

## IMPORTANT INFORMATION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation

THIS PRODUCT  
CONTAINS FCC ID TE7-WR841NXV9

# iNavConnect Wireless Router

Installation and instruction Manual

**NOTE:-** This manual is only applicable to iNavConnect units built after March 2015. These units can be identified by the number of Wi-Fi antennas fitted. Units prior to March 2015 had one antenna while units built after March 2015 and for which this manual is applicable have two Wi-Fi antennas.



## 1. Introduction

Congratulations on the purchase of your iNavConnect Wireless Router. It is recommended that your router is installed by a professional installer. If the iNavConnect is to be connected to the internet via a Digital Yacht WL510 long range Wi-Fi Adaptor or to a Fusion or other marine network, it is recommended that this installation/configuration is carried out by someone with suitable IT experience and knowledge of Ethernet networks.

The iNavConnect can be used in the following configurations;

- 1) As a simple Wireless Access Point or Wireless Router for setting up a wireless network on-board a boat
- 2) In conjunction with a Digital Yacht WL510 to share the long range internet connection with everyone on-board
- 3) With a Fusion 700/750 series marine entertainment system allowing control via the Fusion-Link app.
- 4) A combination of the above configurations

 **Before operating the unit you should familiarise yourself with this Quick Start manual and any manuals for the equipment you intend to interface with iNavConnect.**

## 2. Before you start

You will need the following items and tools to complete the installation:

- The iNavConnect Router
- RJ45 Cat 5 cable to connect between the iNavConnect and your Ethernet network
- A connection to the boat's 12v/24v DC supply where the unit is to be installed.
- M3 or M4 screws or other fixings appropriate to the mounting location.

To test and configure the iNavConnect you will need:

- A PC, Mac, iPhone/iPad or other wireless device that has a web browser such as IE, Chrome, Firefox, etc.

To connect the iNavConnect to a Fusion 700/750 series, you will need a:

- Fusion 700/750 Series system
- A standard RJ45 Network cable
- A latest copy of the Fusion-Link App running on a compatible iPhone/iPad or Android Device.

To use the iNavConnect to share a long range Wi-Fi internet connection on board the boat, then you will need a;

- Digital Yacht WL510 Long Range Wi-Fi Adaptor

## 3. Installation

Before starting installation select a suitable location for the iNavConnect Router. The unit is designed for below deck mounting on board a boat and is not water resistant. It should be installed in a cool, dry location and can be mounted on a vertical or horizontal surface. When locating the unit you should consider:

- Routing of power and network cables to the unit.
- Provision of sufficient space around the unit for cable connections.
- Routing of optional network connections to a WL510 Long Range Wi-Fi Adaptor (if necessary).
- Maintaining the compass safe distance of 0.5m.
- Best location for Wi-Fi reception i.e. not inside a metal enclosure



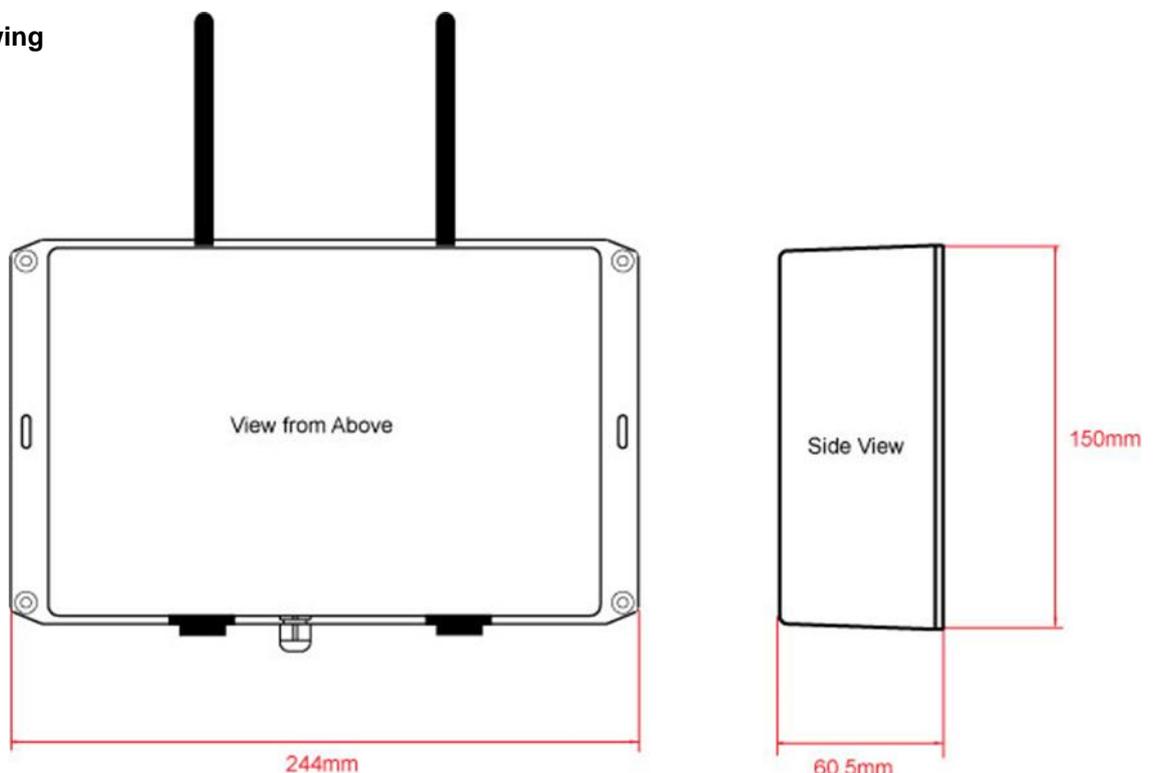
## Installation Step 1

- Siting of the iNavConnect is critical for Wi-Fi reception. The unit features two 5dB antennas which should give up to 30m range but it is important that the unit is sited in a central location within the boat to try and ensure that Wi-Fi reception is good in all areas of the boat.
- If the unit is to be hidden away behind a bulkhead, Wi-Fi reception maybe reduced. In this situation, it is advisable to fit SMA extension cables, which are available from many suppliers. The Extension cable length should be kept to a minimum, between 1m and 3m would be recommended.
- To fit the SMA Extension cables, unscrew one of the 5dB antenna from the iNavConnect and screw the extension cable between the iNavConnect and the antenna, repeat for the second antenna. Now you will be able to hide the iNavConnect unit behind a bulkhead and just mount the antennas in the cabin for maximum Wi-Fi range.
- Provide power connections to the unit from the boat's supply. Power is connected to the iNavConnect's two core Power cable on the Red and Black wires. The Red wire is the positive (+) connection. The Black wire is the negative (-) connection. Connect the wires to the nearest source of primary 12V or 24V DC power. **Ensure that the supply is connected via a suitable fuse or circuit breaker.** Add the fuse in the positive power connection to the unit if necessary.
- **IMPORTANT** – if connecting the iNavConnect to a Digital Yacht WL510 Long Range Wi-Fi Adaptor, make sure that the WL510 and iNavConnect are both wired on the same circuit breaker/switch and are powered up at exactly the same time. This ensures that correct network negotiations are carried out after power up.

## Installation Step 2

- Use suitable fixings (not supplied) to fix the iNavConnect to a flat surface – using the dimensions and details shown in the drawing below. Note that the unit may be installed in any orientation.

### Dimension drawing





- Once the unit is secured in place, position the antennas so that they are pointing vertically upwards or if connected via extension leads, mount and secure the antennas within the cabin area.

### Installation Step 3

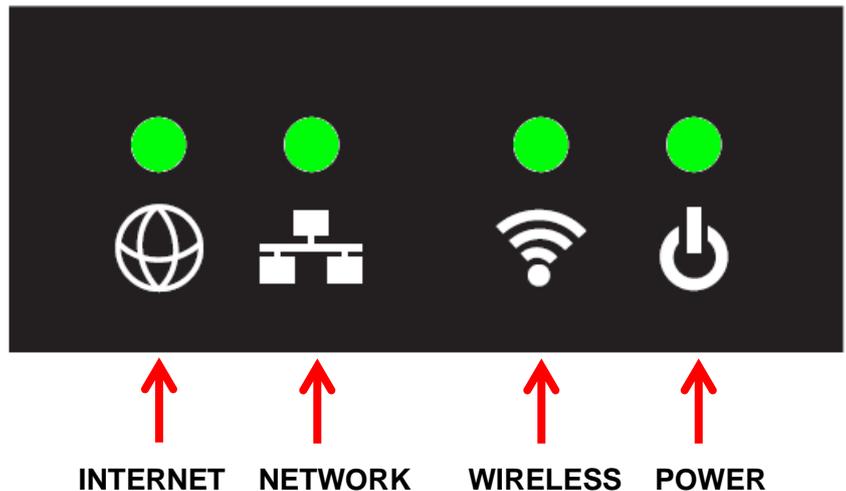
- The following steps only need to be followed if you are connecting the iNavConnect to a Digital Yacht WL510 long range Wi-Fi Adaptor.
- Using the network cable supplied with the iNavConnect or the WL510, insert one end in to the iNavConnect socket labelled **“WAN Internet (WL510 Option)”** and the other end in the WL510 network socket.
- We have had reports of the Login Page of some “Captive Portal” marina hotspots, not appearing when you try to go to the internet and in this situation your browser will report that the internet connection is not available. Please consult our latest Tech Note 00039-2013 for information on how to fix this problem.

### Installation Step 4

- The following steps only need to be followed if you are connecting the iNavConnect to a Fusion 700/750 Series Marine Entertainment System.
- For connection to a Fusion system, you will need a normal RJ45 network cable. Connect the network cable between the Fusion Ethernet socket and the iNavConnect socket labelled “Navigation Network/LAN”.

### Installation Step 5

- Now that we have all of the connections made, we can apply power to the iNavConnect. If you are using the iNavConnect with a Digital Yacht WL510, they must be turned on at the same time, preferably wired on the same switch/circuit breaker. This ensures that the WL510 is ready to give the iNavConnect the correct internet connection settings as it powers up.



- As the iNavConnect powers up the LEDs on the top side of the unit will briefly illuminate and then only the Power LED will stay illuminated. Below is an image that shows what each LED indicates.
- After a few seconds the Wireless LED will illuminate to indicate that the iNavConnect has created the Wireless network – once this occurs your wireless device should be able to scan and connect to iNavConnect.
- If you have a Fusion system connected, the “NETWORK” LED should illuminate. NOTE – this LED will flash when data is being transmitted between the Fusion Network and the iNavConnect.
- If you have a WL510 system connected, the “INTERNET” LED should illuminate. NOTE – this LED will flash when data is being transmitted between the WL510 and the iNavConnect.
- When a wireless device is connected to iNavConnect, the “WIRELESS” LED will flash.



## 4. Network Configuration

Digital Yacht have pre-configured the iNavConnect so that in most situations it will work straight out of the box with no additional configuration required. The iNavConnect default settings are as follows;

IP Address	-	192.168.1.1
Subnet Mask	-	255.255.255.0
DHCP Range	-	192.168.1.100 to 192.168.1.250
SSID	-	iNavConnect
Password	-	inavconnect

The iNavConnect network settings have been chosen for maximum compatibility with marine equipment and marina hotspots and we do not recommend changing them but if you are experienced with configuring PC networks and wireless routers you can easily change all of the network settings via the Router's web interface in the normal manner – this procedure is not covered in this Quick Start Guide but if you need further assistance in setting up your iNavConnect please contact; [support@digitalyacht.co.uk](mailto:support@digitalyacht.co.uk).

### Using iNavConnect with WL510

If you are using the iNavConnect with the Digital Yacht WL510 long range Wi-Fi adaptor, then the network settings that your wireless device should get when connecting to the iNavConnect are:

IP address	-	In the range 192.168.1.100 to 192.168.1.250
Subnet Mask	-	255.255.255.0
Gateway	-	192.168.1.1
DNS	-	192.168.10.20, 191.168.1.1 (Secondary)

If your wireless device does not receive network settings in this range, then correct negotiation between the WL510 and iNavConnect has not occurred. Make sure that both units are on the same switch/circuit breaker and have powered up correctly.

### Using iNavConnect with Fusion network

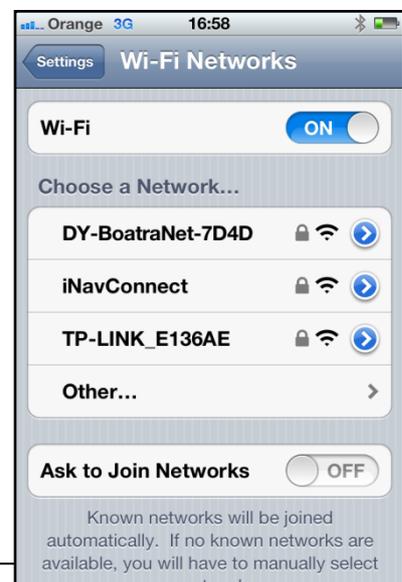
If you have correctly connected the iNavConnect to the Fusion 700/750 series, then after about 20-30secs of powering up the units, the Fusion head unit should get an IP address from iNavConnect in the range 192.168.1.100 to 192.168.1.200. You can check this by going to the "Settings" Menu and selecting the "About" screen on the Fusion unit.

## 5. Wirelessly Connecting to iNavConnect

To connect wirelessly to iNavConnect, simply initiate a scan of wireless networks on your wireless device i.e. Laptop, iPhone, tablet, etc. and select the "iNavConnect" network.

Below are two screen shots showing this procedure on an iPhone. When you select "iNavConnect" you will be prompted to enter a wireless password – type in "inavconnect" (all lower case and do not include the quotation marks).

When you have wirelessly connected to iNavConnect, you can start to share the long range Wi-Fi connection, if you have a WL510 connected or run the Fusion-Link App to control your entertainment system.



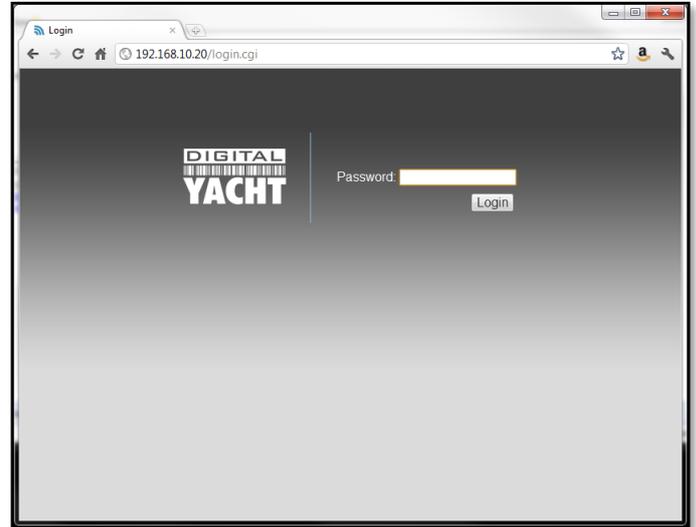


## 6. Sharing Long Range Wi-Fi Connection

When you use the iNavConnect with the Digital Yacht WL510, all routing of the wireless connections to the internet are automatically configured.

After you have connected wirelessly to the iNavConnect as detailed in section 4, you should be able to display the WL510 login page by typing 192.168.10.20 in to the address bar of your internet browser, see screen shot.

This shows that communication between the iNavConnect and WL510 is working correctly and you should now be able to log on to the WL510 and initiate a long range wi-fi connection with a Marina or local hotspot in the normal manner detailed in the WL510 Quick Start Guide. Once the long range connection is established then all wireless devices connected to iNavConnect will be able to access the internet.



## 7. Changing the Wireless Settings of your iNavConnect

The only iNavConnect settings that most users will want to change are the Wireless Network Name (SSID), the wireless password and perhaps the country of operation, if you are sailing from country to country.

The web interface of the iNavConnect can be reached at <http://192.168.1.1> on later units and <http://10.0.0.1> on earlier units. The admin password is...

### **inavconnect**

We recommend following this video on how to change the wireless network settings...

<https://youtu.be/JcW7X6lfx0>



# PRODUCT HANDBOOK

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