WF-WM420

WiFi Wireless High Speed High Precision

@Z`ef d \k\i

Technical Manual

Product Introduction

WF-WM420 WiFi wireless high speed high precision inclinometer sensor is a miniaturized intelligent digital tilt sensor designed for structural health monitoring. Using rechargeable lithium battery, it can work continuously for 24 hours on a single charge (continuous measurement and data transmission), and can be quickly charged by an external special charger. Can meet the needs of high-precision and high-frequency monitoring With remote control and management functions, you can transfer data to the cloud by connecting to a wireless router.

In terms of network connection, the sensor has an automatic disconnection and reconnection function, which effectively avoids problems caused by connection loss caused by network abnormalities and server maintenance.

The sensitive mechanism adopts the latest technology, the tilting unit of the micro-electromechanical production process, small size, low power consumption, consistency and stability High, because it is a digital tilt sensor module, the linearity is easier to correct. Working temperature reaches industrial grade 25℃ ~ +85℃.

Characteristics

- Resolution 0.001°
- Biaxial inclination measurement range ±90°
- More user-friendly design, more in line with the actual deployment needs on site
- Accuracy 0.05°
- Standard industrial grade design, very suitable for outdoor

Function

- Dangerous housing monitoring
- Bridge tower inclination measurement
- Dam monitoring
- Slope disaster prevention
- Ancient building protection monitoring
- Tunnel monitoring
- Foundation pit inclinometer
- Tower tilt monitoring

Application

Mechanical Characteristic

|	
Connectors	Aviation plug
Protection level	IP65
Housing material	Magnesium aluminum alloy anode oxidation
Install	Three M4 screws

Performance Specifications

Measuring range(°)		±90
Measuring axis		X-Y
Accuracy(°)	At room temperature	0.05
Resolution(°)	Completely stationary	0.001
Zero temperature drift(°/℃)	-40 ~ +85℃	±0.001
Cross-axis error(°)	25℃	0.01
Output frequency (Hz)		Up to 50
Mean Time Between Failure	≥100000 hours	
Electromagnetic compatibility	accordance to GBT17626	
Insulation resistance	≥100 MΩ	
Impact-resistant	2000g，0.5ms，3Times/axis	
Size (mm)	L109*W65*H72.5	
Weight (g)	540 (±10)	

Resolution: The measured minimum change value that the sensor can detect and resolve within the measurement range.
Accuracy: The error between the actual angle and the Root mean square(RMS) of the measured angle of the sensor (≥16 times).

Electrical Specifications
电气指标

Supply voltage	Charging voltage	4.2VDC
	Charging current	1000mA
	Operating current	80mA （Typical value)
	Battery capacity	6000mAH
Transmit power	13~16 dBm	
Receiving sensitivity	-90~-67dBm	

Network Topology

WLAN (WIFI)

WLAN

INTERNET

Monitoring Center

Mobile APP

Wireless Router

BWSENSING
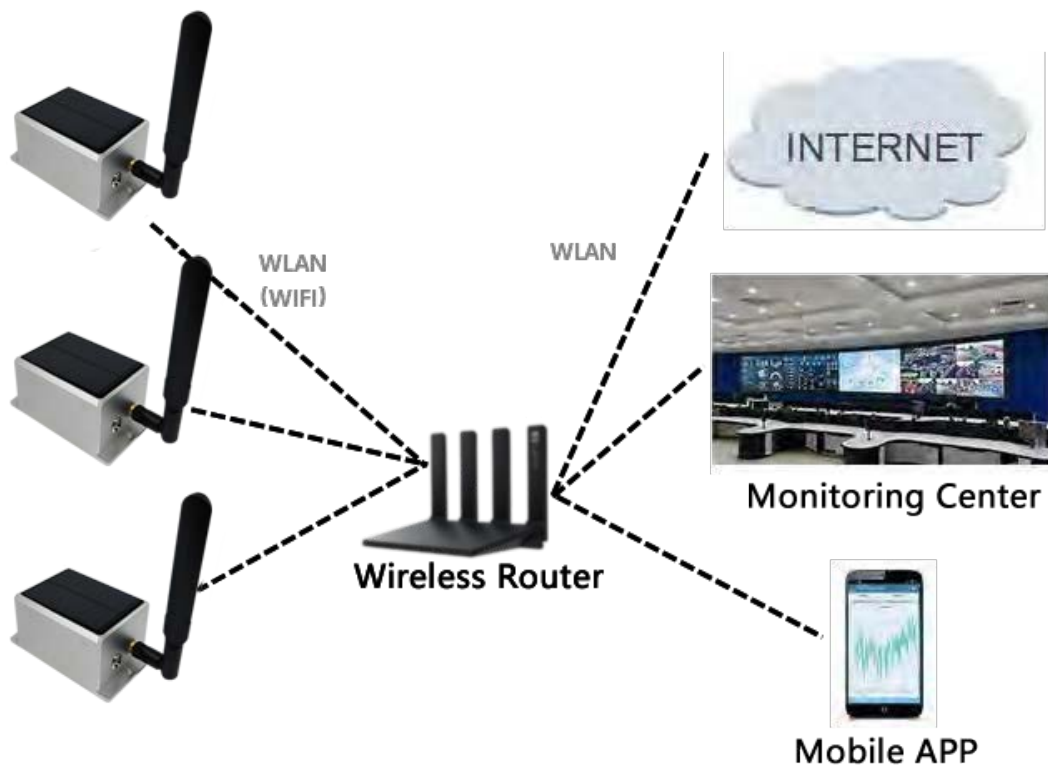
Package size

Product Size:: L109*W65*H72.5 (mm)

Note:±1mm error for length and width dimensions, please refer to actual size.

φ 4 Hole

65

36

97

109

72.5

105
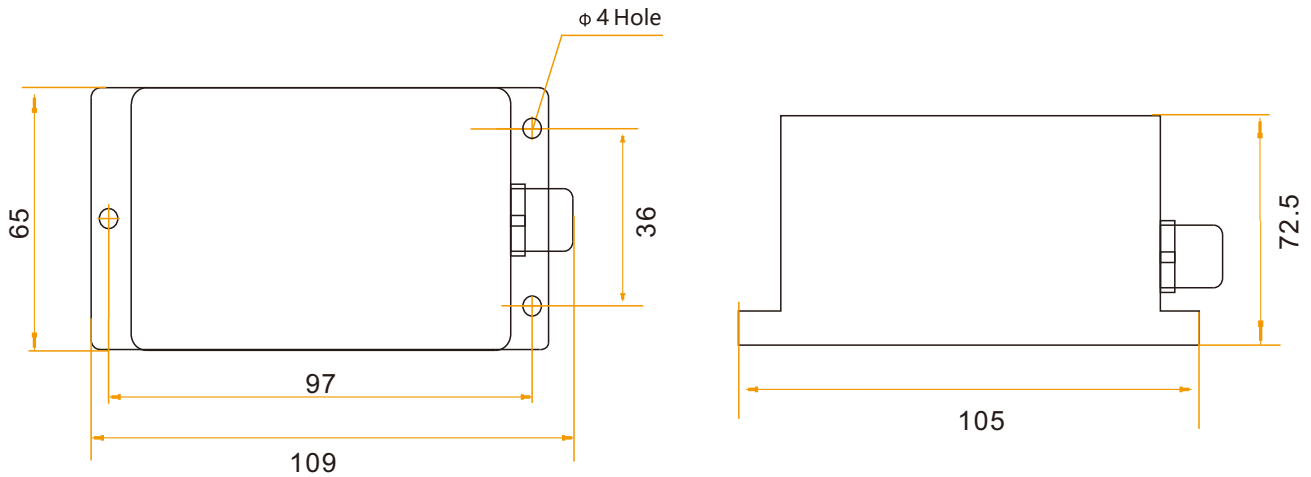
Electrical connections

Definition of Aviation Plug Wiring

Color & function	RED		BLACK		GREEN		YELLOW
	1		3		4		5
	4.2V		GND		RX		TX

POWER

4.2 V

① RED DC 4.2V — POWER+

⑤ YELLOW: TX

POWER-

④ GREEN: RX

③ BLACK: GND

Sensor

1 6
2 7
3 8
4 9
5
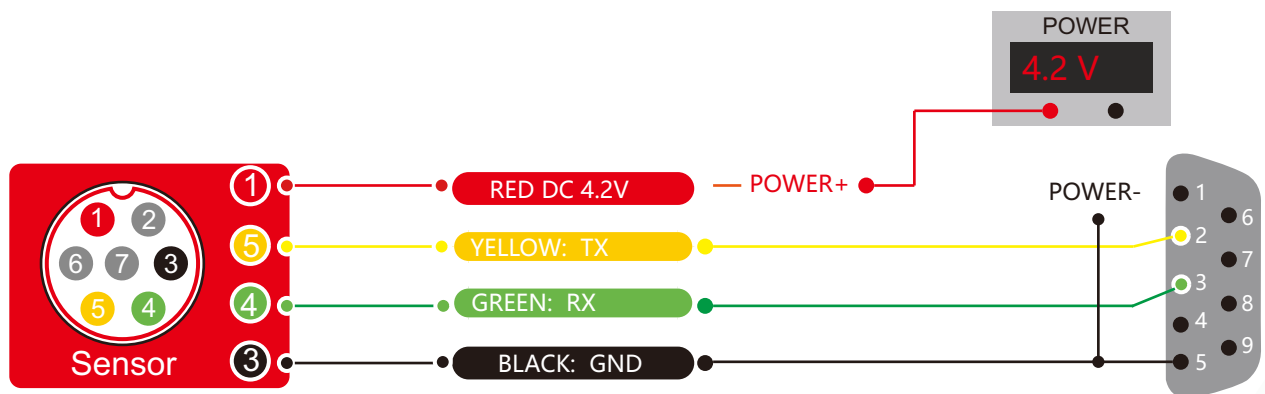
Product installation

The correct installation method can avoid measurement error. The following points should be made when installing the sensor:

First of all, to ensure that the sensor mounting surface and the measured surface completely close, the measured surface should be as horizontal as possible, can not have the angle shown in Figure A and Figure C, the correct installation is shown in Figure B and Figure D.
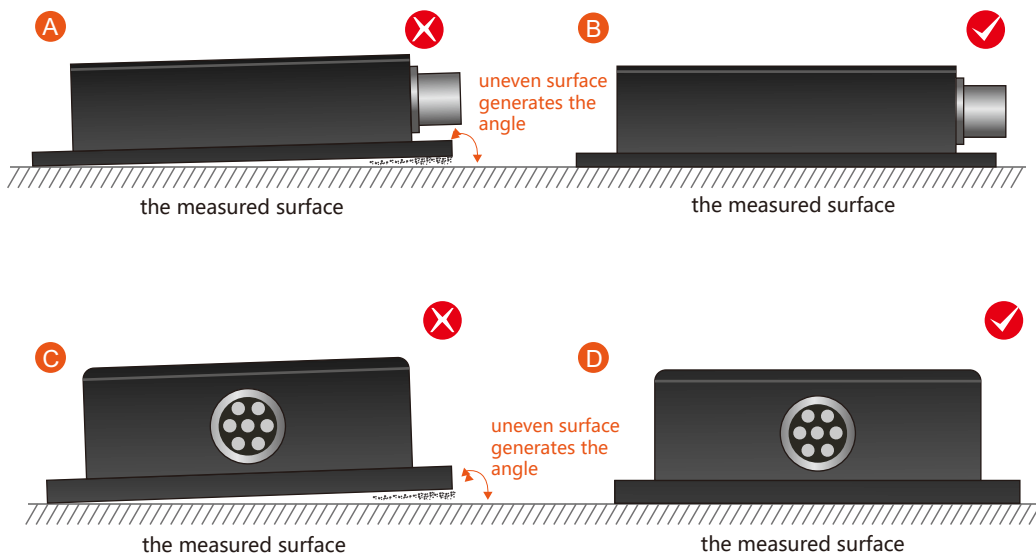
Secondly, the bottom cable of the sensor and the axis of the measured object shouldn't generate the angle shown in E. When installing, the bottom cable of the sensor should be kept parallel or orthogonal to the rotation axis of the measured object. This product can be installed horizontally or vertically (vertical installation requires customization). The correct installation method is shown in Figure F.
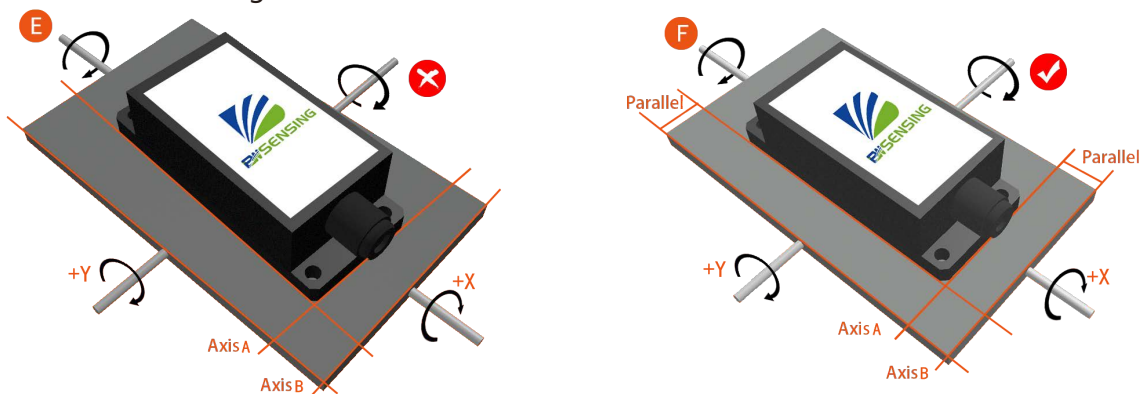
Finally, the installation surface of the sensor must be fixed with the measured surface tightly and smoothly, to avoid measurement error that may be caused by the acceleration and vibration.

Debug software

Users can directly download serial assistant on official website (Supports-Download). You can also use more convenient and intuitive PC software.
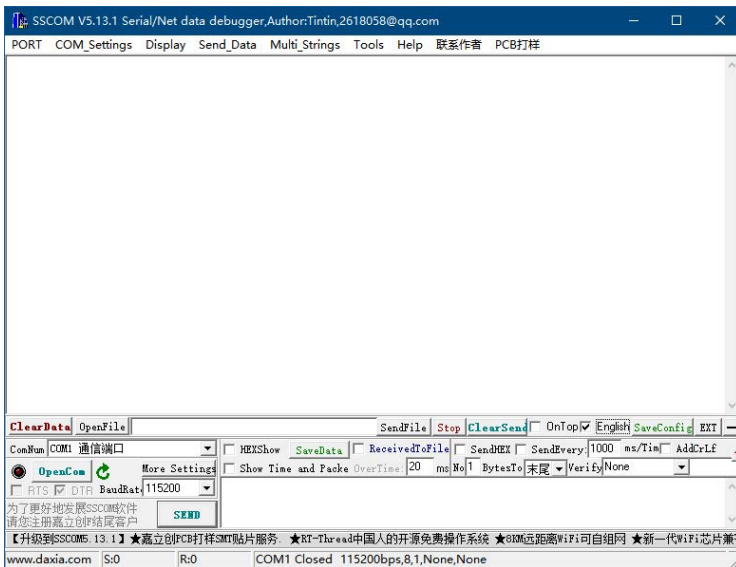
Debugging method

1 Serial data debugger SSCOM
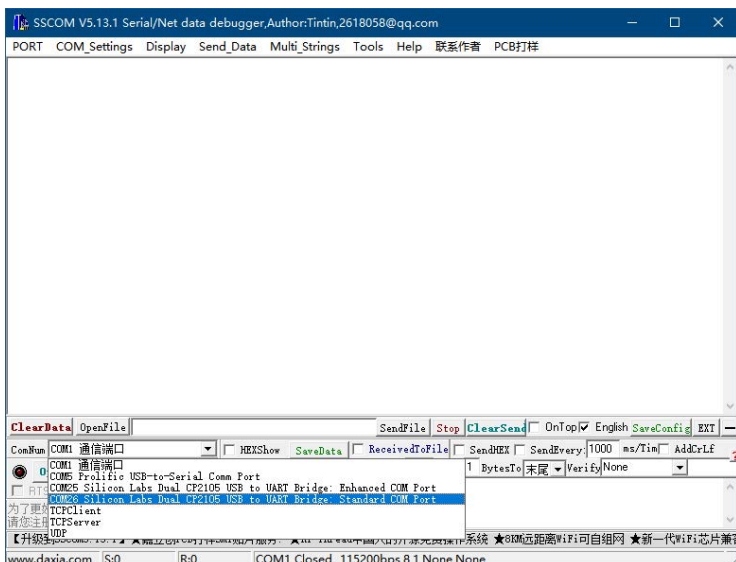
Download link: http://www.daxia.com/sscom/ http://www.daxia.com/sscom/sscom5.13.1.rar
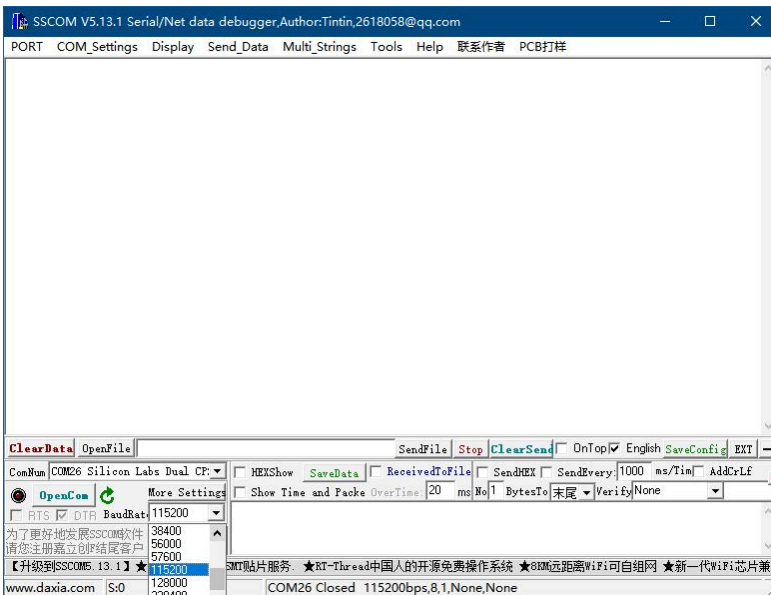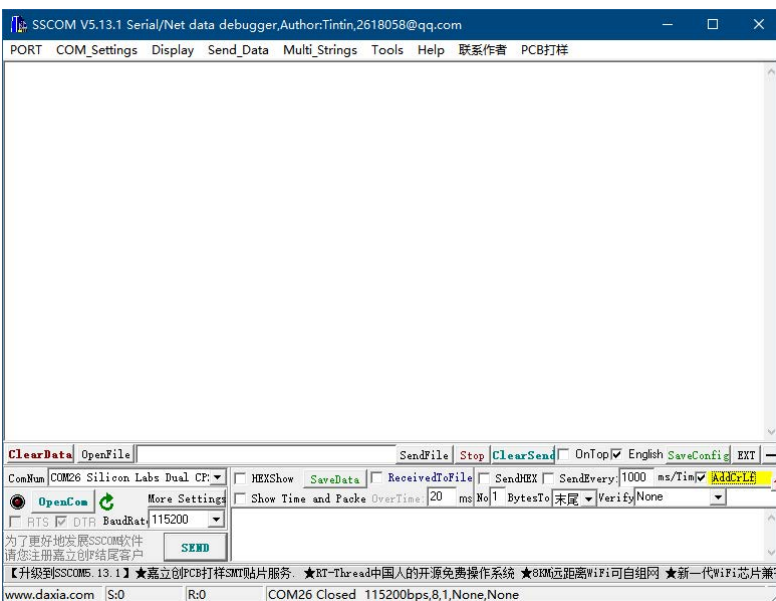
Instructions:
① Open the software and select 'English'.

② Select the COM Port to be used.

③ Select the BaudRate of 115200.

④ Unselect 'HEXShow' and 'SendHEX' and select 'AddCrLf'.

⑤ Click 'OpenCom'.
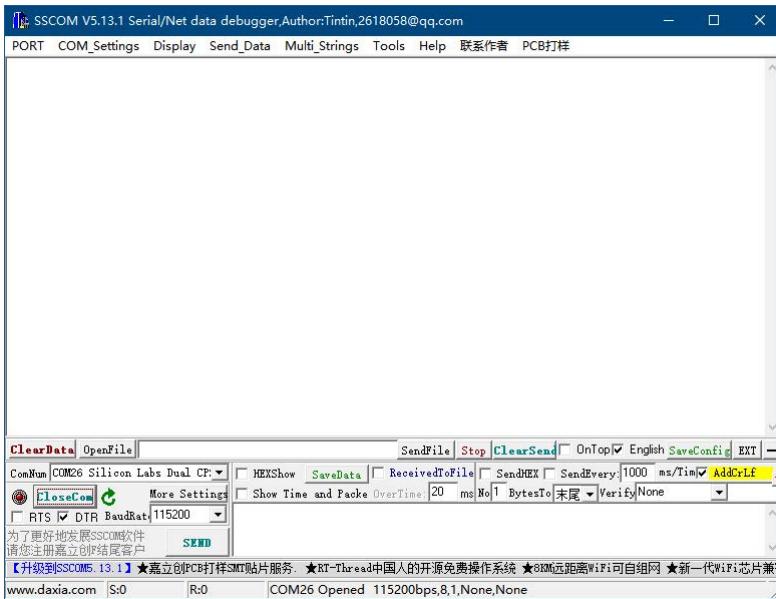
⑥ Enter the command to be sent and click 'SEND'.

2 Open source software PuTTy

Download link：https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

Instructions：
① Obtain the serial number, right-click 'This PC->Manage->Device Manager->Ports (COM & LPT)', if there are multiple COM*, you can try them one by one, but generally not COM1；
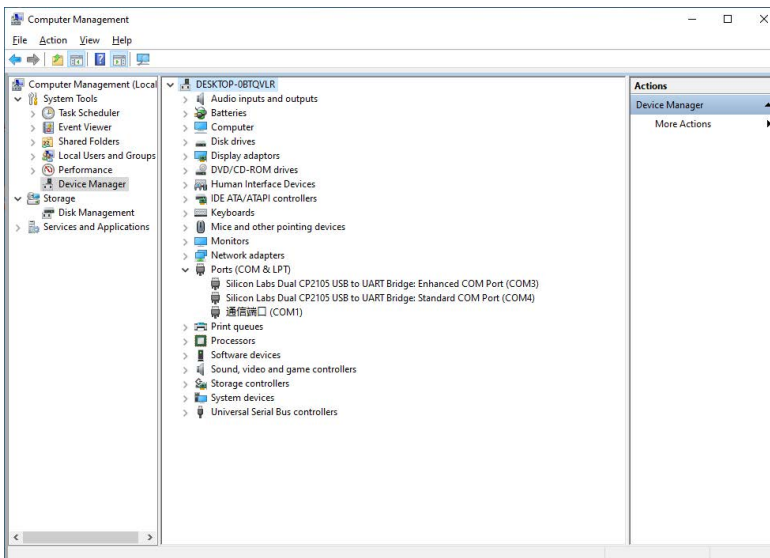
② Open the software;

③ Click Serial and select the serial port mode;

④ Enter the serial port number (Serial line: COM*) and baud rate (Speed: 115200);

⑤ Click Open to open the serial port;

⑥ Enter the command, and press Enter after entering a command.

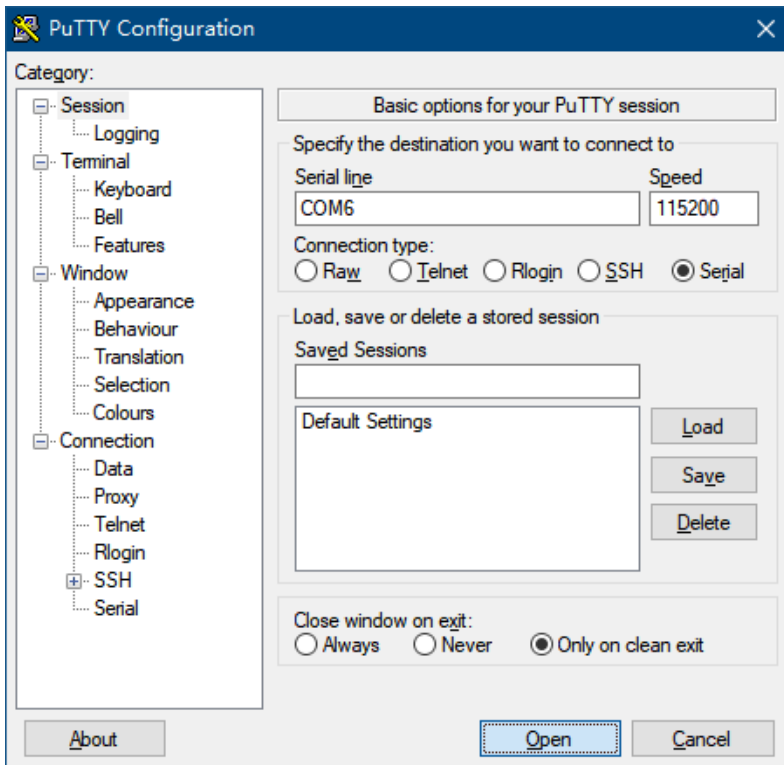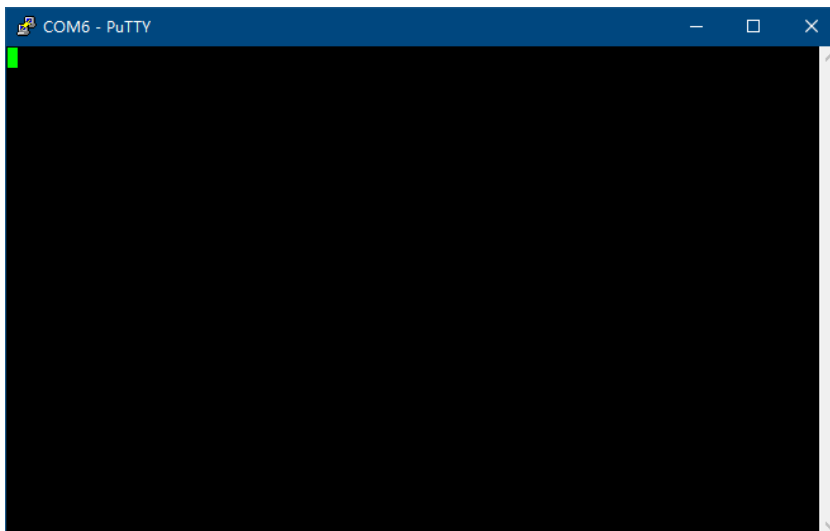Note: Except Enter and Backspace, please do not press any non-printing characters (such as up, down, left and right, ESC), otherwise the input commands may be wrong, and please do not enter spaces if necessary, the same Causes a command error.

Tip: Right-click after selecting a section of text to quickly copy and paste, and right-click after copying external text to paste.

Network debugging tools

Note: Due to the limited performance of the network debugging tools, it is recommended to open multiple debugging tools to transmit on multiple ports, and connect 2-4 sensors to each port when there are a large number of sensors, otherwise the debugging tools may be severely stuck or even crash. Reception is theoretically not subject to this restriction.

Note: Some ports may have a special role in the operating system. Do not use these ports for debugging when debugging, otherwise you may not be able to establish a connection or receive data.

1   TCP/UDP debugging tool SSCOM
Can handle TCP and UDP data, the function is more complete, but the data sent by different devices will be displayed together, it is not easy to distinguish.

Download link：http://www.daxia.com/sscom/   http://www.daxia.com/sscom/sscom5.13.1.rar

Instructions：
① Open the software;
② Select TCPServer (TCP protocol) or UDP (UDP protocol) for the port number, set the local IP and local port, check "HEX display" and "HEX send", you can check "time stamp and packet display";
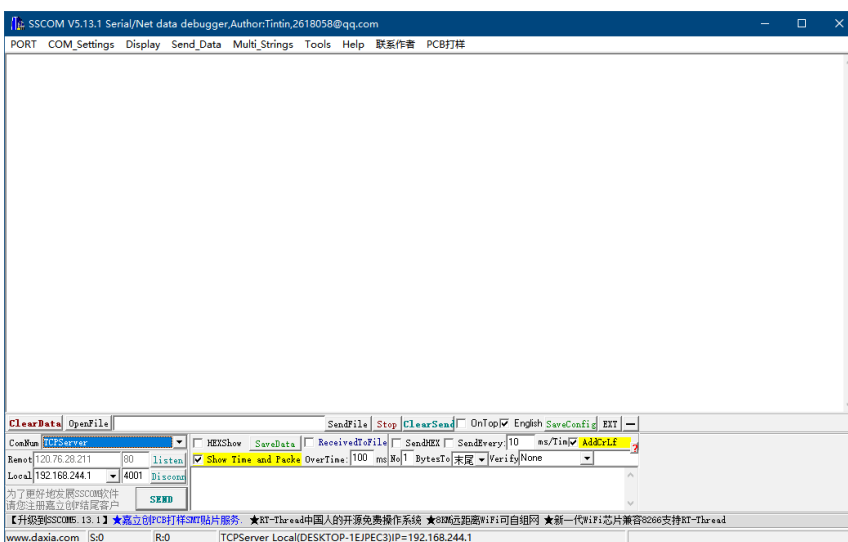
③ Click Listen to start receiving data, if there is a pop-up window prompting network access, please click Allow, the sensor will automatically connect, and the receiving effect is as shown in the figure:
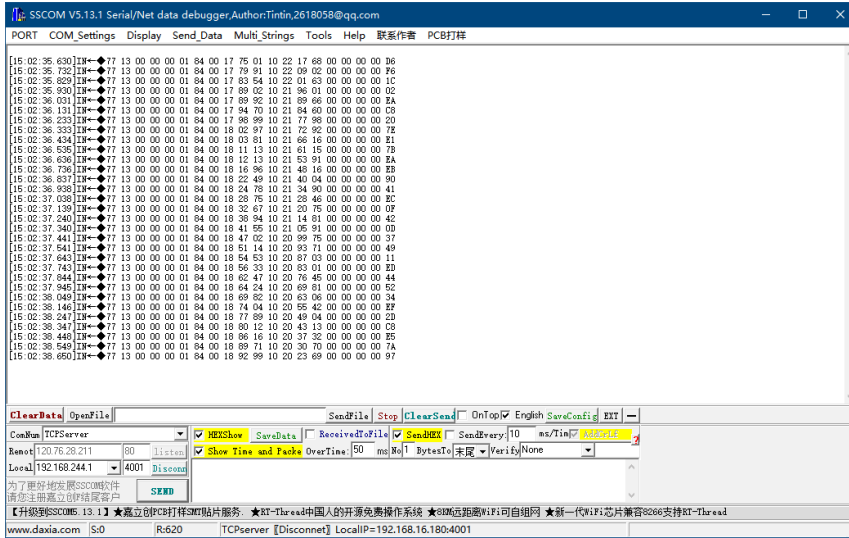
④ Input 77 series hexadecimal commands and click send to control via WLAN, as shown in the figure:
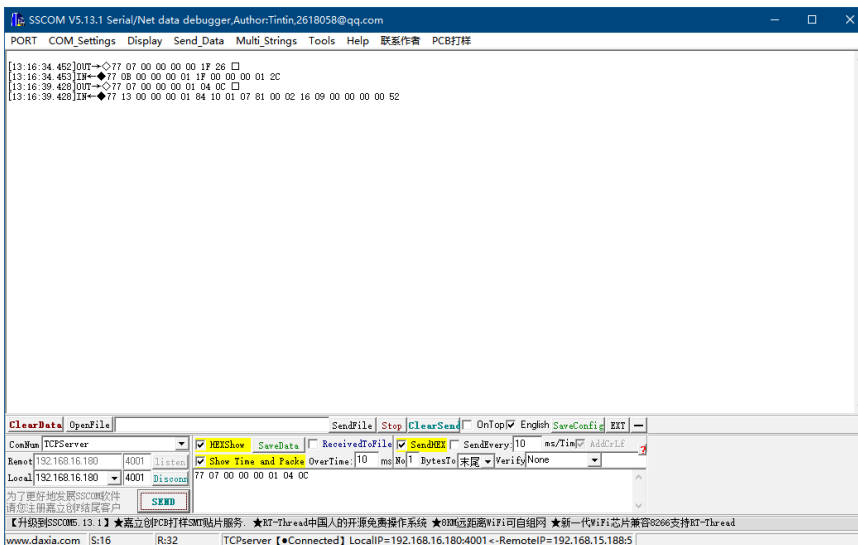
Note: If the Socket is abnormally disconnected or the network is abnormal, it may cause the listening to stop, please pay attention to reopen the listening.

Command list

String commands sent through the serial port

The following commands can configure the basic parameters of the sensor through the serial port. The serial port parameters are 115200bps, 8-bit Frame Length, 1 stop bit, and no parity bit. For the use of the serial port, please refer to the serial debugging tools section in the debugging method. The pictures are all using the serial tool PuTTy and the sensor echo mode is set to the advanced mode.

Note: Only after setting mode is turned on, commands other than turning on setting mode can be used.

Tip: Any command sent in the setting mode will return OK or ERROR (actually "OK\r\n" or "ERROR\r\n").

① Turn on the setting mode (send twice consecutively)

This command is no longer recognized after the setting mode is turned on, and will remain in the setting mode unless it is reset or exited with EXIT.

Send: SENSOR+SET

Return: OK

② EXIT Turn off setting mode

Send：EXIT
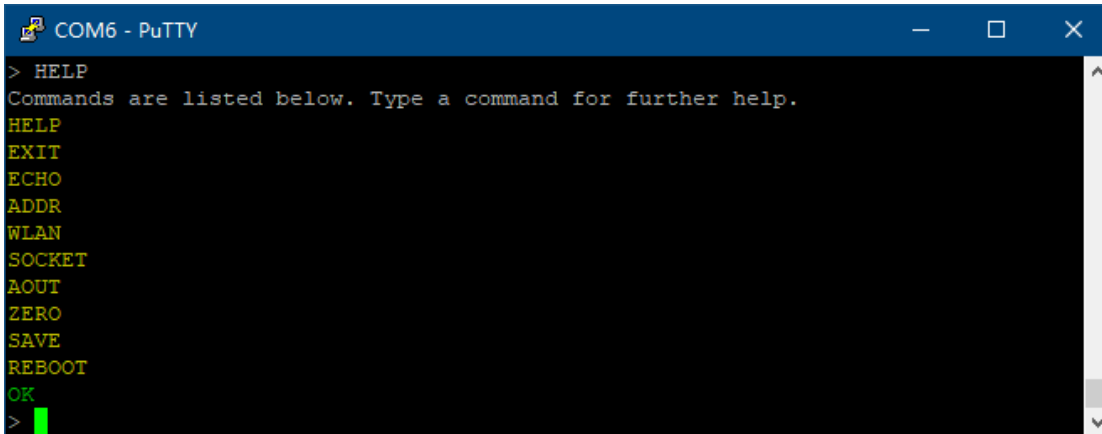
Return：OK

③ HELP Get command help

Send：HELP
Return：OK
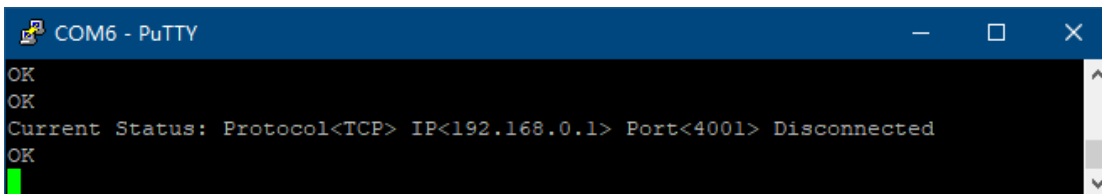
Prompt: Most commands display further prompts when entering commands without entering parameters.

④ ECHO echo mode setting and acquisition
MINIMALIST: Minimalist mode, only display the status of sending success or failure and query information, there is no echo and each command prompt, suitable for embedded devices, as shown in the figure:
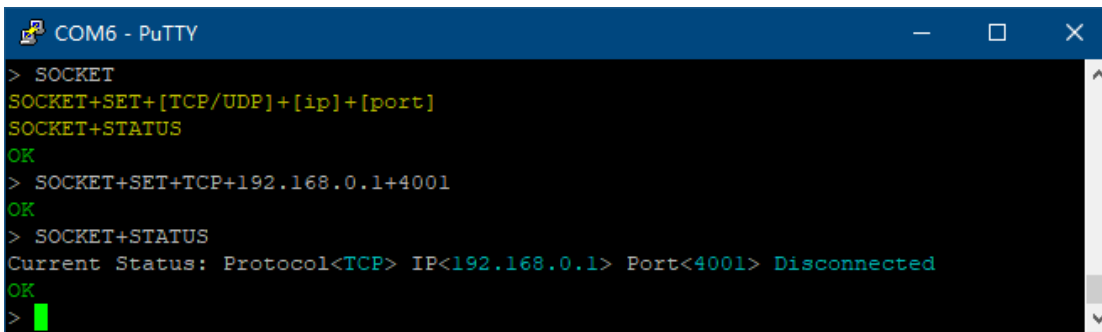
NORMAL (default): Normal mode, all content will be displayed, as shown in the figure:

ADVANCED: Advanced mode, in addition to displaying all content, there are colors and special marks for easy viewing, suitable for human-computer interaction, and the function of displaying colors can only be displayed normally in serial tools (such as PuTTy) that support Linux special characters, as shown in the figure :

```
COM6 - PuTTY                                      —   □   ×
> SOCKET
SOCKET+SET+[TCP/UDP]+[ip]+[port]
SOCKET+STATUS
OK
> SOCKET+SET+TCP+192.168.0.1+4001
OK
> SOCKET+STATUS
Current Status: Protocol<TCP> IP<192.168.0.1> Port<4001> Disconnected
OK
>
```

Set echo mode
Send: ECHO+MINIMALIST or NORMAL or ADVANCED
return: OK
Example: ECHO+ADVANCED

```
COM6 - PuTTY                                      —   □   ×
> ECHO+ADVANCED
OK
>
```

Get current echo mode
Send: ECHO+STATUS
Return: Current Mode: Current Mode

        OK

```
COM6 - PuTTY                                      —   □   ×
> ECHO+STATUS
Current Mode: ADVANCED
OK
>
```

⑤ ADDR device address (not IP address) setting and
obtaining Set the address, the address is not case sensitive:
Send: ADDR+SET+8-bit hexadecimal address
Return: OK
Example: ADDR+SET+0012ABCD

```
COM6 - PuTTY                                      —   □   ×
> ADDR+SET+0012ABCD
OK
>
```
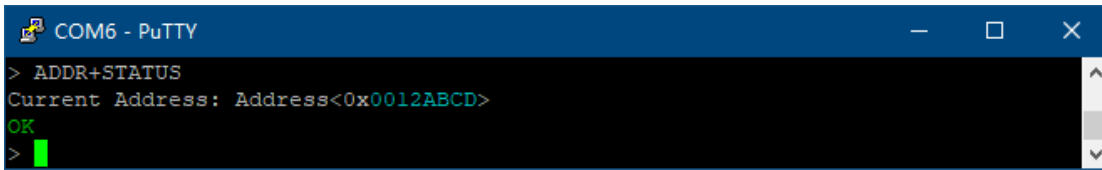
Get current address:
Send: ADDR+STATUS
Return: Current Address: Address<0x current address>
        OK

```
COM6 - PuTTY                                          —    □    ×
> ADDR+STATUS
Current Address: Address<0x0012ABCD>
OK
>
```

⑥ AOUT automatic output frequency setting and acquisition

The allowed frequency range is 0-1000 (Hz), but higher than 50Hz may cause unstable operation. Please try to select a frequency within 0-50Hz. When the set automatic output frequency exceeds 1000, it is automatically set to 0. When the set automatic output frequency is 0, the automatic output stops. When the set frequency is not a common frequency, the actual frequency may be slightly different from the set frequency, and the current frequency read shall prevail. The automatically output data content is the return information of reading all the data in the hexadecimal command.

Set the automatic output frequency:
Send: AOUT+SET+Auto output frequency
Return: OK
Example: AOUT+SET+5

```
COM6 - PuTTY                                          —    □    ×
> AOUT+SET+50
OK
>
```

Get the current automatic output frequency:
Send: AOUT+STATUS
Returns: Current Status: Frequency<current frequency Hz>

　　　　OK

```
COM6 - PuTTY                                          —    □    ×
> AOUT+STATUS
Current Status: Frequency<50Hz>
OK
>
```

⑦ WLAN wireless information setup and acquisition

If the WLAN name or password appears +, \, ", please add "on both sides of the WLAN name or password, and use \\ instead of \ and \" instead of ". If there is no password, you can write "" or not.

Set up Wi-Fi information:
Send: WLAN+SET+network name+network password
Return: OK
Example: WLAN+SET+WLANNAME+"12+\\AB\"x" The network name is WLANNAME and the password is 12 +\AB"x

　WLAN+SET+"WLAN+NAME"　　Network name is WLAN+NAME, no password

```
COM6 - PuTTY                                          —    □    ×
> WLAN+SET+WLANNAME+"12+\\AB\"x"
OK
>
```
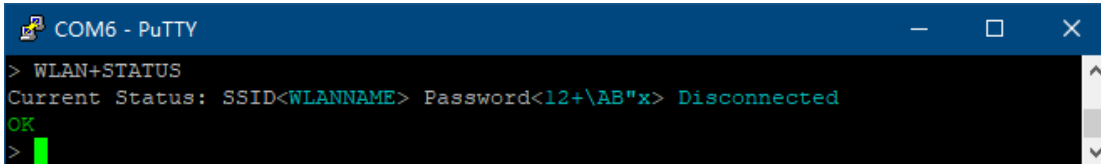
Get current Wi-Fi information and status

Send: WLAN+STATUS

Return: Current Status: SSID<current network name> Password<current password>

Connected or Disconnected

OK

```
COM6 - PuTTY                                              —    □    ×
> WLAN+STATUS
Current Status: SSID<WLANNAME> Password<12+\AB"x> Disconnected
OK
>
```

⑧ SOCKET socket settings and acquisition

The protocol can choose TCP or UDP protocol, the actual sending frequency (pack/s) of UDP can be higher but the packet will be lost. Higher transmission frequency does not mean higher transmission speed (Byte/s) or higher automatic output frequency upper limit (Hz) that can be set. Under normal circumstances, the limit transmission speed using UDP is only slightly higher than that using TCP, but Using UDP can significantly reduce the combined sending of multiple packets.

Set Socket information:

Send: SOCKET+SET+TCP or UDP+target IP+target port

Return: OK

Example: SOCKET+SET+TCP+192.168.0.1+4001

```
COM6 - PuTTY                                              —    □    ×
> SOCKET+SET+TCP+192.168.0.1+4001
OK
>
```
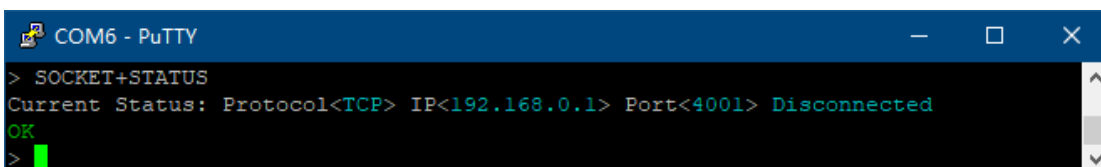
Get the current Socket information and status:

Send: SOCKET+STATUS

Return: Current Status: Protocol<current protocol> IP<current target IP> Port<current port>

Connected or Disconnected

OK

```
COM6 - PuTTY                                              —    □    ×
> SOCKET+STATUS
Current Status: Protocol<TCP> IP<192.168.0.1> Port<4001> Disconnected
OK
>
```

⑨ ZERO zero state setting and acquisition

Setting the relative zero point will use the current angle as the zero point reference, and setting the absolute zero point will clear the relative zero point information and use the factory-set zero point as the zero point reference.

Set relative zero point or absolute zero point

Send: ZERO+SET+RELATIVE (relative zero) or ABSOLUTE (absolute zero)

Return: OK

Get the current zero state

Send: ZERO+STATUS

Return: Current Status: Current status

　　　　OK

⑩　SAVE Save configuration

Save the sensor address, sending frequency, WLAN and SOCKET configuration, but do not save the echo mode.

The saved basic configuration (SENSOR) includes sensor address, automatic output frequency, and zero point information; the network configuration (NETWORK) includes WLAN and Socket configuration; all configurations include all the saved configurations mentioned above.

The storage process may cause slight freezes. At this time, the data transmission may be wrong, and the network connection may be temporarily disconnected. If you mind, please send the save command when the automatic output stops. Please do not send any through the serial port or network before returning the save result. command.

Send: SAVE+SENSOR or NETWORK or ALL

Return: OK

⑪ REBOOT Device restart

After restart, it will exit the setting mode and discard the unsaved settings. If you need to re-enter, please enter the command to open the setting mode again.

Send：REBOOT

Return：OK

Hexadecimal commands sent over the network

1 Data frame format:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (n byte)	Checksum (1 byte)
0x77					

Data format: 16

Identifier: Fixed to 77

Frame Length: Length from Frame Length to Checksum (included)

Address Code: Address of acquiring module, default 0X00000001

Data: Content and length variable according to Command.

Checksum: Sum of Frame Length, Address Code, Command, and Data .No entry is considered.

2 Detailed command:

2.1 Read angle of X axis   Command：77 07 00 00 00 01 01 09

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x01		

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (4 byte)	Checksum (1 byte)
0x77	0x0B		0x81	0xSXXXYYYY	

Note: The data field is 4 bytes which return the angle value, for the compressed BCD code, S is the symbol bit (0 positive, 1 negative) XXX is a three-digit integer value, YYYY is a small value. Other axis data is the same. For example, 10268010 represents -26.8010 degrees.

2.2 Read angle of Y axis   Command：77 07 00 00 00 01 02 0A

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x02		

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (4 byte)	Checksum (1 byte)
0x77	0x0B		0x82	0xSXXXYYYY	

2.3 Read all data   Command：77 07 00 00 00 01 04 0C

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x04		

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (12 byte)	Checksum (1 byte)
0x77	0x13		0x84		

The Data part is 12 Byte, divided into four groups, namely x-axis angle, y-axis angle, temperature, battery power. Each group of angle 4 bytes is a compressed BCD code, the first bit is the sign bit (0 positive, 1 negative), three integer values, four decimal places; temperature 3 bytes is the compressed BCD code, the first bit is the sign bit (0 positive, 1 negative), three-digit integer value, two decimal places; one byte of battery power.

Examples:

Send：77 07 00000001 04 0C

Return：77 13 00000001 84 10008680 10052000 002677 09 89

among them:

77 is the prefix Identifier;

13 is the byte length from the second digit to the last digit (decimal is 19);

00000001 is the address (factory default 00000001);

84 represents the reading angle of Command;

The last digit 89 is the hexadecimal sum (round down) from the second digit (07) to the penultimate digit (89);

10008680 10052000 002677 09 is the data bit.

In the data bit:

1 000 8680 represents the X axis angle is -0.8680；

1 005 2000 represents the angle of Y-axis is-5.2000；

0 026 77 means the temperature is 26.77℃；

The battery capacity of the 09th generation battery ranges from 00 to 09. The highest power is 09 (full state) and the lowest is 00 (needs to be charged).

The above red fonts are sign bits (0 positive, 1 negative), blue fonts are integer bits (BCD code), and purple fonts are decimal places (BCD code).

2.4 Set relative/absolute zero   Command：77 08 00 00 00 01 05 00 0E

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x05	0x00 Absolute zero 0x01 Relative zero	

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x85	0x00 Succeeded 0xFF Failed	

If set to absolute zero, the measurement angle is based on the factory-set zero. If set to relative zero, the measurement angle is based on the current position.

The factory default is absolute zero. After setting, the save command (77 07 XXXXXXXX 0A YY) must be sent to write to the internal storage, otherwise the previously saved configuration will be restored after reset.

2.5 Query relative/absolute zero   Command：77 07 00 00 00 01 0D 15

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x0D		

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x8D	0x00 Absolute zero 0xFF Relative zero	

2.6 Set automatic output frequency　Command：77 09 00　　　　C 00

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (2 byte)	Checksum (1 byte)
0x77	0x09		0x0C	0xXXXX	

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x8C	0x00 Succeeded 0xFF Failed	

The data part is a 4-bit compressed BCD code. The allowed frequency range is 0-1000 (Hz), but higher than 50Hz may cause unstable operation. Please try to select a frequency within 0-50Hz. When the set automatic output frequency exceeds 1000, it is automatically set to 0. When the set automatic output frequency is 0, the automatic output stops. When the set frequency is not a regular frequency, the actual frequency may be slightly different from the set frequency, and the actual frequency obtained through the serial port shall prevail. After setting, the save command (77 07 XXXXXXXX 0A YY) must be sent to write to the internal storage, otherwise the previously saved configuration will be restored after reset. The automatically output data content is the return information of reading all the data in

2.7 Set module address　　Command：77 0B 00 00 00 01 0F 12 34 56 78 2F

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (4 byte)	Checksum (1 byte)
0x77	0x0B		0x0F	0xXXXXXXXX	

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x8F	0x00 Succeeded 0xFF Failed	

The module address is 8-bit hexadecimal data, and the factory default is 0x00000001, which will take effect immediately after modification (including response commands). After setting, the save command (77 07 XXXXXXXX 0A YY) must be sent to write to the internal storage, otherwise the previously saved configuration will be restored after reset.

2.8 Query module address　　Command: 77 07 00 00 00 00 1F 26

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07	0x00000000	0x1F		

Response Command:

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (4 byte)	Checksum (1 byte)
0x77	0x0B		0x9F	0xXXXXXXXX	

2.9 Save Settings   Command：77 07 00 00 00 01 0A 12

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x0A		

Response Command:

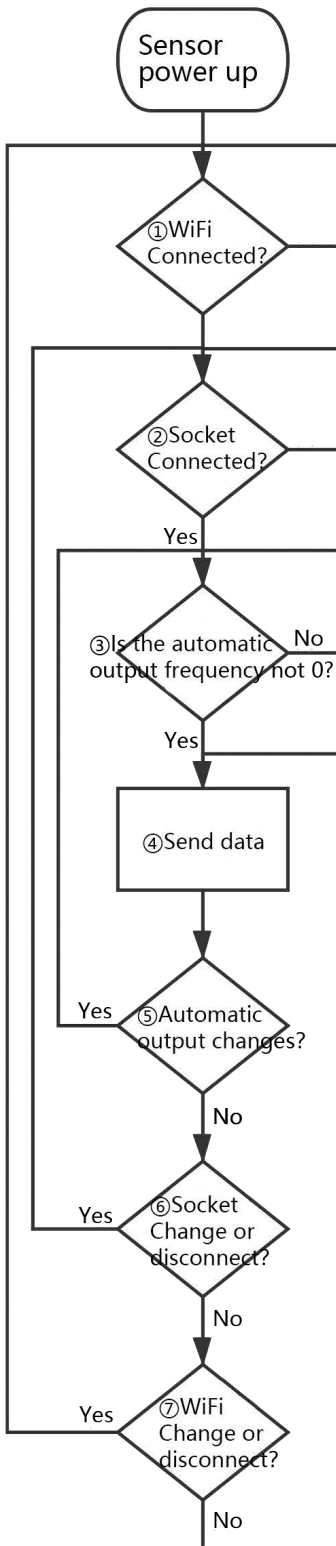| Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (1 byte)	Checksum (1 byte)
0x77	0x08		0x8A	0x00 Succeeded 0xFF Failed	

2.10 Reboot   Command：77 07 00 00 00 01 44 4C

Identifier (1 byte)	Frame Length (1 byte)	Address Code (4 byte)	Command (1 byte)	Data (0 byte)	Checksum (1 byte)
0x77	0x07		0x44		

Sensor data transmission process

Sensor data transmission process:

① WiFi Connected?

② Socket Connected?

Yes

③ Is the automatic output frequency not 0?   No

Yes

④ Send data

Yes ⑤ Automatic output changes?

No

Yes ⑥ Socket Change or disconnect?

No

Yes ⑦ WiFi Change or disconnect?

No

Sensor power up

① You can use the command WLAN+SET+... to set or use the command WLAN+STATUS to check whether it is connected;

② It can be set through the command SOCKET+SET+... or through the command SOCKET + STATUS to see if it is connected;

③ You can use the command AOUT+SET+... to set or use the command AOUT+STATUS to view the current automatic output frequency;

④ Data can be received at the receiving terminal (if it is UDP protocol, it depends on the network situation);

⑤ It can be set by the command AOUT+SET+...;

⑥ It can be set by the command SOCKET+SET+..., if it is disconnected due to network reasons, the sensor will automatically reconnect;

⑦ It can be set by the command WLAN+SET+..., if it is disconnected due to network reasons, the sensor will automatically reconnect.

Troubleshooting

(1)   No response to send string command

There may be no power supply or the switch is not turned on;

Maybe the serial port baud rate is not 115200bps;

The wrong serial port number may be selected;

It is possible that operations other than the opening setting mode have been performed when the echo mode is MINIMALIST mode and non-setting mode. Please refer to <1 Open Setting Mode> in the string command part to enter the setting mode and then perform other operations;

If there is a response but no information is returned, it may be because you did not enter the setting mode. Please refer to <1 Enable Setting Mode> in the string command section.

(2)   The data receiver cannot receive the data

Maybe the WiFi is not connected. You can check the current WiFi connection by command WLAN +STATUS. If the message...Disconnected... appears, it means there is no connection. Please see the following item (3) for more information;

Maybe the Socket is not connected. You can check the current SOCKET connection by command SOCKET+STATUS. If there is a...Disconnected... message, it means there is no connection. Please see the following item (4) for more information;

The automatic output frequency may be 0. You can view the current automatic output frequency through AOUT+STATUS. Note that if the set automatic output frequency exceeds 1000, the sensor will automatically set the frequency to 0. At the same time, unless you have special needs, please do not set the automatic output frequency high At the rated frequency.

(3)   WiFi can't connect

Maybe the WiFi signal is not covered or there is no wireless signal that the sensor can recognize, the sensor can only connect to 2.4G WiFi (802.11b, 802.11g, 802.11n);

It is possible that the wireless router has set up mechanisms such as whitelisting, please ask the company IT for details;

It is possible that the WiFi name or password contains +, \, "characters but it is not set in accordance with the prescribed format. Please refer to the <7 WLAN wireless information setting and acquisition> part of the string command section to set it.

(4)   Socket cannot connect

Maybe the WiFi is not connected, and the Socket can be connected only after WiFi is connected;

The Socket configuration of the sensor may not match the Socket configuration of the server, including the protocol (TCP/UDP), IP or port inconsistency; the sensor and the data receiving terminal may not be in the same local area network that can be connected, and the receiving terminal is not using the public network IP Or the port that has been mapped to the public network IP; when the receiving terminal is connected to multiple local area networks, the IP listening by the receiving terminal may not be the IP of the network where the sensor is located;

It is possible that the wireless router is equipped with AP isolation and other mechanisms. For details, please ask the company's IT.

(5)   The sensor worked normally before, but it cannot send data normally after it is powered on again

It is possible that the save command was not sent before the power failure. After the configuration, please refer to <10 SAVE save configuration> in the string command section to save.

Executive standard

- Enterprise quality system standard: ISO9001:2015 standard (certificate number：23919Q10455R0S)
- CE certification (certificate number:M.2019.103.UY1151)
- RoHS (Certificate：G190930099)

WF-WM420

WiFi Wireless High Speed High Precision Inclinometer

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