

MAVLINK to Timezero Server

The **MAVLINK to TimeZero Server** is a dedicated computer that converts MAVLINK protocol data into **NMEA0183** protocol, allowing it to be displayed on **TimeZero** software.

Getting Started

Powering On the System

The software comes pre-installed on a **Lenovo computer**. To start the system:

1. **Plug in the power** and turn on the Lenovo computer by pressing the front **power button**.

Network Setup

- The computer uses **DHCP** to obtain an IP address automatically.
- **Connect an Ethernet cable** from the Lenovo computer to a **router**.
- Once connected, the computer will receive an IP address dynamically.

Finding the Computer's IP Address

To locate the IP address of the Lenovo computer on your network:

1. Download and install **Advanced IP Scanner**: <https://www.advanced-ip-scanner.com/>
2. Run the software to scan your local network and find the Lenovo computer's IP address.

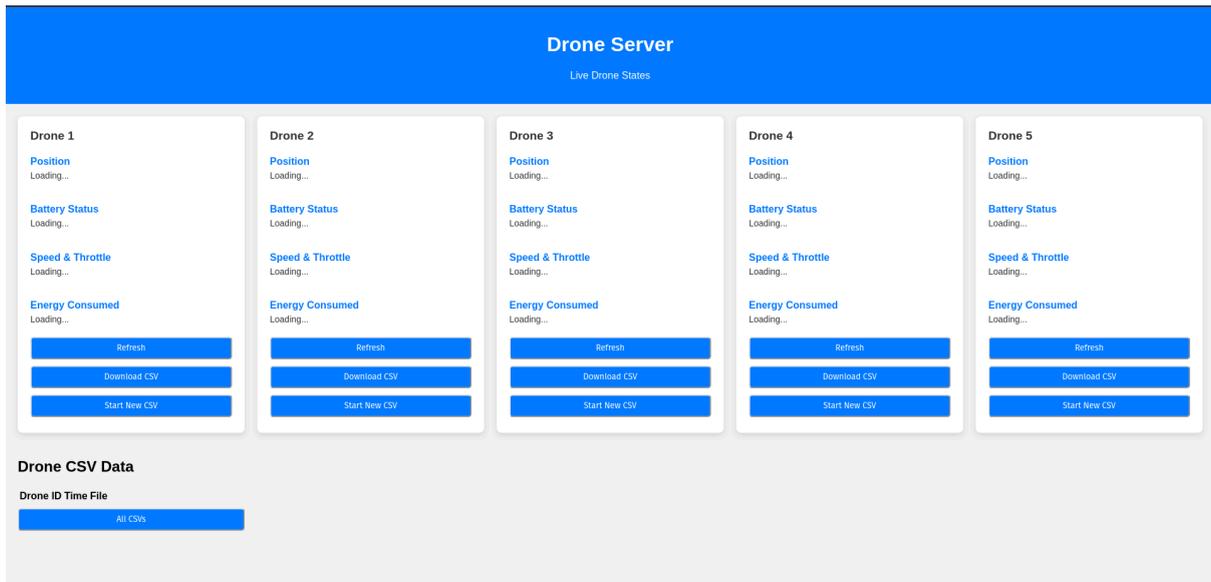
Accessing the Web Interface

Once you have the IP address, open a **web browser** (Google Chrome, Firefox, etc.) and enter:

http://LENOVO_COMPUTER_IP:8080

*(Replace **LENOVO_COMPUTER_IP** with the actual IP address you found in the previous step.)*

This web interface allows you to **monitor connected drones** in real time.



MAVLINK to NMEA0183 Data Conversion

MAVLINK Input

The server listens for **MAVLINK data** via **UDP packets** on the following ports:

- **14551** → Drone 1
- **14552** → Drone 2
- **14553** → Drone 3
- **14554** → Drone 4
- **14555** → Drone 5

NMEA0183 Output

The server provides **NMEA0183 data** via **TCP streams** on these ports:

- **5001** → Drone 1
- **5002** → Drone 2
- **5003** → Drone 3
- **5004** → Drone 4
- **5005** → Drone 5

For people using an Herelink with QGC, use the Mavlink forwarding feature :

https://docs.qgroundcontrol.com/master/en/qgc-user-guide/settings_view/mavlink.html#groun_station to send the Mavlink data to the Levono address. URL to set beeing :

LENOVO_COMPUTER_IP:14551 for drone1 . Adjust according to the drone number.

Connecting to TimeZero

To configure **TimeZero** to receive NMEA data from the server, follow the **official TimeZero manual**:

 [TimeZero User Guide](#)

Use the **Connection Assistant** in TimeZero to establish a TCP connection to the **NMEA0183 stream** you need.

HereLink WiFi Configuration

To simplify **HereLink WiFi connections**, a **5GHz WiFi router** is provided.

Setting Up the Router

1. **Power on the router.**
2. **Connect an Ethernet cable** from the router's **blue (WAN) port** to your **main router**.
3. The router will create a **WiFi network named here1ink20**.
4. The **WiFi password** is:

here1ink20

Now, HereLink devices can connect to this network for seamless communication.