V1.0

2024.12

GCU_Assistant

快速入门指南

阅读提示 - 符号说明

 重要注意事项

 操作提示

 词汇解释及参考信息

目录

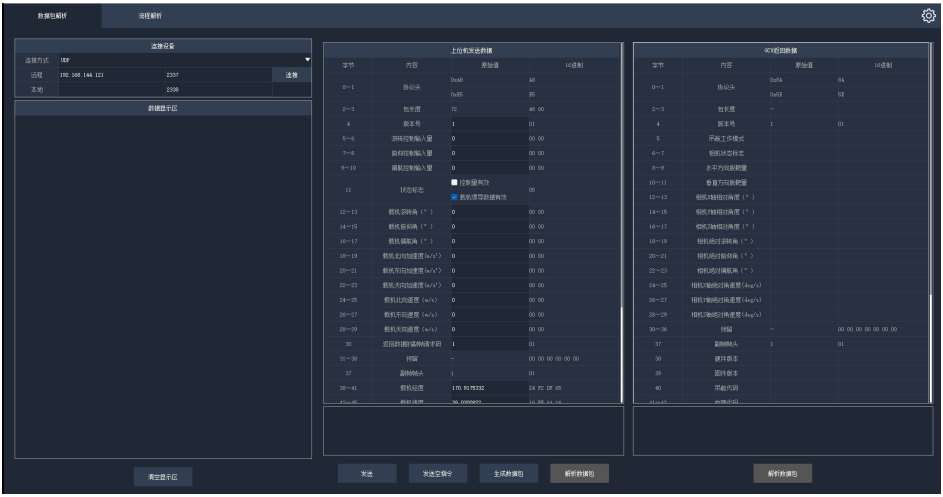
本软件中：

标注单位的数值，为不含单位的原始数据，如 41.123m 的载机海拔 (m) 对应的数值为 41.123；

标注 (DEC) 的数值，为按照协议转化后的十进制数值，如 30° C 对应的报警温度 (DEC) 对应的数值为 300；

标注 (HEX) 的数值，为十六进制数据。

数据包解析



设备连接

可通过串口、UDP 或 TCP 连接 GCU。

数据显示区

显示软件与 GCU 通信时的收发数据包。

上位机发送数据

在上位机发送数据列表中输入原始数据，点击 69~S-3 字节的“控制命令”并选择所需的命令，点击“生成数据包”，软件会将原始数据转换为上位机发送的完整数据包，并显示在下方的文本框中。

也可在文本框中输入完整的上位机发送数据包，点击“解析数据包”，数据列表中会显示由数据包解析出的原始数据。

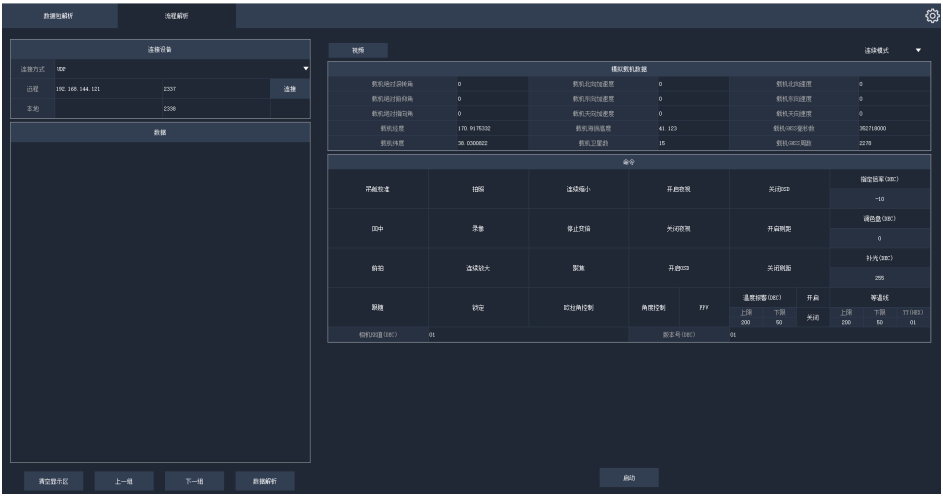
点击“发送”，可将文本框中的数据包发送至 GCU。点击“发送空命令”，可发送一条含有空命令的数据包。

GCU 返回数据

软件收到 GCU 返回的数据包后，会自动解析数据并显示在数据列表中。

也可在下方文本框中输入 GCU 返回的完整数据包并点击“解析数据包”，解析得出的数据会显示在数据列表中。

流程解析



连续模式

点击“启动”，软件会与 GCU 以 30Hz 进行正常通信，可点击各项命令对吊舱进行控制。

单步模式

点击“启动”，软件会与 GCU 以 30Hz 进行正常通信，发送某一命令并收到 GCU 的命令反馈后，软件会再与 GCU 进行两次含有空命令数据包的通信，然后停止通信。

数据解析

点击此按钮，软件会停止与 GCU 的通信，解析数据显示区内高亮标识的一组数据包（含发送数据包与接收数据包），并显示解析结果。可通过点击“上一组”或“下一组”选择需要解析的数据包。

视频

点击“视频”，会弹出视频播放窗口，可在此界面进行与画面交互的操作。

URL：
输入吊舱视频流地址，点击“播放”，窗口显示吊舱实时画面。

画中画切换：
点击此按钮以循环切换吊舱的画中画模式。

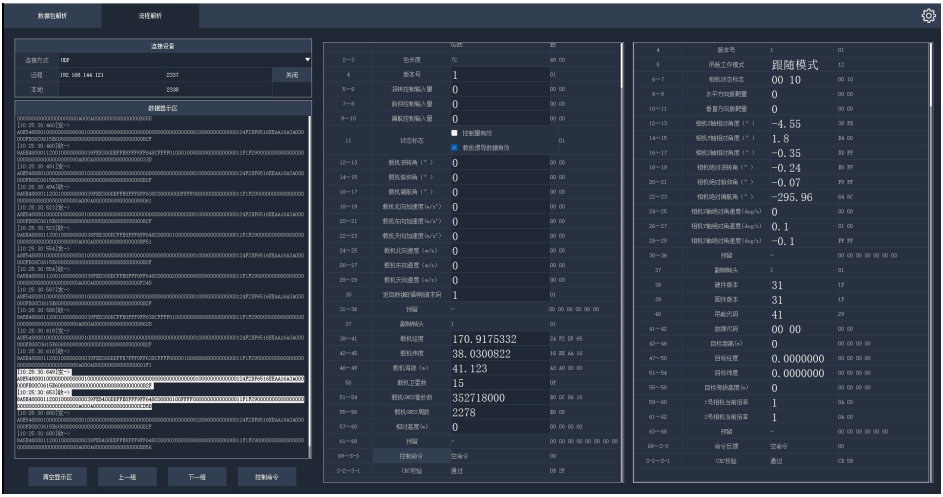
指点平移坐标生成：
点击此按钮后，在画面上单击目标，在下方会显示所选点在画面中的坐标。点击“发送”，软件将发送以此坐标为参数的指点平移命令。

指点测温坐标生成：
点击此按钮后，在画面上单击目标，在下方会显示所选点在画面中的坐标。点击“发送”，软件将发送以此坐标为参数的指点测温命令。点击“命令退出”以发送关闭指点测温的命令。

跟踪坐标生成：
点击此按钮后，在画面上框选目标，在下方会显示选择框两个对角点在画面中的坐标。点击“发送”，软件将发送以此坐标为参数的跟踪命令。点击“命令退出”以发送退出跟踪的命令。

区域测温坐标生成：
点击此按钮后，在画面上框选目标，在下方会显示选择框两个对角点在画面中的坐标。点击“发送”，软件将发送以此坐标为参数的区域测温命令。点击“命令退出”以发送关闭区域测温的命令。


URL:
播放
画中画切换
指点平移坐标生成
跟踪坐标生成
XO XO（DEC）
YO YO（DEC）
X1 X1（DEC）
Y1 Y1（DEC）
发送
命令退出
指点测温坐标生成
区域测温坐标生成


数据包解析
远程解析
连接设备
连接方式
UDP
远程
192.168.144.121
2337
关闭
本地
2336
数据提示区
调空显示区
上一组
下一组
控制命令
跟随模式
170.9175332
38.0300822
41.123
352718000
-4.55
1.8
-0.35
-0.24
-0.07
-295.96
0.1
-0.1

GCU_Assistant

Quick Start Guide

Using this Manual – Legend

 Important

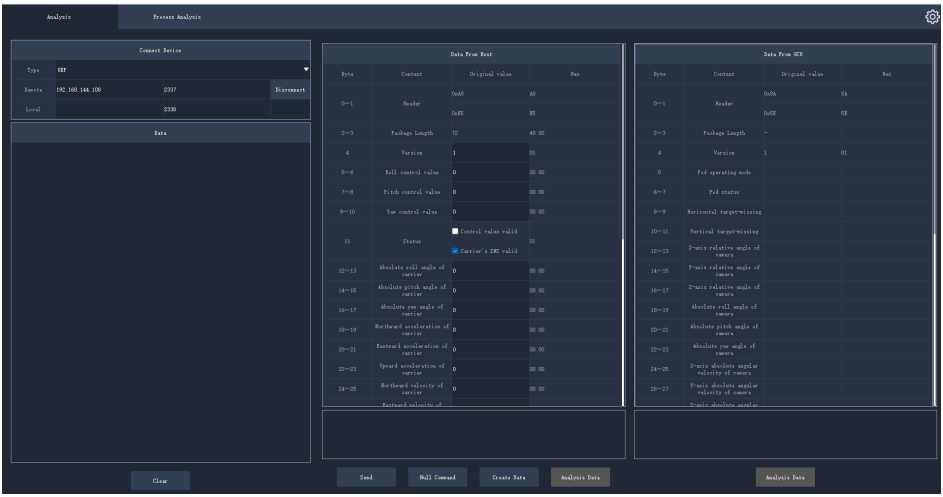
 Tips

 Explanation

Catalog

Values in units are raw data without units, e.g., 41.123m for carrier altitude(m) corresponds to 41.123.
The values labeled (DEC) are the decimal values converted according to the protocol, e.g., the value for the alarm temperature (DEC) is 300 for 30° C.
The values labeled (HEX) are hexadecimal data.

Analysis



Connect Device

GCU can be connected via serial port, UDP or TCP.

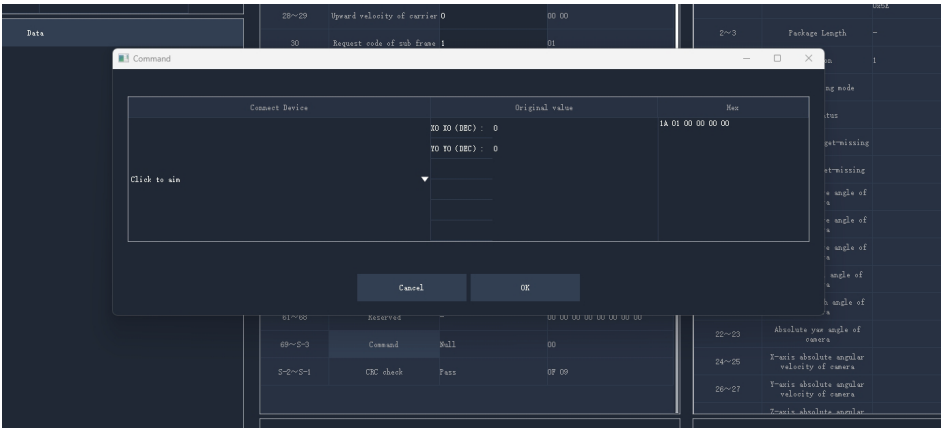
Data

Displays the packets sent and received when the software communicates with the GCU.

Data From Host

Enter the original data in the list of Data From Host, click "Command" in bytes 69~S-3 and select the desired command. Click "Create Data", the software will convert the raw data to the complete packet from host and display it in the text box below.

You can also input the complete packet from host into the text box, click "Analysis Data", and the data list will show the data parsed from the packet. Click "Send" to send the packet in the text box to GCU, and click "Null Command" to send a packet with null command to GCU.

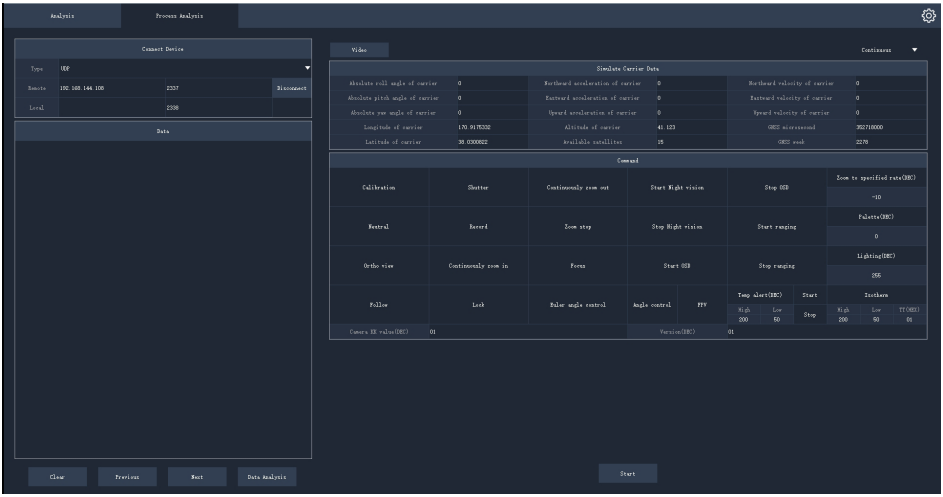


Data From GCU

When the software receives the packet returned by the GCU, it automatically parses the data and displays it in the data list.

You can also enter the complete packet returned by the GCU in the text box below and click "Analysis Data", and the parsed data will be displayed in the data list.

Process Analysis



Continuous

Click "Start", the software will communicate with the GCU normally at 30Hz, and you can click various commands to control the pod.

Single-step

Click "Start", the software will communicate with the GCU normally at 30Hz, after sending a command and receiving the command feedback from the GCU, the software will communicate with the GCU twice more with null command packets, and then stop the communication.

Data Analysis

Click this button, the software will stop the communication with GCU, parse the highlighted group of packets (including sent and received packets) in the data display area, and display the parsing result. You can select the packets to be parsed by clicking "Previous" or "Next".

Video

Click "Video", a video playback window will pop up, and you can interact with the screen on this interface.

URL:
Enter the video stream URL of the pod and click "Play", and the window will display the real-time image of the pod.

Pic-in-pic:
Click this button to cycle through the picture-in-picture mode of the pod.

Click to aim:
After clicking this button, click the target on the screen, and the coordinates of the selected point on the screen will be displayed at the bottom. Click "Send", the software will send a click-to-aim command parameterized by these coordinates.

Spot temp:
After clicking this button, click the target on the screen, and the coordinates of the selected point on the screen will be displayed at the bottom. Click "Send", the software will send a spot-temperature-measurement command parameterized by these coordinates. Click "OFF" to send a command to turn off the spot-temperature-measurement.

Track:
After clicking this button, frame select the target on the screen, and the coordinates of the two diagonal points of the selection box on the screen will be displayed at the bottom. Click "Send", the software will send a track command parameterized by these coordinates. Click "OFF" to send a command to exit tracking.

Area temp：

After clicking this button, frame select the target on the screen, and the coordinates of the two diagonal points of the selection box on the screen will be displayed at the bottom. Click "Send", the software will send an area-temperature-measurement command parameterized by these coordinates. Click "OFF" to send a command to turn off the area-temperature-measurement.