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ST15NMT User Manual



SUNTOR ELECTRONICS CO., LIMITED



Focus on Wireless, Make Transmission Easier

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I , **Product Appearance**



II、 Product Intro

The ST15MPT UAV wireless transmission link is an Ad-hoc network device, it's good performance in NLOS transmission. The device wireless module adopt Qualcomm chip and two-frequency design, it support 1.4G (1427.9-1447.9MHz) and 800M (806-826MHz). When it's in 1.4G frequency, it can realize a high throughput Ad-hoc network transmission in a long LOS distance. When it's in 800M frequency, it can realize fast mobile Ad-hoc network transmission in a NLOS complex environment. In our testing, the NLOS distance is 1-3KM, the LOS distance is 10-20KM.

The ST15MPT RF power is 300mW, its features of low power consumption, small in size, quick to install, strong penetration transmission and long range advantages, is very suitable application for manpack video transmission, UAV, Unmanned ship, Unmanned car, Airship, Target drone, Powered parachute, Robot and other fields for



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video signal transmission, police video forensics, emergency monitor and rescue sites.

III、Equipment Install

3.1 Interfaces Describe



No.	Item	Function describe
1	ANT1/ANT2	antenna interfaces 1/2
2	RJ45 Eth interface	connect to devices : IPC , Switch , PC , etc.
3	USB interface	reserved port
4	DC5V power interface	power supply (DC 5V)

3.2 Basic Parameters

N.W.:140g



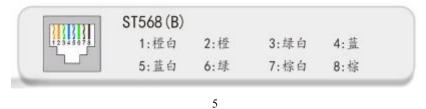
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G.W.:180g(including two antenna)



3.3 Cautions

The device data interface is designed by air plug. If it needs to be extended during use, please use the direct network cable. The direct network cable sequence is defined as follows:





Special attention: before the equipment is powered on, please carefully confirm whether the antenna is correctly connected, so as to avoid unnecessary trouble and economic loss caused by damage to the equipment.

IV、Equipment Debug

4.1 Prepare of Debug

Before debugging, ensure that PC and device IP in the same network segment.

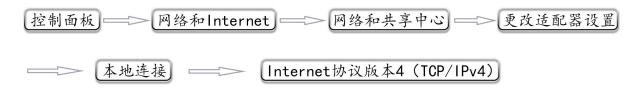
Factory default parameters: IPv4 address: 192.168.1.1; Subnet mask: 255.255.255.0;

The IP of the computer should be set to 192.168.1.x (X = any number between 2 and

253, which does not conflict with the device address).

The subnet mask : 255.255.255.0。

The steps to modify computer IP:





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♀ 本地连接 屬性 网络 共享	常规 如果网络支持此功能,则可以获 您需要从网络系统管理员处获得 ● 自动获得 IP 地址 @)	现自动描派的 IP 设置。否则, 适当的 IP 设置。
注接时使用:	 使用下面的 IP 地址(2):] IP 地址(I): 子网摘码(U): 默认网关(II): 	192 .168 .1 .10 255 .255 .255 .0 192 .168 .1 .1
 ● Nicrosoft 网络富户端 ● Go 教授包计划程序 ● Gi crosoft 网络含文件内打印机共享 ● Literast 协议版本 6 (TCP/LPG) ● Literast 防災版本 6 (TCP/LPG) ● LiteRE合计发现映料器 1/0 驱动程序 	● 自动获得 DNS 服务器地址() ● 使用下面的 DNS 服务器地址	
✓ ▲ 磁路层括扑发现响应程序 安装 @D 卸戦 @D 属性 @ 描述	🔲 退出时验证设置 🛈	高級 创
TCF/IE。该协议是默认的广域网络协议,它提供在 的相互连接的网络上的通讯。	D.j	· 确定

4.2 Equipment Login

1. Open IE browser, input the IP of the device in the address bar: 192.168.1.12, log in the device and select "Management Login", the default IP of the device is: 192.168.1.12, username and password is: admin123.

Login	
User Name: Please Enter User Nam	
Password: Please Enter Password	
Login Regist	
Modify Account	
Management Login	
Powered by @ 2019	
简体 繁體 Engilsh	
	choose "Management Login"

2. User name: admin123 pass

password : admin123

7

click login

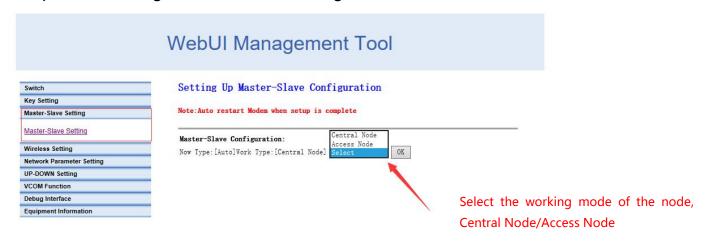


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4.3 Set Central Node/ Access Node

The device has two working modes: Central Node/ Access Node. After logging into the device through the browser, the following actions are required to change the device's working mode. After entering the page, click "Master and Slave Setting", select "Master and Slave Setting" to set the device's working mode, and click "OK" to complete the configuration. As shown in figure:



4.4 Modify IP Address

Enter the device IP address in the browser and enter the device management p



age. Click "Network Parameter Setting" and select "IP setting" to modify the de

vice IP address. Click "OK" to complete IP modification, as shown in figure:

	WebUI Management Tool
Switch	IP Address Change Management
Key Setting	
Master-Slave Setting	IP Setting:
Wireless Setting	Now IP Address: [192.168.1.12]
Network Parameter Setting	New IP Address: 192.168.1.
IP Setting DHCP Setting	
UP-DOWN Setting	Set an IP
VCOM Function	
Debug Interface	
Equipment Information	

4.5 Set WLAN

When setting the working frequency of the device, click the "Wireless Setting" button and select the "Frequency Band" option to enter the operation interface. The device supports the RF 800M frequency band and 1.4G frequency band. The 2.4G frequency band is not open yet. After confirming the frequency, click "Submit" to complete the configuration. The operation is as follows:



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WebUI	Managemen	t Tool
VVEDUI	Manayemen	

Switch			Frequency Band Management		
Key Setting					
Master-Slave Setting			Note:Auto restart Modem when setup is complete		
Wireless Setting					
Frequency Band Frequency Hopping Bandwidth Building Chain			Setting Frequency Band: Now Configuration: (800M Frequency Band:1.46 Frequency Band:2.46 Fr Value: 800M Band 1.46 Band 2.46 Band Reset	Submit	
Network Parameter Setting	Set	tho	frequency band		
UP-DOWN Setting	Jet	ule	inequency band	click "Submit"	
VCOM Function 800MH		MHz/	1.4GHz		
Debug Interface					
Equipment Information					

4.6 Set Bandwidth

According to the link throughput demand, users can choose channel bandwidth 1.4, 3, 5, 10, 20 MHz. The narrower the bandwidth, the farther the transmission distance, the lower the bandwidth, the closer the transmission distance, and the higher the transmission rate. Different electromagnetic environments exist in different environments. The frequency can be adjusted to avoid channel interference and achieve better transmission effect. Click "Wireless Setting", select "Bandwidth", select the bandwidth and click "OK" to complete the configuration. Operation as shown below:



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WebUI Management Tool

Switch	Bandwidt 1.4M ement
Key Setting	3M 5M
Master-Slave Setting	Benderidah g 10M
Wireless Setting	Value: [20M] Select OK
Frequency Band Frequency Hopping Bandwidth Building Chain	select the working bandwidth
Network Parameter Setting	
UP-DOWN Setting	
VCOM Function	
Debug Interface	
Equipment Information	

V、Use Notes

•When we adjust and test equipment, make sure that the Tx and Rx are in the same channel.

•The first time to connect the power supply, please check the power supply voltage

"+ -" is correct.

- •Avoid high voltage towers around.
- •Avoid military airfield radar around.
- •Choose different channels to avoid electromagnetic interference.

• Do not twine the network wire with the power wire, or there will be magnetic interference.

- •Network wire and power wire shall not exceed 20m.
- •Set the distance in software as 110%~120% of the actual distance.
- •Use caution in thunderstorm weather, people should stay away from the antenna to avoid lightning accidents.
- The transmitter and the receiver should not to power on before connect the



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antennas.

VI、Normal Faults and Treatment

+Faults cases: if the video (data) suddenly lost, interrupted, can be as follows

suggested

troubleshooting.

Hardware failure:

1. At this point, the first step is to make sure the power supply is normal, according to the indicator.

2. In case of network failure, the computer needs to be connected to the system switch to access the equipment, and CMD input Ping 192.168.1.xx (the default IP of the equipment is 192.168.1.1; xx stands for specific IP), so as to determine whether the device is online or not. The same method is used to troubleshooting other devices. If the device returns the request timeout or cannot access the target host, the device is not online, need to check the power and hardware.

•Faults cases: if the video (data)lag, lost packet, can be as follows suggested troubleshooting.

3. The weather and physical vibration may causes the equipment antennas connected loosely, which leads to poor signal and low throughput, affect image normal viewing



and data loss packet.

4. In a complex environment, the same frequency interference may occur, the problem can be solved by changing the working frequency through the software GUI.
5. If the equipment parameters are changed and the equipment does not communicate, the parameters can be adjusted according to the above debugging instructions, also you can restore factory setting, according to the Quick Use Manual to set.

VII, Accessories

Item	Quantity	Specification	Remark	
1.4GHz mini	2	SMA Internal thread	2 10'	
Rubber Antenna	2	with needle	3dBi gain	
Warranty Card	1	Suntor Standard	After-sale guarantee	
			Detail describe the	
Specification	1	User manual	parameters and how to	
			use	

(End)

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