# Elfin-EW1X

## RS232/RS485 to Wi-Fi

## **Operation Guide**

## V 1.1



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# 1. ELFIN-EW1X EVK

Elfin-EW10 is RS232 interface and Elfin-EW11 is RS485 interface. The EVK include the following attachment.

- Elfin-E1X product
- Screw driver
- RJ45 to Terminal Transform(4PIN or 8PIN)



1.1. Elfin-EW10 4PIN Connector



1.2. Elfin-EW11 4PIN Connector



## 1.3. Elfin-EW10 8PIN Connector



## 1.4. Elfin-EW11 8PIN Connector



## 1.5. Elfin RJ45 Cable

The RJ45 cable can be done as following picture.



## 1.6. EW10 Interface Conversion Cable



## 1.7. EW11 Interface Conversion Cable



# 2. SERIAL SETTING

## 2.1. Serial Tool SecureCRT

Download adddress: <u>http://www.hi-flying.com/index.php?route=download/category&path=1\_4</u>

Decompress file and find executable program, then open. Click quick start button it to create connection.



## 2.2. Configure Serial Parameter

### Protocol: Serial

Port: Actual connection port(search by "My PC"->"Device Manager"->"Port(COM and LPT)". As figure:

🦷 端	囗 (COM 和 LPT)				
7	通信端口 (COM1) )				
	💼 not connected - SecureCRT			— C	) ×
	File Edit View Options Tra	ansfer Script Tools Help			
	🎝 🕄 🖓 🖓 🖏 🕯 🖻 🤇	<b>\</b>   5 5 5   6 % 1	8   🔤		
					×
		Quick Connect         Protocol:       Serial         Pgrt:       COM1         Paud rate:       115200         Data bits:       8         Parity:       None         Stop bits:       1	Flow Control TRE/DSR TS/CTS XON/XOFF	×	î
		□Sho <u>w</u> quick connect on star	- Saye session Open in a <u>t</u> ab Connect Cancel		

Notes: Elfin-EW1X the default serial data is as above and user can modify device working parameter by IOTService.

# **3. TEST EXAMPLE**

Elfin-EW1X use TCP/IP protocol for communication. There is two main parameters one for IP address and another for port number.

## 3.1. AP Wireless Networking

Product works in AP mode. All other STA devices connect to product AP. (Product AP does not support route function, so the STA can not transfer data to each other) The structure is t shown as below:



Step 1: The product default AP SSID is "EW1X\_+MAC(last 4 characters)". It can also search by cli "show" command. Figure is as below:



===WIFI Status===
Mode:STA
AP SSID:EW10_C69A
Hide AP SSID:Off
Disconnected
STA SSID:Upd
Connected,7C:B5:40:4F:B2:CD
EPORT>

Step 2: PC connect to product AP as following picture.



Step 3: Open network connection and connect to Elfin-EW1XAP from Step 1.

诊断并修复网络问题,或获得故障排除信息。

📑 疑难解答

Internet 选项

Windows 防火墙 家庭组



lqj_tenda	lltee	*		
HF2211_6970	301			
UPGRADE-AP	301			
WX-114	301			
LJLO	301			
LWT	311			
EW10_C69A	301	≡		
通过此网络发送的信息可可见。	「能对其他人			
□ 自动连接	连接(C)			
Lexus	100			
TP-WR842-AP	1000	-		
打开网络和共享中心				

Step 4: Forbidden other network card and only remain the current Wi-Fi network card.



Step 5: Open IOTService and find the device. The device will allocate IP address to the STA connected. STA device IP address will be like 10.10.100.XXX.

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I.O.T Service			
Management (M) Setting (C) Help (H)			
Begin 💥 Stop 🔅 Config	Status 🐺 VirPath		Disconnected
SN DevType MAC Address HostName	IP Position	VirPath State	SW Ver
1 EW10 F0FE6B89C69A EW10	10.10.100.254 Local	Online	1.30.3

## 3.2. TCP Server Test in AP Mode

Step 1: Open TCP&UDP test tool and generate TCP connection as following steps. Device has already created a TCP Server (port 8899) for use. TCP&UDP test tool can be downloaded from our website:

- DestIP: IP address of device which can be found by IOTService.
- Port: Port of TCP Server which can be found by IOTService or set by users own.

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JE TCP&UDP-Debug	
CreateConnn CreateServer   🐰 StartServer 🛞 🐼   😤 Connect 😪   🛬 DisconnAll	💥 DeleteConn 🞇   🔯   💈 🥊
i Operate(O) ViewW Windows(W Help(H) Language	
Properties Client Mode Server Mode Type: TCP DestIP: 10 10 100 254 Port: 8899 LocalPort  Auto Specis 4001 AutoConn: Eve n: Create Cancel	
发送速度(B/S): 0 接收速度(B/	S): 0

ystem		SOCKET		WiFi	
Jser:	admin	SOCKET Name:	neto 💌	Mode:	AP
Password:	admin			AP SSID:	EW10_C69A 🗌 Hide
HostName:	EW10	Protocol:	TCP-SERVER V	AP Key:	
OHCP:	Enable 💌	Server Addr:		AP Channel:	AUTO
P Address:	192.168.8.197	Server Port:	0	STA SSID:	
Mask:		Local Port:	8899	STA Key:	
Gate Way:		Keep Alive:	60		Scan
DNS:	10.10.100.254	Time Out:	0		
Network Mode:	Router 💌	Rout:	uart 💌	it can b	be set by the user
				it contra	
ongitude:	0.0	Buffer Size:	512		
.ongitude:	0.0	Buffer Size: DI/DO Ctrl:	512 Disable		
.ongitude:	0.0	Buffer Size: DI/DO Ctrl: New SOCKET	512 Disable		
.ongitude:	0.0 0.0	Buffer Size: DI/DO Ctrl: New SOCKET	512       Disable       SOCKET Del		
ongitude:	0.0 0.0 UART 1 V	Buffer Size: DI/DO Ctrl: New SOCKET	512       Disable       SOCKET Del		
ongitude:	0.0 0.0 0.0	Buffer Size: DI/DO Ctrl: New SOCKET LANN IP Address:	512 Disable  SOCKET Del		
ongitude:	0.0 0.0 0.0 115200 V 8 1	Buffer Size: DI/DO Ctrl: New SOCKET LANN IP Address: Mask:	512 Disable  SOCKET Del		
ongitude: atitude: JART UART No: Baudrate: Data Bits: Stop Bits: Parity:	0.0 0.0 0.0 UART 1 ▼ 115200 ▼ 8 ▼ 1 ▼	Buffer Size: DI/DO Ctrl: New SOCKET LANN IP Address: Mask: DHCP:	512 Disable SOCKET Del 10.10.100.254 255.255.255.0 Enable	Confirm	Cancel
ongitude:	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Buffer Size: DI/DO Ctrl: New SOCKET LANN IP Address: Mask: DHCP: Eth Wan:	512 Disable  SOCKET Del 10.10.100.254 255.255.255.0 Enable  Enable	Confirm	Cancel Detail

Step 2: Click Connection to generate TCP connection

After successful connection, the left turns to be green arrow, yellow if fails.

📲 : 🛅 CreateConnn 🔊 CreateServer   💥 StartSe	erver 🛎 😡   🛫 Connect 🛫   👻 DisconnAll   🐹 DeleteConn 💸   🙆   🦉 🍦
Operate(O) View(V) Windows(W) Help	H) Language ×
Properties 🛛 🕈 🗙 10.1	L0.100.254:8899
Client Mode 10.10.100.254:8899 Server Mode LocalF 4001 Type TCI AtuoCo Eve 0 Discor Count Send 0 Recv 0 Cle	Send StopShow Clear Save Option ShowHex ar Send StopShow Clear Save Option ShowHex Save (In Time) Save (In Time) Save (In Time) Save (In Time) Save (In Time)

Step 3: Open serial tool according to following parameters(115200 baud rate as default)

🕞 Serial-COM5 - Secu	CDT				
	Session Options - Serial-C	OM5			
File Edit View Opti	Category				
- പെപ്പോം പം	🚍 Connection	Serial Op	tions		
Serial-COM5	Logon Scripts Serial	P <u>o</u> rt:	COM5	$\sim$	Flow Control
_	E. Terminal	<u>B</u> aud rate:	115200	$\sim$	DTR/DSR
	Modes Emacs	Data bits:	8	$\sim$	<u>X</u> ON/XOFF
	-Mapped Keys	P <u>a</u> rity:	None	$\sim$	
	Advanced	<u>S</u> top bits:	1	$\sim$	
	Log File	<u>S</u> erial brea	ak 100	÷ "	nilliseconds
	Advanced Xmodem/Zmodem				
		IMPORTANT:	Any changes	you ma	ke will not take effec

Step 4: Data transmission between TCP and UART is as following.

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🎾 TCP&UDP测试工具 - [10.10.100.2	54:8899]		
🗄 🔄 CreateConnn 🔕 CreateServer	🔡 StartServer 🐰 😧	😪 Connect 🧝   🍣 DisconnAll   💥 DeleteConn 🎇	0 8 -
Operate(O) View(V) Windows	s( <u>W)</u> Help( <u>H</u> ) Langua	ge	_
Properties 4 ×	10.10.100.254:88		🕞 Serial-COM5 - S
10.10.100.254:8899	DestIP: 10.10.100.254	Send AtuoSend Eve 100 ms Send	文件(E) 编辑(E)
Server Mode	DestPort: 8899	Send Hex   Send File  Send Keceived Clear	1230C3X
	LocalPort	fsdfsfsf	Serial-COM6 (1)
	Type TCP		
	AtuoConn		
	Eve 0 s		
	AutoSend Eve 0 ms		
	Disconnect	Rec. StarShow Clear Save Ontion Show	
	Count	Save (In Time)	
	Jenu 16	12232134	
	Recv 21		
	Clear		
			12232134
	Send Spe	ed(B/S): 0 Receive Speed(B/S): 0	

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## 3.3. STA Wireless Networking



Step 1: Elfin-EW1X is AP mode by default. If need to work in STA mode connecting to router. There are following ways:

Method A: Smart Phone connect to Router. Set product nReload pin to low for some time(0.2s < time < 1.5s) to make it in Smartlink config mode. See appendix Smartlink V8 APP for detail. The following is the final device find step for IOS and Android. After the Smartlink config successed, the product works in STA mode and connect to router.





Method Two: PC connect to product AP, and use IOTService tools. The steps are as folloging

System		SOCKET		WiFi	
Jser:	admin	SOCKET Name:	netp 💌	Mode:	STA
assword:	admin	Drotocoli		AP SSID:	EW10_C69A Hide
lostName:	EW10	Protocol:	TCP-SERVER V	AP Key:	
HCP:	Enable 💌	Server Addr:		AP Channel:	AUTO
P Address:	0.0.0.0	Server Port:		STA SSID:	Up
Aask:		Local Port:	8899	STA Key:	12345678
ate Way:		Keep Alive:	60		Scan
NS:	10.10.100.254	Time Out:	0		
letwork Mode:	Router 💌	Rout:	uart 💌		
ongitude:	0.0	Buffer Size:	512		
atitude:	0.0	DI/DO Ctrl:	Disable <b>v</b>		
IART		New SOCKET	SOCKET Del		
UART No:	UART 1 💌				
Baudrate:	115200 💌	LANN			
Data Bits:	8	IP Address:	10.10.100.254		
iton Bits:	1	Mask:	255.255.255.0		
Darity	NONE	DHCP:	Enable 💌	Confirm	Cancel
		Tab Ware	Enable	Export	Detail
Now Control:	Half-Duplex	Eth Wan:	Enable •	Export	WirDath
Buffer Size:	512		LAN Separate	F-Set Upd	F-Set Clear

• Set to STA mode.



• Scan and choose one AP need to connect and input the key.

/stem		SOCKET		WiFi		
ser:	admin	SOCKET Name:	netp 💌	Mode:	STA	
assword:	admin	Durata and		AP SSID:		A 🗌 Hide
ostName:	EW10	Protocol:	TCP-SERVER V	AP Key:		
HCP:	Enable 💌	Server Addr:		AP Channel:	AUTO	
Address:		Server Port:		STA SSID:		Up
ask:		Local Port:	8899	STA Key:		12345678
ate Way:		Keep Alive:	60		Scan	
NS:	10.10.100.254	Time Out:	0			
etwork Mode:	Router 💌	Rout:	uart 💌			
ongitude:	0.0	Buffer Size:	512			
atitude:	0.0	DI/DO Ctrl:	Disable <b>v</b>			
ART		New SOCKET	SOCKET Del			
JART No:	UART 1					
audrate:	115200 💌	LANN				
ata Bits:	8 💌	IP Address:	10.10.100.254			
top Bits:	1	Mask:	255.255.255.0			
arity:	NONE	DHCP:	Enable 💌	Confirm	Cancel	Detail
low Control:	Half-Duplex 💌	Eth Wan:	Enable 💌	Export	Import	
uffer Size:	512		I AN Separate	E-Set Upd	E-Set Clear	VirPath

System							WiFi		
User:			admin	COCKET	News		Mode:	STA	
D			a dusta	SUCKET	Name: netp		AP SSID:		Hide
Password:			admin	Protoco	: TCP-SERVE	R 🔻	AD Keys		
HostName:			EW10				AP Key:		
DHCP:	🕈 Scan						×	AUTO	•
									Upo
P Addre	Select	Channel	S	SID	MAC Address	RSSI	Has Key		
Mack		7	U	pd	7C:B5:40:4F:B2:CD	100	No		123456789
VIDSK	0	7	LBL	INK	3C:33:00:A8:35:2C	100	No		
Gate Wa	0	11	UPGR	ADE-AP	F4:28:53:3E:59:F4	96	No	Scan	
	0	5	UPGRAD	E-AP_aaaa	C8:3A:35:54:B3:70	94	No		
DNS:	0	6	HF221	1_6970	0:FE:6B:53:69:70	90	No		
		6	Son	eter1	10;BF:48:E6:F3:98	90	No		
Network		11	ChinaNe	t-xuanyin	78:44:FD:AB:73:76	84	No		
		4	HF-L	PT120	AC:CI:23:E1:EC:43	84	No		
Longitud		1	W	zd	34:96:12:19:4C:6F	78	No		
Latitude:		10	hc	pe	14:75:90 B5:BE:3A	78	No		
JART UART N Baudrat Data Bit				F	Rescan Cor	firm	Close		
Stop Bits.		NONE		DHCP:	Enab	le 🔻	Confirm	Cancel	
, any,									Detail
Flow Contr	ol:	Half-Du	olex 💌	Eth Wan	: Enab	le 🔻	Export	Import	
Buffer Size			512		LAN Sepa	arate	F-Set Upd	F-Set Clear	VirPath

Device Setting		×
System	SOCKET	WiFi
User: admin	SOCKET Name: netp 💌	Mode: STA 💌
Password: admin	Protocol: TCP-SERVER	AP SSID: EW10_C69A Hide
HostName: EW10	Sama Adda	AP Key:
DHCP: Enable 💌	Server Addr: 0.0.0.0	AP Channel:
IP Address: 0.0.0.0	Server Port: 0	STA SSID: Upd
Mask: 0.0.0.0	Local Port: 8899	STA Key: 123456789
Gate Way: 0.0.0.0	Keep Alive: 60	Scan
DNS: 10.10.100.254	Time Out: 0	
Network Mode:	Rout:	
Longitude: 0.0	Buffer Size: 512	
Latitude: 0.0	DI/DO Ctrl: Disable	
UART	New SOCKET SOCKET Del	
UART No: UART 1		
Baudrate: 115200 💌	LANN	
Data Bits:	IP Address: 10.10.100.254	
Stop Bits:	Mask: 255.255.255.0	
Parity: NONE V	DHCP: Enable 💌	Confirm Cancel Detail
Flow Control:	Eth Wan:	Export Import
Buffer Size: 512	LAN Separate	F-Set Upd F-Set Clear VirPath

• Do restart operation. And then PC connect to the router and check the product STA connection. The following show product Wi-Fi connection is OK.

🔝 Devi	ce Status					×
Syste	m	SOCKET		] [	Network	
		SOCKET Name:	netp 💌		HostName:	EW10
	FIFE	Protocol:	TCP-SERVER	DHCP:		Enable
EH	n-EW10	Status:	Server Created		IP Address:	192.168.89.195
	Wi-Fi Cherr ID: 201809-1813	Client IP:			Mask:	255.255.255.0
	6585	Recv Bytes: 0	Recv Frames: 0		Gate Way:	192.168.89.1
		Send Bytes: 0	Send Frames: 0		MAC Address:	ACCF22201230
		Fail Bytes: 0	Fail Frames: 0		WiFi	
Prod Softv RTC Up T	uct ID: EW10 vare Version: 1.30.11 Time: NTP Disabled ime: 0-Day 1:31:46	UART UART No: Config: 115200,8,1,NONE	UART 1 👻		State: RSSI:	Connected,10:BF:48:E6:F3:98 100
Total Max	Free Memory: 37312 Block Size: 37312	Recv Bytes: 3 Send Bytes: 0 Fail Bytes: 0	Recv Frames: 1 Send Frames: 0 Fail Frames: 0		Reload Restart	Edit

#### Note:

If change product network mode, it needs restart to be valid.

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Device Status				
System	SOCKET		Network	
	SOCKET Name:	netp 💌	HostName:	EW10
	Protocol:	TCP-SERVER	DHCP:	Enable
	Status:	Server Created	IP Address:	0.0.0.0
	Client IP:		Mask:	0.0.0.0
	Recv Bytes: 0	Recv Frames: 0	Gate Way:	0.0.0.0
	Send Bytes: 0	Send Frames: 0	MAC Address:	F0FE6B89C69A
	Fail Bytes: 0	Fail Frames: 0	WiFi	
Product ID: EW10				
Software Version: 1.30.3	LIART No.		State:	Disconnected
RTC Time: NTP Disabled	C C 115200.0.1 NONE	OARTY	RSSI:	-1
Up Time: 0-Day 0:13:28	Config: 115200,8,1,NONE			
Total Free Memory: 25520	Recv Bytes: 0	Recv Frames: 0		
Max Block Size: 25520	Send Bytes: 0	Send Frames: 0	Reload	E-dit
	Fail Bytes: 0	Fail Frames: 0	Restart	Edit

Method Three: PC connect to product AP, and open product webpage with default IP: 10.10.100.254. and change the following setting.

fin status	System Settings Change the device system settings			
SYSTEM SETTINGS	Authentication			Helper
SERIAL PORT SETTINGS	User Name	admin		WiFi Settings
பி COMMUNICATION SETTINGS	Password		۲	
CUSTOM SETTINGS	Basic Settings			
OTHERS	Host Name	EW10		
-	WiFi Settings			
	WiFi Mode	STA	•	
	Channel	AUTO	•	
	STA SSID	Soneter1		
	STA KEY		٢	
		Scan		
	WAN Settings			

## 3.4. TCP Server Test in STA Mode

Step 1: Open TCP&UDP test tool and generate TCP connection as following steps. Device has already created a TCP Server(port 8899) for use. TCP&UDP test tool can be downloaded from the website:

- DestIP: Destination IP address.
- Port: Destination Port.

CreateConnol Sta CreateServer 1 26 Sta	
	rtServer 🐮 🐼   😤 Connect 😹   🛬 DisconnAll   💥 DeleteConn 🎇   🔯   🥃 💂
Operate(O) View(V) Windows(W) H	elp( <u>H</u> ) Language
Properties <b>P</b> ×	
Client Mode	
⊟… E Server Mode	
Local(192.168.8.147):1234	
	ate Connection
T	ype: TCP ▼
	102 168 8 107 P
L	ocalPort @ Auto C Specia 4001
	AutoConn: Eve 0 s
	Send When Conn: Eve ms
	,
	Create Cancel
(	
< III >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Send Speed(B/S): 0 Receive Speed(B/S): 0
	Send Speed(B/S): 0 Receive Speed(B/S): 0
Device Setting	Send Speed(B/S): 0 Receive Speed(B/S): 0
Device Setting	Send Speed(B/S): 0 Receive Speed(B/S): 0
Device Setting  System User: admin	SockET
Device Setting      System User:     admin Password:     admin	Send Speed(B/S): 0     Receive Speed(B/S): 0       SOCKET     WiFi       SOCKET Name:     netp       AP SSID:     EW10_C69A
	Send Speed(B/S): 0       Receive Speed(B/S): 0         SOCKET       WiFi         SOCKET Name:       netp         Protocol:       TCP-SERVER         AP SSID:       EW10_C69A         AP Key:       Hide
Device Setting      System      User:     admin      Password:     admin      HostName:     EW10      DHCP:     Enable	Send Speed(B/S): 0       Receive Speed(B/S): 0         SOCKET       Image: Socket in the section of the section
	Send Speed(B/S): 0 Receive Speed(B/S): 0     SOCKET   SOCKET Name:   Protocol:   TCP-SERVER   Server Addr:   Server Port:     WiFi   Mode:   SErver Port:     WiFi   Mode:   SErver Port:     ViFi   Mode:   SErver Port:     ViFi   Mode:   SErver Server Port:     ViFi   Mode:   SErver Port:     ViFi   Mode:   SErver Server Port:     ViFi   Mode:   SERVER     ViFi   Mode:   SERVER     ViFi     Mode:   SERVER     ViFi     Mode:   SERVER     ViFi     Mode:   SERVER     ViFi   Mode:   SERVER     ViFi     Mode:   SERVER     ViFi     Mode:   SERVER     ViFi     Mode:   SERVER     ViFi     Method   ViFi   Method   ViFi    Method   ViFi   Method   ViFi   Method   Method   V
Device Setting      System      User:     admin      Password:     admin      HostName:     EW10      DHCP:     Enable      IP Address:     192.168.8.197      tic.ic	Send Speed(B/S): 0       Receive Speed(B/S): 0         SOCKET
<ul> <li>✓ III →</li> <li>Device Setting</li> <li>System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.255.0</li> </ul>	Send Speed(B/S): 0 Receive Speed(B/S): 0     SOCKET   SOCKET   Protocol:   TCP-SERVER   Server Addr:   Server Port:   Local Port:   8899   Kast Alice     Server Adir:     Server Port:     Server Adir:     Server Adir:     Server Port:     Se
<ul> <li>✓ III →</li> <li>✓ Device Setting</li> <li>✓ System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.1</li> </ul>	Send Speed(B/S): 0   Receive Speed(B/S): 0     X     SOCKET   SOCKET   Protocol:   TCP-SERVER   Server Addr:   00.000   Server Port:   0   Local Port:   8899   Keep Alive:     AP   Receive Speed(B/S): 0     X     X     X     X     X     Y
<ul> <li>✓ III →</li> <li>✓ Device Setting</li> <li>✓ System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.1</li> <li>DNS: 10.10.100.254</li> </ul>	Send Speed(B/S): 0   Receive Speed(B/S): 0     X     SOCKET   SOCKET   Protocol:   TCP-SERVER   Server Addr:   0.0.00   Server Port:   0   Local Port:   8899   Keep Alive:   60   Time Out:     0     Receive Speed(B/S): 0     X     X     X     Y
<ul> <li>✓ III →</li> <li>✓ Device Setting</li> <li>✓ System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.1</li> <li>DNS: 10.10.100.254</li> <li>Network Mode: Router ▼</li> </ul>	Send Speed(B/S): 0   Receive Speed(B/S): 0     SOCKET   SOCKET Name:   netp   Protocol:   TCP-SERVER   Server Addr:   Server Port:   Local Port:   8899   Keep Alive:   60   Time Out:   0   Rout:     Local Port:     8899   Keep Alive:     60   Time Out:   0   Rout:     Local Port:     Rout:     Local Port:     Based Painter     Contemportie     Local Port:     Rout:     Local Port:     Rout:     Local Port:     Local Port:     Local Port:     Rout:     Local Port:
Device Setting   System   User:   admin   Password:   admin   HostName:   EW10   DHCP:   Enable   IP Address:   192.168.8.197   Mask:   255.255.0   Gate Way:   192.168.8.1   DNS:   10.10.100.254   Network Mode:   Router   Longitude:	Send Speed(B/S): 0 Receive Speed(B/S): 0     SOCKET   SOCKET Name:   netp   Protocol:   TCP-SERVER   Server Addr:   Server Port:   Local Port:   8899   Keep Alive:   60   Time Out:   0   Rout:   uart   60   Time Out:   0   Rout:   uart   512
Device Setting   System   User:   admin   Password:   admin   HostName:   EW10   DHCP:   Enable   IP Address:   192.168.8.197   Mask:   255.255.255.0   Gate Way:   192.168.8.1   DNS:   10.10.100.254   Network Mode:   Router   Longitude:   0.0   Latitude:	Send Speed(B/S): 0     Receive Speed(B/S): 0     SOCKET   SOCKET   SOCKET   Name:   netp     WiFi   Mode:   STA   Mode:   STA   Protocol:   TCP-SERVER   Server Addr:   0.000   Server Port:   0   Local Port:   8899   Keep Alive:   60   Time Out:   0   Rout:   uart   Sta Key:   123456789   it can be by the user
<ul> <li>✓ III →</li> <li>✓ Device Setting</li> <li>✓ System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.1</li> <li>DNS: 10.10.100.254</li> <li>Network Mode: Router ▼</li> <li>Longitude: 0.0</li> <li>Latitude: 0.0</li> </ul>	Send Speed(B/S): 0     Receive Speed(B/S): 0      Receive Speed(B/S): 0
<ul> <li>✓ III →</li> <li>✓ Device Setting</li> <li>✓ System</li> <li>User: admin</li> <li>Password: admin</li> <li>HostName: EW10</li> <li>DHCP: Enable ▼</li> <li>IP Address: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.197</li> <li>Mask: 255.255.0</li> <li>Gate Way: 192.168.8.197</li> <li>NS: 10.10.10.0254</li> <li>Network Mode: Router ▼</li> <li>Longitude: 0.0</li> <li>Latitude: 0.0</li> </ul>	Send Speed(B/S): 0   Receive Speed(B/S): 0     SOCKET   SOCKET   SOCKET   Protocol:   TCP-SERVER   Server Addr:   0.0.00   Server Port:   0   Local Port:   8899   Keep Alive:   60   Time Out:   0   Rout:   uart   e   Sta Key:   123456789   Scan   it can be by the user     New SOCKET
Device Setting   System   User:   admin   Password:   admin   HostName:   EW10   DHCP:   Enable   IP Address:   192.168.8.197   Mask:   255.255.0   Gate Way:   192.168.8.1   DNS:   10.10.100.254   Network Mode:   Router   Longitude:   0.0   Latitude:   0.0	Send Speed(B/S): 0   Receive Speed(B/S): 0     SOCKET   SOCKET   SOCKET   Protocol:   TCP-SERVER   Server Addr:   0.000   Server Port:   0.000   Sta SSID:   Upd   Sta Key:   123456789   Scan   it can be by the user   it can be by the user
Device Setting   System   User:   admin   Password:   admin   HostName:   EW10   DHCP:   Enable   IP Address:   192.168.8.197   Mask:   255.255.255.0   Gate Way:   192.168.8.1   DNS:   10.10.100.254   Network Mode:   Router   Longitude:   0.0   Latitude:   0.0   Latitude:   0.0   WART   Baudrate:   115200	Send Speed(B/S): 0       Receive Speed(B/S): 0         SOCKET       Image: Socket in the second

255.255.255.0

Enable 🔻

Enable 💌

Confirm

Export

F-Set Upd...

Buffer Size: 512 LAN Separate

-

-

Mask:

DHCP:

Eth Wan:

Step 2: Click Connect to create TCP connection

1

NONE

Half-Duplex 💌

Stop Bits:

Flow Control:

Parity:

Detail

VirPath

Cancel

Import

F-Set Clear

✤ HF 物联·改变生活



After successful connection, the left turns to be green arrow.

KCP&UDP测试工具 - [192.168.8.1	97:8899]
🗄 🚰 CreateConnn 🔇 CreateServer	🐰 StartServer 🐰 😧   😤 Connect 🗝   🌺 DisconnAll   💥 DeleteConn 🎇   🔯   🥃 💂
Operate(O) View(V) Windows	K(W) Help(H) Language ×
Properties <b>4</b> ×	
Client Mode 192.168.8.197:8899 Server Mode Local(192.168.8.147):1234	DestIF: [192.166.8.197 DestPort: [5899] LocalPort 4001 Type TCF AtuoConn Eve 0 s Disconnect Count Send 9 Recv 10 Clear Clear Clear Count Clear Cl
· · · · · · · · · · · · · · · · · · ·	Send Speed(B/S): 0         Receive Speed(B/S): 0

Step 3: Open serial tool according to following parameters (115200 baud rate as default)

🕞 Serial-COM5 - Secu						
File Edit View Opti	Session Options - Serial-C	OM5				
	<u>C</u> ategory					
-291-291 L0-1% 1 <b>49</b> 1   1	- Connection	Serial Op	otions			
Serial-COM5	Logon Scripts	P <u>o</u> rt:	COM5	~	-Flow Control	
_	English	<u>B</u> aud rate:	115200	$\sim$		
	Modes Emacs	Data bits:	8	$\sim$	<u>k</u> ts/cts <u>x</u> on/xoff	
	Mapped Keys	P <u>a</u> rity:	None			
	Advanced	<u>S</u> top bits:	1	$\sim$		
	Window Log File					
	- Printing	<u>S</u> erial brea	ak 100	÷ "	nilliseconds	
	Advanced Xmodem/Zmodem					
		IMPORTANT:	Any changes	you mal	ke will not take eff	ĉec

Step 4: Mutual data transmission between TCP and serial port.



🎾 TCP&UDP测试工具 - [192.168.8.1	197:8899]	28 84 8	
🗄 🚰 CreateConnn 🔇 CreateServer	🛛 🗏 StartServer 🔏 🤇	🕽   😤 Connect 🗝   🝣 DisconnAll   💥 DeleteConn 饕	Serial-COM5
Operate(O) View(V) Windows	s( <u>W)</u> Help( <u>H</u> ) Langu	age	文件(F) 编辑(E) 查看(V) 选项(O) 传输(I) 脚本(S)
Properties <b>P</b> ×	192.168.8.197:8	8899	
Client Mode	DestIP:           192.168.8.197           DestPort:         8899           LocalPort           4001           Type         TCP           AttoSend           Eve         0           Send         9           Recv         10           Clear         10	Send AtuoSend Eve 100 ns Send Send Hex Send File Ser Acceived Clear 123453241 Rec StopShow Clear Save Option Showh Save (In Time) FDFDSDFDF	1.3.1         1.3.1 <td< td=""></td<>
			FDFDSDFDF

### 3.5. Restore to Factory Setting

If device works in STA mode and not yet connect to router AP, do the following operation to recover and reconfig.

1. UART Cli command to reload

✓ Serial-COM4 ×					
EPORT> COM4 Show Restart ScriptCrc EPORT>rekiad	SYS Reload Exit	UART FwUpgrade	SOCK Debug	DATA CfgVer	
EPORT>Reload					

2. nReload button to restore or reconfig with SmartLink V8 APP.

#### nReload Pin (Button) function:

- 1. After module is powered up, short press this button (0.2< "Low" <1.5s) and loose to make the module go into "<u>Smartl ink" config</u> mode, waiting for APP to set password and other information. (See Appendix to download SmartLink APP).
- 2. After module is powered up, long press this button ("Low" > 4s) and loose to make the module recover to factory setting...

## **APPENDIX A:REFERENCES**

## A.1. Test Tools

IOTService Configure Software: http://www.hi-flying.com/index.php?route=download/category&path=1\_4

### A.2. Smartlink V8

http://www.hi-flying.com/download-center-1/applications-1/download-item-smartlink-v8

### A.3. More Application

http://www.hi-flying.com/download-center-1/application-notes-1/download-item-industry-productsapplication-manual-20180415