

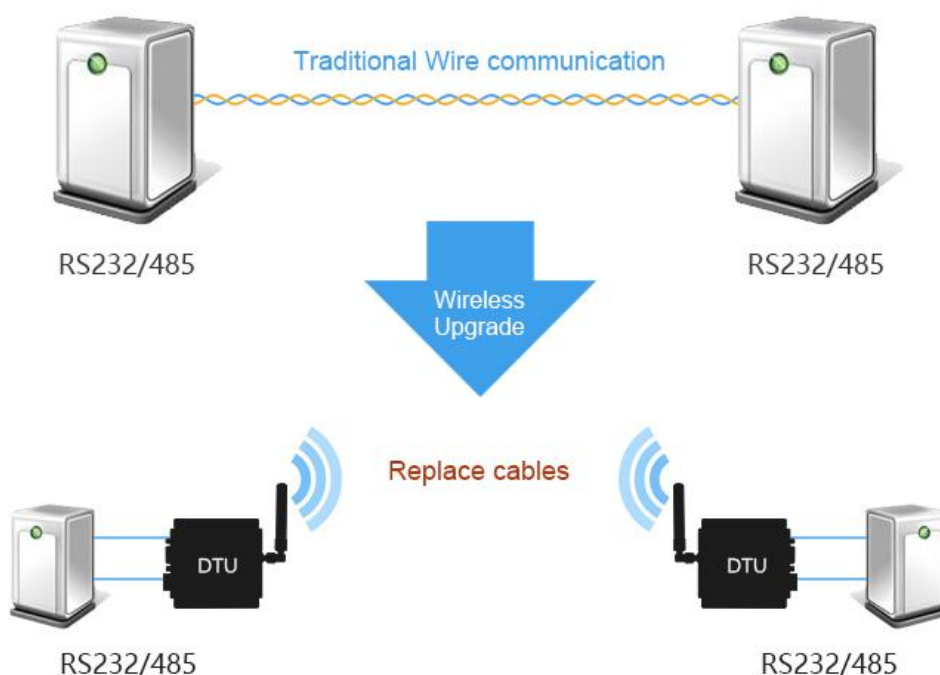


成都亿佰特电子科技有限公司
Chengdu Ebyte Electronic Technology Co.,Ltd.

E61-DTU-2W Datasheet v1.0

Contents

1. Introduction.....	2
1.1 Feature.....	2
1.2 Basic usage.....	3
1.3 Electrical parameter.....	4
2. Functional description.....	5
2.1 Pin definition.....	5
2.2 Connection type.....	6
3. Operating mode.....	7
4. Instruction format.....	7
4.1 Default parameter.....	8
4.2 Parameter setting instruction.....	8
4.3 Reading operating parameters.....	10
4.4 Reading version number.....	10
4.5 Reset instruction.....	11
5. Parameter setting.....	11
6. Customization.....	12
7. About us.....	12



1. Introduction

1.1 Feature



E61-DTU-2W is a high-speed data transfer unit (DTU) with RS232/RS485 interface, 8V~28V, operating at 425~450.5MHz (Default: 433MHz). Transparent transmission is available.

The package length is unlimited when module works in Continuous mode, which perfectly realizes continuous transmission for baud rate of 57600/38400/19200/9600, etc. In fixed-length transmission, air data rate, FEC, password etc. are configurable. Transmit data with configured air data rate in the most efficient way, which realizes low-latency and high-response. The high-speed feature of module is suitable for polling sampling, handshake response communication, and supporting Modbus protocol.

The data of the module transmitted on the air features randomness. And with the rigorous encryption & decryption, data interception becomes pointless. 65536 configurable addresses for user to define, which only allows the module with matched password to receive the data successfully.

No.	Feature	Description
1	Continuous transmission	In this mode the data transmitting length is unlimited: Perfectly realize continuous transmission for baud rate of 57600/38400/19200/9600/4800/2400/1200.
2	Fixed-length transmission	Air data rate, FEC and Encryption are configurable by users; Transmitting data to the receiver in present air data rate with a most effective way to realize low delay and high respond.
3	Encryption	Module has 65536 ciphers reserved for user to define, only when the cipher is matched can the module receive data.
4	Modbus	433M high rate and low latency, suitable for polling sampling, handshaking response communication, and supporting Modbus protocol.
5	Broadcast	Set the address as 0xFFFF: All data transmission of modules in the same channel can be monitored. Data transmitted can be received by modules in the same channel to broadcast and monitor.
6	FEC	FEC (Forward Error Correction) algorithm. It has high coding with efficiency & good correction performance. In a sudden interference, it can correct the interfered data packets proactively, so that the reliability & transmission range are improved proactively. Without FEC, those data packets can only be dropped.
7	Watchdog	With a built-in watchdog and precise time configuration, once an exception occurs , the DTU will restart within 0.107 second and continue to work on previous parameter settings.

1.2 Basic usage

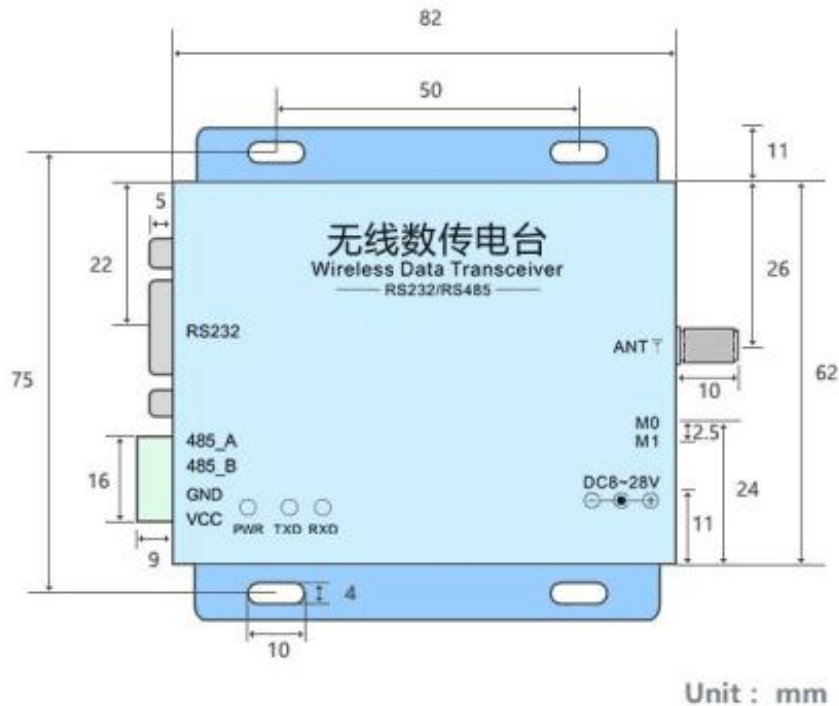
No.	Usage	Description
1	Continuous transmission	Modules work on mode 0, and set "Continuous transmission " ; air data rate will be matched automatically. Suitable for huge data transmission continuously(transparent transmission). I.e.: A send 1000 bytes FF 00...FF 00 to B(HEX), then B receives 1000 bytes FF 00...FF 00 accordingly.
2	Fixed-length transmission	Modules work on mode 0, and set "fixed-length transmission" ; Suitable for the transparent transmission of small data packet(within dozens of bytes). Users can set air data rate, FEC, password etc to realize low-latency and high-response. Note : 77 bytes at most per package in this mode. I.e.: A send 5 bytes 01 02 03 04 05 to B(HEX), then B receive 5 bytes 01 02 03 04 05 accordingly.

1.3 Electrical parameter

No.	Item	Parameter details	Description
1	Size	82 * 62 * 24mm	-
2	Weight	240g	Average weight
3	Frequency band	Default: 433MHz	425~450.5MHz channel:256, 433±5MHz(recommended)
4	Housing	Aluminum alloy	Black
5	Connector	RS485 : 1 * 4 * 3.81 mm RS232 : DB9	Screwing Standard DB9, hole
6	Supply voltage	8 ~ 28V DC	Note: the voltage higher than 28V is forbidden
7	Communication level	RS232/RS485	Available for RS232 and RS485
8	Operation range	Continuous transmission:4000m	Test condition: clear and open area&33dBm, antenna gain: 5dBi , height: 2m, baud rate: 9600
		Fixed-length transmission:8000m	Test condition: clear and open area&33dBm, antenna gain: 5dBi , height: 2m, air data rate: 1.2kbps
9	Transmitting power	Maximum 33dBm	2W, four optional level: 33, 30, 27, 24dBm
10	Receiving sensitivity	-126dbm@1.2kbps	Sensitivity has nothing to do with baud rate or timing
11	Air data rate	Continuous transmission: baud rate will be matched automatically.	
		Fixed-length transmission : 8 option level(1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 50, 70kbps)	
12	Standby current	14mA	Mode 3(the supply voltage is 12V)
13	Transmitting current	938mA@33dBm	≥2A (recommended) (the supply voltage is 12V)
14	Receiving current	45mA	Average(the supply voltage is 12V)
15	Communication interface	RS232/RS485	8N1, 8E1, 8O1 , Eight kinds of baud rate, from 1200 to 115200 bps (default: 9600)
16	Driving mode	RS232/RS485	Can be configured to push-pull/high pull, open-drain
17	Transmitting length	Continuous transmission: unlimited(≤57600)	
		Fixed-length transmission:256 bytes buffer, 77 bytes per package	
18	Receiving length	Continuous transmission: unlimited	
		Fixed-length transmission:256 bytes buffer	
19	Address	65536 configurable address, 0xFF FF is for broadcasting	
20	Password	65536 transmitting password(cipher text)	
21	Antenna type	SMA-K	External thread hole, 50 Ω characteristic impedance
22	Operating temperature	-40 ~ +85°C	-
23	Operation Humidity	10% ~ 90%	Relative humidity, no condensation
24	Storage temperature	-40 ~ +125°C	-

2. Functional description

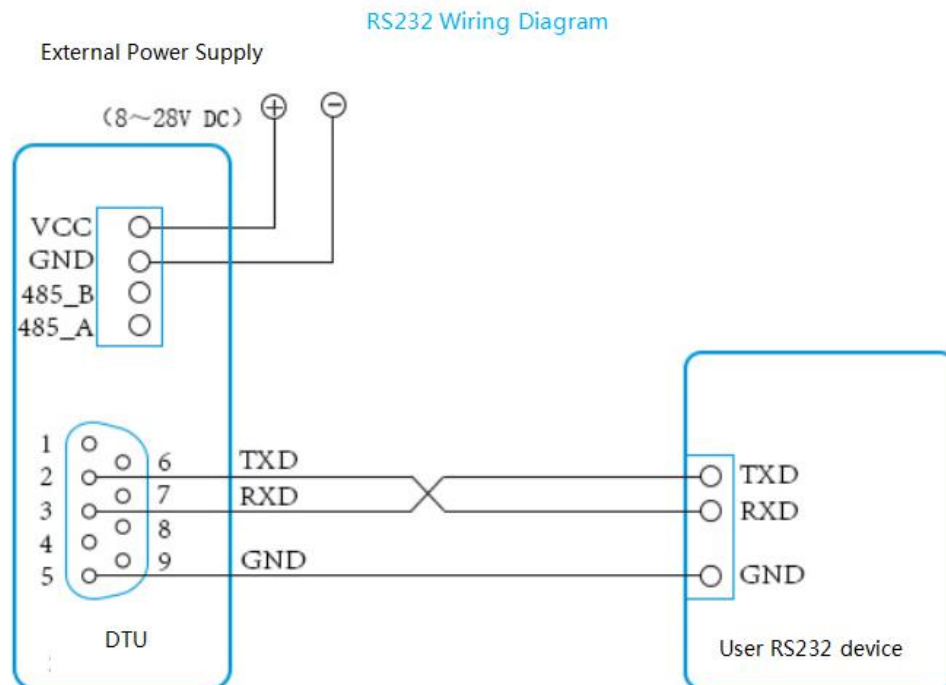
2.1 Pin definition



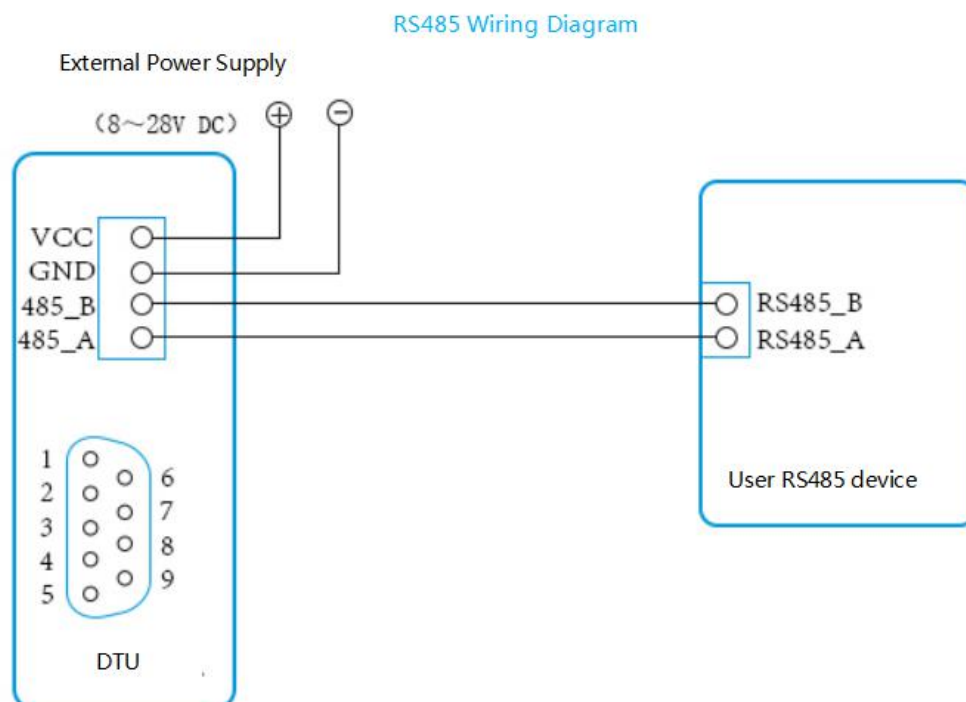
No.	Pin item	Application
1	RS232	Standard DB9, hole
2	485_A	Connect to end A of other RS485 devices
3	485_B	Connect to end B of other RS485 devices
4	GND	Ground
5	VCC	Power supply , default: 8~28V (5V version can be customized)
6	DC8~28V	DC power connector(5.5*2.5)for DC10~36V(5V version can be customized)
7	ANT	Antenna (SMA-K : External thread hole, 50Ω characteristic impedance)
8	PWR	Power indicator
9	TXD	Transmitting indicator
10	RXD	Receiving indicator
11	M0	Dip switch (control operating mode)
12	M1	Dip switch (control operating mode)

2.2 Connection type

● RS232 Connection



● RS485 Connection



3. Operating mode



	Mode	M1	M0	Description
M0	Normal Mode	On	On	Open UART and RF , transparent transmission is on
M1	Remained Mode	On	Off	UART and module are closed
M2	Command Mode	Off	On	Parameter setting
M3	Sleep Mode	Off	Off	UART and module are closed

4. Instruction format

In sleep mode (mode 3 : M1=Off, M0=On), it supports below instructions on list. Only support 9600 and 8N1 format when setting.

No.	Instruction format	Illustration
1	C0+working parameter	C0 + 5 bytes working parameters are sent in hexadecimal format. 6 bytes (in total) must be sent in succession. (Save the parameters when power- down)
2	C1+C1+C1	Three C1 are sent in hexadecimal format. The DTU returns the saved parameters and they must be sent in succession.
3	C2+working parameter	C2 + 5 bytes working parameters are sent in hexadecimal format. 6 bytes(in total) must be sent in succession. (Do not save the parameters when power- down).
4	C3+C3+C3	Three C3 are sent in hexadecimal format. The DTU returns the version information and they must be sent in succession.
5	C4+C4+C4	Three C4 are sent in hexadecimal format. The DTU will reset for one time and they must be sent in succession.

4.1 Default parameter

Default parameter values : C0 00 00 18 50 50							
Model	Frequency	Address	Channel	Air data rate	Baud rate	Parity	Transmitting power
E61-DTU-2W	433MHz	0x0000	0x50	Continuous transmission	9600	8N1	33dBm

4.2 Parameter setting instruction

The difference between C0 command and C2 command is that C0 command will write parameters into the internal flash memory and can be saved when power down, while C2 command cannot be saved when power down, because C2 command is temporarily mend instruction.C2 is recommended for the occasion that need to change the operating parameters frequently, such as C2 00 00 18 50 50.

Contents in below table are the introduction of input status of M1 & M0 and their corresponding mode:

No.	Item	Description	Remark
0	HEAD	Fix 0xC0 or 0xC2, it means this frame data is control command	<ul style="list-style-type: none"> Must be 0xC0 or 0xC2 C0: Save the parameters when power- down C2: Do not save the parameters when power-down
1	ADDH	High address byte of module (the default 00H)	00H-FFH <ul style="list-style-type: none"> Address is defined by ADDH and ADDL to form a 16 bit. Only the modules with same address can be communicate each other. When ADDH=FFH, ADDL=FFH, the module has the broadcasting function: <ol style="list-style-type: none"> As the transceiver, module can transmit data to all modules in different address. As the receiver, module can monitor data packets in different address.
2	ADDL	Low address byte of module (the default 00H)	<ul style="list-style-type: none"> 00H-FFH
3	SPED	Rate parameter , including UART baud rate and air data rate 7 , 6 UART parity bit 00 : 8N1 (default) 01 : 8O1 10 : 8E1 11 : 8N1 (equal to 00) ----- 5 , 4 , 3 TTL UART baud rate (bps) 000 : 1200bps	<ul style="list-style-type: none"> UART mode can be different between communication parties ----- <ul style="list-style-type: none"> In Continuous Mode, the baud rate must be same for both communication parties.

		001 : 2400bps 010 : 4800bps 011 : 9600bps (default) 100 : 19200bps 101 : 38400bps 110 : 57600bps 111 : 115200bps ----- 2 , 1 , 0 Air data rate (bps) 000 : 1.2Kbps 001 : 2.4Kbps 010 : 4.8Kbps 011 : 9.6Kbps 100 : 19.2Kbps 101 : 38.4Kbps 110 : 50Kbps 111 : 70Kbps	<p>The higher the baud rate the shorter the transmission distance.</p> <ul style="list-style-type: none"> ● In fixed-Length Mode, UART baud rate can be different between communication parties. The UART baud rate has nothing to do with wireless transmission parameters & won't affect the wireless transmit / receive features. ----- <ul style="list-style-type: none"> ● In Continuous Mode, the setting is unavailable. The air data rate will match automatically according to UART baud rate. ● In fixed-Length Mode, The air data rate must keep the same for both communication parties. the lower the air data rate, the longer the transmitting distance, better anti-interference performance and longer transmitting time.
4	CHAN	Communication frequency (425M + CHAN * 0.1M (default 50H : 433MHz)	<ul style="list-style-type: none"> ● 00H-FFH, for 425-450.5MHz.
5	OPTION	7 , FEC switch 1 : turn on FEC 0 : turn off FEC (default) ----- 6 IO drive mode(the default 1) 1 : TXD and AUX push-pull outputs, RXD pull-up inputs 0 : TXD, AUX open-collector outputs, RXD open-collector inputs ----- 5 , 4 , 3 Transmission mode: (for receiver it is monitoring gap time, for transceiver it is gap time for continuously transmitting preamble code) 000: fixed-Length	<ul style="list-style-type: none"> ● When FEC turns on, the data transmitting time will be extended while greatly improved the probability of successful sending and receiving data. User can enable this function if your application do not need low-latency transaction. ----- <ul style="list-style-type: none"> ● This bit is used to the module internal pull-up resistor. It also increases the level's adaptability in case of open drain. But in some cases, it may need external 4-10KΩ pull-up resistor. ----- <ul style="list-style-type: none"> ● See more details in related chapters.

		<div>001: Reserved, like 0</div> <div>010: Continuous Mode (default)</div> <div>011: Reserved, like 0</div> <div>100: Reserved, like 0</div> <div>101: Reserved, like 0</div> <div>110: Reserved, like 0</div> <div>111: Reserved, like 0</div> <div></div> <div>2 , Whether to enable cipher</div> <div>1 : Enable</div> <div>0 :Not enable(Default)</div> <div></div> <div>1, 0 transmission power</div> <div>(approximation)</div> <div>00 : 33dBm (Default)</div> <div>01 : 30dBm</div> <div>10 : 27dBm</div> <div>11 : 24dBm</div>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <
--	--	---	---

4.3 Reading operating parameters

Instruction format	Description
C1+C1+C1	In sleep mode , User gives the module instruction (HEX format): C1 C1 C1, Module returns the present configuration parameters. For example, C0 00 00 18 50 50.

4.4 Reading version number

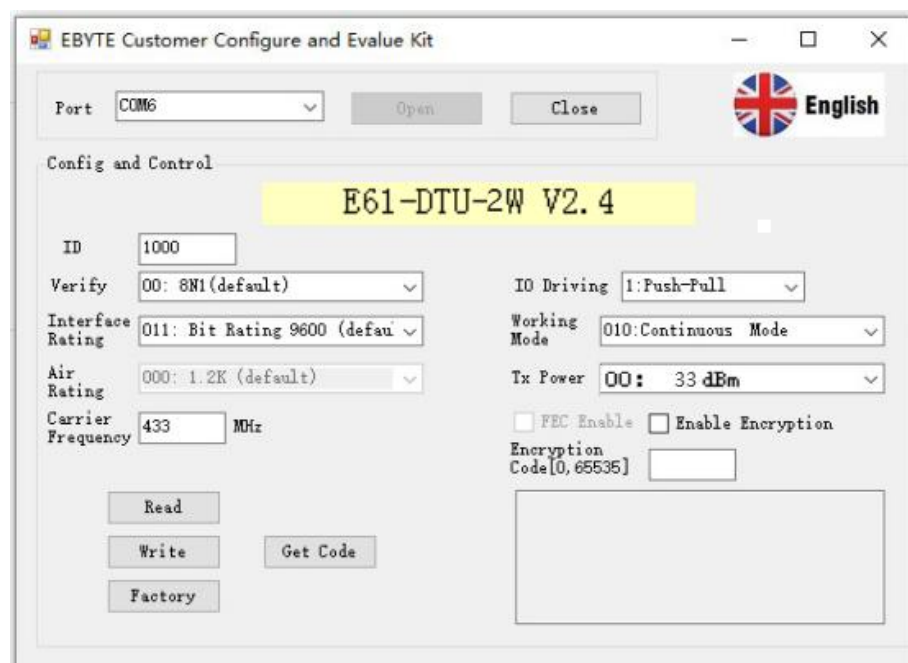
Instruction format	Description
C3+C3+C3	In sleep mode, User gives the module instruction (HEX format): C3 C3 C3, Module returns its present version number, for example C3 61 xx yy. 61 here means the module model (E61 series); xx is the version number and yy refers to the other module features.

4.5 Reset instruction

Instruction format	Description
C4+C4+C4	<p>In sleep mode, User gives the module instruction (HEX format): C4 C4 C4, the module resets for one time.</p> <p>During the reset process, the module will conduct self-check, AUX outputs low level. After reset completing, the AUX outputs high level, then the module starts to work regularly which the working mode can be switched or be given another instruction.</p>

5. Parameter setting

Configure the DTU to commend mode.
Switch the dip switch to M2 (as shown in the picture)



6. Customization

★Please contact us for customization.

★Ebyte has established profound cooperation with various well-known enterprises.



7. About us



Chengdu Ebyte Electronic Technology Co., Ltd. (Ebyte) is specialized in wireless solutions and products.

- ◆We research and develop various products with diversified firmware;
- ◆Our catalogue covers WiFi, Bluetooth, Zigbee, PKE, wireless data transceivers & etc.;
- ◆With about one hundred staffs, we have won tens of thousands customers and sold millions of products;
- ◆Our products are being applied in over 30 countries and regions globally;
- ◆We have obtained ISO9001 QMS and ISO14001 EMS certifications;
- ◆We have obtained various of patents and software copyrights, and have acquired FCC, CE, RoHs & etc.