

E103-W05 Quick Start Manual



Chengdu Ebyte Electronic Technology Co.,Ltd.



CONTENTS

3 QUICK START	2
3.1 PREPARATION BEFORE CONFIGURATION	2
3.2 THE APPLICATION OF TCP SERVER WHEN MODULE WORKS UNDER AP MODE	
3.2.1 Introduction	
3.2.2 Networking model	3
3.2.3 Parameter configuration	
3.3 THE APPLICATION OF TCP CLIENT WHEN MODULE WORKS UNDER STA	8
3.3.1 Application introduction	8
3.3.2 Networking model	8
3.3.3 Parameter configuration	



3 Quick start

The E103-W05 module is easy to use and easy to access the network, and is compatible with most E103-W01 AT commands. When using the E103-W05, you can also use the serial debugging assistant to easily realize the parameter settings of E103-W05, Guide users to use the product through communication examples between modules, modules and servers, and modules and clients.

When the user configures the parameters of the module, first of all, the user needs to ensure that the working voltage of the module is 3.0~3.6V (typical value is 3.3V), the serial port pins have been correctly connected to the relevant serial port tools and can communicate normally.

3.1 Preparation before configuration

Hardware	:	
1	E103-W05 series wifi module	E
2	Test board for E103-W05 series wifi module	5
3	Computer	G
4	One router (can be replaced by Wi-Fi hotspot on cellphone)	EB
Software	(available for download from www.ebyte.com)	
1	AccessPort/XCOM/serial_port_utility	
2	TCP&UDP test tool	
3	Airkiss related app"AirkissDebug"	
4	Configuration software for E103-W01	

3.2 The application of TCP Server when module works under AP mode

3.2.1 Introduction

We search for the hot spots of the E103-W05 module through the computer and connect, establish a TCP Client on the PC and connect to the port monitored by the TCP Server of the module, and realize the communication process.

3.2.2 Networking model



3.2.3 Parameter configuration

①. Open serial_port_utility, select Port and Baudrate (default 115200), check version info in the receiving window on the right side.

If there are version info, communication is good.

Serial Port Utility		– 🗆 X
e <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>C</u> ontrol <u>H</u> elp		
🖹 🚥 🕨 🚺 🔳 O 🕇 — 🔳] 錼	
Serial Port Setting	[15:31:12.676] AT+GMR	
Port COM3(USB-SERIAL CH340) 💌	[15:31:12.683] AT+GMR	
Baudrate 115200	AT version:1.1.8(Nov 21 2019, 17:44:38)	
Data Bits 8	ThingsTurn Technology Co., Ltd.	
Parity None	Nov 21 2019, 17:44:38	
Stop Bits 1	ОК	
Flow Type None		
Receive Setting		
• Text C Hex		
☑ Auto Feed Line		
☑ Display Send		
☑ Display Time		
- Send Setting		
• Text C Hex		
□ Loop 1000 ÷ ms		
	AT+CNR	
	11 Out	Send
	AT. CMD	
	AI+GMK	

(((•))) EBYTE 成都亿佰特电子科技有限公司

②. Set the working mode of the module to AP, and set the related AP parameters, such as AP name, password, channel number, encryption method, etc., you can view the AT command manual example.

🔤 Serial Port Utility	- C	x u
<u> F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>C</u> ontrol <u>H</u> elp		
	<u>③</u>	
- Serial Port Setting	[15:44:18.649] AT+CWSAP?	
Port COM3(USB-SERIAL CH340) 💌 Baudrate 115200 💌	[15:44:18.658] AT+CWSAP? +CWSAP:"EBYTE_001","12121212", 1, 3, 1, 0	
Data Bits 8 Parity None	OK [15:46:55.697] AT+CWSAP="ebyte001", "123456789", 5, 4	
Stop Bits 1 Flow Type None	[15:46:55.707] AT+CWSAP="ebyte001", "123456789", 5, 4 [15:46:55.997] +STA_DISCONNECTED:"28:6d:cd:24:95:4e" [15:46:56.792]	
Receive Setting	OK	
• Text C Hex		
☞ Auto Feed Line ☞ Display Send ☞ Display Time		
Send Setting		
• Text C Hex		
□ Loop 1000 ÷ ms		
	AT+CWSAP="ebyte001", "123456789", 5, 4	Send
	AT+CWSAP="ebyte001","123456789",5,4	•
COM3 OPENED, 115200, 8, NONE, 1, OFF Rx: 140 By	tes Tx: 48 Bytes Skm远距离WIFI 同	

③. When the setting is successful, we can search through the WIFI in the lower right corner of the computer to find our module and connect it.



(4). When connected, the module will print the following information, showing the MAC address of the connected STA and the assigned IP address.

Serial Port Utility	- 0
ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>Control</u> <u>H</u> elp	
Serial Port Setting Port COM3(USB-SERIAL CH340) • Baudrate 115200 • Data Bits 8 • Parity None • Stop Bits 1 • Flow Type None • Receive Setting • Text • Hex • Auto Feed Line • Display Send • Display Time Send Setting • Text • Hex	<pre>[15:44:18.649] AT+CWSAP? [15:44:18.658] AT+CWSAP? +CWSAP:"EBYTE_001", "12121212", 1, 3, 1, 0 OK [15:46:55.697] AT+CWSAP="ebyte001", "123456789", 5, 4 [15:46:55.997] AT+CWSAP="ebyte001", "123456789", 5, 4 [15:46:55.997] +STA_DISCONNECTED:"28:6d:cd:24:95:4e" [15:46:56.792] OK [15:50:25.379] +STA_CONNECTED:"7c:dd:90:d8:2b:50" [15:50:29.703] +DIST_STA_IP:"7c:dd:90:d8:2b: 50", "192.168.4.2"</pre>
□ Loop 1000 ÷ ms	AT+CWSAP="ebyte001", "123456789", 5, 4 Send
042 OPENED 115300 0 NONE 1 OFE De 334	Dutan Tur 49 Putan

⁽⁵⁾Now we create a TCP Server in the module and listen to the port. It needs to be set to multi-connection, and then create the server and port;

((w)) **EBYTE** 成都亿佰特电子科技有限公司

E	Serial Port Utility	– 🗆 X	2
2	<u>File Edit View Tools Control H</u> elp		-4
1	🖹 ∞ ▶ I 🔳 O + − 🛅 {		
	- Serial Port Setting	[15:44:18.649] AT+CWSAP?	
	Port COM3(USB-SERIAL CH340) 💌	[15:44:18.658] AT+CWSAP?	
	Baudrate 115200 💌	+CWSAP:"EBYTE_001", "12121212", 1, 3, 1, 0	
	Data Bits 8	OK	
	Parity None 💌	[15:46:55.697] AT+CWSAP="ebyte001","123456789",5,4	ŀ
	Stop Bits 1	[15:46:55.707] AT+CWSAP="ebyte001", "123456789", 5, 4	
	Flow Type None	[15:46:56.792]	
	Receive Setting	OK [15:50:25.379] +STA_CONNECTED:"7c:dd:90:d8:2b:50"	
	• Text C Hex	[15:50:29.703] +DIST_STA_IP:"7c:dd:90:d8:2b: 50"."192.168.4.2"	
(✓ Auto Feed Line	[15:53:11.418] AT+CIPMUX=1	,
		[15:53:11.425] AT+CIPWUX=1	1
	✓ Display Time	OK	
	5	[15:53:33.048] AT+CIPSERVER=1,1001	
	- Send Setting	[15:53:33.054] AT+CIPSERVER=1,1001	
-		DK	
		J	
1			
		AT+CIPSERVER=1, 1001	
		Send	
		AT+CIPSERVER=1,1001	1
1	COM3 OPENED, 115200, 8, NONE, 1, OFF Rx: 272 By	tes Tx: 82 Bytes <u>8km远距离WIFI 可自组网</u>	
r	. 2. 10 11 OII MODI		

(6). We build a client on the PC and connect to the client of the module, and then we can send data. Here, if the server needs to send data to the client, we can send it through the AT+CIPSEND=<link ID>,<length> command. Here, users can download the AT instruction manual of E103-W05 in the data download, which has detailed instructions.

((w)) EBYTE 成都亿佰特电子科技有限公司

	.1:1001]	- 🗆 X	🔚 Serial Port Utility		- 0	×
操作(O) 查看(V) 窗口(W) 幕	助(日)	×	<u>File Edit View Tools Control H</u> elp			
ZNE-200T全功能型 具有10/100M自适 油結束高计1_15Mb	快速以太网转串口横块	ETCOM-10S标准型以太网转串口设备 (有TCP Server,TCP Client, UDP, Real 更多	Serial Port Setting			•
 □ 创建连接 ● 创建服务器 ※ ■ 健性栏 平 × 	記服务器 28 ② 25 连接 28 警全部新 	〒 ※離除 巻 図 まま ↓ ×	Port COM3(USB-SERIAL CH340) • Baudrate 115200 •	[15:59:35.176] AT+CIPSEND [15:59:35.186] AT+CIPSEND		
日-■ 香수勝度: ■ 192:168-4:1:1001 ■ 服务器模式	目标IP: び送区 「自动 「ないの は、 「「ないの ない。 「「ないの ない。 「「ないの では 「「ないの では 「「ないの では 「「ないの では 「「ないの " 「「ないの " 「「ないの " 「「ないの " 「「ないの " 「「ない " 「「ない " 「「ない " 「「ない " 「「な	发送: 间隔 100 es 发送 停止 进制 「发送文件 <u>清空</u> 选项 元 清空 保存 选项 「 技16进制 到文件(938)	Data Bits 8 Parity None Stop Bits 1 Flow Type None Receive Setting Text Auto Feed Line Display Send Display Time	ERROR [16:00:22.368] AT+CIPSEND=4,20 [16:00:22.376] AT+CIPSEND=4,20 link is not valid ERROR [16:00:28.735] AT+CIPSEND=0,20 [16:00:28.741] AT+CIPSEND=0,20 OK > [16:00:42.652] +IPP,0,10:111111111		4
	#8(K): 0 清空计数		© Send Setting © Text ○ Hex □ Loop 1000 🔆 ms	AT+CIPSEND=0,20	S	end •
	(c)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)		COM3 OPENED 115200 8 NONE 1 OFF Rx: 426 E	vtes Tx: 145 Bytes 8kmini	ARWIEL DE	当组网 .

3.3 The application of TCP Client when module works under STA

3.3.1 Application introduction

We use the E103-W05 module as the STA working mode to search for nearby WIFI and connect. At the same time, the computer is also connected to the same WIFI, so that the E103-W05 and the computer are in the same local area network. Create a TCP Client on the module side and create it on the computer side. TCP server, and then communicate.

3.3.2 Networking model



3.3.3 Parameter configuration

①. Set the module to STA mode and connect to the relevant WIFI hotspot (router). When the connection is successful, the following information is displayed in the receiving data box. At this time, we can query the assigned IP information through IP information query.

Serial Port Utility	<u></u>	×
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>C</u> ontrol <u>H</u> elp		
🖹 🚥 🕨 🚺 🔳 🕂 🕂 🥅		
Serial Port Setting Port COM3(USB-SERIAL CH340) Baudrate 115200 Data Bits 8 Parity None Stop Bits 1 Flow Type None Value Value Val	<pre>[16:42:48.627] AT+CWMODE=1 [16:42:48.632] AT+CWMODE=1 OK [16:42:53.330] AT+CWJAP="CHB- XKA", "chb12345678" [16:42:53.337] AT+CWJAP="CHB- XKA", "chb12345678" [16:42:53.386] WIFI DISCONNECT</pre>	
Receive Setting Text C Hex Auto Feed Line Display Send Display Time	[16:42:56.238] WIFI CONNECTED [16:42:56.271] WIFI GOT IP [16:42:56.994] OK	
• Text C Hex	AT+CWJAP="CHB-XKA", "chb12345678"	 nd
1 LOOD 1000 . ms	AT+CWJAP="CHB-XKA","chb12345678"	-

②. At this time, also connect our computer to the same wifi as the module, so that they are in a local area network.



(3). On the computer, create a server and monitor the relevant ports.

E103-W05 产品规格书

	成都亿佰特电子科技有限公司
EBYTE	成都亿伯特电于科技有限公司

@ TCP&UDP测试工具		100	×
操作(<u>O</u>) 查看(<u>V</u>) 帮助(<u>H</u>)			
			w.
🗄 🚰 创建连接 💐 创建服务器 🐰 启动服务器 送 🕢 😤 连接 😒 🛬 全部断开 💥 删除 💈	* I 🖸 I 🌫 📮		
雇性栏 # ×			1
······································			
			8
			0
			10
			R
友法速度(B/S); 0 接收速度	(B/S): U		

(4). Set up the module and connect to the server. When the connection is successful, the receiving box will have the following prompt message.



Serial Port Utility	– 🗆 ×
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>C</u> ontrol <u>H</u> elp	
Serial Port Setting	[16:42:48.632] AT+CWMODE=1
Port COM3(USB-SERIAL CH340) 💌	
Baudrate 115200 💌	[16:42:53.330] AT+CWJAP="CHB-
Data Bits 8	KKA", "chb12345678"
Parity None 💌	[16:42:53.337] AT+CWJAP="CHB-
Stop Bits 1	[16:42:53.386] WIFI DISCONNECT
Flow Type None 💌	[[16:42:56.238] WIFI CONNECTED [16:42:56.271] WIFI GOT IP
Receive Setting	[16:42:56.994]
• Text C Hex	[16:49:15.890] AT+CIPSTART="TCP", "192.168.1.110", 8888
I Auto Feed Line	[16-40-15 207]
I Display Send	AT+CIPSTART="TCP", "192. 168. 1. 110", 8888
☞ Display Time	[16:49:16.527] CONNECT
Send Setting	AT+CIPSTART="TCP", "192. 168. 1. 110",
● Text C Hex	Send Send
□ Loop 1000 ÷ ms	AT+CIPSTART="TCP","192.168.1.110",8888
COM3 OPENED, 115200, 8, NONE, 1, OFF Rx: 183	Bytes Tx: 87 Bytes 8km远距离WIFI 可自组网

(5). After successfully connecting to the server, we can carry out data communication between the server and the client, but here, in order to achieve simple data transmission, we also need to send the AT command "AT+CIPMODE=1" to enter the transparent transmission mode, and send the command "AT+ CIPSEND" enters the sending state; in this way, you can avoid the embarrassing operation of specifying the width every time you send data. As shown below.



Serial Port Utility		<u>002</u> 9		×
<u>File Edit View Tools Control H</u> elp				
🖹 ∞ ▶ 🔳 🗘 + − 🛅				
Serial Port Setting	[17:03:18.144] AT+CIPMODE=1			
Baudrate 115200	[17:03:18.150] AT+CIPMODE=1			
Data Bits 8	[17:03:25.688] AT+CIPSEND			
Parity None	[17:03:25.693] AT+CIPSEND			
Stop Bits 1	×			
Receive Setting				
• Text C Hex				
✓ Auto Feed Line				
I Display Send				
☑ Display Time	1			
Send Setting	AT+CIPSEND		Con	, d
• Text C Hex			ser	u
□ Loop 1000 <u>÷</u> ms	AT+CIPSEND			•
COM3 OPENED, 115200, 8, NONE, 1, OFF Rx: 37 B	ytes Tx: 26 Bytes 8km	远距离W	IFI 可自线	M

⁽⁶⁾. Send transparent data.

- 1							
@ TCP&UDP测试工具 - [192.168	.1.114:65002]		- 🗆 🗙	al 🔤 Serial Port Utility		- 🗆	×
操作(O) 查看(V) 窗口(W)	解助(日)		×	^H <u>File Edit View Iools Control H</u> elp			
ZNE-200T全功能 具有10/100M自道	型快速以太网转串口横块 15应以太网接口,串口通信:	Retcom-10S标准型以 具有TCP Server,TCP	以太网转串口设备 Client, UDP, Real 更多				
波特率高达1.15M	bps	COM ,Group组播,TCF	Auto等多种工作模式	- Serial Port Setting	[17:03:18.144] AT+CIPMODE=1		
실 创建连接 😒 创建服务器 🔡	启动服务器 28 📀 😒	连接 🗝 📽 全部断开 💥 删除 🎇 🖸	😹 ₌	Port COM3(USB-SERIAL CH340) 💌	[17:03:18.150] AT+CIPMODE=1		
屠性栏 平 ×	🔸 😽 😽 😽	65002	4 Þ ×	Baudrate 115200 -			
 ● 書户論模式 ● 書 疑答葉模式 ● 192.168.15.1):8888 ● 192.168.1.114:65002 ● 「「「「「二」」」」 ● 192.168.1.114:65002 ● 「「」」」 ● 「二」」 ● 192.168.1.114:65002 ● 「二」」 ● 「二」 ● 192.168.1.114:65002 ● 「二」 ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	目标IP:	目标IP:	■5 发送 停止 日 件 <u>清空</u> 选项 件 <u>清空</u> 选项 件 <u>清空</u> 通项 件 <u>清空</u> 通项 件 <u>清空</u> 月 月 月 月 月 月 月 月 月 月 月 月 月	E Data Bits 8	OK [17:03:25.688] AT+CIPSEND		
	目标端口:			Parity None 💌	[17:03:25.693] AT+CIPSEND		
	65002			Stop Bits 1			
	· ▼ 指定本机端口: 8888			Flow Type None	[17:06:19.272] 22222222		
	类型:			Receive Setting	[17:06:19.456] 22222222		
	TCP -			• Text • Hex	[17:06:19.656] 22222222		
	计数 ————			Auto Feed Line	[17.06.21.211] 1111111111111111111111111111111	1	
	发送: 40			₩ Display Jenu ₩ Display Time			
	接收: 90			Send Setting	22222222	s	send
	清空计数			- C Text C Hex □ Loop 1000 → ms	22222222		
< >						DESTRUCT TH	
	友运速度(B/S): 0	接収]] 医度(B/S): 0		L COMS OPENED, 115200, 8, NONE, 1, OFF RX: 67 E	sytes IX: DO Bytes Bkm	心胆离WIE 可E	AND MEET