ZLAN8305/ZLAN8305L/

ZLAN8305LN

2G/3G/4G Serial Server

RS232/485 to 4G/Ethernet Modbus RTU to 4G Modbus TCP RS232/485 to MQTT

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ZL DUI 20180214.1.0

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release.

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1.Overview

ZLAN8305/ZLAN8305L/ZLAN8305LNIt is a new high-cost-effective product launched by Shanghai Zhuolan 4G DTU/4GRouter. The sub-models differ as follows:

- 1. ZLAN 8305:supportRS232/485change4G, does not support Ethernet port. Supports serial port configuration.
- ZLAN 8305L:support4Gand Ethernet port, supporting in wired modeRS232/485Switch to wired network. 4GSupport in routing modeRS232/485change4G, and can also be used as4GUsed for routers. Supports serial port configuration, WebConfiguration,ZLVircomLocal area network configuration. SupportMQTT.
- 3. ZLAN8305LN:exist8305LBasic supportP2PandN2NFunctional products support serial port remote monitoring and network port remote monitoring. For details, please refer to the "P2P Product User Guide" document (http://www.zlmcu.com/download/p2p_manual.pdf).



picture1 ZLAN8305Appearance

8305/8305LAdopting the latest4GThe chipset can achieve a low price while ensuring powerful functions and stability, and has a high cost performance.7The model is of full network standard and supports all cards of China Telecom, China Mobile and China Unicom.8305/8305LsupportMQTTProtocol andModbus TCPchangeRTUprotocol, support645protocol,modbusRTUProtocol Transferjson.support-45~85Industrial temperature range. Supports custom registration

package and heartbeat package. Supports remote program upgrade or configuration change on the server side.

in addition8305/8305LIt can also be customized to meet various special needs, including local storage of tens of megabytes of data when

the network is down, and uploading it to the server when the network is connected.

default8305/8305/Equipped with suction cup4GThe antenna can be equipped with rail accessories. At the same time, the power supply can provide two power supply methods: power socket and terminal (selected at the time of delivery).

8305/8305LSuitable for the following application areas:

1.Data collection in the fields of industrial Internet and industrial automation.

2.Power data collection and monitoring.

3.Access control and security.

4. Collection and monitoring of hydrological, meteorological and environmental data.

5.Intelligent transportation, vehicle-mounted data collection.



picture2Application environment diagram

2.Features

1.support7Type of mode,TD-LTE/ FDD-LTE/ WCDMA/ TD-SCDMA/ GSM/

EVDO/CDMA2000, including China Unicom 4G, 3G, 2G, China Mobile 4G, 3G, 2G and China Telecom 4G, 3G, 2G networks.

2. 8305LSupport in wired modeTCPServer,TCPClient,UDPMode. Support multiple TCPThe client's connection.

3.Serial port support1200~460800Baud rate, support5~8Data bit, support no check, odd check, even check,

support1~2Stop bit, supports no flow control, hard flow control, and soft flow control.

4.Support serial port conversion4G,8305LSupport serial port to network port and4GRouter application, supportDHCP SERVER.

5.Support serial port transparent transmission, supportModbus RTUchangeModbus TCP,MQTTAgreement and645 protocol,modbusRTUProtocol Transferjson.

6.Support serial portATCommand configuration,8305LsupportWEBConfiguration, supportZLViromSoftware configuration.

7. Supports custom registration packages and custom heartbeat packages.

8. 8305Lable to passWEBTo update the firmware of the device, all models can be updated throughZLVircom The software updates the device firmware on the server side.

9.supportTCPConnect to a separate channel for remote management, upgrade firmware and configuration, and connect to the ZLAN cloud platform for remote

management. For details, please refer to the "ZLAN Equipment Cloud Management" document

3.Technical Parameters

Main parameters of the product					
parameter name	parameter	Remark			
Support Mode	support7Modes:				
	B1/B3/B5/B8@FDD LTE				
	B34/B38/B39/B40/B41@TDD-LTE:B41Frequency range				
	2555-2655				
	B1/B8 @WCDMA				
	B34/B39@TD-SCDMA				
	BC0@CDMA2000 1X/EVDO				
	B3/B8@GSM				
	Including China Unicom4G,3G,2G,China Mobile4G,3G,2Gas well as				
	China Telecom4G,3G,2Gnetwork.				
Transmission rate	LTE-FDD:Max 150Mbps(Downward)/Max 50 Mbps(Up)				
	LTE-TDD:Max130Mbps(Downward)/Max 30 Mbps(Up)				
	WCDMA:384Kbps(Downward)/Max384Kbps(Up)				
	TD-SCDMA:Max 4.2Mbps(Downward)/Max 2.2 Mbps(Up)				
	EDGE:296Kbps(Downward)/Max236.8Kbps(Up)				
	GPRS:107Kbps(Downward)/Max85.6Kbps(Up)				
SIMCard	Voltage:3V,1.8V; Size: Large card (small card can be purchased with card holder)				
Antenna interface	50Ω/SMAGlue stick antenna or suction cup antenna optional				
Serial port type	RS232/RS485				
Serial port parameters	Baud rate:1200~460800bps; Data bits:5~8Bit; Stop Bit:1~2				
	bit; flow control: hard flow control, soft flow control; check bit: none, even, odd, mark,				
	Space.				
Power interface	Q2.1Socket, can be customized as power terminal input.				
Input voltage	DC9V~24V				

Shang	hai Zhuolan Information Tec	hnology Co., Ltd.	Tel:(021)64325189	http://www.zlr	ncu.com
	Working current	90mA@12V(When d	ialing150mA@12V)		
	Operating temperature	- 40Degree~85Spend			
	Storage temperature	- 40Degree~120Spend			
	Humidity range	0~95%Non-condensing			
	Product Size	Length × width × height =	9.4cm×6.5cm×2.5cm		

4.Hardware Description

ZLAN8305The front view of3shown.



picture3 ZLAN8305Front view

8305It adopts radiation-resistant metal casing and has two mounting ears on both sides, which can be fixed with screws; it can also be

equipped with guide rail accessories.

Panel Light:

Indicator Lights	green	blue
4GIndicator Lights	Power indicator	Flashing blue means4GAfter dialing, the system is powered on40
		Seconds to start dialing, generally10You can dial in seconds.
		Solid blue means4GConnectivity status
LinkIndicator Lights	System operation light, each1minute	Solid blue meansTCPConnection established
	Change status once	
ActiveIndicator Lights	The network sends data to the serial port	Serial port sends data to the network
Network port light (only8305L)	Yellow light indicates the network cable is connected	/



picture4Interface Diagram1

ZLAN8305The front interface is as shown in the figure4As shown:

1. Power input: Interface typeQ2.1socket,DC+9V~ +24VDC, power required3WAbove. Default

The adapter provided is12V. Can be customized as power terminal input. 2. RS485

Signal input. Be careful not to connect to the power supply.

3. RJ45Interface, Ethernet access port. Only8305LThe network port is valid.

ZLAN8303The rear interface is as shown in the figure5As shown:



picture5Interface Diagram2

4.antenna:8305The antenna interface adopts50Ω/SMA(female), external antennas must use a suitable4G Antennas with working bands. ZLAN can provide rubber stick antennas and suction cup antennas that can be sucked onto metal casings (default2meters in length).

 SIMCard Installation: InstallationSIMMake sure the device is not powered on when inserting the card. Use a pen or screwdriver toSIM The card slot is pushed out.SIMPush the metal side down into the card slot.

6. DB9:RS232signal input.

5.Configuration

The device can be configured via the serial port and the network.ZLAN8305Without network port, usually only serial port configuration is used.ZLAN8305LWith network port, it can be used in addition to serial port configurationWeb Configuration and ZlVircom WindowsTool network search configuration.

5.1. ZLVircomSerial port configuration

Serial port configuration applies to8305and8305L,because8305There is no network port, so configuration is mainly done through the serial port.

downloadZLVircom (http://www.zlmcu.com/download/ZLVircom.zip) 5.65And above versions, this software can be configured through the serial port8305/8305L.

Shanghai Zhuolan Information Technology Co., Ltd.		l:(021)643251	89	http://	www.zlmcu.com
[ℤ] 虚拟串□&设备管理器 - VirCom 管理(M) 配置(C) 查看(V) 報助(H)					- 🗆 X
● ●	<i>(</i>) 关于				
序 状态 虚拟串口	虚拟串口名称	类型	设备IP	说明	设备ID
×t z	LVirCom 虚拟串口&设 上海卓岚信。 http://www	设备管理器 ZLVirCom 息科技有限公司版权M /.zlmcu.com	V5.65 3.3.1 所有(C)2008 确定	×	
┌信息 [2021-03-11,13:50:17] 创建成功。 [2021-03-11,13:50:16] 在端口4196监□	斤成功。				^
ご体も可用ても、	日十八月夕四	上十步口地主			~ _ :

picture6Configuration software

WillUSBchangeRS232Connect to8305The serial port, give8305Power on, turn onZLVircom(Hereinafter referred to as

configuration tool). Click Device Management, then click Serial Port Search.

设备管理	E													×
序	类型	设备名称	Ρ.	设备IP	本地	目的IP	模式	TCP连	虚拟串口	虚拟串口状	设备ID	TXD	RXD	
1	内网	ZLDEV0001		192.168.1.212	0	183.66.199.42	TCP Client	已建立	未设置	未联通	863B6006	0	418	
								_						日初拨系
				Ĩ	过串口搜索			×						手动添加
					串口: 波特-	COM6 率: <u>搜索所有</u> 1200	▼ 波特率 <u>▼</u>							串口搜索
					数据(校验)	位: 2400 位: 4800 位: 7200								P2P设备
					停止	14400 19200								编辑设备
						復家 28800 38400 57600 76800								搜索列表
						115200 230400 460800 搜索所有	波特率							返回
	10	101001001 1												

picture7Serial port configuration tool

Select the serial port number, here isCOM6, the baud rate is115200,here115200This is the factory default

setting. If the user has previously set8305Set to other baud rates (such as9600), then the actual device baud rate

needs to be used here. If you forget the serial port baud rate, you can select Search All Baud Rates, or

Open the case, power on and wait20Short-circuit twoDEFReset the hole to default parameters.

Wait after power on20After the dial light starts flashing, click "Search". The configuration tool will try to communicate with the device. If successful, a pop-up window will appear.8305Configuration interface, and then click to enterATIn command mode, the device will display the parameter information read on the right.

 第一步:选择1 串口: 波特率: 数据位: 校验位: 	AT指令模式,或 2. 固件升级 COM6 ▼ 115200 ▼ 8 ▼ N ▼	ð∕面置文件下载模式,含JSOM面雷	年 (信息 +*YER:ZLAN8005690W:HE00,SW:VI. +*BAUD:115200 +*DFADD:47.95.144.92 +*PFORT:1024 +*PROTOCOL:TCP +ZL_MODE:2 +*HEARTOME:0 +*HEARTOME:0 +*HEARTOME:0865617274 +DATAB:8 +*CHECKS:N	73
第二步:AT指令 登录密码: 第三步:AT指令 第三步:AT指令 读持率: 日的TPRIME2	模式时,如需修改参数请先登陆 eeeeee 登录 模式的主要参数 115200 又 : 47.95.144.92		<pre>FEN EINROL:0 +FEN EINROL:366316e +APRN: +APR_USERNAME: +APR_DASSW0RD: +APR_PASSW0RD: +MQTT_USERNAME:281679 +MQTT_LINEN:552665043 +MQTT_SUBSCRIBE_DOPIC: +MQTT_SUBSCRIBE_DOPIC: +MQTT_PUBLISK_TOPIC:\$4p +MQTT_PUBLISK_TOPIC:\$4p +MQTT_REFALIVE:60 +MQTT_WILL_TOPIC: +MQTT_WILL_MESSAGE: +Z_INNT_FORT:4195 +Z_NNT_FORT:4195</pre>	×
目的端口:	1024			清空
协议:	TCP		ZL+VER?	手动发送AT指令
获取参数	设置主要参数	高级参数	, 状态 配置模式:已进入配置模式 登陆状态:已登陆	
弱]:31 温度:℃ 月	l压:.V ID:8628100499	9507 硬件版本:HR00,软		

picture8Serial port configuration interface

The default login password is666666Before clicking "Login", the parameters are read-only and cannot be set or modified. That is, you can click "Get Parameters" but cannot "Set Parameters". Now click the "Login Button":

Can set serial port parameters and network parameters

nghai Zhuolan Information Technology Co., Ltd.	Tel:(021)64325189	http://www.zlmcu.com
Z ZL8305ConfTool		>
第一步:选择 1. AT指令模式,或 2. 团 串口: COM6 ▼ 波特率: 115200 ▼ 数据位: 8 ▼ 校验位: N ▼	固件升级/配置文件下载模式,含JSOX配置等一	信息 +*BAUD: 115200 +*TPADD: 47.95.144.92 +*PFORT: 1024 +*PFORT: CCL +*PRORT: CCL +*RATIME: 0 +HEARTIME: +APN USERNAME: +APN PASSWORD:
 第二步: AT指令模式时,如需修改参数试登录密码: 666666 登录 第三步: AT指令模式的主要参数 波特率: 115200 ▼ 	青先登陆	+MQTT_USERNAME:281679 +MQTT_LASENU.2865042072E8 +MQTT_CLIENT:552865048 +MQTT_SUBSCRIBE_TOPIC: +MQTT_SUBSCRIBE_QOS:1 +MQTT_FUBLISH_TOPIC:\$4p +MQTT_VBLISH_QOS:1 +MQTT_WILL_MESSAGE: +Z_RAT_MAG:0 +Z_RAT_WILL_0PIC: +DQTT_147.95.144.92 *LOGIN:0K
目的IP或域名: 47.95.144.92 目的端口: 1024		 清空
协议: TCP 💌	1	ZL+VER? 手动发送AT指令
	高级参数	- 状态

picture9Configuration Tool2

You can see that after logging in, the login status changes to "Logged in" and a "+LOGIN OK" Information.

TCP/IPThe main parameters are set in the column, including baud rate, destinationIP, destination port and protocol. Protocol supportTCPorUDPAfter modifying the corresponding parameters, click the "Set Main Parameters" button to set the new parameters to the device. After the settings are completed, close this interface, the device will restart the software, exit the configuration mode, and connect according to the parameters.

The "Get Parameters" button can get the parameters of the current device. Getting parameters is done by sendingATInstructions to obtain parameters, listed on the right areATThe return data of the instruction.ATFor instructions, please refer to this articleAT Instructions section. Since the "Get Parameters" will be automatically executed once the "Open" is successful, you generally do not need to click the "Get Parameters" button.

Click "Advanced Parameters"

奴参议				
┌工作参数 ——			_ MQTT参数 —	
工作模式:	双向透传	•	MQTT版本:	V3.1.1
DNS服务器IP:	—————————————————————————————————————	-	用户名:	281679
心跳间隔:	MQTT 禁用	<u> </u>	密码:	2853B42D72E8
心跳内容:	6865617274		客户端ID:	552865048
串口数据位:	8	•	订阅主题	
串口校验位:	N			
登陆密码:			1 1 阅质重:	
启用注册句:	林田	_	友布王题:	\$dp
注册包内容:	示力] 7-6-616-		发布质量:	1 💌
APN:	1 4000108		存注时间·	60
			速 百 子 55.	
Arn用户名:			<u> </u>	
APN密码:			遗愿信息:	
□ 启用远程ì	受备管理			
远程服务器IF	或域名: 47.95.144.92			
远程服务器端	口: 4 195			
	-	_		
	生效高级参数	故	取消	恢复默认值

picture10Configuration Tool

The meanings of common parameters are:

1.Working mode: You can choose two-way transparent transmission (transparent transmission between the serial port and the network without

changing the data content), MQTTmodel(MQTTparameters will take effect) and MODBUSProtocol conversion (serial portmodbusRTU With the network

modbusTCPMutual conversion)

2.Heartbeat interval: You can select according to your needs.15Incremental seconds, maximum300Second.

3.Heartbeat content: This is the heartbeat packet content.

4.Enable Registration Package: Enable or disable the registration package.

5.Registration package content: The default registration package content sent after connecting to the server16Base.

MQTTParameters only selectmqttAfter enabling remote device management, the device will beTCPClient

connects to remote serveripWith the port, it can connect to the ZhuoLan cloud platform and support

Software for the LANSHAN remote management protocol.

After selecting the parameters, click the "Effective Advanced Parameters" button and return to the main interface. At this time, you do not need to click

the "Set Main Parameters" button on the main interface.

5.1.1Serial port downloadjsonConfiguration Files

Enter8305After configuring the interface, select "Firmware/Configuration File Mode" and the following interface will pop up

 配置网页目录下载 本地配置网页所在根目录: 	×
E:\config_web	
特殊功能配置选择: 清除全部	
ZLINB网关 NQTT配置 JSON配置 注册包	
C 程序文件下载 选择程序文件:	
E:\zlan_updateV1.73_1.74.bin	
○ 通过网络下载	● 通过串口下载
设备的IP地址或域名: 192.168.1.200	串口: COM8 _
下载端口(一般无需修改): 1092	设备运行波特率: 115200 ▼
模块类型/型号: 2003	设备ID: 绑定ID
网页Flash空间大小选择: 256	
下载时,请先关闭打开的网页。	
下载	

picture11Firmware/Configuration File Mode

The serial port can be used to download firmware andjsonConfiguration file to achieve serial port upgrade, andmodbusRTUorDTL645 changejsonAdvanced features such asjsonFor more information on how to configure the upload, please refer to "Zhuo LanMQTTand JSONchangeModbusAdvanced Tutorial on Gateway Usage

5.1.2Serial port firmware upgrade

First, make sure the device serial port parameters are the default parameters, baud rate115200,81 data bit, no checksum. If not, please modify it to

the default parameters first. The serial port upgrade steps are as follows:

First click on the serial port search, then click on search to enter8305Serial port configuration interface

Shanghai Zhuolan Information Technology Co., Ltd.	Т	Tel:(021)64325189		http://www.zlmcu.com		
通过串口搜索	×	未联通	43338444	0	0	白动地去
串口: COM8 ▼ 波特率: 搜索所有波特率 ▼		未联通	40351857	0	0	手动添加
数据位: 8 <u>▼</u> 校验位: 无 ▼						串口搜索
停止位: 2 1 <u>·</u> 搜索 返回						P2P设备
	_					编辑设备
						搜索列表
						返回

picture12Serial port upgrade1

, ZL8305Conflool		
第一步: 选择 1. AT指令模式,或 2. 固件升级/配置文件下载模式,含JSOM配 串口:	∐ ■ 【 【 【 【 【 】 【 】 】 【 】 】 】 】 】 】	
·波特革:		Ŷ
目的端口:		清空
	ZL+VER?	
协议:		手动发送AT指令

picture13Serial port upgrade2

Check "Program File Download", then select the firmware and click Download.

Shanghai Zhuolan Information Technology Co., Ltd.	Tel:(021)64325189	http://www.zlmcu.com
配置网页/程序下载工具		X
 C 配置网页目录下载 本地配置网页所在根目录: 度:\web2 		
特殊功能配置选择: 清除全部 ZIJAB网关 MQTT配置 JSOX面置 注册包	0	
 ● 程序文件下载 选择程序文件: ▶ Lupdatebin\zlan_updateV1.73_1.74.bin ● 通过网络下载 ● 设备的IP地址或域名: ■ 192.168.1.200 下载端口(一般无需修改): 	 通过串口下载 串口: 设备运行波特率: 	COM8
模块类型/型号: 2003 网页Flash空间太小选择: 2048 ▼ KB 2010 下载时,请先关闭打开的网页。	▼ 设备ID:	绑定ID

picture14Serial port upgrade3

rial port upgrade completed 配置网页/程序下载工具				×
C 配置网页目录下载				
E:\web2				T
特殊功能配置选择:	清除全部			
ZLMB网关 MQTT配置 JSON面活			_	
	VirCom	>	×	
● 程序文件下载 选择程序文件:				
E:\updatebin\zlan_updateV1.73_1.74	A 传输完毕, LINK)	灯闪烁期间请勿断电!		.
• 通过网络下载				
设备的TPH的扩散域名· 192.			COM8 -	
		确定	115200	
下载骑山(一般尤需形成): 1032		1	113200	
模块类型/型号: 20	J3 🔻	设备TD·	48cm	
网页Flash空间大小选择: 200	18 V KB	іхнір.	JANAL LU	
下载时,请先关闭打开的网页。				
<u></u>				

picture15Serial port upgrade5

5.2. ZLVircomNetwork port configuration

passZLVircomThe tool can realize the local area network to search for devices through the network, upgrade the firmware, and

manage the devices and upgrade the firmware through the cloud.ZLVircomCan be used to create a virtual serial port,

If you do not need the virtual serial port function, you can download the free installation version.

download link:<u>http://www.zlmcu.com/download.htm</u>

surface1 ZLVircomVersion

name of software	illustrate
ZLVircomDevice Management Tool (Non-installation version)	The non-installation version does not include the virtual serial port function.
ZLVircom-Device Management Tool (Installation Version)	Installation version, which containsZLVircom_x64.msi and
	ZLVircom_x86.msi.641-bit operating system installationx64
	321-bit operating system installationx86Version.

ZLVircomWhen installing, just follow the default prompts. After installation, it will start every time the computer starts

zlvir.com, used to create a virtual serial port when booting.

5.2.1LAN Management

First, we will introduce the usage of local area network. This usage is only used for8305Lversion, because8305No Ethernet port. Assuming installationZLVircomComputers and8305LThe network ports of the two devices are in the same LAN.

ClickZLVircomClick "Device Management" on the main interface, enter the device management dialog box, and then click "Auto

著	举型	设备名称	P.	设备IP	本地	目的IP	模式	TCP连	虑拟串口	虑拟串口状	设备ID	TXD	RXD
1	内网	httpd		192.168.1.254	0	192,168,1,184	TCP Client	未建立	未设置	未联通	F631C037	0	0
2	内网	ZLAN800		192.168.10.1	0	192.168.1.57	TCP Client	已建立	未设置	未联通	01020304	0	0
			-				1						-

picture16LAN Search

You can now view the device configuration information and configure it.4GThe mode

selection is "Destination Mode". If the destination mode is static, it is wired mode. If the

destination mode is dynamic, it is4Gmode, where4GModeipThe default is

192.168.10.1, but it can be modified later.

anghai Zhuolan Information Technology	Co., Ltd.	Tel:(021)643251	http://www.zlmcu.com		
设备设置					×
设备信息 虚拟串ロ <mark>不使用 ▼</mark> 设备型号 <mark>Unknown</mark>	网络设置 IP模式 IP地址	静态 192 . 168 . 1 . 200	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	<u>8.8.8</u> 静态	. 8
设备名称 ZLAN8005A 设备ID 285040351766 [-] 固件版本 \1.450	端口 工作模式 子网掩码	0 TCP 客户端 <u>·</u> 255 . 255 . 255 . 0	转化协议 保活定时时间 断线重连时间	无 60 12	▼ (秒) (秒)
- 该设备支持功能	网关 目的IP或域名	192 . 168 . 1 . 1 47. 95. 144. 92 本地I	网页访问端口 P 所在组播地址 □ 启用注册句	80 230 , 90 , 76	. 1
┏ 域名系统 ┏ REAL_COM协议 ┏ Modbus TCP转RTU	日前编口 一串口设置	115200	 「 启用无数据] 「 启用定时发; 	・ ┃ 重启 每隔 300 送参数每隔 <mark>5</mark>	(秒) (分钟)
□ 串口修改参数□ 自动获取IP	数据位 校验位	8 • 无 <u>·</u>		更多高级选项	
┍ 存储扩展EX功能 ┍ 多TCP连接	停止位 流控	1 <u>●</u> 无 <u>●</u>	数据包长度 数据包间隔(;	1024 越小越好) <mark>3</mark>	(字节) — (毫秒)
系统默认参数 保存默认参数	<u>加载默认参</u>	数修改密码	固件与配置 重度	启设备 修改设置	取消

picture17 vircomConfiguration

Can be configured through the configuration fileMQTTParameters and jsonTo upgrade the firmware via LAN, click

電置网页目录下载 本地配置网页所在根目录: R:)configured	
特殊功能配置选择: 清除全部 ZLMB网关 MQTT配置 JSOM配置 注册包	
 ○ 程序文件下载 选择程序文件: [E:\zlan_updateV1.73_1.74.bin 	
 通过网络下载 设备的IP地址或域名: 「载端口(一般无需修改): 	 ● 通过串口下载 串口: ● 设备运行波特率: □ 115200
模块类型/型号: 2003 ▼ 网页Flash空间大小选择: 256 ▼ KB 下载时,请先关闭打开的网页。	设备ID: 285049995078 绑定ID

picture18Download configuration file via network port

Tel:(021)64325189	http://www.zlmcu.com
	×
183.230.40.39	
1883	
btjzew4/zlanname	
zlanid	
zlansub	
zlansub	
设置 删除和QTT设置	返回
	183.230.40.39 1883 btjzew4/zlanname zlanid zlansub zlansub zlansub

picture19 MQTTConfiguration

5.2.2Upgrade firmware via network port

You can alsovircomTo upgrade the firmware through the network port, the device and the computer must be in the same network

segment. If not, please modify the device or computer to change it to the same network segment. First, click Auto Search, and then double-click the

list to enter the configuration interface.

设备管	Ŧ													×
序	类型	设备名称	PORT	设备IP	本地	目的IP	模式	TCP连	虚拟串口	虚拟串口状	设备ID	TXD	RXI	0
1	内网	ZLAN8005A		192.168.1.249	0	192.168.1.57	TCP Client	已建立	未设置	未联通	40351857	0	0	
2	内网	ZLDEV0001		192.168.1.100	4196	47.95.144.92	TCP Server	未建立	未设置	未联通	9B04F125	0	0	自动搜索
З	内网	ZLAN8005A		192.168.10.1	0	192.168.1.57	TCP Client	已建立	未设置	未联通	43338444	0	0	
				2										手动添加
														串口搜索
														P2P设备
														编辑设备
														搜索列表
														返回
												_		
<													>	

picture20Network port upgrade1

Then click on "Firmware and Configuration"

Shanghai Zhuolan Information Technology	Tel:(021)643	825189	http://www.zlmcu.com			
设备设置						×
设备信息 虚拟串口 不使用 ▼ 设备型号 Unknown 设备名称 ZLAN8005A 设备ID 285043338444 [-] 固件版本 V1.473	网络设置 IP模式 IP地址 端口 工作模式 子网掩码 网关	静态 192 .168 .10 0 TCP 客户端 255 .255 .255 192 .168 .10	• • 1 • 0 • 1	高级选项 DNS服务器IP 目的模式 转化协议 保活定时时间 断线重连时间 网页访问端口	8 . 8 . 4 动态 无 60 0 80	·4 · (秒) (秒)
 Ⅰ 図 図 図 又 好 切 能 □ 网 页 下 载 □ 域名系统 	目的IP或域名 目的端口	47. 95. 144. 92 1024	本地IP	所在组播地址 「 启用注册包:	230 . 90 . 76	. 1
 □ REAL_COM协议 □ Modbus TCP转RTU □ 串口修改参数 	■ 串口设置 波特率 数据位	115200 •		□ 启用无数据重 □ 启用定时发送	启 每隔 300 参数每隔 5 更多高级选项	(秒) (分钟)
☑ 自动获取IP ☑ 存储扩展EX功能 □ 多TCP连接	校验位 停止位 流控	元 1 元 ・ 、 、		- 分包规则 - 分包规则 数据包长度 数据包间隔(越	512 小越好) 15	 (字节) (毫秒)
系统默认参数 保存默认参数	》 加载默认参	数修改	密码	国件与配置 重启	设备修改设置	取消

picturetwenty oneNetwork port upgrade2

Check the program file download, select the firmware to be upgraded, and then click Download

	×
本地配置网页所在根目录:	
E:\赵强工作\客户支持\MQTTjson下发浮点型嵌套问题\web2	T
特殊功能配置选择: 清除全部	
ZIMB网关 MQTT配置 JSOX酮器 注册包 1	
 ● 程序文件下载 选择程序文件: 	
E:\updatebin\zlan_updateV1.73_1.74.bin	.
· 通过网络下载 · 通过串口下载	
设备的IIP地址或域名: 192.168.10.1 串口: COM1 🔽	
下载端口(一般无需修改): 1092 设备运行波特率: 115200 ▼	
模块类型/型号: 2003 设备ID: 285043338444 绑定ID	
网页Flash空间大小选择: 2048 ▼ KB	
下载时,请先关闭打开的网页。	

picturetwenty twoNetwork port upgrade3

Download completed

Shanghai Zhuolan Information Technology Co., Ltd.	Tel:(021)64325189	http://www.zlmcu.com
特殊功能配置选择: 第 ZLINB网关 MQTT配置 JSON面に置し	游全部 主册句	
?	m 使输完毕,LINK灯闪烁期间请勿断电! 确定	×
模块类型/型号: 2003 网页Flash空间大小选择: 2048 5 下载时,请先关闭打开的网页。	▼ 设备ID: 2850433 • KB	38444

picturetwenty threeNetwork port upgrade4

5.2.2 TCPRemote Management

8305Support single channelTCPConnection is used to connect to the remote public networkIPRealize remote management and upgrade.

殳备信息	┌网络设置——			┌高级选项———		
塩拟串ロ 不使用 💽	IP模式	静态	•	DNS服务器IP	8.8.4	. 4
G备型号 Unknown	IP地址	192 .168 .10	. 1	目的模式	动态	•
设备名称 ZLAN8005A	端口	0		转化协议	无	-
受备ID 285043338444 [-]	工作模式	TCP 客户端	•	保活定时时间	60	(秒)
5日件版本 V1.451	子网掩码	255 . 255 . 255	i. 0	断线重连时间	12	(秒)
_{多设备支持功能}	网关	192 .168 .10	. 1	网页访问端口	80	
7 网页下载	目的IP或域名	47. 95. 144. 92	本地IP	所在组播地址	230 . 90 . 76	. 1
7 域名系统	目的端口	1884		□ 启用注册包:		ASC
- REAL_COM协议	_ 串口设置───			□ 启用无数据重/	启 每隔 300	(秒)
7 Modbus TCP转RTU	波特率	115200 💌		▶ 尼用定时发送	参数毎隔 5	(分钟
7 串口修改参数	数据位	8		<u> </u>	更多高级选项	
7 自动获取IP	校验位	无				
7 存储扩展EX功能	停止位	1		数据包长度	1024	(字节)
多TCP连接	流控	无		数据包间隔(越	小越好) 3	(

picturetwentigtametc2p4FartcPrpdddDataProgram Management

Enable scheduled sending parameters (this option is in8305LTop is openTCPRemote Management Channel), then click

More Advanced Options, Multi-PurposeipAnd the first line of port settings is filled in the serverip, fill in the port4195.

Tel:(021)64325189

http://www.zlmcu.com

FI参数		多日的正和端口设置		
		IP地址或者域名	端口	类型
IFI工作模 无线AP	■ Modbus 网关类型: 简单Modbus TCP转RTU ▼	47. 95. 144. 92	4195	客户端目的
P或STA SSID			0	客户端目的
密类型 无加密			0	
P或STA密码	RS485指令应答超时时间 0 ms(0~8191)		0	-
•模式信道选择 4	□ 支持RS485总线冲突检测		0	-
ICP服务器 启用	▲ 检测到RS485总线空闲 0 ms后才发送		0	-
ロWIFI互通 禁用			1.	
设备支持的高级功能————————————————————————————————————	□ 小能选择和启用 □ 修改参数需密码			
UDP组播	□ 允许接收广播数据			
多目的IP	□ 启用P2P功能			
代理服务器功能	□ TCP建立时发送MAC			
P2P功能	□ 后用Ping检测断网 □ rep建立时不进空中口			
	「TCP建立需要密码验证			

picturetwes totpcpFatingCuthenty two

Just run the serverZLUseDevMange.exe(Default listening port4195), or software monitoring that supports the management protocol 4195The device will communicate with the server.4195Port establishmentTCPConnect. After the connection is established, you can configure or upgrade the firmware

5.3. WebWeb page configuration

onlyZLAN8305LbringLVersion supportLANMouth andWebConfigure the function.8305LDevice DefaultIPfor 192.168.10.1If you do not know the deviceIPAddress, which can be accessed throughZLVircomSoftware Search Device IP.

ComputerIPChange to the same network segment as the device, for example192.168.10.2If it is a direct network connection, it can also be obtained dynamicallyIP(If it is not a direct connection, you may getIPNot really8305LIn the browser, enter the deviceIPaddress, you can enter the login interface, the default password6666666.

Shanghai Zhuolan Information Technology Co., Ltd.	Tel:(021)64325189	http://www.zlmcu.com
□ 后台配置 × +		- 0 - ×-
← → C ③ 不安全 192.168.10.1		☆) ೧ :

			登录			
*堆技体	目168歳(1)11月66	本语浏览	i器成Chro	me内核	浏览器法	司太市の

后台管理员登录

法输入应码

picture26 WebLog in

Log in to the main interface to display the current status of the device, working mode,IPThe device can

have two working modes:

1. 4GRouter mode: At this time4G, Ethernet are both open, the serial port can be4GInternet, while

Ethernet port asWANThe port can be used by other devices to access the Internet.

2. Wired Mode (off4G):No4GFunction, only serial port to wired network function. Different device information will

be displayed according to different modes.4GThe system status in routing mode is shown as follows:

系统状态		设备配置	设备管理
设备信息			
当前工作模式:	4G路由模式		
运营商类型:	CHN-CT		
网络类型:	E-UTRAN		
网络状态:	注册到网络		
SIM卡状态:	SIM卡正常		
SIM FICCID :	89861117040216407564		
IMEI号:	867732035176890		
信号强度:	100%		
基站定位:	3610:00C0310		
MAC地址:	5A:4C:01:02:03:04		
公网IP地址:	10.177.98.74		
LAN口IP地址:	192.168.10.1		
LAN口子网掩码:	255.255.255.0		
DNS地址:	222.66.251.8		

picture27Device Information

Click Device Configuration:

系统状态		设备配置		设备管理
	工作模式	通讯设置	协议选择	
工作模式				
* 工作模式:	4G路由模式	×		
IP地址:	192.168.10.1			
子网掩码:	255.255.255.0			
DHCP Server开启:	是	¥		
DHCP分配起始IP:	192.168.10.100			
DHCP分配终止IP:	192.168.10.200			
拨号失败重启次数:	5		如果设置为0则功能不启用	
APN :				
APN 账号:				
APN密码:				

picture28Working mode configuration

Working mode: You can choose4GRouter Mode and Wired Mode. Click

Communication Settings.

anghai Zhuolan Information Technology	γ Co., Ltd.	Tel:(021)	64325189	http://www.zlmcu.com
串口参数				
波特率:	115200	Ŧ	数据位: 8	
校验位:	无	•	停止位: 1	•
流控:	无	¥		
通讯参数				
工作模式:	Client	Ŧ		
本地端口:	0			
目的IP或域名:	47.95.144.92			
目的端口:	18 <mark>8</mark> 4			
TCP保活时间:	60		小于65535秒	
高级参数				
注册包选择:	1	•		
注册包内容:	zlan			
心跳包时间:	0		15s为单位*输	认的数值
心跳包内容:	heart			

picture29Communication Settings

Here you can configure the serial port parameters.8305Work on the client or server, purposeIPAnd port. Set heartbeat

ì	packet and	registration	packet, etc.
	pacific and	. egisti ation	paciet, etc.

	工作模式	通讯设置	协议选择	
5择				
*工作协议:	MQTT协议	¥		
MQTT ID:	zlan			
用户名:	zlan			
密码:	zlan			
订阅主题:	zlan			
发布主题:	zlan			
		MQTT高级参数」		

picture30Conversion Protocol

Here you can choose:

1.No protocol: At this time, the serial port and TCPIt is transparent transmission.

- 2. ModbusProtocol: At this time, the serial port isModbus RTUProtocol, network isModbus TCPprotocol.
- 3. MQTTProtocol: The network isMQTTprotocol, and the serial port data will be used asMQTTThe payload is sent, you

can fill inMQTTSome related parameters. Click "MQTTClick the "Advanced Parameters" button to select the configuration of advanced parameters.

		MQTT高级参数↓	
保活时间:	40		小于65535秒
清除标志:	1	*	
遗愿选择:	0	•	
遗愿主题:	zlan		
遗愿信息:	zlan		
遗愿消息质量:	0		
遗愿保持标志:	0	•	
订阅消息质量:	1	T	
发布消息质量:	0	¥	
服务器保持发布消息:	0	v	

picture31 ModbusAdvanced Parameters

Click Device Management:

Tel:(021)64325189	http://www.zlmcu.com
设备配置	设备管理
	固件更新
	重启
	Tel:(021)64325189 设备配置

picture32Device Management

Here you can update the firmware, reboot the device, and change the password.

6.Communication test

6.1.Server and device communication

This test is suitable for 8305 and 8305 L. Assume that there is the following network structure as shown below, 8305

picture33Network structure diagram

Configure to connect to the server116.226.72.135of 4196Please configure it according to the method in the "Serial Port

Configuration" section. After the configuration is completed, power on again.40~50seconds to connect to the server.



Server IP: 116.226.72.135 Port: 4196 Client DestIP:116.226.72.135 DestPort:4196

We run on the serverSocketDlgTestthisTCPtool

Tel:(021)64325189

http://www.zlmcu.com

(http://www.zlmcu.com/document/tcp_debug_tools.html).

🤰 卓岚TCP&UDP调试	工具-ZLA	N专业的串口取	美网方案排	是供商-http://www	v.zlmcu.co	om 🔼
通信设置	接收信息	接收缓冲大小:	10000	字节		
工作模式: TCP服务器 ▼	dev send					~
本地端口: 4196 0表示任意						
wr目的IP/端口随对方变化 🔽						
目的IP: 192.168.1.200						
目的端口: 4196						
所在组播组: 230.90.76.1						
美闭 ☑ 自动重连						
						×
	发送信息。	(ctrl+Enter输入[回车 (0x0d, 0	xOa); \r输入OxOd, \n轴	前入OxOa)	发送
□ 十八进利援収 □ 十八进利援収 □ 计择接收文件/停止接收	server se	nd			^	
清除窗口					~	1學止
	, 报告 厂	关闭报告				清空信息
反应 020 □ 十六进制发送(格式01 02)	10:13:52.	628 :TCP socket	114.87.22.	200:19968 Send OK!		^
□ 每隔 1000 毫秒发送	10:13:52.	627 :TCP socket	101.84.48.	75:55848 Send OK!		
□ 收到任何数据后启动发送	10:13:49.	979 :TCP rov fr	om socket 1	14.87.158.58:39357		
发送接收方式: 信息模式 ▼	10:12:32.	275 :The NO. 16	TCP socket	114.87.158.58:39357	is accepte	d!
修改发送文件名					-	~
★ HbTP 10.80.85.60 直线	3设罢 计a	ងារ់សេះសំងា កម្មាប	17	992 RYD 8	641	
	× • • • • • • • • • • • • • • • • • • •	клиткамди тир.	1	1	1	王亦时致

picture34Server-side tools

Select the local port as shown in the figure4196(Note that if you runZLVircomtools, you need to change a port), and then click the "Open" button.8305After connecting to the server, it will display "The NO... is accepted!"Information.

Now will8305Serial port connectionUSBchange232Serial line, and open the serial debugging tool (<u>http://www.zlmcu.com/document/com_debug_tools.html</u>), and open the correctcom As shown below:

Zhuolan Information Technology Co., Ltd.	Tel:(021)64325189	http://www.zlmcu.com
🤄 卓岚串口调试工具-http://ww	w.zlmcu.com	THE PARTY AND
通信设置 across 串口号 COM4 波特率(支持手动输入) 115200 数据位 3 復止位 1 校验位 None 流控制 None 关闭串口 接收区设置	r send	
 □ Hex显示 接收窗口字节 1000 	息(ctrl+Enter输入回车(OxOd,Ox end	(Oa); \r输入OxOd, \n输入OxOa)
 ₩JE,子付Ux Ub □ 收到帧尾后发送 □ 加载自动发送指令 发送一应答时间差 2752.25% G 	ns)均值 2752.25((ms) 计数1	rx: 8 Rx: 17 重新计:

picture35Device serial port debugging tool

Now the serial port sends data, and the server will receive the corresponding data.dev send, also send data on the server side"server send"The same data is received in the serial port tool.4GTwo-way communication on the network.

6.2.8305Ltest

The following tests are suitable for8305Lmodel.

6.1.1Transparent transmission test

Connect the computer serial cable to the device.WEBSet the device to wired mode. TCPServer mode, local port4196. Select No Protocol for the Conversion Protocol.

OpenSocketTestNetwork debugging software andComdebugSerial port debugging software.SocketTest Set to client

mode, purposeIPSet as DeviceIP, the destination port is the local port of the device4196, click to open the connected device.

ComdebugThe software's serial port parameters are set to be consistent with the device's serial port parameters. Comdebugas

well asSocketTestThe software can communicate bidirectionally through the device.

■ 卓炭TCP&UDP调试工具-ZLAN	与业的串□联网方案提供商-http://www.zlmcu.com —	пх	※ 卓风中山铜瓜工具-http://www.zimcu.com X
通信设置	接收信息 接收缓冲大小: 2000 字节		通信设置 123456890
工作模式: TCP客户端 ▼	0987654321	^	
本地端口: 0 0表示任意			115200
UDF目的IF/端口随对方变化 🔽			数据位 8 ▼
目的IP: 192.168.1.163			
目的端口: 4196			校验10 Rone ▼ 这些技術社 None ▼
所在组播组: 230.90.76.1			
关闭		~	接收区设置
	' 发送信息(ctrl+Enter输入回车(0x0d,0x0a); \r输入0x0d,\n输入0x0a)	4534	
□ 十六进制接收	123456890	及达	12840 BD
L 选择接收文件/停止接收		停止	
		清空信息	发送区设置
发送区设置			Hex友医(切U1 02)
□ 十六进制发送(格式01 02)	15:26:31.712 :TUP rov from socket TUPCLient	^	自动发送
母帰 60 宽杉友広	15:26:08.89 :TCP rov from socket TCPCLient		每隔 10 (ns) 0987654321
1 収到11回数据后后初发达 安洋接脚方式・信白措式 -	15:26:05.188 :TCP socket TCPClient Send OK!		□ 发送收到的帧
◎ 「「「「「「「「「「「「」」」」 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	15:25:43.66 :TCP rov from socket TCPClient		••••夏字符0x 0d
		~	「 收到帧尾后发送
本地IP: 192.168.10.50 高级语	D置 TXD字节: 53 RXD字节: 38 接收数据次数: 0	重新计数	□ 加载自动发送指令 🗸
			发送一应答时间差 1964089. (ms)均值 390607.1 (ms) 计数TX: 90 RX: 54 重新计数

picture36Transparent transmission test

6.1.2ModbusProtocol conversion test

The configuration parameters are basically the same as those for the non-protocol transparent transmission test. You only need to

change the conversion protocol toMODBUS The serial port can be realized MODBUS RTUProtocol conversion to network MODBUS TCP

Protocol, the networkMODBUS TCPProtocol conversion to serial portMODBUS RTUprotocol.



picture37 ModbusProtocol conversion test

6.1.3MQTTProtocol testing

This test is to connect to Baidu Cloud. Create a new account namedzlansubTheme of,

Allows publishing and subscription. Configure the device to connect to Baidu Cloud in client modeIPas well as1883Port, select the conversion protocol asmqttprotocol.

WillMQTTofID, username, and password. Because the publish and subscribe topics on Baidu Cloud arezlansub, so the publish and subscribe topics configured by the device are alsozlanusb.MQTTThe advanced parameters are not configured in this test and are actually configured as required.

	工作模式	通讯设置	协议选择	
送择				
*工作协议:	MQTT协议	~		
MQTT ID:	zlany			
用户名:				
密码:				
订阅主题:	zlanjsub			
发布主题:	zlanşub			
		MOTT宫级会数		
		1117 1 1101-5X 38-5X 1		

picture38 MQTTset up

Send data from the serial port of the device throughzlansubThe topic is published to Baidu CloudMQTTServer, and because the device subscribes tozlansubThe theme, soMQTTAfter receiving the information published by the device, the server sends the information to the device, thus forming a serial port self-transmission and self-reception test.zlansubSo Baidu Cloud can also receive it.zlansubThe data of the subject.

				✓ Subscriptions	
🖽 Messages				Add New Topic	Subscription
1234567890				Qos: 0 zlanyan	\otimes
2018/10/19 下年2:05:02	Topic zlanyan	Qos: 0		L	
1234567890				全 道河市口環ば工具-http://www.zimcu.com	
2018/10/19 下午2:05:03	Topic: zlanyan	Qos: 0		週間195回 出口号 [00m5 王] 1234567890 1234567890 1234567890	
1234567890				波特軍(支持手动输入) 1234567890 115200 1234567890 1234567890	
•			,	数据位 ◎ ▼ 1234567890 1234567890 1234567890	
				使验位 Neas ▼ 1234567890 1234567890 1234567890 1234567890 1234567890 1234567890	
				<u>美田田</u> 1234567890 1234567890	
				機吹区设置 「Hex夏示	
				接收窗口字节[1000 38893000]	
				发送区设置	
				□ Heat发送((201 02) □ 自动发送	
				West Of HI (atra] that as 50 3 (atra)	E (0x04, 0x0a) 1 \r\$0 \ 0x04, \r\$6 \ 0x0
				御稿 [100 (au) 1234567890	~

picture39 MQTTtest

7.special function

7.1.Timely to the goalIPsendUDPParameter Pack

设备信息	┌网络设置——	10		┌高级选项———	-	
素拟串ロ 不使用 📃	IP模式	静态	-	DNS服务器IP	8.8.4	. 4
& 备型号 ZLSN8305	IP地址	192 .168 . 1 .	230	联网模式	网口联网模式	-
设备名称 ZLAN8005A	端口	502		转化协议	无	•
殳备ID 287061129174 [-]	工作模式	TCP 客户端	-	保活定时时间	60	(秒)
国件版本 №1.494	子网掩码	255 . 255 . 255 .	0	断线重连时间	12	(秒)
_{亥设备支持功能}	网关	192 . 168 . 1 .	1	网页访问端口	80	
☑ 网页下载	目的IP或域名	192.168.1.69 Z	本地IP	所在组播地址	230 . 90 . 76	. 1
▼ 域名系统	目的端口		目的	🗖 启用注册包:		ASC:
▼ REAL_COM协议	串口设置			□ 启用无数据重/	启 毎隔 300	(秒)
☑ Modbus TCP转RTU	波特率	115200 💌		□ 启用定时发送	参数每隔 5	(分钟
7 串口修改参数	数据位	8 🔹			更多高级选项	
▼ 自动获取IP	校验位	无 💽				
▼存储扩展EX功能	停止位	1		数据包长度	512	(字节)
▼ 多TCP连接	流控	无		数据包间隔(越	小越好) 3	(毫秒)

picture40Heartbeat packet sendingUDPParameter Pack

As shown40, when the keep-alive timer is changed to an odd number, the device is connectedTCPAfter that, every60swill move towards the goal (i.e. the purpose of settingIP, port, as shown in the figure40middle192.168.1.69,port6889) Sends information with its own parametersUDPParameter package, this function allows customers to open the remotezlvir.com found8305,certainly,zlvir.comofIPThe listening port needs and the purpose of the deviceIP, port. However, opening it will increase the communication data flow.

7.2.Send data regularly

8305Supports sending data to the serial port at a fixed time.JSONIn "Configuration", click "Scheduled Delivery":

Tel:	(021))643251	89
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http://www.zlmcu.com

任意 ▼ 月 任意 ▼ 日 任意 ▼ 时	任意 💌 分 10 💌 秒,串口发送HEX指令: 01 02 03 04 05	。若TCP连接正常连接则: 仍发送
任意 ▼月任意 ▼日 ▼时	✓ 分 任意 ▼ 秒,串口发送HEX指令:	。若TCP连接正常连接则: 仍发送
任意 ▼月 任意 ▼日 ▼时	✓ 分 任意 ✓ 秒,串口发送HEX指令:	。若TCP连接正常连接则: 仍发送
任意 ▼月任意 ▼日 ▼时	✓ 分 任意 ✓ 秒,串口发送HIXX指令:	。若TCP连接正常连接则: 仍发送
任意 ▼ 月 任意 ▼ 日 ▼ 时	▼ 分 任意 ▼ 秒,串口发送HEX指令:	。若TCP连接正常连接则: 仍发送



As shown41As shown, you can specify a certain month, day, time, and second to send any16Binary data, for example, the

data in the figure represents the10Seconds to send to the serial port01 02 03 04 05This string of data.

It should be noted that the scheduled delivery function requires the device to be able to connect to the Internet and obtain the time normally.

MQTTClientID\Publish a topic to automatically add devicesID

8305Support in configurationmqttParameters, automatically on the clientIDOr add the unique device after publishing the topicID

Number to facilit	ate customer	identification	and testing
Number to facilit	ate customer	luentification	and testing.

MQTT对应的Port口选择(1	QXX12系列支持): 1	
服务器域名或IP:	192. 168. 1. 69	
服务器MQTT端口:	1883	
用户名:	mgttname	
密码:		
客户端ID(需要唯一性):	mqttid14427	
订阅主题1:	mqttsub	
订阅主题2:		
订阅主题3:		
发布主题:	mqttsub	「 末尾加设备ID
MQTT高级参数	保存MQTT设置 删除MQTT设置	返回

picture42 mqttAutomatically add equipmentID

As shown42As shown, check the "Add device at the end"ID, you can set up the clientIDOr add the device after the topicID, to ensure uniqueness.

7.4.Register package to add deviceMAC

8305Support adding devices at any position in the registration packageMACAddress, in Firmware and Configuration

Shanghai Zhuolan Information Technology	Co.,	Ltd.
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In the Registration Package settings:

注册包	回、心跳包设置	×
1 2 3	本界面功能用于实现较长注册包和心跳,采用配置文件方式实现,步骤如下: 在设备参数对话框确认此设备固件版本大于等于1.589(2003型号),否则先升级固件。 在上一个界面选择一个存放配置文件的目录,第一次配置时,可以新建一个空目录。 填写注册包和心跳包,默认为十六进制格式(十六进制中间含空格,如01 02)。	
	注册包: 18 5A 4D 41 43 5B 31 38 2E 2E 2E 32 33 5D	🗆 🗖 ASCII
4	心跳包: 心跳包间隔:	ASCII

picture43Register package to add deviceMAC (1)

As shown43As shown,16Base mode:4D 41 43 5B 31 38 2E 2E 2E 32 33 5D, add this string, the

program will automatically replace them with6Bit16Base number deviceID, the final registration

package is18 54 28 70 61 12 91 74,in28 70 61 12 91 74It's the equipmentMACaddress.

注册包、心跳包设置	×
本界面功能用于实现较长注册包和心跳,采用配置文件方式实现,步骤如下: 1. 在设备参数对话框确认此设备固件版本大于等于1.589(2003型号),否则先升级固件。 2. 在上一个界面选择一个存放配置文件的目录,第一次配置时,可以新建一个空目录。 3. 填写注册包和心跳包,默认为十六进制格式(十六进制中间含空格,如01 02)。 注册包: [122MAC[2435]	ASCII
心跳包:	
心跳包间隔: 0 秒	
4. 点击确定后返回上一个界面,点击"下载"按 通定	

picture44Register package to add deviceMAC (2)

As shown44As shown, checkASCLmodel,ASCLIn string form:MAC[24...35], the program will automatically replace them with12device ofIDstring, the final registration package is

12Z287061129174, in287061129174It's the equipmentMACThe address as a string.

8.CommonATinstruction

8.1.Login and Configuration

8.1.1Enter configuration mode

instruction:REQUEST CFG MODE Function: Enter the configuration mode. During the device startup phase, send this command and the device can enter the configuration mode after the startup is complete.

return:CFG MODE\r.

8.1.2Login

instruction:ZL+LOGIN=666666\r\n Function: Login, modifying device

parameters requires login status to be successful. Return: +LOGIN:OK\r\n(

Success) or +LOGIN:NG\r\n(fail)

8.1.3Setting login password

instruction:ZL+LOGIN_PW=6666666\r\n Function: Change

password. You need to be logged in to succeed.

Returns: +LOGIN_PW=666666\r\n

8.1.4Get device status

instruction:ZL+STAT?\r\n

Function: Query the signal strength, temperature, and voltage of the device

Returns: +STAT: Intensity, temperature, voltage\r\n

8.1.50btainICCID

instruction:ZL+ICCID?\r\n Function: GetICCID Returns: +ICCID:ID\r\n

8.1.60btainIMSI

instruction:ZL+ IMSI?\r\n

8.1.70btainSIMCard Status

instruction:ZL+ SIM?\r\n

8.1.8Get network dial-up status

instruction:ZL+NETSTATE?\r\n

8.2.Serial port parameters

8.2.1Get serial port parameters

instruction:ZL+BAUD?\r\n

Function: Get baud rate

Returns: +BAUD:n\r\n,nIndicates the specific baud rate

8.2.2Get the check digit

instruction:ZL+CHECKB?\r\n

Function: Get the check digit

Returns: +CHECKB:N/O/E\r\n

N:No verification

O:Even parity

E:Odd parity

8.2.3Get data bits

instruction:ZL+DATAB?\r\n

Function: Get data bit

Returns: +DATAB:5/6/7/8\r\n

8.2.4Set serial port parameters

instruction:ZL+BAUD=n\r\n

Function: Set the baud rate,nIndicates the value to be set

Returns: +BAUD:n\r\n

8.2.5Setting the check digit

instruction:ZL+CHECKB= N/O/E \r\n

Function: Set the check digit

Returns: +CHECKB:N/O/E\r\n

N:No verification

O:Even parity

E:Odd parity

8.2.6Setting Data Bits

instruction:ZL+DATAB=5/6/7/8\r\n

Function: Set data bit

Returns: +DATAB:5/6/7/8\r\n

8.3.Network parameters

8.3.1Purpose of acquisitionIPor domain name

instruction:ZL+PIPADD?\r\n

Function: Get the purposeIPor domain name

Returns: +PIPADD=ip\r\n

8.3.2Get the destination port

instruction:ZL+PPORT?\r\n

Function: Get the destination port

Returns: +PPORT=n\r\n

8.3.3Get the device working mode

instruction:ZL+PROTOCOL?\r\n

Function: Get the device working mode

Returns: +PROTOCOL=TCP/UDP\r\n

8.3.4ObtainDNSserverIP

instruction:ZL+PDNS?\r\n Function: GetDNSserverIPAddress returned: +PDNS=ip\r\n

8.3.5Setting PurposeIPor domain name

instruction:ZL+PIPADD=ip\r\n

Function: Setting purposeIPor domain name

Returns: +PIPADD=ip\r\n

8.3.6Set the destination port

instruction:ZL+PPORT=n\r\n

Function: Set the destination port

Returns: +PPORT=n\r\n

8.3.7Set the working mode

instruction:ZL+PROTOCOL=TCP/UDP \r\n

Function: Set the working mode

Returns: +PROTOCOL=TCP/UDP\r\n

8.3.8set upDNSserverIP

instruction:ZL+PDNS=ip\r\n Function: SettingDNSserverIPAddress

returned: +PDNS=ip\r\n

8.4.Registration packet and heartbeat packet

8.4.1Check the registration package contents

instruction:ZL+ENROL?\r\n

Query the registration package content (default registration package16Hexadecimal system

Returns: +ENROL:1234567890\r\n

8.4.2Whether to enable the registration package

instruction:ZL+EN_ENROL?\r\n

Check whether the registration package is enabled (1Enable0

Disability) Return: +EN_ENROL:1\r\n

8.4.3Set the registration package content

instruction:ZL+ENROL=123456\r\n Set the registration package content (default registration package16 The actual registration package is0X12 0X34 0X56 Returns: +ENROL:123456\r\n

8.4.4Enable/disable registration package

instruction:ZL+EN_ENROL=1\r\n

Enable/disable registration package

Returns: +EN_ENROL:1\r\n

8.5. TCPRemote Management

8.5.1EnableTCPRemote Management

instruction:ZL+Z_RMT_MAG:1\r\n

Enable/DisableTCPRemote Management

Returns: +Z_RMT_MAG:1\r\n

8.5.2set upTCPRemote management purposeIP

instruction:ZL+Z_RMT_IP:47.95.144.92\r\n

Function: SettingTCPRemote management

purposeIP Returns: +Z_RMT_IP:47.95.144.92\r\n

8.5.3set upTCPRemote management destination port

instruction:ZL+Z_RMT_PORT:4195\r\n Function:

SettingTCPRemote management destination port

Returns: +Z_RMT_PORT:4195\r\n

8.6.Software Restart

instruction:ZL+RESTART\r\n

Function: After entering the configuration mode, you need to restart to exit the configuration mode

Here are just some of the commonly used parametersATInstruction configuration instructions,MQTTFor more advanced parameters, please consult after-sales

technical staff

8.7.examineTCPConnection Status

This command does not need to be used firstREQUEST CFG MODE,EnterATCommand status. Send directly"

ZL+TCPCONECT=?", receive"ZL+TCPCONNECT=1\r"Indicates that the connection has been established and received

ZL+TCPCONNECT=0\r"Indicates that the connection is not established.

8.8.Set network standard

instruction:ZL+SET_NETMODEL=3\r\n Function: Setting4GThe network standard

of mode dialing, the standard list is as follows:

Standard name	ATCommand value	illustrate
AUTO	0	automatically choose
GSM	1	China Mobile/China Unicom2G
WCDMA	2	Telecom/Unicom3G
LTE	3	Telecom/Mobile/Unicom4G
TD-SCDMA	4	move3G
UMTS	5	1
CDMA	6	telecommunications2G
HDR	7	/
CDMAAND HDR	8	1

Returns: +NETMODEL=3\r\n

8.9.Set up base station location queryAPIport

instruction:ZL+BS_POSITION_APIPORT=82\r\n Function:

Set the base station location queryAPIport

Returns: +API_PORT=82\r\n

8.10.Hexadecimal command set

This method can use the hexadecimal prefix to identify read and write commands. Get the status of the device. ZLVircom

All parameters that can be displayed and set can be realized by this command, and there is no need to send it before sending

REQUEST CFG MODEFor details, please refer to "Serial port parameter modification and hardwareTCP/IPProtocol Stack".

Now list several commonly used commands:

1.getTCPConnection status: Sendinged f2 a3 56 ca db 91 84 b0 d7 00 3d 01,return0

Indicates that the connection is not established and returns1Indicates that the connection has been established.

2. Get the current networking mode. The networking mode uses the "Serial port modification parameters and hardwareTCP/IPprotocol

The dynamic destination parameter in the stack is0, "4GNetworking method is1.

a)Get: Sended f2 a3 56 ca db 91 84 b0 d7 00 3a 01return0If it is network port mode, return1for4GWay.

b)Settings: Sended f2 a3 56 ca db 91 84 b0 d7 01 3a 01 00Set to network port mode, sended f2 a3 56 ca db 91 84 b0 d7 01 3a 01 01Set as4Gmode. After the setting command is sent, the internal program of the device will be automatically restarted. The program restart time is less than10seconds.

9.Accessories

1、 Model selection:

model	Function	illustrate
ZLAN8305	4GConvert to Serial Port	No Ethernet port
ZLAN8305L	4GSerial to Serial, Ethernet to Serial,	With Ethernet port
	4Grouter	

2、Antenna selection:

You can choose glue stick antenna or suction cup antenna. The suction cup antenna is the default.2M,customizable3Mantenna.

3, power input:

Default is plug typeQ2.1The socket can be customized as a terminal block type power input.

4, You can choose rail mounting accessories.

10.After-sales service and technical support

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