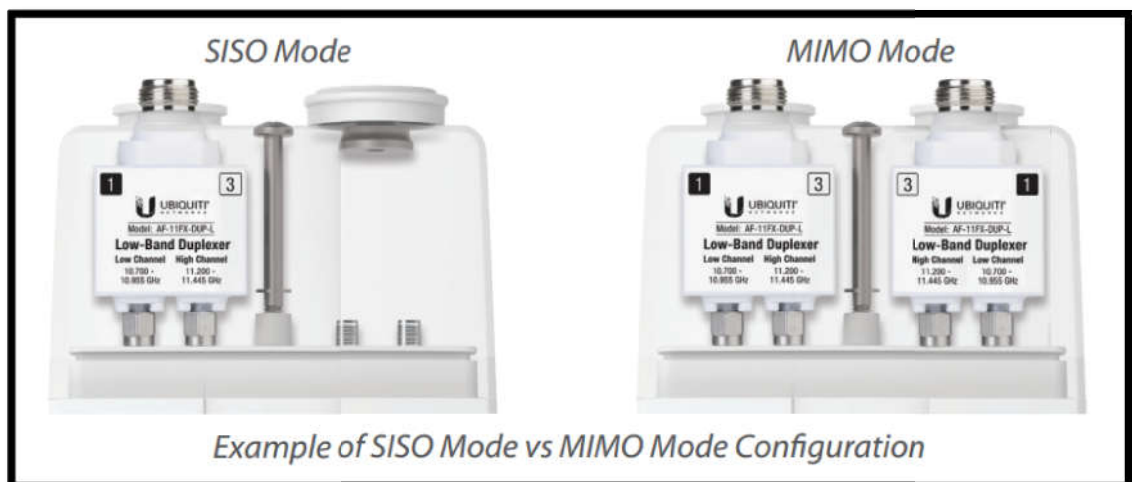
3. 双工器分高频和低频两种，上方左右角标明 1 和 3 的为低频（型号为 AF-11FX-L），标明 2 和 4 的为高频（型号为 AF-11FX-H）。双工器下方两个 SMA 接口的上方也相应标出支持的频率范围，网桥频率设置时需根据所接的接口与双工器上的频率范围一一对应。



4. 网桥配对模式为 SISO 时，一端的双工器的 1 和 3 接口对应设备的 TX0 和 RX0，另一端则将双工器反过来接，双工器的 3 和 1 接口，对应设备的 TX0 和 RX0。



5.配置为 MIMO 模式时，需要接上两个双工器，且连接的接口相反，如 TX0 和 RX0 对应的是 1 和 3，那么 TX1 和 RX1 对应的是 3 和 1。另一端设备的 TX0 和 RX0 对应的是 3 和 1，TX1 和 TX2 对应的是 1 和 3。



6.SISO 的接收和发射都是单天线流，MIMO 的接收和发射都是双天线流，故吞吐量翻倍。



配置部分

1. 设备的默认登录 IP 是 **192.168.1.20**，请在电脑设置为同网段的静态 IP（如 **192.168.1.80**），打开浏览器地址栏输入 **192.168.1.20** 登录到以下初始界面。默认用户名和密码都是 **UBNT**，国家选择 **Licensed**，下方勾选协议条款之后，点击 **LOGIN**。

192.168.1.20/login

Login

Please login to manage your wireless device.

Username
ubnt

Password

Country
Licensed

Language
English

TERMS OF USE

This Ubiquiti Networks, Inc. radio device must be professionally installed. Properly installed shielded Ethernet cable and earth grounding must be used as conditions of product warranty. It is the installer's responsibility to follow local country regulations including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements. You are responsible for keeping the unit working according to these rules.

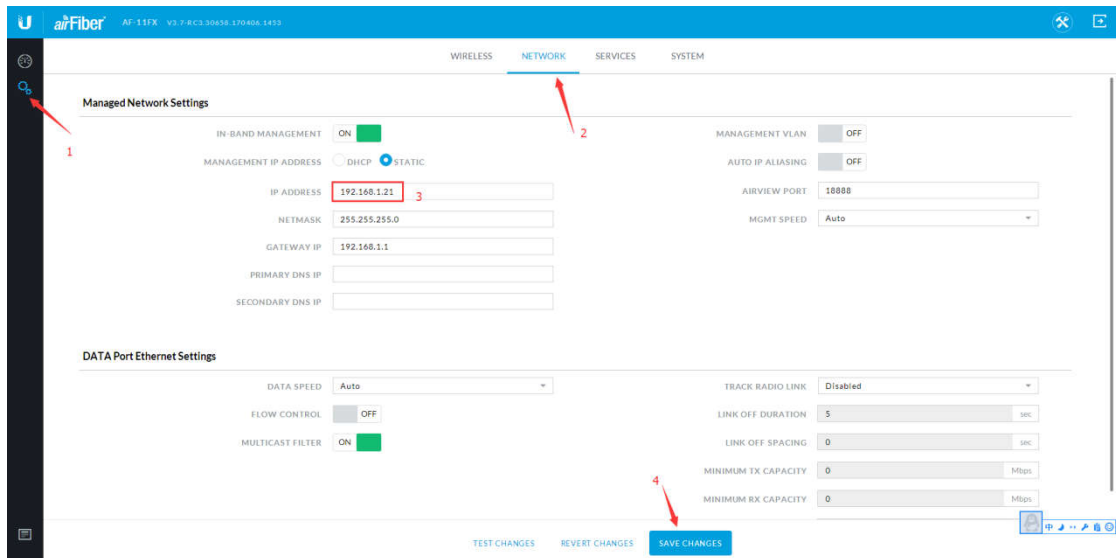
You must also read and agree to the terms of the UBIQUITI FIRMWARE LICENSE AGREEMENT in the link below before you can download or install or use the Ubiquiti airFiber™ Firmware.

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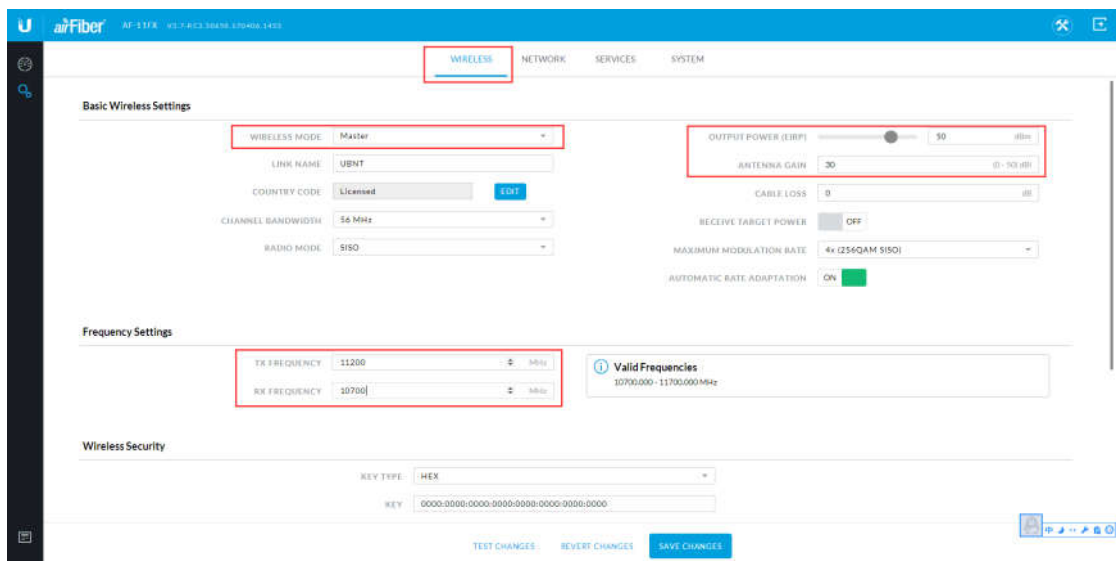
I agree to these TERMS OF USE and the UBIQUITI FIRMWARE LICENSE AGREEMENT

LOGIN

2. 首先打开 **NETWORK** 菜单，修改 IP 地址，避免设备间 IP 冲突，本例发射端 IP 设置为 **192.168.1.21**，最后点击 **SAVE CHANGES** 保存配置。



3.先配置发射端，在 WIRELESS 下，选择无线模式为 **Master**，链路名默认为 UBNT（如现场有多对网桥，建议修改链路名，使其区别开），频宽默认选择最大 56MHz，以便获取到最大吞吐量，模式为 SISO（如需选择 MIMO，详见教程最下方截图），右边填写天线增益数值以及合适的输出功率值。TX 频率和 RX 频率的填写需要以设备 TX0 接口和 RX0 接口所接的双工器频率范围为准，切勿乱填！此例填写 TX 为 11200，RX 为 10700。加密模式保持默认。最后点击 SAVE CHANGES 保存即可，发射端配置完成。



4.接着配置接收端，初始操作与发射端一致，填写初始登录信息以及修改设备 IP，如下截图

192.168.1.20/login

Login

Please login to manage your wireless device.

Username:

Password:

Country:

Language:

TERMS OF USE

This Ubiquiti Networks, Inc. radio device must be professionally installed. Properly installed shielded Ethernet cable and earth grounding must be used as conditions of product warranty. It is the installer's responsibility to follow local country regulations including operation within legal frequency channels, output power, and Dynamic Frequency Selection (DFS) requirements. You are responsible for keeping the unit working according to these rules.

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airFiber AT-511A v2.7-RC3.3848.130408.1403

WIRELESS NETWORK SERVICES SYSTEM

Managed Network Settings

IN-BAND MANAGEMENT: ON

MANAGEMENT IP ADDRESS: DHCP STATIC

IP ADDRESS:

NETMASK:

GATEWAY IP:

PRIMARY DNS IP:

SECONDARY DNS IP:

MANAGEMENT VLAN:

AUTO IP ALIASING:

AIRVIEW PORT:

MGMT SPEED:

DATA Port Ethernet Settings

DATA SPEED:

FLOW CONTROL:

MULTICAST FILTER: ON

TRACK RADIO LINK:

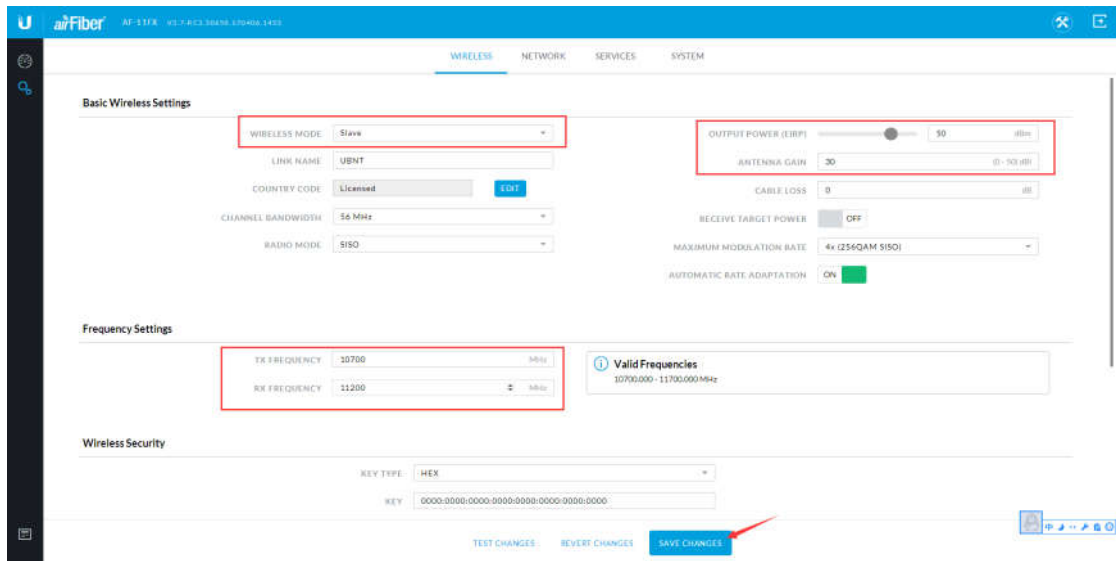
LINK OFF DURATION: sec

LINK OFF SPACING: sec

MINIMUM TX CAPACITY: Mbps

MINIMUM RX CAPACITY: Mbps

5.配置接收端，则在 WIRELESS 菜单下的无线模式选择 **Slave**，链路名（UBNT）和频宽以及射频模式（SISO）以及加密需于发射端一致，输出功率与天线自行填写合适值，TX 频率与 RX 频率则与发射端相反，TX 为 10700，RX 为 11200，最后点击 **SAVE CHANGES** 保存配置即可。



6. 连通之后可以在设备的 MAIN 页看到设备的接收信号值等信息参数。PS: 如配置信息确认无误, 则请更换信道测试即可。



7. 如需将设备配置为 MIMO 射频模式, 需要连接两个双工器, 并在两端设备的 WIRELESS 菜单下的射频模式修改为 MIMO, 并开启下方 ENHANCED MIMO 为 ON 即可。

U aFiber AF-311X WS-F-PC2-384M-170406-1423

WIRELESS NETWORK SERVICES SYSTEM

COUNTRY CODE: Licensed CABLE LOSS: 0 dB

CHANNEL BANDWIDTH: 56 MHz

RADIO MODE: MIMO

RECEIVE TARGET POWER: OFF

MAXIMUM MODULATION RATE: 10x (1024QAM MIMO)

AUTOMATIC RATE ADAPTATION: ON

Frequency Settings

TX FREQUENCY: 11300.000 MHz

RX FREQUENCY: 10800.000 MHz

Valid Frequencies
10700.000 - 11700.000 MHz

Wireless Security

KEY TYPE: HEX

KEY: 0000:0000:0000:0000:0000:0000:0000:0000

Advanced Wireless Settings

ENHANCED MIMO: ON

AUTOMATIC POWER BACKOFF: OFF

MAX 10X CONDUCTED POWER: dBm

TEST CHANGES REVERT CHANGES **SAVE CHANGES**