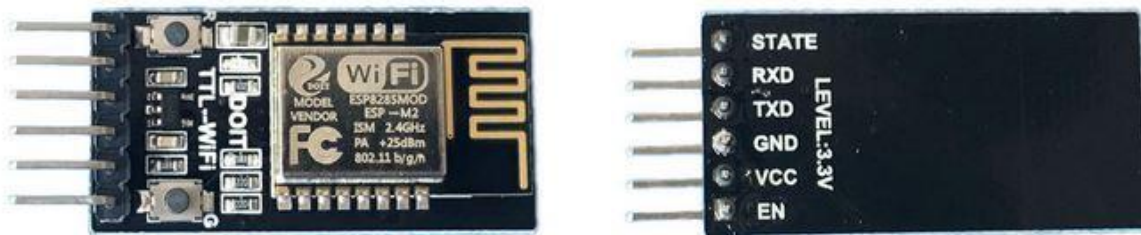# AIS over WiFi with the DT-06 WiFi module

dAISy 2+ comes with an auxiliary serial port that can be combined with the inexpensive DT-06 WiFi module to make AIS data available to mobile devices like laptops, tablets and smartphones.


What you need

- DT-06 WiFi module, available for US$4 to $10 on Ebay and other online shops. We use https://www.banggood.com/Geekcreit-DT-06-Wireless-WiFi-Serial-Port-Transparent-Transmission-Module-TTL-To-WiFi-p-1141047.html
- An app that accepts AIS from a network connection, like for example OpenCPN, BoatBeacon or SailGrib. In this document, we will use OpenCPN.

Setup the basics

Remove power from dAISy. Plug the WiFi module into AUX Serial so that VCC and GND on the WiFi module line up with labels on dAISy 2+. dAISy TXD will be connected to WiFi RXD, and dAISy RXD to WiFi TXD. Connect dAISy to power. A blue light on the WiFi module turns on.

When first powered up, the module will show up as a WiFi access point with the name Doit_WiFi_x, where are the last 6 characters of the module's MAC address. Connect to this access point with a computer or mobile device.
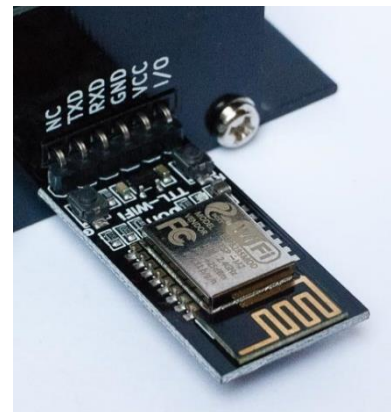
Open a browser and enter http://192.168.4.1 in the address bar. After pressing enter you will see the configuration menu of the WiFi module.

Go to MODULE > Serial to configure the communication between the module and dAISy. Change BaudRate to 38400 and leave the remaining fields at their defaults (8, NONE, 1, 50). Click Save.

Go to MODULE > WiFi. In the section Soft AP Settings, we recommend entering a Password to restrict access to the module. The password must be 8-63 characters. Write down the password, as losing it may permanently lock you out of the configuration of the WiFi module.

Configure as standalone WiFi access point with a TCP server

In this mode, dAISy creates its own WiFi network. To receive AIS data, mobile devices must be connected to this network.

Go to MODULE > WiFi. In the section SOFT AP Settings, select Enable. Leave the other settings at their defaults. Click Save.

Go to MODULE > Networks. For Socket Type select TCP Server. Set TCP Server Local Port to 9000. Leave the other settings at their defaults. Click Save.

Go to MORE > Restart. The module restarts and the settings you've made are now active.

Configure as a TCP server connected to your existing WiFi network

In this mode, dAISy uses your existing WiFi network. To receive AIS data, mobile devices will use that same network.

Go to MODULE > WiFi. In the section Station Settings, select Enable. Enter or select the SSID name of your WiFi network. Enter the password of your WiFi network. Select Enable DHCP. Click Save.

Go to MORE > Restart. The module now restarted and the settings you've made are now active.

Go to STATUS and note down the Station IP Address. This is the IP address your WiFi network assigned to the module.
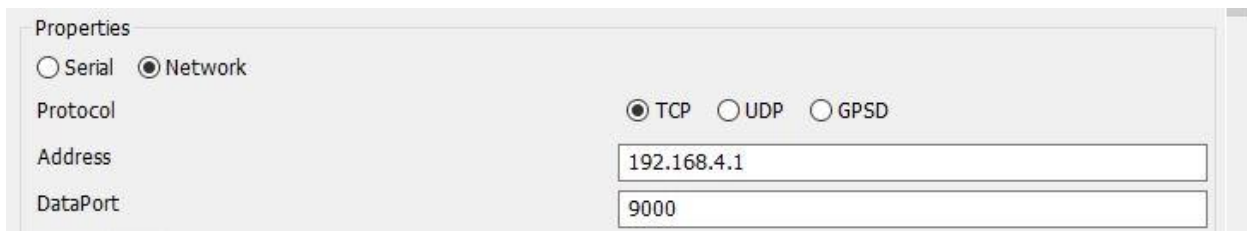
Go to MODULE > Networks. Select Socket Type TCP Server. Set TCP Server Local Port to 9000. Leave the other settings at their defaults. Click Save.

Go to MORE > Restart. The module restarts and the settings you've made are now active.

Configure OpenCPN

Applications that process the AIS data must be configured to receive data from the TCP server with IP address you noted down on port 9000. Here we use OpenCPN, but the procedure will be similar with other applications.

Start OpenCPN. Go to Options > Connections. Click Add Connection to create a new connection. Select Network, Protocol TCP. If you configure the WiFi module as standalone access point, enter 192.168.4.1 as Address. Otherwise, enter the Station IP Address your network assigned. Enter 9000 as DataPort.

Press OK to save and activate the new connection. OpenCPN should now start receiving AIS data.