H16 Interface Manual

V1.0

Kindly Notes：If your APP is running on H16,please refer to points 1、2、3、4.If your APP is running on other devices and connected to H16 WIFI hotspot,please refer to points 5、6. We recommend you to develop APP directly on H16.

1、Transmission interface

The air terminal supports connecting the sensor and one HDMI input.
Video website：rtsp://192.168.0.10:8554/H264Video
At present, HDMI and sensor video stream address
are shared, and at the same time access only
sensor output, HDMI independent address is under
development and will be released later
RTSP Decoding rendering playback：Please
refer to the demo we
supply:https://gitee.com/CQD_197
/SkydroidDemo.git

2、Air terminal data transmission interface

There are 2 serial ports on the air terminal, both with transmission function.

uart0 Address：Receive data through the local UDP port 14551 and send data through the local UDP port 14552. Default baud rate 57600 (support modification later)

uart1 Address：Receive data through the local UDP port 13551 and send data through the local UDP port 13552. Default baud rate 115200 (support modification later).

Please refer to the following code for calling two serial ports：
private var datagramSocket : DatagramSocket? = null

```
//create read only  13551 port
Socket private fun read13551(){
    try {
        datagramSocket =   DatagramSocket(13551)
    } catch (e: Exception)
        { e.printStackTrace()
    }
    read()
}


//create  can send and receive
Socket private fun
connect14551(){
    try {
        datagramSocket =   DatagramSocket(14551)
        datagramSocket?.connect(InetAddress.getByName("127.0.0.1"), 14552)
    } catch (e: Exception)
        { e.printStackTrace()
    }
    read()
}

//reading
private fun
    read(){ try {
        while (datagramSocket != null)
            { var cache = ByteArray(256)
            var packet = DatagramPacket(cache , cache.size)
            datagramSocket?.receive(packet)
            //data processing  receive(packet.data)
        }
    } catch (e: java.lang.Exception)
        { e.printStackTrace()
    }
}
```

3、Network port transmission

The default IP address of the air terminal is 192.168.144.10, and the default IP address of the ground terminal is 192.168.144.11.
The equipment connected to the air end network port and the ground end network port need to be in the same network segment and should be configured as 192.168.144.xxx.

Take the IPC camera connected to the sky port as an example, assuming that the IPC address is set to 192.168.144.108.

The H16 application terminal can directly obtain the 192.168.144.108 video stream (please consult the corresponding IPC device manufacturer for the rtsp video stream address). Can also connect other devices through the H16 network port to obtain the sky video stream, and the device should also be set to 192.168.144.xxx.

4、Sky camera video

（Under development, there will be SDK to provide methods later）

5、Signal strength acquisition

（Under development,there will be SDK to provide methods later）

6、WiFi Sharing

Please turn on the H16 hotspot sharing first, and the client connects to the H16 hotspot.
 Video interface:
H16 video stream acquisition address：rtsp://127.0.0.1:8554/fpv_stream
 Client video stream acquisition address：
 rtsp://192.168.43.1:8554/fpv_stream
192.168.43.1 is the H16 hotspot gateway address.

Data transmission interface
 UART0:
Client binds local UDP port 14550 to monitor data
The client cannot actively send data to the sky terminal, and needs to respond to the corresponding port according to the sky terminal UART0 data packet received on port 14550.
 UART1:
Client binds local UDP port 13550 to monitor data
The client cannot actively send data to the sky terminal, and needs to respond to the corresponding port according to the sky terminal UART1 data packet received on port 13550.

Third-party ground station access and video stream acquisition (Examples:Mission Planner and vlc)
1.Turn on the H16 WiFi hotspot, and connect the PC to the H16 hotspot
2. Turn on Mission Planner, select UDP connection, port setting 14550, select OK
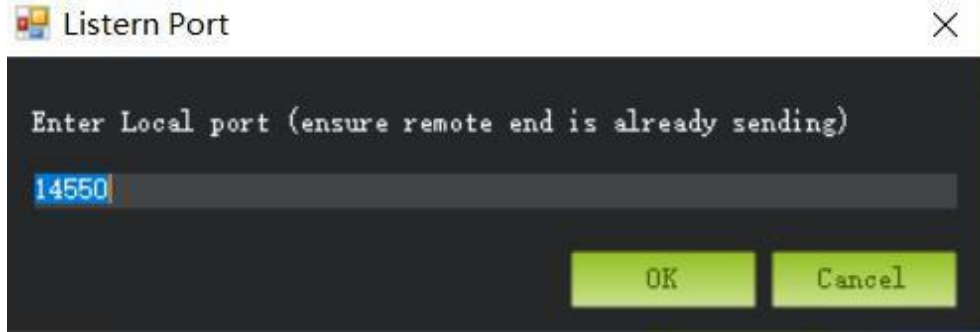
3. Turn on H16 Video Share Enabled option

Open the VLC player, select Media″ to open the network stream, enter rtsp://192.168.43.1:8554/fpv_stream, select ″Play″
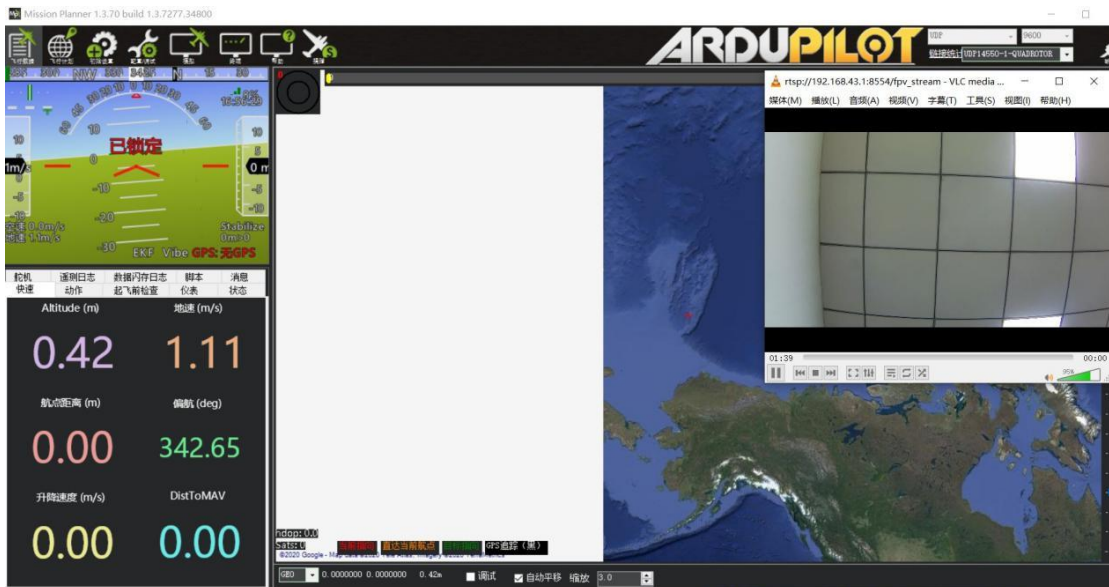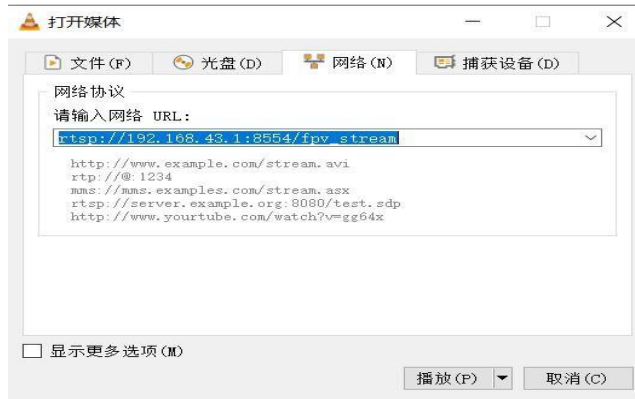
Note: The sky network port device does not support WiFi sharing for the time being, and can only be transmitted through the H16 network port. For the method, please refer to ″3. Network Port Transmission.