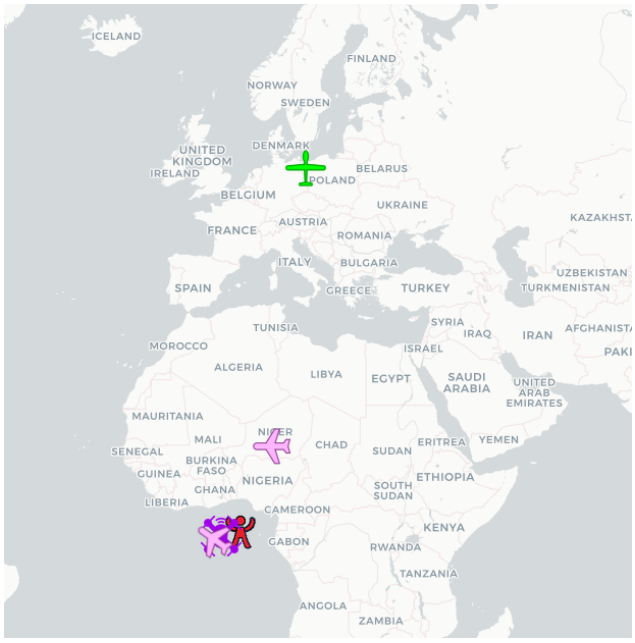
Aerobits

Subsystems for the
UAS integration into the airspace

Plane Map 2

Data sheet - User manual



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1 Introduction

PlaneMap 2 is application designed to visualize received data in CSV and JSON protocol. It enables visualization of air traffic around the installed receiver.

1.1 Features

- **Quick start with the products of AEROBITS company**
- **Easy air-traffic visualization**
- **Cross platform**
- **Data visualization fom serial or TCP/IP connected device**
- **Simple module integration via USB or UART interface and AT commands**
- **Aircraft flight parameters preview**
- **Messages payload preview**

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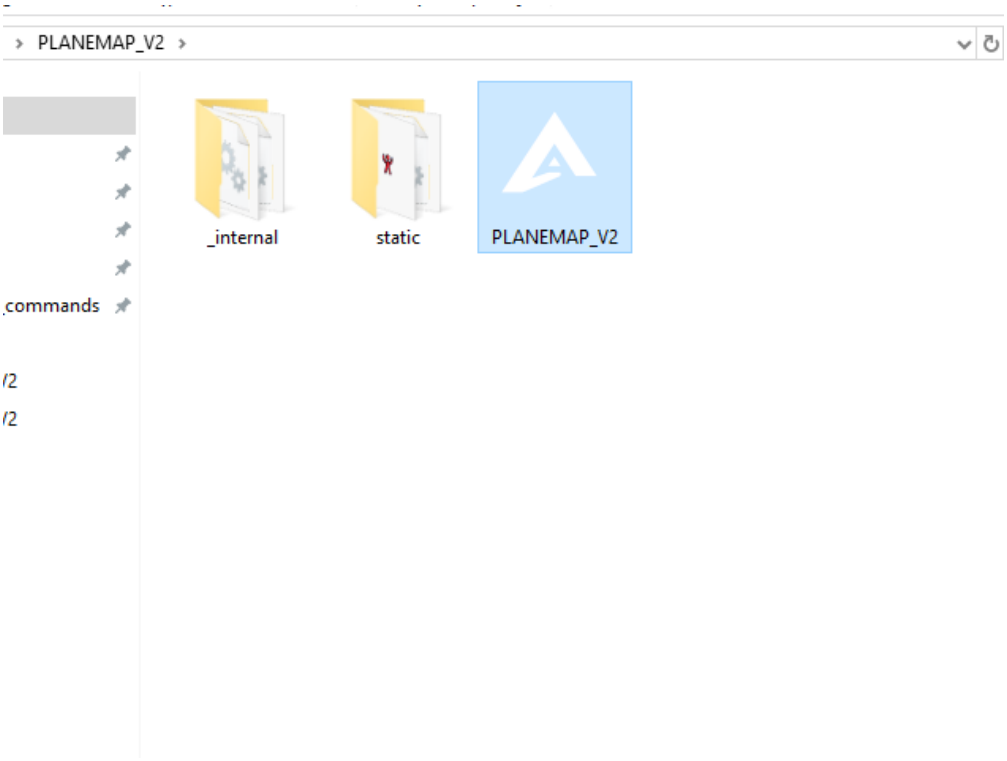
2 Installation

2.1 Installation on Windows

Run the unzip **planemap_v2_windows-v1.x.x.zip** file and go into this folder.



Now there are two options.

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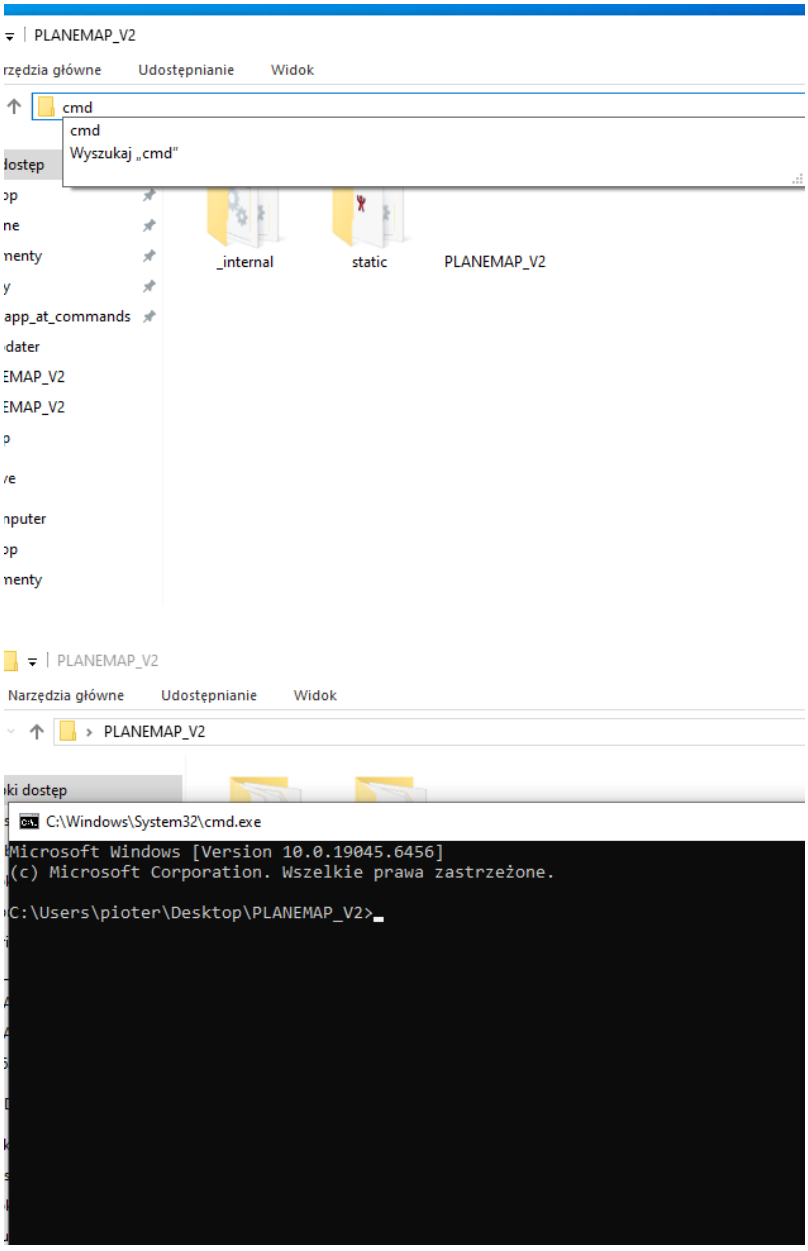
2.1.1 Option 1

Type cmd into path and hit enter.



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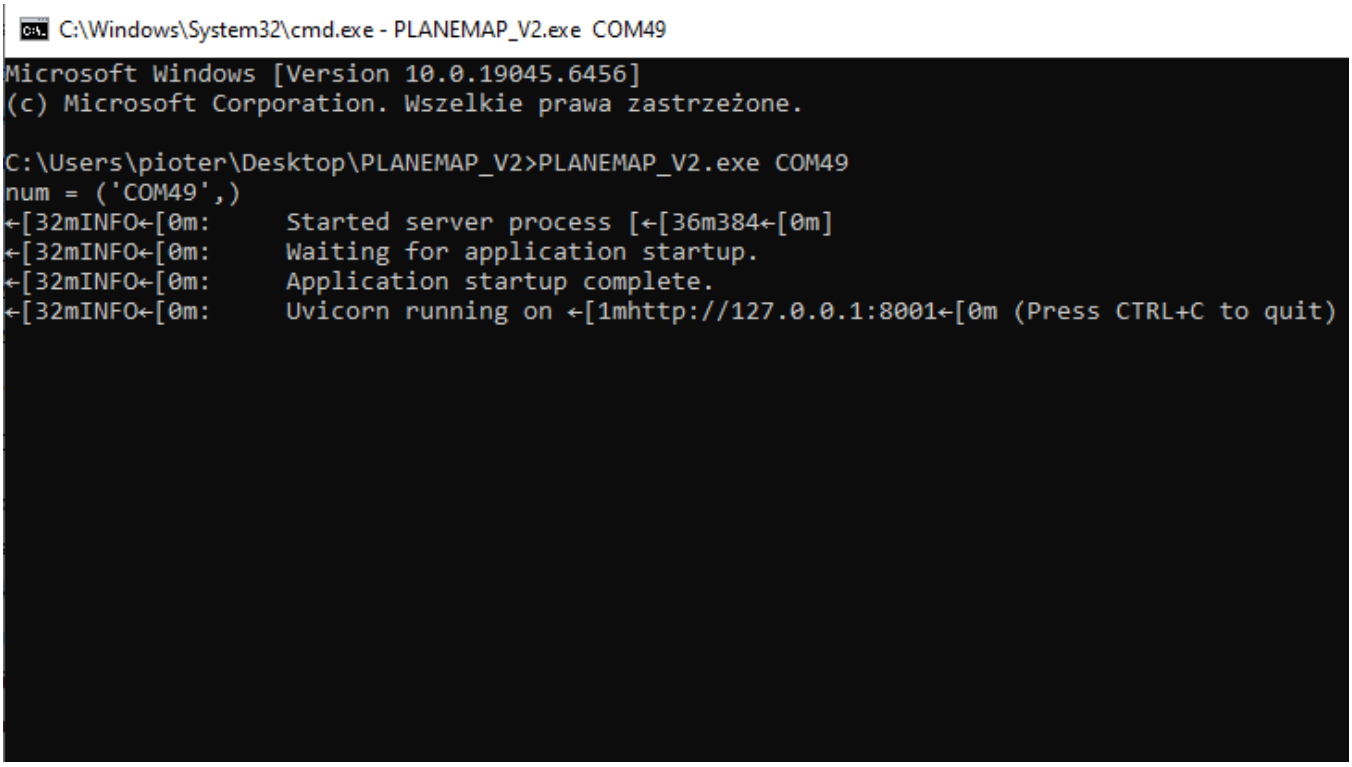
Type in cmd **PLANEMAP_V2.exe** with device port number and hit enter.



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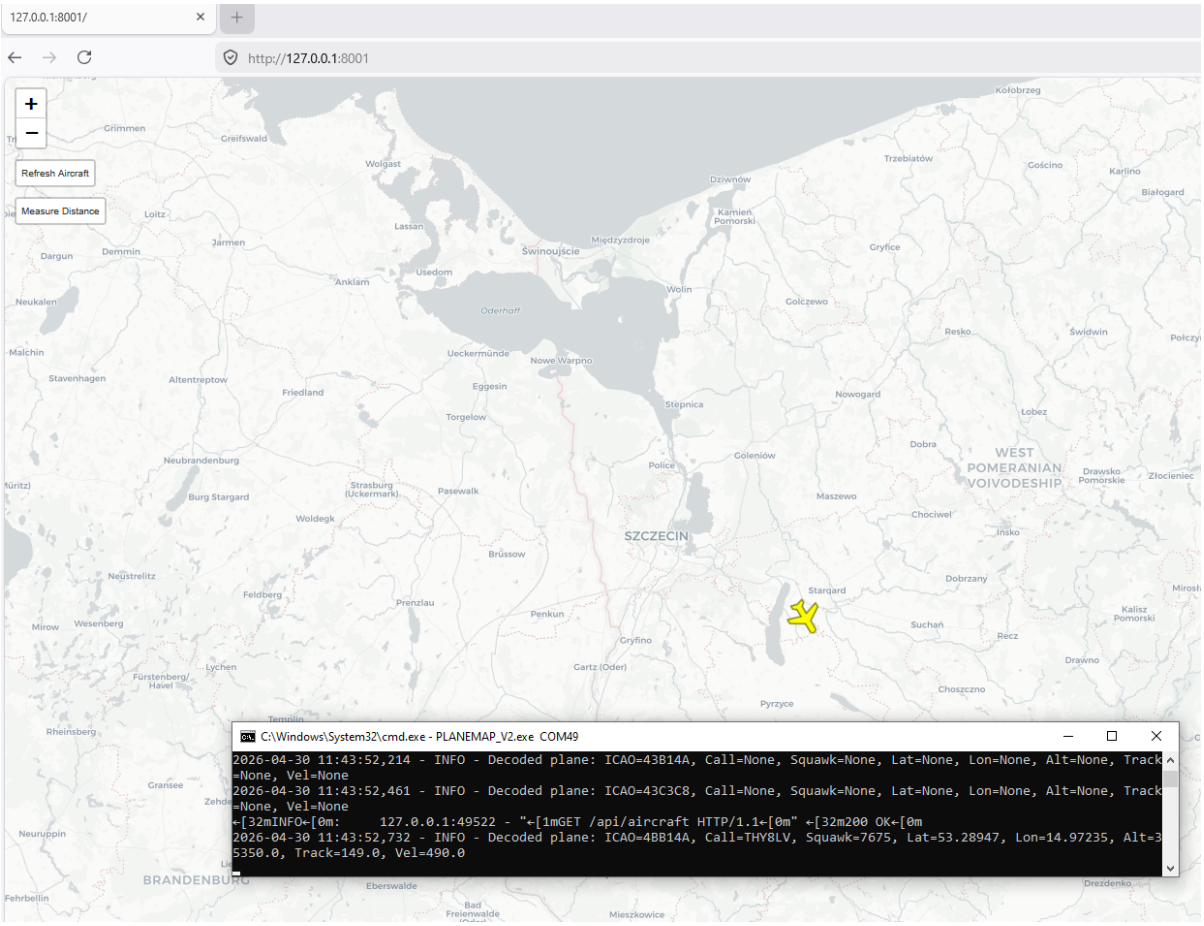
We got running instance, go to linked address **http://127.0.0.1:8001/** into the browser.



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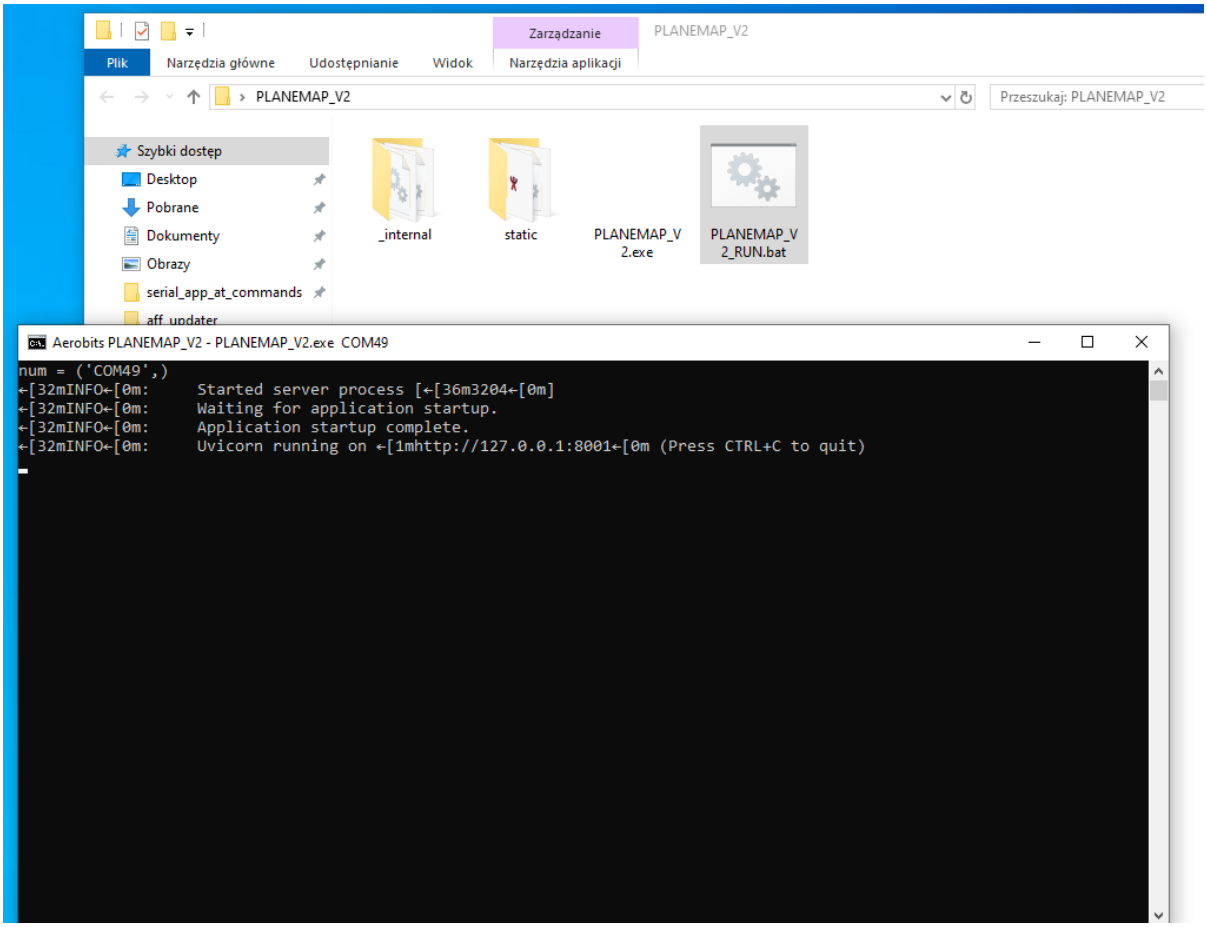
2.1.2 Option 2

We can create *bat* or *ps1* files to run application by one click. Create txt file and paste this into:

```
@echo off
start "Aerobits PLANEMAP_V2" cmd /k "cd /d C:\path\to\project1 && PLANEMAP_V2.exe␣
↪COM49"
```

Now change file extension from *txt* into *bat* and click this file.



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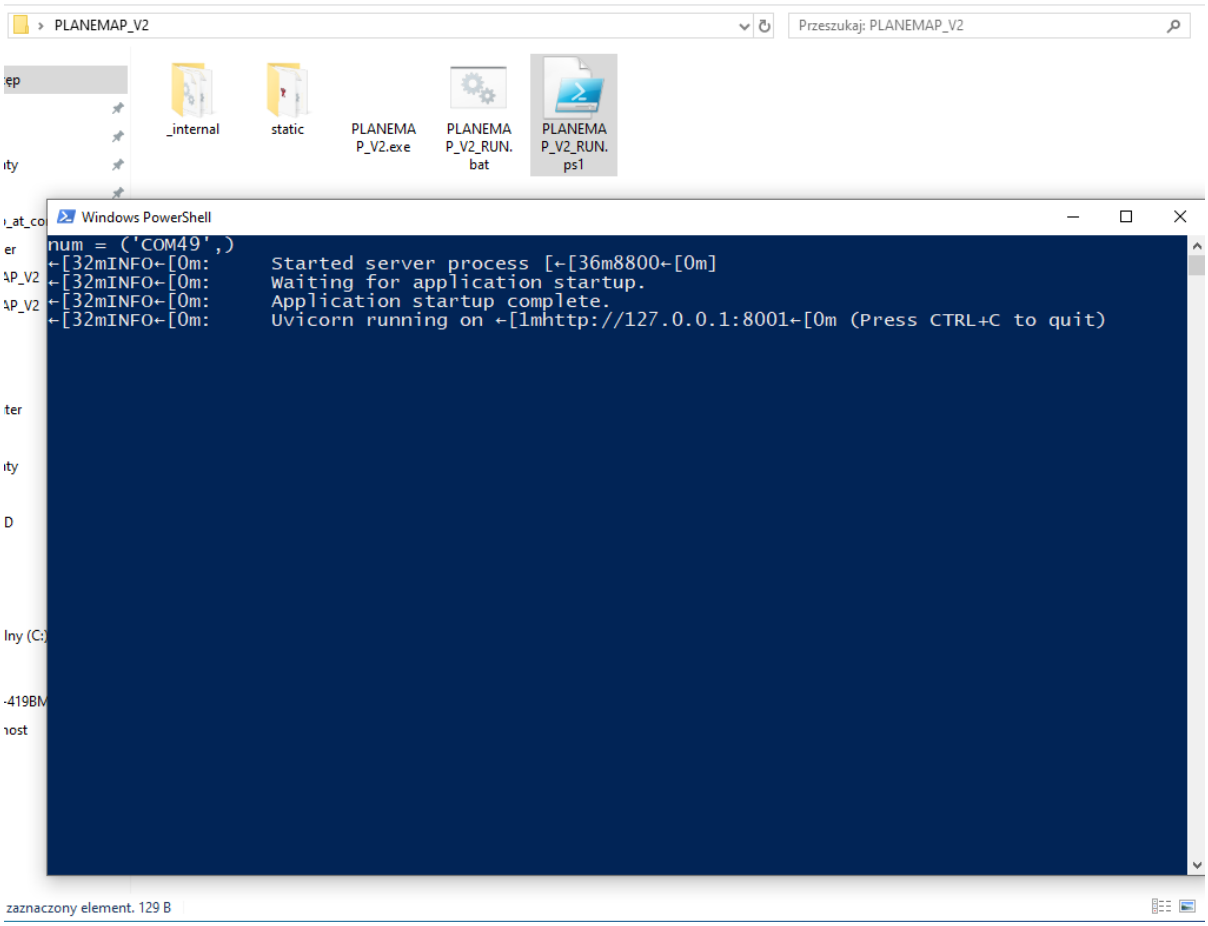
Or create *ps1* file:

```
Start-Process powershell -ArgumentList "-NoExit", "-Command", "cd 'C:\path\to\
↪project1'; ./PLANEMAP_V2.exe COM49"
```

Now change file extension from *txt* into *ps1*, right click this file and run in PowerShell.



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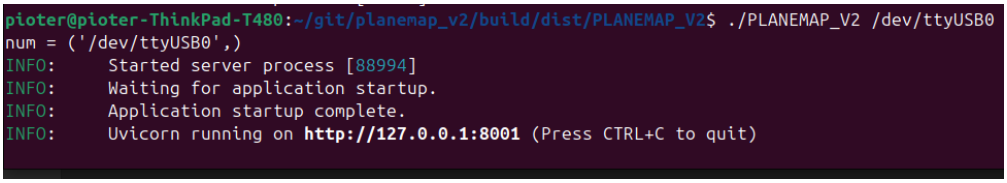
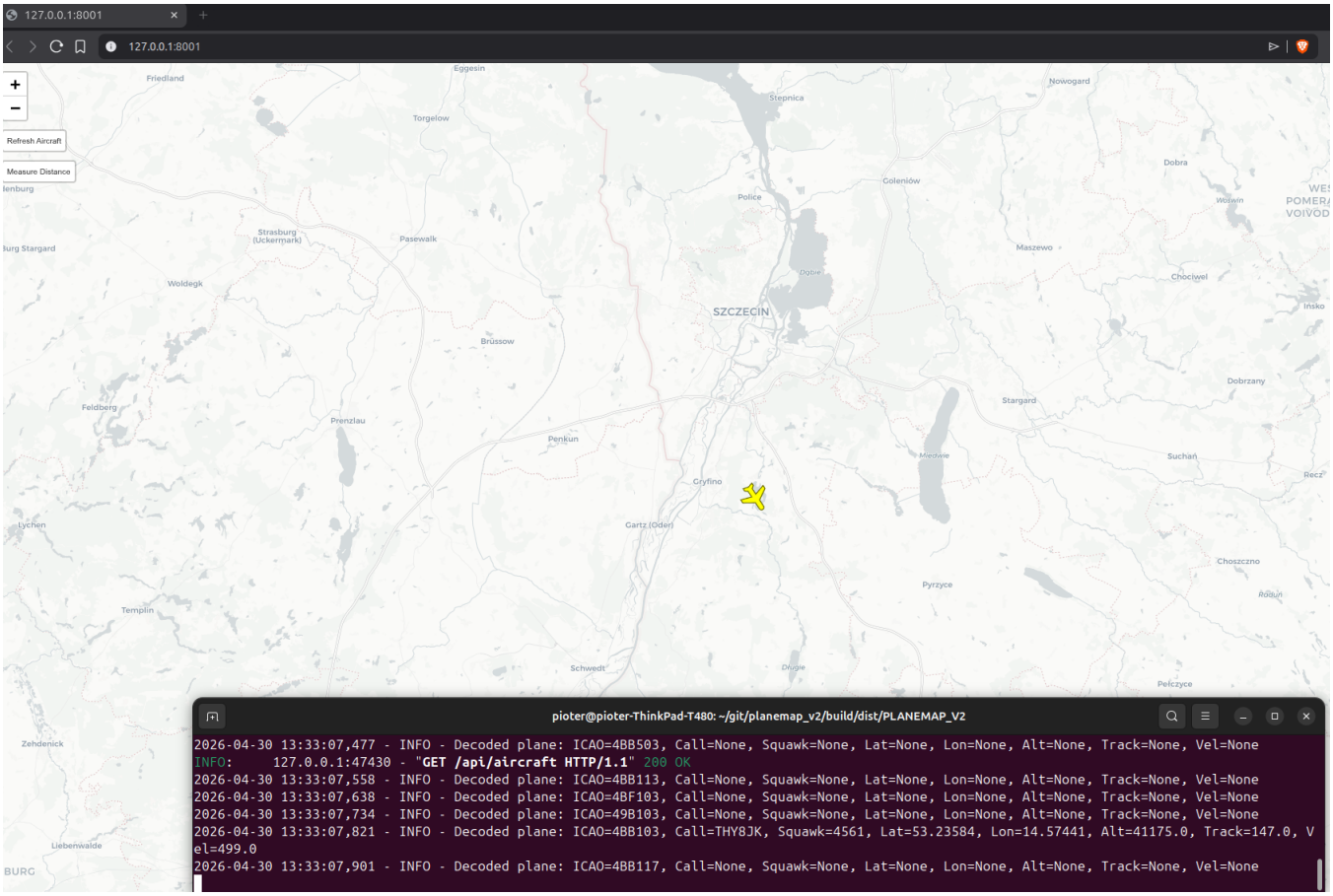
2.2 Installation on Linux

Unzip planemap_v2_linux-v1.x.x.zip file and go into this folder. Run application by typing:

```
./PLANEMAP_V2 /dev/ttyUSB0
```





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3 Quick start

Application can visualize data from Aerobits serial device or TCP/IP data in two formats **CSV** and **JSON**. We can visualize multiple systems such as:

- ADS-B
- UAT
- FLARM
- RemoteID

Table 1: Icons description.

ICON	Description
	ADS-B
	UAT
	FLARM
	RemoteID
	Drone Operator

All input data can be logged into the file.

Warning:

The user can log all input data to the debug.log file only on the main computer with running instance of the **PLANEMAP_V2**.

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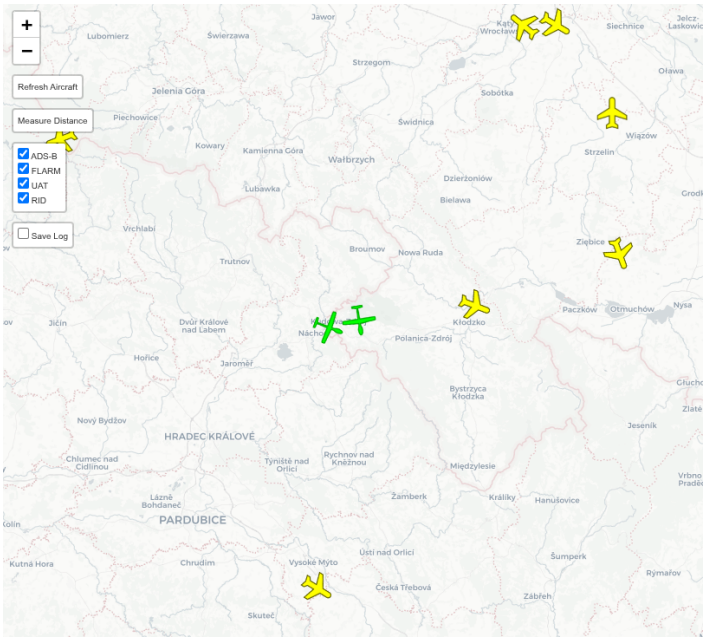
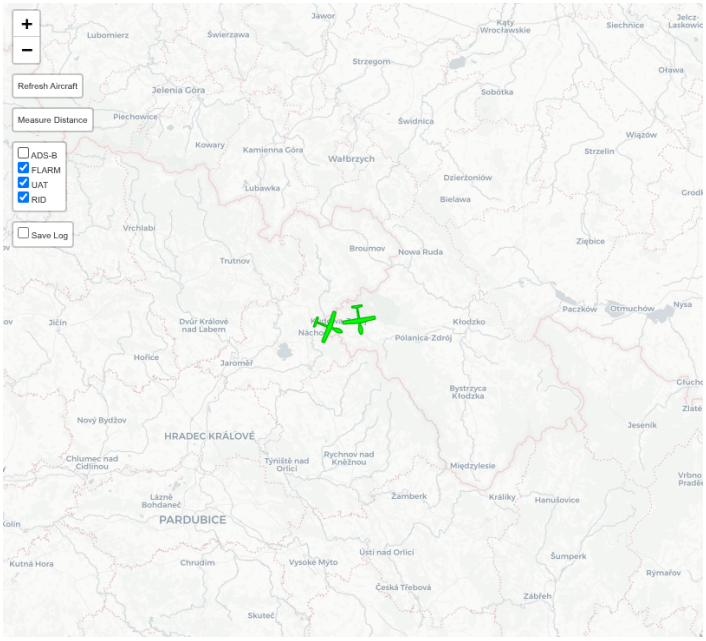
3.1 Filtering options

The user can turn on or turn off visible systems on the map:





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3.2 Configuration file

The PLANEMAP_V2 has special configuration file in **yaml** format for fast startup and customization. Using this file user can connect multiple sources to application, such as:

- serial device
- TCP/IP device
- subscribe MQTT topics

There is no limit for number of sources, PLANEMAP_V2 can parse data in **CSV** or **JSON** formats.

1. To use this feature create **config.yaml** alongside app and paste your own configuration:

```yaml
- broker: "broker.address.com" # GS2L/trkME
  port: 1889
  username: "user"
  password: "password"
  topics:
  - "BROKER/TOPICS"
  websocket: true
  tls: true
- ip: "192.168.1.199" # DRS-1A/F/U/R
  port: 2000
- port: "/dev/ttyUSB0" # Eval TT-SC1/TT-SF2/TT-SU2
  baudrate: 115200
```

2. Save file and run PLANEMAP_V2 app with *config.yaml* as argument.

3.3 Command line

The PLANEMAP_V2 can be run in command line with a few parameters. Just simply run app in command line to print available parameters:

```
./PLANEMAP_V2

Add serial port name as one argument for serial connection.
Default baudrate is 115200 but it can be changed with -b option.
   ./PLANEMAP_V2.exe COM3
   ./PLANEMAP_V2.exe COM3 -b 3000000

Add IP and port as two arguments for TCP connection.
   ./PLANEMAP_V2.exe 192.168.1.10 2000

Add .yaml or .yml file name with connection configuration as one argument.
For mqtt connection.
   ./PLANEMAP_V2.exe config.yaml
```


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