

# Sneak Preview



Technical information on Digital Yacht's brand new NavDoctor product  
"For a Healthy marine network"

June 2020

# What is **NAVDDoctor** ?

- World's first wireless NMEA 2000 Diagnostics Tool
- Easy “plug ‘n’ play” connection to NMEA 2000 network
- No special software required, uses the browser of any mobile device
- Shows devices and data on the NMEA 2000 network
- Health checks the NMEA 2000 network

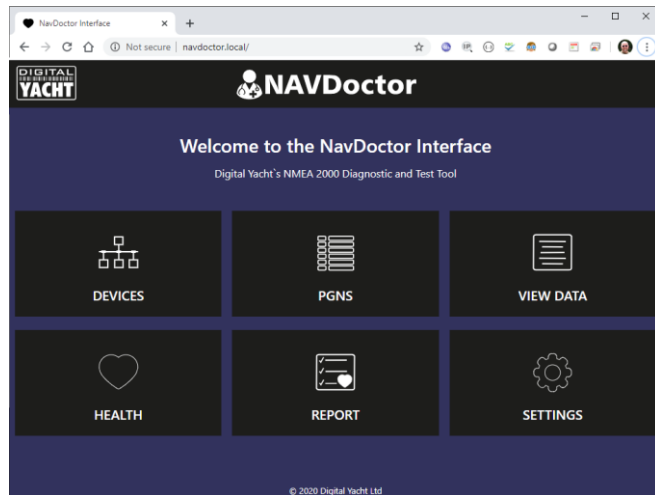


## Features



# What can NAVDoctor do?

1. Display a network Device List
2. Query a Device's Product Info
3. Shows all PGNs being displayed
4. Decodes individual PGNs
5. View and log "RAW" data
6. Conduct a network Health Check
7. Display and print test report



# Pages

# Devices



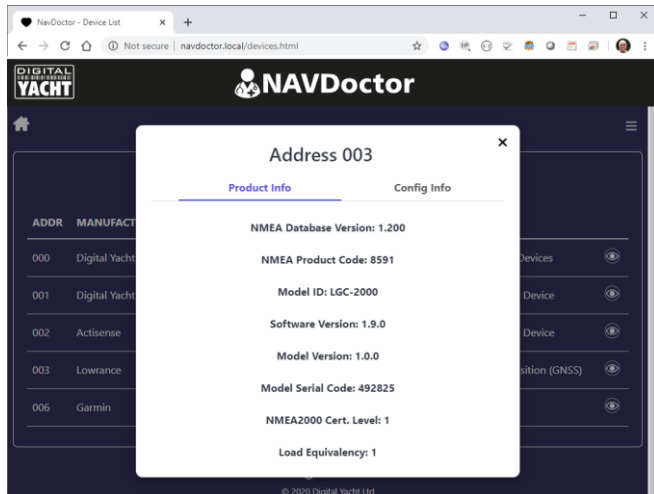
- Shows the following data:
  - CAN Address
  - Manufacturer (if known)
  - 64 bit NMEA NAME
  - Device Instance
  - Class and Function

The screenshot shows a web browser window with the address bar displaying "navdoctor.local/devices.html". The page has a dark blue header with the "DIGITAL YACHT" logo on the left and the "NAVDoctor" logo on the right. Below the header is a home icon and a menu icon. The main content area is titled "DEVICE LIST TABLE FOR NAVDOCTOR" and contains a table with the following data:

ADDR	MANUFACTURER	CAN NAME	DIN	CLASS	FUNCTION
000	Digital Yacht	1300a036008214c0	0	System Tools	Diagnostic Devices
001	Digital Yacht	6126a736008232c0	0	Inter/Intranetwork Device	PC Gateway Device
002	Actisense	10f92122008232c0	0	Inter/Intranetwork Device	PC Gateway Device
003	Lowrance	19858711009178c0	0	Navigation	Ownship Position (GNSS)
006	Garmin	f3cbb41c0082f0c0	0	Display	Display

At the bottom of the page, there is a "Refresh" button and a copyright notice: "© 2020 Digital Yacht Ltd".

- Click on the “Eye” icon to display the following data:
  - NMEA database version
  - NMEA Product Code
  - Manufacturer specific model, version and serial number
  - Certification Level
  - LEN number

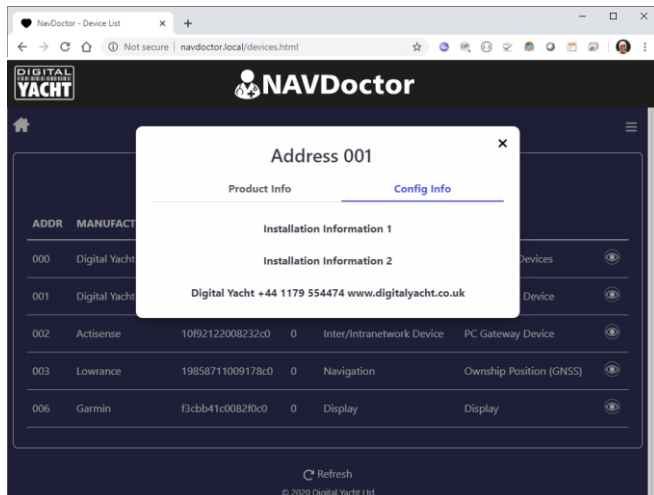


# Pages

## Config Info



- Click on the “Config Info” tab to display the following data:
  - Installation Information 1
  - Installation Information 2
  - Manufacturer’s Information



# Pages

# PGNs



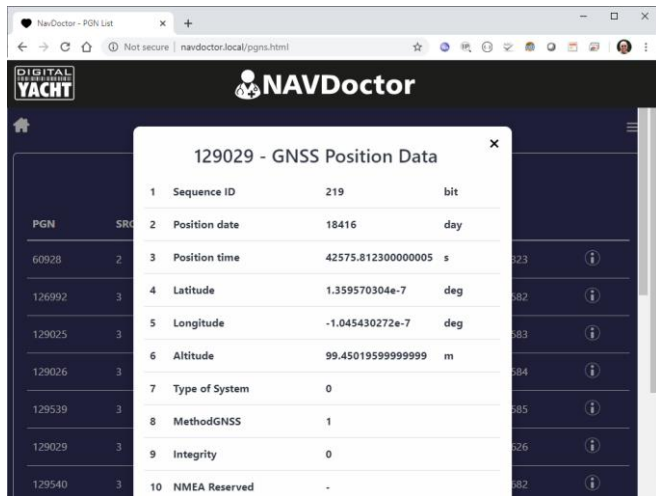
- All of the received PGNs are displayed with the following data :
  - PGN number
  - Source Address
  - Destination Address
  - Description
  - Time Received in seconds
- Click a column heading to sort

The screenshot shows a web browser window with the title "NavDoctor - PGN List" and the URL "navdoctor.local/pgns.html". The page has a dark blue header with the "DIGITAL YACHT" logo on the left and the "NAVDoctor" logo on the right. Below the header is a home icon and a menu icon. The main content area is titled "PGN LIST TABLE FOR NAVDOCTOR" and contains a table with the following data:

PGN	SRC	DST	DESCRIPTION	TIME	
60928	2	255	ISO Address Claim	1019.430	
126992	3	255	System Time	1030.687	
129025	3	255	Position, Rapid Update	1030.688	
129026	3	255	COG & SOG, Rapid Update	1030.689	
129539	3	255	GNSS DOPs	1030.690	
129029	3	255	GNSS Position Data	1030.730	
129540	3	255	GNSS Sats in View	1030.786	

# Decode PGN

- Click “Info” icon to decode that PGN in pop-up window
- Field Name, value and type of data displayed



The screenshot shows the NAVDoctor web application interface. The main window displays a list of PGNs (60928, 126992, 129025, 129026, 129539, 129029, 129540) with their corresponding sequence IDs (2, 3, 3, 3, 3, 3, 3). A pop-up window titled "129029 - GNSS Position Data" is open, displaying the following data:

Field Name	Value	Type
1 Sequence ID	219	bit
2 Position date	18416	day
3 Position time	42575.8123000000005	s
4 Latitude	1.359570304e-7	deg
5 Longitude	-1.045430272e-7	deg
6 Altitude	99.450195999999999	m
7 Type of System	0	
8 MethodGNSS	1	
9 Integrity	0	
10 NMEA Reserved	-	

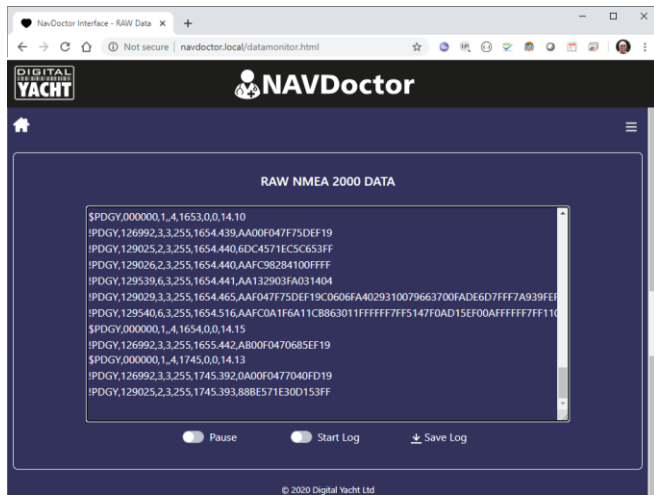


# Pages

## View Data



- All received “RAW” N2Net data is displayed in real time
- Pause button to stop scrolling
- Start Log button stores all “RAW” data in a text file
- Stop Log button closes the log file
- Save Log button downloads the Log file to your mobile device



# Pages Health



- NavDoctor carries out a series of health checks on the network:
  - NMEA 2000 Supply Voltage
  - Network Load
  - Dominant Differential Voltage
  - Recessive Differential Voltage
  - Number of devices on network
  - Number, type and rate of Error Frames
  - Bus State



# Pages Report



- All key network properties and health checks are displayed in a report
- Installer can enter boat name and who carried out the test
- Installer can print/save/email the report for the customer job record

The screenshot shows a web browser displaying the NAVDoctor Network Test Report. The page has a dark blue header with the NAVDoctor logo and title. Below the header, there is a table listing network devices. The table has columns for ADDR, MANUFACTURER, CAN NAME, DIN, CLASS, and FUNCTION. The data rows are as follows:

ADDR	MANUFACTURER	CAN NAME	DIN	CLASS	FUNCTION
000	Digital Yacht	1300w036000214c0	0	System Tools	Diagnostic Devices
002	Garmin	15cbac1c0082f0c0	0	Display	Display
043	Digital Yacht	d7d1bc36000c80c0	0	Communication	AEI

Below the table, there is a section for network health checks, each with a green checkmark icon and a value:

- Number of Devices on the Network = 3
- Bus Load = 4
- Bus Supply Voltage = 12.04
- Bus Dominant Voltage = 2.19
- Bus Recessive Voltage = 0.02
- Error Frame = 0

At the bottom, there are two red X icons indicating fields that need to be filled out:

- Boat Name: [Empty text box]
- Tested By: [Empty text box]

At the very bottom, there is a "Date / Time" field showing "14:23 05/05/20".

Footer: © 2020 Digital Yacht Ltd. There are also "Refresh" and "Print" buttons.

# Pages Settings

- In this page the NavDoctor's access point details can be changed
- Alternatively, NavDoctor can be configured to join another network
- The network data mode can be configured to TCP or UDP – unlikely to be changed
- The NavDoctor's serial number, FW versions and free memory are displayed
- A firmware update can be performed

