# **T900-DEMO User Guide**

900MHz 1W Data radio Version: 20230423V2.0



## Contents

1.PRODUCT INTRODUCTION	3
2.DIMENSIONS&WEIGHT	4
3.PRODUCT ACCESSORIES	5
4.PRODUCT CONNECTIONS	6
5.PRODUCT USE	7
<ul> <li>5.1.T900-DEMO Power</li> <li>5.2.T900-DEMO INTERFACE</li> <li>5.3.PRODUCT INDICATOR MEANING</li> <li>5.4. CONTROL SERIAL PORT PARAMETER SETTINGS</li></ul>	
5.6. A I SOFTWARE VERSION UPGRADE	
<ul> <li>6.1 Master configuration (AT software)</li> <li>6.2 Slave configuration (AT software)</li> <li>6.3 Master configuration (UI software)</li> <li>6.4 Slave configuration (UI software)</li> </ul>	
7.POINT-TO-POINT&RELAY MODE CONFIGURATION	20
<ul> <li>7.1 Master-slave configuration</li> <li>7.2 Relay configuration (AT software)</li> <li>7.3 Relay configuration (UI software)</li> </ul>	
8 POINT-TO-POINT MODE CONFIGURATION	22
<ul> <li>8.1 Master configuration (AT software)</li> <li>8.2 Slave configuration (AT software)</li> <li>8.3 Master configuration (UI software)</li> <li>8.4 Slave configuration (UI software)</li> </ul>	
9.HAVE CENTER MESH MODE CONFIGURATION	26
<ul> <li>9.1 MASTER CONFIGURATION (AT SOFTWARE)</li> <li>9.2 SLAVE CONFIGURATION (AT SOFTWARE)</li> <li>9.3 MASTER CONFIGURATION (UI SOFTWARE)</li></ul>	
J.+ JLAVE CONFIGURATION (UTSOFTWARE)	

## **1.Product introduction**

T900-DEMO provides standard data interface, control interface, power supply interface and antenna for T900-30-IPEX. T900-DEMO is suitable for applications that do not require auxiliary OEM integration, but still require a smaller size. The T900-Demo can also be used to quickly evaluate the features and performance of the T900.

#### Interface:

- Input power: DC9~26V
- Power indicator light: PWR
- RS232/RS485
- Three RSSI
- Transmit/receive indicator light.
- CFG
- SMA
- USB
- Reserve IO



T900-DEMO

## 2.Dimensions&Weight







T900-DEMO Diagram

- T900-DEMO Dimensions(L\*W\*H): 79.2mm\*49.0mm\*26.0mm
- T900-DEMO Weight: 119g

## **3.Product accessories**

T900-DEMO accessories (one)							
No	Name	Description	Quantity				
1	T900-DEMO	module	1				
2	Little glue stick antenna	2.5dBi	1				
3	USB Type-C		1				
4	DB9		1				
5	Molex3.0 Semi-bare power cable	DC9~26V	1				



T900-DEMO module



Little glue stick antenna







DB9



Molex3.0 Semi-bare power cable

## **4.Product connections**



T900-DEMO Connection steps:

- Connected the SMA to the antenna.
- ◆ Power on: DC9~26V, Typical value:+12V.
- The USB is used to set parameters, use the UI upper computer software for configuration.
- DB9 connection steps: (The serial port can also be used to configure AT command parameters.)

(Notes: Please confirm whether the serial port of the DEMO device is TTL or RS232)



## **5.Product use**

### 5.1.T900-DEMO Power

T900-DEMO use DC power, Supply voltage: DC9~26V, Typical value: +12V.

The maximum current required for sending data at different voltages is shown in

the table below.

Supply voltage	Peak current (A)	Mean current (A)
9V	0.80A	0.59A
12V	0.60A	0.44A
24V	0.30A	0.22A
26V	0.28A	0.20A

### 5.2.T900-DEMO Interface



T900-DEMO has four interfaces: a DB9 serial port, a power supply port, a CFG button, and a USB configuration port. Note whether the device is TTL or RS232 when the serial port is connected. The power supply port supports DC9 to 26V.

#### Power interface

Vin+/Vin-

Supply power to modules, input power: DC9-26V

10-1/10-2

Pin reserved for use.



#### • USB interface

Use the USB to connect the UI software, it can configure parameters and upgrade T900-DEMO.

#### • CFG button

Press the CFG button and release it to enable T900-DEMO to enter the AT mode. In this case, open the AT software to configure module parameters, query, and upgrade modules.

#### • DB9 data serial port

Connect to the data serial port of T900-DEMO for data transfer or AT command control. Currently, RS232 and RS485 half-duplex are supported. RS232 only uses RXD, TXD, and GND, but other control cables are not supported.



Pin	RS232	RS485	RS485
		( Full duplex )	( Half duplex )
1	DCD		
2	TXD	TX-	Data-
3	RXD	RX+	
4	DTR		
5	GND	GND	GND
6	DSR		
7	RTS	RX-	
8	CTS	TX+	Data+
9			

DB9 Interface definition

## 5.3. Product indicator meaning



#### Power PWR (blue)

If the power indicator is on, the device is powered on.

#### Transmitting indicator TX (red)

When the TX light is on, it indicates that the

module is sending data.

#### Receiving indicator RX (red)

When the RX light is on, it indicates that the

module is receiving data.

#### Serial port 485 indicator (red)

When 485 is on, the serial port is configured as 485.

# Receiving signal strength indicator (3 RSSI,

#### green)

The more power lights on, the stronger the signal reception.

The RSSI indicator represents the strength of the received signal					
RSSI quantity Received energy dBm					
3 RSSI on	About -50dBm				
2 RSSI on	About -80dBm				
1 RSSI on	About -95dBm				

Module	Mode	T900-40-SMA Indicator status				
type		RX	ТХ	RSSI 123		
CFG	AT command	off	off	off		
	configuration					
	mode					
master	work	blink when	on	proportional to the		
		receiving data		strength of the		
				received signal		
slave	out of sync	off	off	cycle light every 860ms		
slave	after	on	blink when	proportional to the		
	synchronization		sending data	strength of the		
				received signal		
relay	out of sync	flashes	flashes	cycle light every 860ms		
		alternately with	alternately with			
		the sending	the receiving			
		light	light			
relay	after	blink when	blink when	proportional to the		
	synchronization	receiving data	sending data	strength of the		
		otherwise on	otherwise on	received signal		

When the master and slave are successfully paired, the power indicator and TX indicator of the master are steady on, and the power indicator and RX indicator of the slave are steady on. If the primary/secondary pairing fails, the RSSI of the secondary device is always in the search state. In this case, you should re-check the configured parameters. When data is being sent or received over the serial port, the RX indicator of the master and the TX indicator of the slave blink.

### 5.4. Control serial port parameter settings

The control serial port is the auxiliary serial port of T900, and the built-in UI upper computer software can be used to configure parameters and obtain the status. Its baud rate is fixed at 115200bps 8N1. The control serial port of T900-DEMO is USB Type-C.

<b>\$</b> T900控制	串口配調	置平台	V3.8		- + ×
基本信息 信证	道信息	工程信息	息 系统版	本	串口:
					COM9
网络类型	点对点	•	运行模式	主模式	
输出功率	40dBm(10W)	¥	空口速率	172800 -	)
网络ID	1234567890		串口格式	8N1 -	]
串口波特率	115200	•	本机地址	0	]
RS232/RS485	RS232	¥	同步地址	0	
是否有中继	无中继	¥	目标地址	0	查询
中继序号			数据重传次数	3	保存
信道接入方式	RTS/CTS	*	TDMA最大地址	6	
加密开关	OFF	•	加密密钥		
参数读取成功					

Control serial port parameter setting steps:

- Open the T900-UI control serial port configuration platform. If the serial port is successfully opened, parameters are read successfully in the lower left corner. If the serial port fails to be opened, messages such as Communication timeout are displayed in red.
- 2) Select the Basic Information page and click the query button to query the current configuration parameters. The parameter list on the left will be updated to the current latest parameter.
- 3) Modify the required parameters.
- 4) Click the Save button to save the parameters on all pages. After the Settings are saved, the device soft resets and the parameters take effect immediately.



#### Basic information page:

It can be used for parameter query and parameter configuration.

#### Channel information page:

You can view information such as RSSI energy, statistics on sent and received data, and error statistics.

#### Engineering information page:

You can upgrade the device and restore the factory settings.

#### System version page:

You can obtain the version numbers of the current device.

### 5.5. AT software parameter configuration

You can configure the parameters of the AT command by using the general serial port Assistant or using the AT software of the upper computer.

🍓 (*有新版本V5.13.1*)SSCOM V5.12.1 串口/网络数据调试器,作者:习小猛(大虾丁丁),2618058@qq.com. QQ群 – 🗆 🗙
通讯端口 串口设置 显示 发送 多字符串 小工具 帮助 回报作者 PCB打样
<pre>Welcome To Use T900 OK etGr 900 900MDF Hopping Radio System Zhejiang Tianze Communication LTD., www.okseeker.com Hardware Version 0001-036B-90-TPEX Firmware Version 0001-020201021-0A Software Version 0001-020201027-0A Serial Number 01-20220708-0007</pre>
Metork Type S133=1 Operating Mode S101=2 Wireless Link Rate S103=2 Output Power (dBm) S108=30 MetBork Address (DD) S104=1 Unit Address S105=0 Serial Baud Rate S102=1 Packet Retransmissions S113=3 Data Format S110=1 Serial Channel Mode S142=0 Repeater T/N Eable S159=0 Repeaters Index Use Opio S143=0 Encryption Enable S159=0 Repeaters Index S114=1 RSSI Form Master (dBm) S123=-255 RSSI Form Slaver (dBm) S124=-255 OK
」
端口号 COM13 USB Serial Port ▼ FHEX最示 保存劫据 F 接收数据到文件 FHEX发送 F 定时发送: 100 ms/次 ▼ 加回车换行
● 关闭串口 き 更多串口设置 □ 加时间戳和分包显示,超时时间: 20 ms 第 1 字节至末尾加校验: None
□ RTS □ DTR 波特率: 115200 👤 at&y
【PCB打样】哪家强? 当然就是嘉立创: [进入] 发送
【升级到V5.13.1】★合宙高性价比46模块值得一试 ★RI-Thread中国人的开源免费操作系统 ★新一代WiFi芯片兼容8266支持RI-Thread ★8BM元
www.daxia.com S:20 R:936 COM13 已打开 115200bps,8,1,None,None

You can use the general serial port terminal, through the data serial port, and use the AT command to configure parameters. For details about how to configure the AT command, see Chapter 6 of the T900 User Manual. How to enter the AT command mode is explained in the data serial port in Chapter 5 of the T900 User Manual.

SSCOM general serial port tool configuration parameters operation steps:

- Correctly connect the serial port to the power supply, set the correct baud rate, and turn on the serial port.
- 2) Enter '+++' to enter the AT command mode.
- 3) Enter AT&V to display the current configuration parameters.
- Using the AT command to set the required parameters (See AT command/Register Instructions in Chapter 6 of the T900 User's Manual for details).
- 5) After the configuration is completed, enter AT&W to save the parameters.

(or just type AT&WA save and exit).

6) Enter ATA to exit the AT command mode and start to work.

You can also use the T900 AT configuration platform to configure parameters through the data serial port. AT The upper computer software allows users to quickly configure the T900. All its functions can also be realized by manually inputting AT commands through the above general serial port tool.

		12.0				
₩ 1900	JAI配直半台、	/3.0				- + ×
网络类型	点对点		运行模式	从模式		串口:
输出功率	40		空口速率	172800		COM8
网络ID	1234567890		串口格式	8N1		115200
串口波特率	115200		本机地址	0	Z.	
RS232/RS485	RS232	<u>/</u>	同步地址	0	Zee.	进λΔτ構式
是否有中继	无中继		目标地址	0		香油
中继序号	1		数据重传次数	3		保存
信道接入方式	RTS/CTS		TDMA最大地址			退出AT模式
加密开关	OFF		加密密钥		2	
硬件版本	60136C-40A-PAD	]	软件版本	0040-20230301-0A		恢复出厂设置
生产序号	01-20230309-0127	]	固件版本	40A1-20230301-0A		升级
ATS244? 0 OK send: ATS221?						清除

- AT software configuration parameters operation steps:
- After the baud rate is set correctly, open the serial port. (The average baud rate is 115200bps).
- Click To enter the AT mode (send '+++'), and the data frame will return Welcome To Use T900 OK, which means that the AT mode is successfully entered.
- Click Query (send AT&V), and the queried parameters will be displayed one by one in the parameter list on the left.
- 4) After modifying the corresponding parameters as needed, click the yellow button on the right of the parameter box (send AT command settings).

- 5) After all the parameters need to be modified are configured, click the Save button (send AT&W).
- 6) Click the Exit AT mode button (send ATA) to return to the normal working state.

		运行模式			串口:
输出功率		空口速率			COM50
网络ID		串口格式		-	9600
串口波特率	· 🖌	本机地址			
RS232/RS485	●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●		×		进入AT模式
是否有中继	四版本发在文件/四	○▲版本省本/тоо	0 60126P-20-TREV 60		香油
中继序号		5%			保存
信道接入方式	固件加载中				退出AT模式
加密开关	( <i>M</i>	мната М1			A HILL KA
硬件版本		软件版本			恢复出厂设置
生产序号		固件版本			升级

### 5.6. AT software version upgrade

AT software version upgrade steps:

- After the baud rate is set correctly, open the serial port. (The average baud rate is 115200bps).
- 2) Click the Upgrade button and select the upgrade file.
- 3) During the firmware loading process, you can click the cancel button to cancel the upgrade.
- 4) The upgrade cannot be canceled, and the power cannot be disconnected during the updating. An unexpected power failure may damage the equipment.
- 5) When the upgrade is completed, please power off and restart the equipment.

## 6. Point-to-point mode configuration

## 6.1 Master configuration (AT software)

👯 T90	0 AT配置	昰平台V3	.0				- + ×
网络类型	点对点	- <u>/</u>	运行模式	主模式	*		串口:
输出功率	40		空口速率	172800	*	2	COM8
网络ID	1234567890		串口格式	8N1	•	2	115200
串口波特率	115200	•	本机地址	0		2	
RS232/RS485	RS232	- 🦯	同步地址	0		2	进入机械
是否有中继	无中继	-	目标地址	0			西次AI 侯氏 本海
中继序号	1		数据重传次数	3			但友
信道接入方式	RTS/CTS	🗘 设备恢复出	厂设置	×		200	退出47档式
加密开关	OFF						ASTIMITIKAN
硬件版本	60136C-40A-PA	1 恢复出厂设置	点对点主站	•	301-0A		恢复出厂设置
生产序号	01-20230309-0	1	OK	Cancel	301-0A		升级
send: ATS2217 ATS221? 6 OK			U.				清除

- Power on the data transmission, then connect the data serial port. Click to enter the AT mode, then click query.
- Click Restore factory Settings, then select point-to-point master mode, and click OK.
- 3) Click Query to set the network ID, serial port baud rate, and port rate (Other parameters can be default.) .
- 4) Click Save.
- 5) Click to exit AT mode.

## 6.2 Slave configuration (AT software)

🤽 T900	)AT配置	平台V3.	0		- + ×
网络类型 输出功率 网络ID 串口波特率	点对点 40 1234567890 115200		运行模式 空口速率 串口格式 本机地址	从模式 172800 8N1 0	串口: COMS 115200 《周
RS232/RS485 是否有中继 中继序号 信道接入方式 加密开关	RS232 无中继 1 RTS/CTS OFF	<ul><li>✿。设备恢复出</li><li>恢复出厂设置</li></ul>	厂设置 点对点从站 0	K Cancel	<ul> <li>进入AT模式</li> <li>查询</li> <li>保存</li> <li>退出AT模式</li> </ul>
硬件版本 生产序号	60136C-40A-PAD 01-20230309-012	7	软件版本 固件版本	0040-20230301-0A 40A1-20230301-0A	恢复出厂设置 升级 清除

- Power on the data transmission, then connect the data serial port. Click to enter the AT mode.
- Click Restore factory Settings, then select point-to-point slave mode, and click OK.
- Click Query to set the same network ID, port rate, and serial port baud rate as the master.
- 4) Click Save.
- 5) Click to exit AT mode.

## 6.3 Master configuration (UI software)

<b>菜</b> T900控制	山市四置平台	ìV3.8		- + ×
基本信息 信i	道信息 工程信!	息 系统版	本	串口:
				СОМ9 -
网络类型	点对点	运行模式	主模式	关闭
输出功率	40dBm(10W)	空口速率	172800	
网络ID	1234567890	串口格式	8N1 -	
串口波特率	115200 -	本机地址	0	
RS232/RS485	RS232	同步地址	0	
是否有中继	无中继	目标地址	0	查询
中继序号		数据重传次数	3	保存
信道接入方式	RTS/CTS -	TDMA最大地址	6	
加密开关	OFF -	加密密钥		
参数读取成功				.:

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the master mode of point-to-point under factory Settings restoration, and click Save.
- Click basic information to set the network ID, serial port baud rate, and port rate (Other parameters can be default) .
- 4) Click Save.

## 6.4 Slave configuration (UI software)

🔅 T900控制	串口配置平台	ìV3.8		- + ×
基本信息 信i	道信息 工程信!	息 系统版	本	串口:
				СОМ9
网络类型	点对点	运行模式	从模式	关闭
输出功率	40dBm(10W)	空口速率	172800 -	
网络ID	1234567890	串口格式	8N1 -	
串口波特率	115200	本机地址	0	
RS232/RS485	RS232	同步地址	0	
是否有中继	无中继	目标地址	0	查询
中继序号	1	数据重传次数	3	保存
信道接入方式	RTS/CTS	TDMA最大地址	6	
加密开关	OFF	加密密钥		
参数读取成功				.:

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the point-to-point slave mode under factory Settings restoration, and click Save.
- Click basic information to set the network ID, serial port baud rate, and port rate (Other parameters can be default) .
- 4) Click Save.

## 7.Point-to-point&relay mode configuration

### 7.1 Master-slave configuration

The master and slave configurations are the same as the 5.1/5.3 and 5.2/5.4 configurations.

## 7.2 Relay configuration (AT software)

🤽 T900	)AT配置平台	≦¥V3.0				- + ×
网络类型	点对点	-	运行模式	中继模式		串口:
输出功率	40		空口速率	172800	<b></b>	COM8 -
网络ID	1234567890		串口格式	8N1	Z.	9600
串口波特率	9600	•	本机地址	0	Zw.	
RS232/RS485	RS232	-	同步地址	0	Zau.	进入和模式
是否有中继	无中继	-	目标地址	0	Z.	查询
中继序号	1 🗘 设备恢复出	厂设置	$\times$	3		保存
信道接入方式	RTS/CT:			3	<b></b>	退出AT模式
加密开关	OFF 恢复出厂设置	点对点中继	•		<b></b>	
硬件版本	60136C		OK Cancel	0040-20230301-0A		恢复出厂设置
生产序号	01-202			40A1-20230301-0A		升级
send: ATS221? ATS221? 6 OK						清除

- Power on the data transmission station, connect the serial port, and access the AT configuration platform.
- 2) Click Restore factory Settings, select point-to-point relay mode, and click OK.
- 3) Click Query to set the same network ID, serial port baud rate, and port rate as the master.
- 4) Set the relay number to 1. If there are several relays, set the number to 1 to N.

(The master automatically identifies the relay, you do not need to configure it.)

- 5) Click Save.
- 6) Click to exit the AT mode.

### 7.3 Relay configuration (UI software)

🔽 T900控制	J串口配	置平台	ìV3.8		- + ×
基本信息 信道	首信息	工程信息	息 系统版	本	串口:
					СОМЭ
网络类型	点对点	•	运行模式	中继模式	关闭
输出功率	40dBm(10W)	*	空口速率	172800	]
网络ID	1234567890		串口格式	8N1 -	]
串口波特率	9600	•	本机地址	0	]
RS232/RS485	RS232	*	同步地址	0	
是否有中继	无中继	*	目标地址	0	查询
中继序号			数据重传次数	3	保存
信道接入方式	RTS/CTS	•	TDMA最大地址	6	
加密开关	OFF	*	加密密钥		]
参数读取成功					

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the point-to-point slave mode under factory Settings restoration, and click Save.
- 3) Click basic information to set the same network ID, serial port baud rate, and port rate as the master.
- 4) Set the relay number to 1. If there are several relays, set the number to 1 to N.
- 5) Click Save.

## 8 Point-to-point mode configuration

# 8.1 Master configuration (AT software)

🤽 T900	) AT配置平台	¢73.0	)			- + ×
网络类型	点对多点	-	运行模式	主模式		串口:
输出功率	40		空口速率	172800		COM10
网络ID	1234567890		串口格式	8N1		115200
串口波特率	115200	-	本机地址	1		大国
RS232/RS485	RS232	-	同步地址	0		→# ) ▲ ▼ 措 →
是否有中继	无中继	-	目标地址	0		进入AI 候式
中继序号	1		数据重传次数	3		但方
信道接入方式	RTS/CTS	-	TDMA最大地址	6		□ 田山和樹寺
加密开关	OFF	-	加密密钥			KIII I KII
硬件版本	60136C-40A-PAD		软件版本	0040-20230301-0A	]	梅有山口沿置
生产序号	01-20221110-0029		固件版本	40A1-20230301-0A	]	千仞
on cond: ATS2212						
ATS221?						
OK						

- 1) Power on the data transmission radio, connect the serial port, and enter the AT configuration platform.
- 2) Click Restore factory Settings, select point-to-multipoint master mode, and click OK.
- 3) Click query, and the user can configure the required network ID, serial port baud rate, and empty port rate.
- Local address =1, synchronous address =0, destination address =0, channel access mode select RTS/CTS.
- 5) Click Save.
- 6) Click to exit the AT mode.

## 8.2 Slave configuration (AT software)

🤼 Т900	)AT配置平台 <sup>、</sup>	/3.0			- + ×
网络类型 输出功率 网络ID 串口波特率 RS232/RS485 是否有中继 中继序号 信道接入方式	点对多点 40 1234567890 115200 RS232 无中维 1 RTS/CTS		运行模式 空口速率 串口格式 本机地址 同步地址 目标地址 数据重传次数 TDMA最大地址	从模式     ・       172800     ・       8N1     ・       2     1       0     3       6     ●	<ul> <li>串口:</li> <li>COM10</li> <li>115200</li> <li>流明</li> <li>进入AT模式</li> <li>查询</li> <li>保存</li> <li>退出AT模式</li> </ul>
加密开关 硬件版本 生产序号 5 send: ATS221? ATS221? 6 0K	OFF		加密密钥 软件版本 固件版本	0040-20230301-0A 40A1-20230301-0A	恢复出厂设置 升级 清除

- 1) Power on the data transmission radio, connect the serial port, and enter the AT configuration platform.
- 2) Click Restore factory Settings, select point-to-multipoint slave mode, and click OK.
- Click Query to set the same network ID, port rate, and serial port baud rate as the master.
- 4) The local address= $2 \sim N+1$ , N= total number of slaves.

Synchronization address =1

synchronization address = local address of the primary end

Destination address =0

The channel access mode is RTS/CTS.

- 5) Click Save.
- 6) Click to exit the AT mode.

## 8.3 Master configuration (UI software)

🔽 T900控制	山串口配置	冒平台	ìV3.8		– + ×
基本信息 信述	道信息  ]	二程信」	息 系统版	本	串口:
					COM10 -
网络类型	点对多点	•	运行模式	主模式	关闭
输出功率	40dBm(10W)	*	空口速率	172800 -	
网络ID	1234567890		串口格式	8N1 -	
串口波特率	115200	•	本机地址	1	
RS232/RS485	RS232	*	同步地址	0	
是否有中继	无中继	•	目标地址	0	查询
中继序号	1		数据重传次数	3	保存
信道接入方式	RTS/CTS	*	TDMA最大地址	6	
加密开关	OFF	•	加密密钥		
参数读取成功					

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the master mode of point-to-multipoint under factory Settings restoration, and click Save.
- 3) Click basic information to set the network ID, serial port baud rate, and empty port rate.

Local address =1, synchronization address =0, and destination address =0. The channel access mode is RTS/CTS.

4) Click Save.

## 8.4 Slave configuration (UI software)

🔽 T900控制	制串口配置平	台V3.8		- + ×
基本信息信道	道信息 工程(	言息 系统版	本	串口:
				COM10
网络类型	点对多点	运行模式	从模式	关闭
输出功率	40dBm(10W)	空口速率	172800 -	
网络ID	1234567890	串口格式	8N1 -	
串口波特率	115200	本机地址	2	
RS232/RS485	RS232	同步地址	1	
是否有中继	无中继	目标地址	0	查询
中继序号	1	数据重传次数	3	保存
信道接入方式	RTS/CTS	TDMA最大地址	6	
加密开关	OFF	加密密钥		
参数读取成功				

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the slave mode of point-to-multipoint under factory Settings restoration, and click Save.
- 3) Click basic information to set the network ID, serial port baud rate, and air port rate.

Local address =2 to N, synchronization address =1, destination address =0. The channel access mode is RTS/CTS.

4) Click Save.

## 9. Have center MESH mode configuration

## 9.1 Master configuration (AT software)

🤼 Т90	0 AT配置平台V3.2					- + ×
网络类型	有中心MESH		运行模式	主模式		串口:
输出功率	20		空口速率	276400	2.	230400
网络ID	333		串口格式	8N1		关闭
串口波特率	230400		本机地址	1		
RS232/RS485	RS232	2	同步地址	0		进入AT模式
是否有中继	无中继		目标地址	0		查询
中继序号	1		数据重传次数	3		保存
GPIO功能扩展	OFF		TDMA最大地址	6	<u>_</u>	退出AT模式
信道接入方式	TDMA_AUTO -		TDMA时隙分配	15		
加密开关	OFF -		加密密钥			恢复出厂设置
硬件版本	60136C-30-IPEX		软件版本	0030-20230420-0A		升级
生产序号	01-20221110-0307		固件版本	3001-20230423-0A		
15 OK send: ATS143? ATS143? O OK						清除

- 1) Power on the data transmission radio, connect the serial port, and enter the AT configuration platform.
- 2) Click Restore Factory Settings, select master mode with Center MESH, and click OK.
- 3) Click query, and the user can configure the required network ID, serial port baud rate, and air port rate.
- 4) Local address =1, synchronization address =0, destination address =0.

The channel access mode is TDMA\_AUTO.

TDMA slot allocation is set to 15.

- 5) Click Save.
- 6) Click to exit the AT mode.

## 9.2 Slave configuration (AT software)

🤽 Т90	0 AT配置平台V3.2					- + ×
网络类型	有中心MESH		运行模式	从模式		串口:
输出功率	20		空口速率	276400	<u>_</u>	230400
网络ID	333		串口格式	8N1		关闭
串口波特率	230400		本机地址	13		
RS232/RS485	RS232		同步地址	1		进入AT模式
是否有中继	无中继	<u>/</u>	目标地址	0	2	查询
中继序号	1		数据重传次数	3		保存
GPIO功能扩展	OFF		TDMA最大地址	6		退出AT模式
信道接入方式	TDMA_AUTO		TDMA时隙分配	4		
加密开关	OFF		加密密钥			恢复出厂设置
硬件版本	60136C-30-IPEX		软件版本	0030-20230420-0A		升级
生产序号	01-20221110-0307		固件版本	3001-20230423-0A		
4 OK send: ATS143? ATS143? O OK						清除

- 1) Power on the data transmission radio, connect the serial port, and enter the AT configuration platform.
- 2) Click Restore Factory Settings, select Slave mode with Center MESH, and click OK.
- 3) Click Query to set the same network ID, port rate, and serial port baud rate as the master.
- 4) The local address= $2 \sim N+1$ , N= total number of slaves.

Synchronization address =1

synchronization address = local address of the primary end. Destination address =0

The channel access mode is TDMA\_AUTO

The slave TDMA slot allocation does not need to be configured.

- 5) Click Save.
- 6) Click to exit the AT mode.

## 9.3 Master configuration (UI software)

🤹 т900	控制串口配	置平台	′́∋V4.0			- + ×
基本信息	信道信息	工程	信息  豸	系统版本		串口:
网络类型 输出功率 网络ID 串口波特率 RS232/RS485 是否有中继	有中心MESH 20dBm (100mΨ) 333 230400 RS232 无中继		运行模式 空口速率 串口格式 本机地址 同步地址 目标地址	主模式 276400 8N1 1 0 0	· · · · · · · · · · · · · · · · · · ·	Сом12 ~ () () () () () () () () () () () () () (
中继序号 加密开关 信道接入方式	1 OFF TDMA_AUTO		数据重传次: 加密密钥 TDMA最大地 TDMA时隙分	数 3 址 6 配 15		查询 保存 

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the master mode with center MESH under factory Settings restoration, and click Save.
- 3) Click basic information, set the network ID number, serial port Baud rate, air port rate.
- 4) The local address is set to 1, and the synchronization address and destination address are both set to 0.

The channel access method is selected as TDMA\_AUTO, and the master TDMA time slot allocation is selected as 15.

5) Click Save.

## 9.4 Slave configuration (UI software)

🤅 Т900	控制串口配	置平台	′́⇒V4.0			- + ×
基本信息	信道信息	工程	信息 系	统版本		串口:
网络类型 输出功率 网络ID 串口波特率 RS232/RS485	有中心MESH 20dBm (100m¥) 333 230400 RS232		运行模式 空口速率 串口格式 本机地址 同步地址	从模式 276400 8N1 20 1	• •	COM12 • X [1]
是否有中继 中继序号 加密开关 信道接入方式	无中继 1 OFF TDMA_AUTO		目标地址 数据重传次数 加密密钥 TDMA最大地址 TDMA时隙分香	0 3 6 2 15		查询 保存

- 1) Power on the data transmission station, connect the control serial port, then open the serial port, and the parameters are read successfully in the lower left corner.
- Click project information, select the slave mode with center MESH under factory Settings restoration, and click Save.
- 3) Click basic information, set the network ID number, serial port Baud rate, air port rate.

The local address ranges from 2 to N. Synchronization address =1, destination address =0.

The channel access mode is TDMA\_AUTO, and the slave TDMA time slot allocation is not configured.

4) Click Save.