

Network AIS Receiver NWD-01 with WiFi+decode

AvionixTech

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1. Introduction

NWD-01 is a high-performance, portable, and user-friendly AIS ground receiver, offering both network and WiFi connectivity options. The integrated AIS decoder allows NWD-01 to output decoded AIS data, significantly reducing the effort required for customers to decode AIS messages.





NWD-01 includes:

- ①、 NWD-01 unit *1
- ②、 Power *1
- ③、 WiFi antenna *1
- ④、 AIS antenna cable 10 meters *1 (please specify if you need longer cable)
- ⑤、 AIS antenna with clamp *1

2. Functions

- NWD-01 offers connectivity options via both network cables and WiFi for data output.
- NWD-01 provides the convenience of outputting both standard AIS messages and decoded AIS data, eliminating the need for customers to decode AIS messages themselves.
- NWD-01 is capable of outputting standard AIS messages and decoded AIS data.
- Small in size and light in weight, NWD-01 is highly portable and can easily fit into a backpack. It can be powered by a 12V rechargeable battery, making it ideal for on-the-go use.
- NWD-01's IP address can be configured to enable direct connection with a computer without the need for routers. However, it can also be configured to connect with a computer via routers, providing flexibility according to user preference.
- NWD-01 supports both static IP address assignment and DHCP configuration.
- Compatible with OpenCPN software, ensuring seamless integration and compatibility for users.

3. Optional

- Surge Protector: Provides protection against power surges to ensure the safety of the device.
- IP67 Waterproof Version: We offer the NWD-01P, equipped with a

weather-resistant enclosure and IP67 waterproof rating, specifically designed for outdoor use.

- Dual Unit for High Reliability: Incorporates dual units to enhance reliability and ensure continuous operation.
- OEM/Customization. All our products can be supplied fully customized with your brand and logo. We can even do customized form factors, enclosures and packages on your requirement. This OEM/Customization service enables you to have your own unique product in minimal time with no risk.
- AIS IQ data output and storage. We provide the capability to output and store IQ data for analysis purposes. Please feel free to contact us with your specific requirements.
- Integration of AIS, ADS-B, and ACARS: We offer integration of AIS, ADS-B, and ACARS receivers, commonly referred to as a 3A receiver. We can accommodate this configuration.
- We welcome any additional requirements you may have, and we are eager to collaborate with you to meet your needs!

4. Specifications

- Frequency: 161.975/162.025 MHz
- Sensitivity: better than -112 dbm
- Dynamics: -112dbm to +10dbm
- Power Supply: DC 12V, 2A
- Power Consumption: less than 10W
- Physical Size: 24.1*15.3*6.5 cm (not include antenna connectors)
- Antenna Connector: N/F

5. Configuration

The default cable network IP address of NWD-01 is: 192.168.10.33 The default Wifi IP address is DHCP.

5.1 Log in and Start

5.1.1 Power on NWD-01 and connect NWD-01 to computer via network cable, and set the IP of the computer to the same network segment as the NWD-01.

5.1.2 Enter the NWD-01 IP address 192.168.10.33 in browser

Login

Username

Password

[Sign In](#)

5.1.3 Enter user name and password:

User name: admin

Password: aaareceiver

5.1.4 Enter NWD-01 control page Dashboard

AIS Receiver NWD-01

- Dashboard
- Network Setting
- Dataport Setting
- Logout

Dashboard

Service	Process running
Cable	Manual(Static IP)
IP	192.168.10.33
Netmask	255.255.255.0
Default Gateway	192.168.10.1
WIFI	Automatic(DHCP)
Reboot System	Reboot Shutdown

The status of <Service> should be <Process running>, otherwise click <Process start> to start service.

AIS Receiver NWD-01

- Dashboard
- Network Setting
- Dataport Setting
- Logout

Dashboard

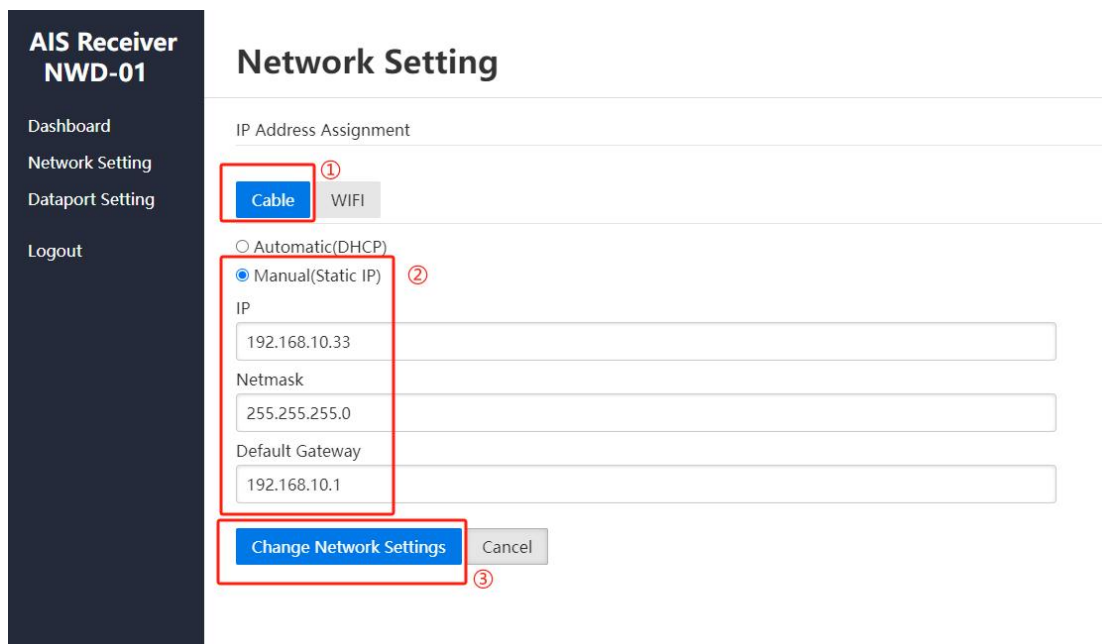
Service	Process start
Cable	Manual(Static IP)
IP	192.168.10.33
Netmask	255.255.255.0
Default Gateway	192.168.10.1
WiFi	Automatic(DHCP)
Reboot System	Reboot Shutdown

5.2 Network configuration

Important note:

- **Please first use cable to login and set your WiFi, this might help if you forgot your static IP address.**
- **Considering WiFi instability and complexity, WiFi is just for supplementary, not guaranteed and in warranty.**
- **When you change NWD-01 to static IP, please make sure the IP address, subnet mask and gateway are correct. And make sure you remember all these configurations. Otherwise, you may not be able to access NWD-01. Well, if you do forget and you did set WiFi the first place, WiFi DHCP might, might help you.**
- **Cable and WiFi can't work at the same time. If you want to use WiFi, disconnect your RJ45 cable.**

Click Network Settings:

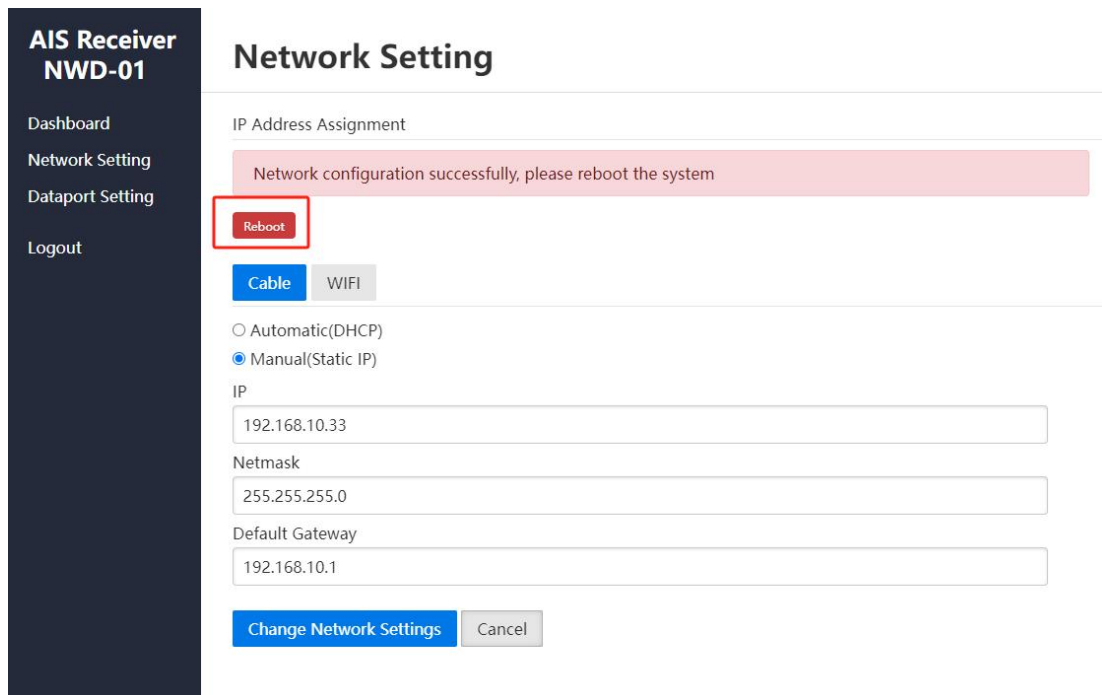


Click Cable to configure Cable network. Enter the IP address, subnet mask, gateway to configure. Click WiFi to configure WiFi network. Enter the SSID and PSK (password).

Click Change Network Settings:

(Please note, when you Click Change Network Settings, both cable and WiFi settings would be changed.)

Click Reboot:



New IP address is valid after reboot.

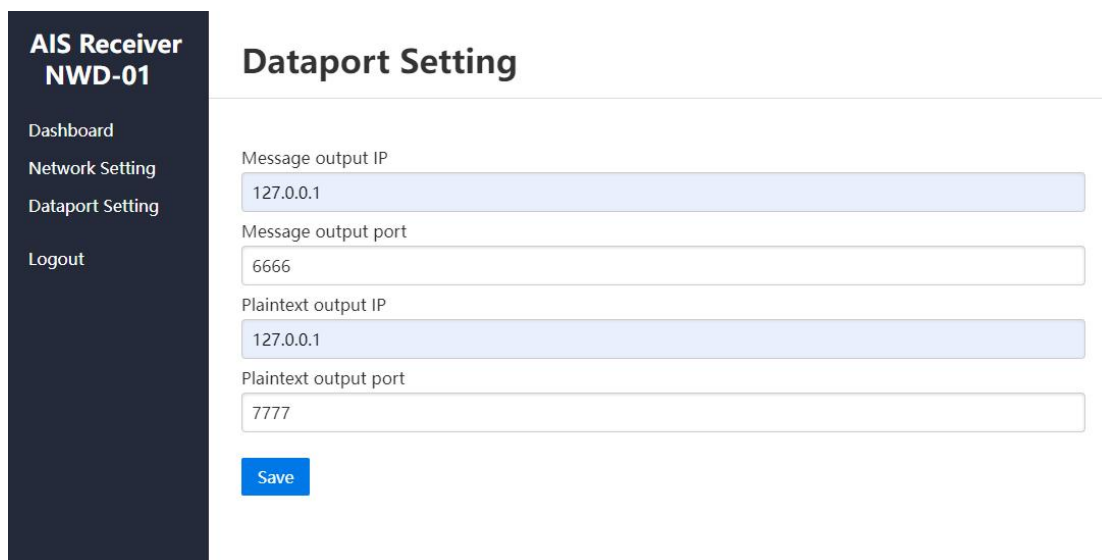
It's the same for WiFi network configuration.

NWD-01 supports DHCP for cable and WiFi. Open the router configuration page DHCP client list, you can see the IP address of NWD-01 (host name: receiver). As long as the computer is in the same network with NWD-01, you can access the IP address obtained by NWD-01 through DHCP.

It is recommended that at least one of cable and Wifi be reserved for DHCP to avoid forgetting your static IP.

5.3 Dataport configuration

Click Dataport Setup:

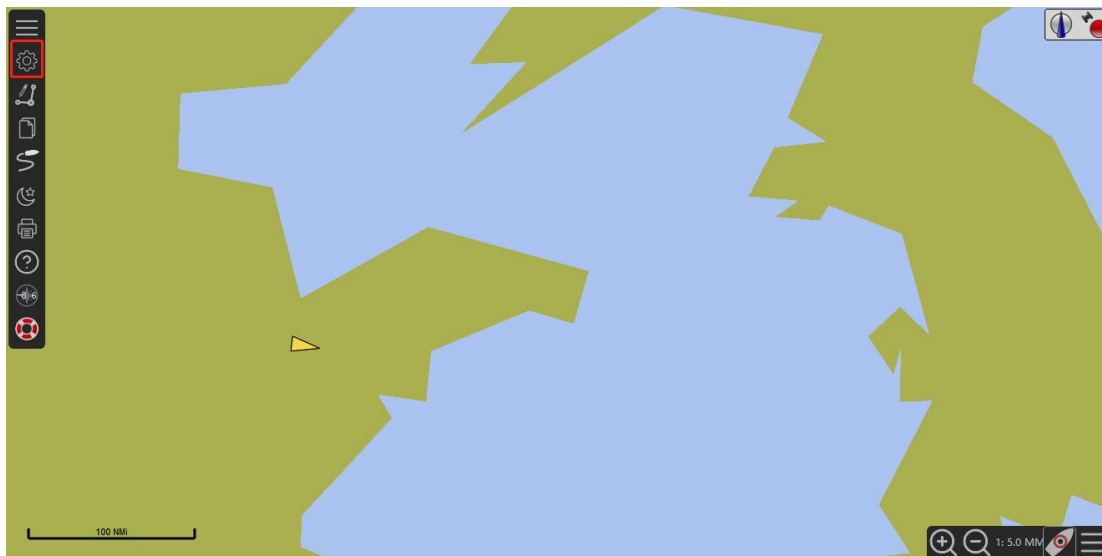


The screenshot shows the 'Dataport Setting' configuration page for the AIS Receiver NWD-01. The page has a dark sidebar on the left with the following menu items: 'AIS Receiver NWD-01', 'Dashboard', 'Network Setting', 'Dataport Setting', and 'Logout'. The main content area is titled 'Dataport Setting' and contains four input fields: 'Message output IP' (127.0.0.1), 'Message output port' (6666), 'Plaintext output IP' (127.0.0.1), and 'Plaintext output port' (7777). A blue 'Save' button is located at the bottom of the form.

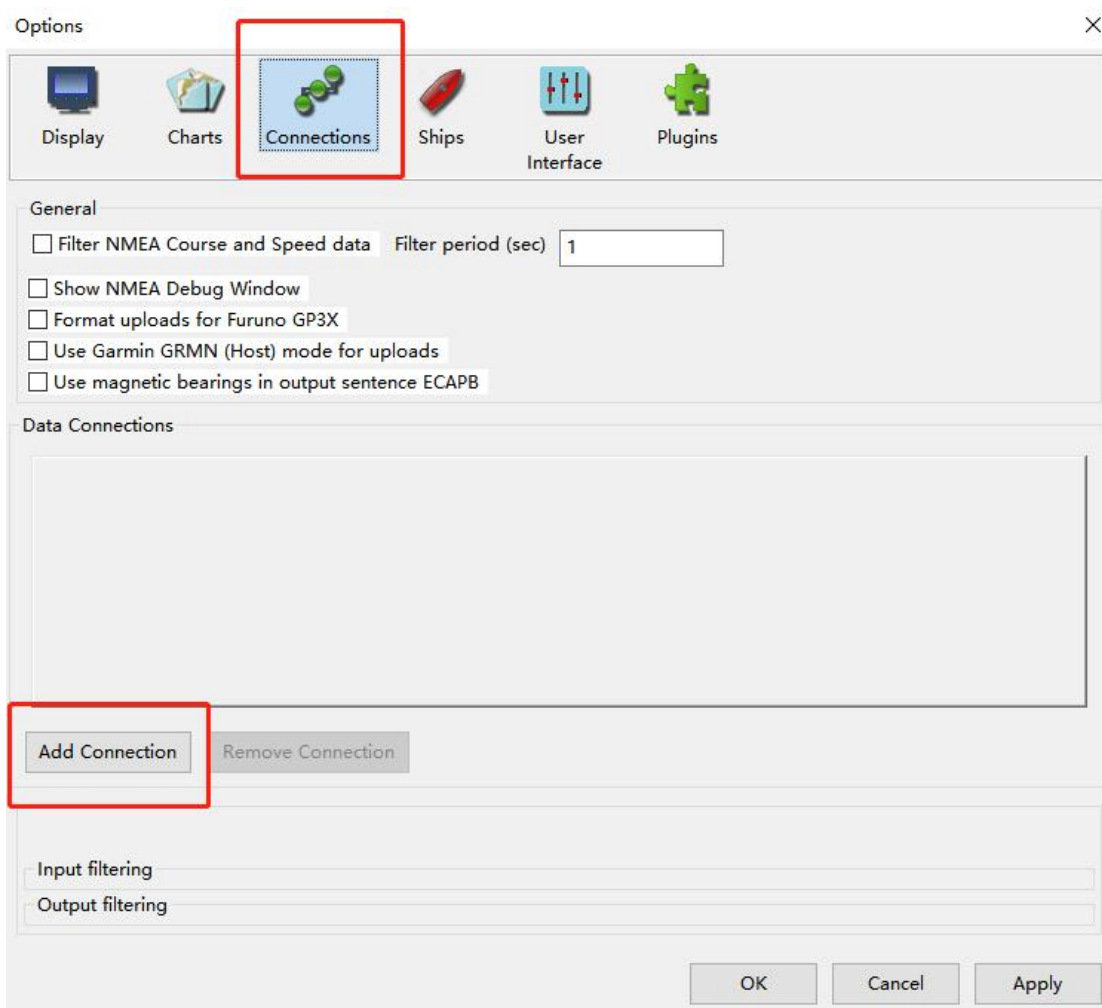
NWD-01 would work as UDP client. Message means the standard AIS messages with timestamp. Plaintext means decoded AIS data with timestamp.

6. Works with OpenCPN

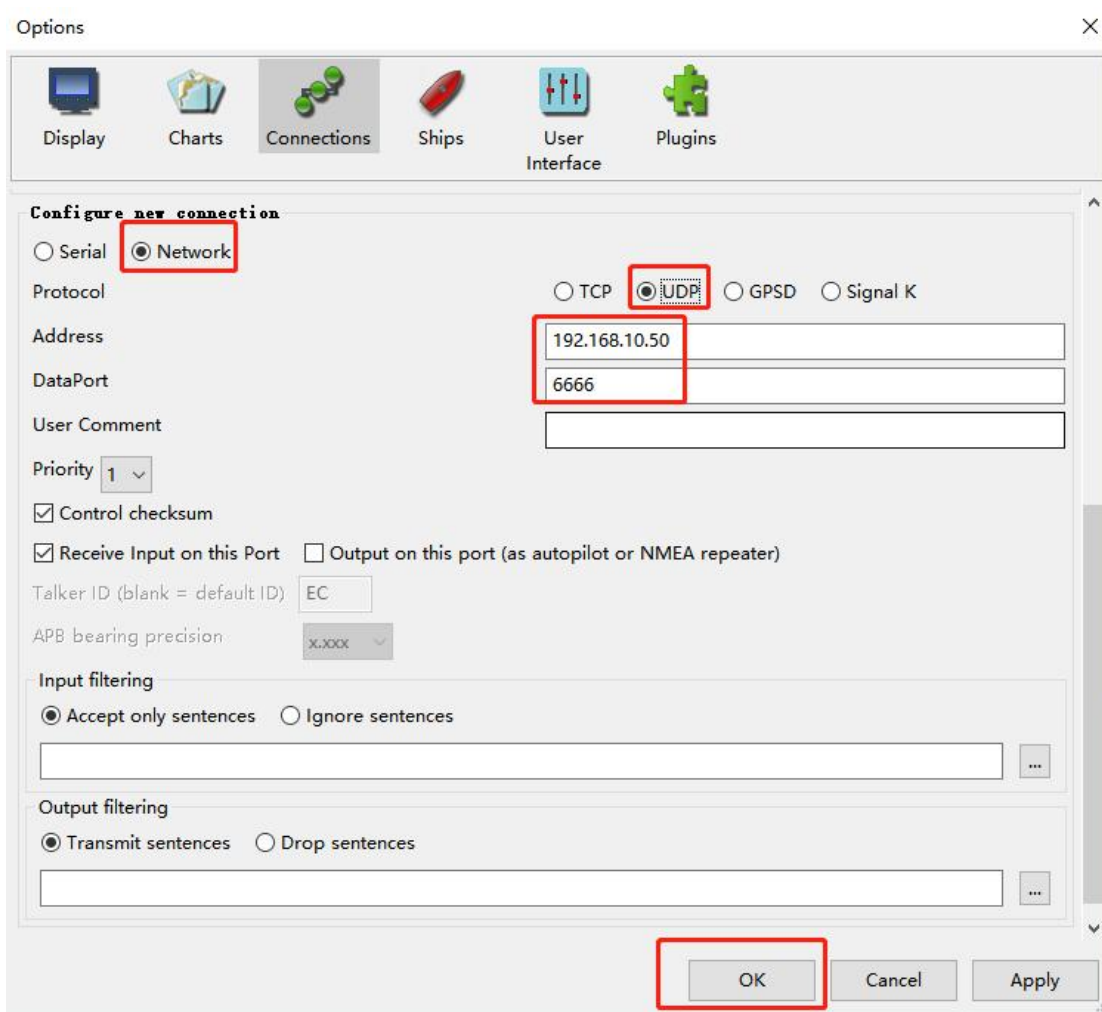
NWD-01 can work with OpenCPN
Open OpenCPN, click set



Click Connections, and then click Add Connection



Select Network, UDP. In the Address area, input the NWD-01 message output IP (usually this is your computer IP). In DataPort area, input the message output port (in this manual example it's 6666, in 5.3), click OK.



Done!

