

UG-230 User Manual

1. Photo of UG-230



2. instructions

In order to realize the function of distance measurement, communication is established between the UWB gateway (UG-230) and the uVision remote console based on UWB technology. The model of UWB gateway is UG-230. The UWB gateway (UG-230) is a positioning device installed in the mobile DR equipment for indoor use. Mobile DR equipment is usually used in the examination room or ward.

UG-230 must be professionally installed and installation must be controlled. The device sold to dealer who hires installers with licensed professionals and special training.

2.1 Antenna installation

The UWB antenna is connected through an RP-SMA connector. The whip mounted antenna is installed vertically to the ground, and the antenna is installed away from metal objects in the environment;

2.2 System installation

UG-230 is installed in the front position of the mobile DR. As shown in the following figure. There is also a plastic cover outside the mobile DR.



2.3 System power supply

The UWB gateway is an external power supply device. The device supports DC 12 to 48V power supply. When the UWB gateway is installed inside the mobile DR, the PDU board provides 24V DC power to the UWB gateway through the XH2.54 connector. The XH2.54 connector is shown in the following figure.



2.4 System configuration

The device can be easily configured through RS-485, with XH2.54 connectors, as shown in the figure at 1:485_ A 2: GND 3:485_ B; As shown in the following figure.



3. debugging specification

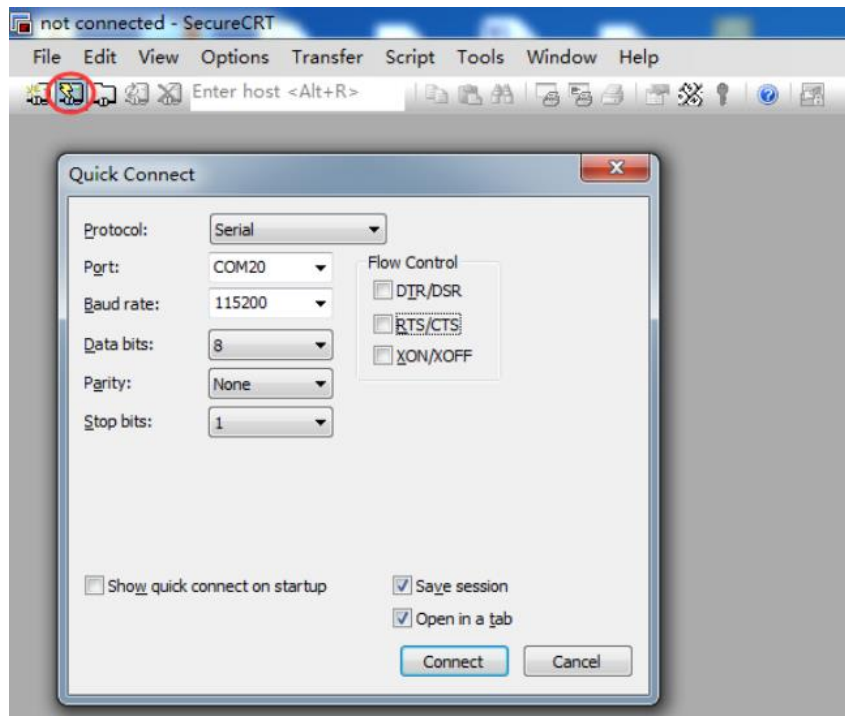
3.1 Debugging tools

RS-485 to USB converter

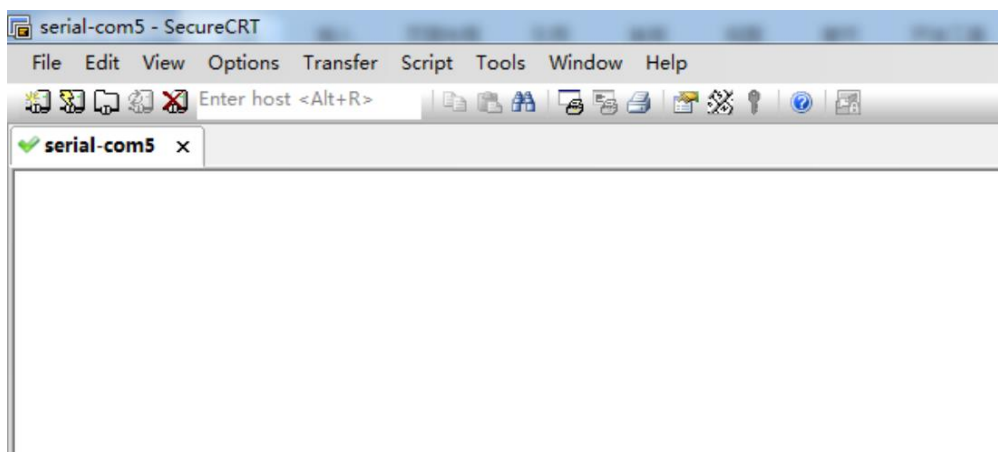
3.2 System Connections

When connecting for the first time, you need to install a driver for this module. The driver file is PL2303 all driver.zip. Confirm whether the driver has been successfully installed. After successful installation, The connection status can be seen in the device manager.

Device access configuration line. Open the serial port debugging tool SecureCRT and select Quick Connect. The operation method is as follows:



Among them, select Serial for Protocol, select COM port for computer identification of the module for Port, select 115200 for Baud rate, select 8 for Data bits, select None for Parity, select 1 for Stop bits, and uncheck any options in Flow Control. Then click Connect. After success, it is shown in the following figure:



Power on the device, press and hold the Enter key, and print the serial port information.

3.3 Common configurations

- a. Working mode switching

Enter "Set operator_mode 2" and configure it as the Anchor working mode

- b. Get Device ID

Enter "Get mac" to obtain the device UWB ID

- c. Reboot

Enter "Reboot" to restart the device

- d. Reset

Enter "Reset" to restore the device to its factory settings

- e. Upgrade

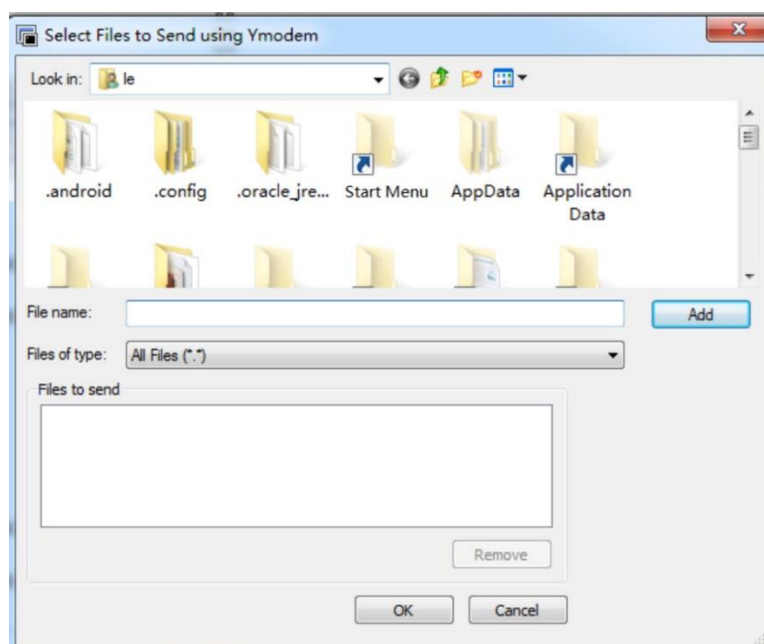
Enter "Upgrade" to enter the upgrade mode

3.4 Upgrade

1. Enter the command "Upgrade" and the following print information will appear

```
*****IAP START*****  
waiting for the file to be sent...  
CCC
```

2. Click "Transfer" on the toolbar, select "Send Ymodem", and the Select Upgrade File column will appear



3. The interface displays the upgrade progress, as shown in the following figure after the upgrade is completed

```
*****IAP START*****
waiting for the file to be sent...
CCCC
Starting ymodem transfer. Press Ctrl+C to cancel.
Transferring UG-100-V01.bin...
100%      39 KB      3 KB/sec      00:00:11      0 Errors

-----
[WX]:APP LOAD DEFAULT DATA!
***** ANCHOR [7001] INIT *****
█
```

In addition to entering the Upgrade command line to upgrade, you can also enter firmware upgrade mode by powering on the motherboard while pressing and holding the "U" key on the keyboard.

4. RF Specification

Feature	Description
Center Frequency	3.990GHz
Transmitting Power (25°C)	≤-41dBm/MHz
Modulation	BPM-BPSK
Bandwidth	≥500MHz

5. Precautions

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

This device is designed to be used in such way that keeps minimum distance of 20 centimeters of the body of the user.

This equipment may only be operated indoors. Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.

UWB devices may not be employed for the operation of toys. Operation onboard an aircraft, a ship or a satellite is prohibited.