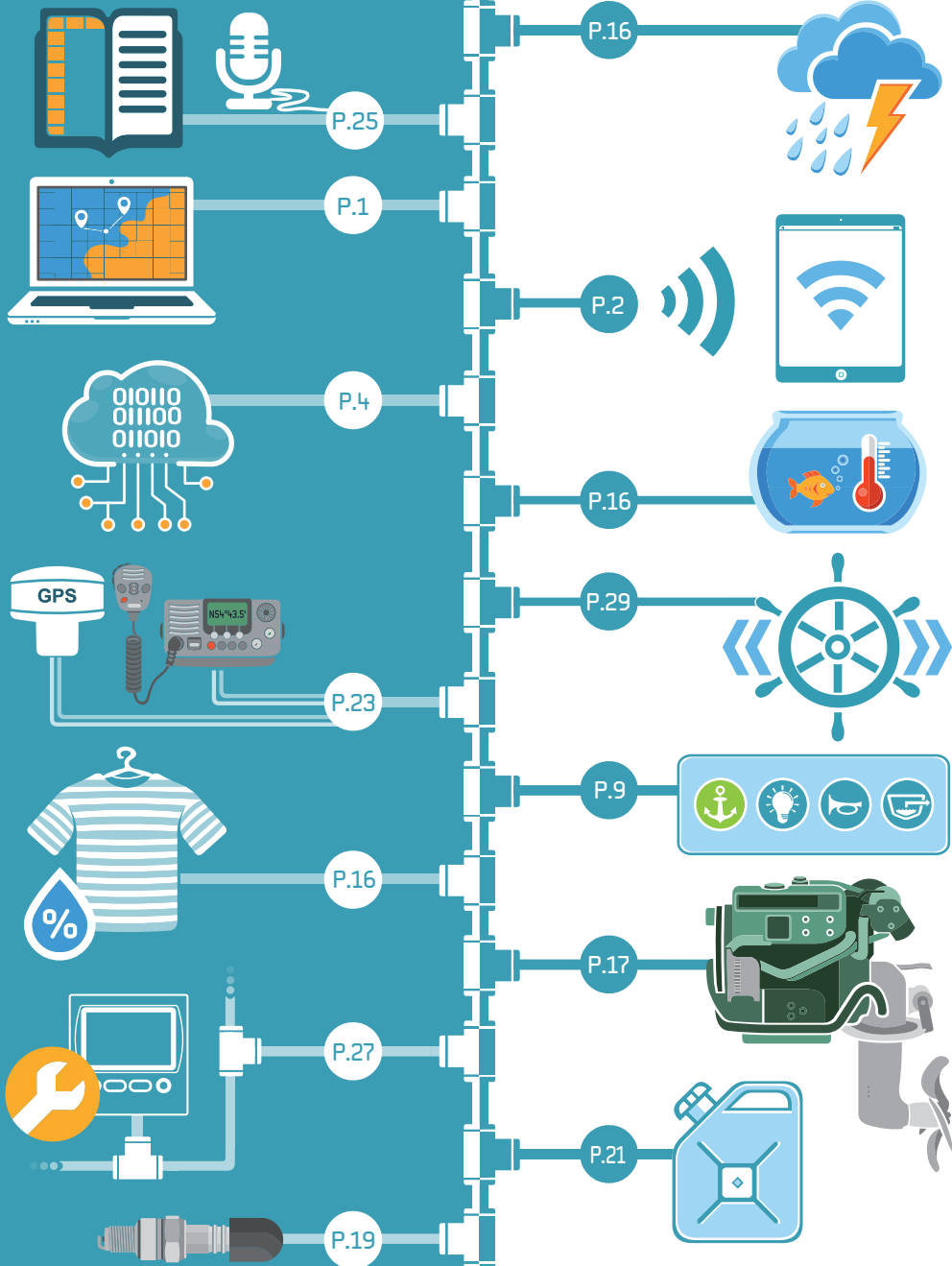
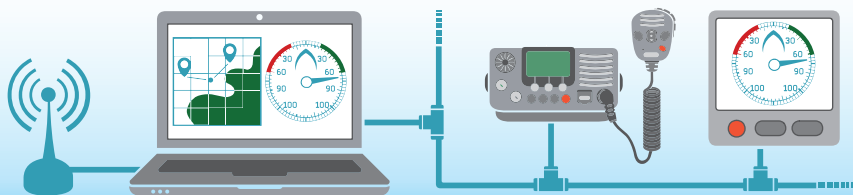


# Yacht Devices

sailors for sailors





## NMEA 2000 USB GATEWAY YDNU-02

The gateway allows you to see data from a NMEA 2000 marine digital network on a PC, laptop or tablet PC with Microsoft Windows, Mac OS or Linux. With it, you get marine network data including vessel course, speed, position, wind speed and direction, water depth, AIS messages from vessels and aircrafts and other navigation data in PC applications.

The device works as a bi-directional gateway so it is also possible to send messages from PC applications to the NMEA 2000 network. That allows, for example, sending of AIS data from a PC USB receiver to a chart plotter, as well as controlling the autopilot.

### Operation modes:

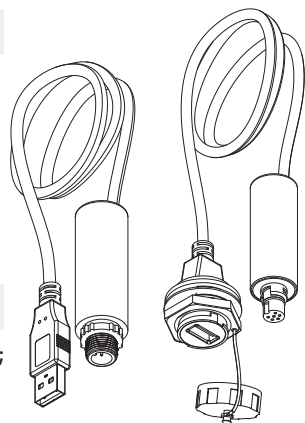
- ▶ **0183.** The Device performs conversion from NMEA 2000 to NMEA 0183 and vice versa. NMEA 0183 is supported by virtually all marine PC applications including **OpenCPN**. Conversion covers all significant data, including AIS, DSC, routes/waypoints, and autopilot.
- ▶ **N2K.** Device sends all messages from NMEA 2000 to a PC and vice versa in binary form and is compatible with **Coastal Explorer**, **Expedition**, **Polar View**, **OpenSkipper** and some other marine software.
- ▶ **RAW.** Device sends all messages from NMEA 2000 to a PC and vice versa in readable text format. You can record messages to a file and/or monitor NMEA 2000 data in real time with free **CAN Log Viewer** software (Mac OS X, Windows, Linux). Also supported in **Expedition**.
- ▶ **AUTO.** In this mode, the Device analyzes the connection with the PC application and automatically chooses one of the three modes above for the session.

### Features:

- ▶ no driver required in Windows 10/11, Linux and Mac OS X;
- ▶ allows control of Raymarine SeaTalk NG autopilots from NMEA 0183;
- ▶ is compatible with J1939 networks;
- ▶ high-voltage galvanic isolation between NMEA 2000 and USB.

### Options:

- ▶ IP67 waterproof USB female or non-waterproof male connector;
- ▶ Raymarine SeaTalk NG or NMEA 2000 Micro Male connector.



1

Average current consumption from USB: 35 mA  
Current consumption from NMEA 2000: 13 mA  
Cable length (between case and connector): 450 mm  
Device case length: 54 mm

USD \$ 249



## NMEA 2000 Wi-Fi GATEWAY YDWG-02

The gateway allows you to see data from an NMEA 2000 marine digital network on a laptop, tablet or smartphone. Colorful web gauges on the built-in website show vessel data right from a browser. Save on apps, save on additional instrument displays and monitor your boat from your cabin with a smartphone!

The device works as a bi-directional gateway so it is also possible to send messages from PC. The Gateway supports TCP and UDP network protocols (both can be enabled at the same time). For UDP protocol, the number of clients (physical devices or software applications) is unlimited. Compatible with virtually all marine apps including Navionics, MaxSea, iNavx and OpenCPN.

### Features:

- ▶ has a bi-directional converter between NMEA 2000 and NMEA 0183 protocols;
- ▶ Web Gauges allow controlling of digital switching equipment, can display all data from two engines, 15 batteries, dozens of tanks of all types, and support all major navigation and environmental data;
- ▶ records vessel's data to the internal memory and can upload them to the Cloud (see page 4);
- ▶ can act as an NMEA 2000 wireless extender and allows joining of two or more physical networks;
- ▶ works as a Wi-Fi Access Point or can be connected to an existing Wi-Fi network;
- ▶ allows control of Raymarine SeaTalk NG autopilots from NMEA 0183 application;
- ▶ supports firmware updates over Wi-Fi and diagnostic data logging;
- ▶ free diagnostic software for Microsoft Windows, Mac OS X and Linux is supplied;
- ▶ contains an internal web server for configuration, diagnostics and web gauges hosting.



Built-in Web Gauges (iPhone)



AIS data on SEAiq Open iPhone app



With NMEA 2000 or SeaTalk NG Connectors

Wi-Fi module: 2.4 GHz 802.11b/g/n  
 Wi-Fi internal antenna range (open space): 30 m / 100 feet  
 Current consumption: 43 mA at 7.17 V  
 Device case length: 54 mm

USD \$ 249

2



## NMEA 2000 Ethernet Gateway YDEN-03

Q1  
2025

The Gateway connects navigation PCs and laptops to NMEA 2000 over Ethernet, Garmin Marine Network, Raymarine SeaTalk HS and RayNet, Furuno NavNet, or NMEA OneNet, and allows bridging of NMEA 2000 networks.

The Gateway is equipped with a standard Ethernet RJ45 connector, and you may need a proprietary adapter to connect it with your vessel's network; direct connection to PC with standard computer cable is also supported.

The Device provides NMEA 0183 and NMEA 2000 data streams using TCP and/or UDP protocols, and has a **bi-directional converter between NMEA 0183 and NMEA 2000**. This allows viewing of navigational data including AIS as well as managing NMEA equipment including autopilot from virtually all marine software, e.g. OpenCPN and Expedition (both NMEA 0183 and NMEA 2000 protocols are supported). The Gateway has three data servers (TCP/UDP), allowing customized settings for different applications.



### Features of the Gateway:

- ▶ can be configured for static IP, or to obtain an IP automatically, or work as a DHCP server;
- ▶ is compatible with 10 Mb/s, 100 Mb/s and 1000 Mb/s Ethernet networks;
- ▶ provides high-voltage galvanic isolation between NMEA 2000 and Ethernet interfaces;
- ▶ support mDNS and Bonjour protocols for easy discovery in the network;
- ▶ records vessel's data to the internal memory and can upload them to the Cloud (see page 4);
- ▶ has internal web server for configuration, firmware updates and hosting Web Gauges;
- ▶ pair of Gateways can bridge two NMEA 2000 segments over Ethernet;
- ▶ it differs from the previous model YDEN-02 by a more powerful microprocessor.

3

Supply voltage (from NMEA 2000 network): 7..17V  
Current consumption: 48 mA (1 LEN)  
Ethernet galvanic isolation from NMEA 2000: 1500 VRMS  
Device case length: 54 mm

USD \$ 249

- ✓ NAVIGATION
- ✓ WEATHER
- ✓ ENGINES & FUEL RATE
- ✓ TANKS AND BATTERIES
- ✓ DIGITAL SWITCHING



## Yacht Devices Cloud

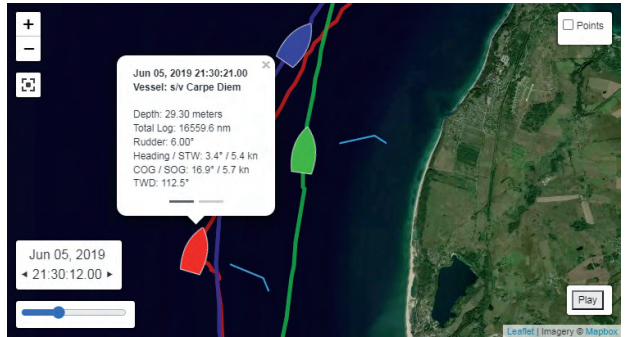
The Cloud Service is a free online service targeted at users of our NMEA 2000 gateways and routers. The Cloud Service is supported in Wi-Fi Router YDNR-02, Wi-Fi Gateway YDWG-02, and Ethernet Gateway YDEN-03.

These devices can record to the internal memory the navigation, weather, engines, tanks and batteries data, and the state of digital switching equipment. The recorded data can be exported from the device's memory into a spreadsheet or to a GPS track from the built-in administrative web site.

If your boat's Wi-Fi or Ethernet network has an Internet connection, devices can be configured to automatically upload your data to the Cloud. You only need to register in the Cloud Service, obtain the boat's key for your device and enter it to the settings.

### Benefits of using the Cloud Service for private boat owners:

- ▶ Share your sailings with friends and family;
- ▶ Share multiple boats to a single page (to re-play regattas, etc);
- ▶ Unlimited backup for your sailing data;
- ▶ Access to your sailing records from home;
- ▶ Monitor your boat at anchorage or in a marina;
- ▶ Save on satellite traffic (2 KB to transmit 24 points).



Demo boats at YD Cloud

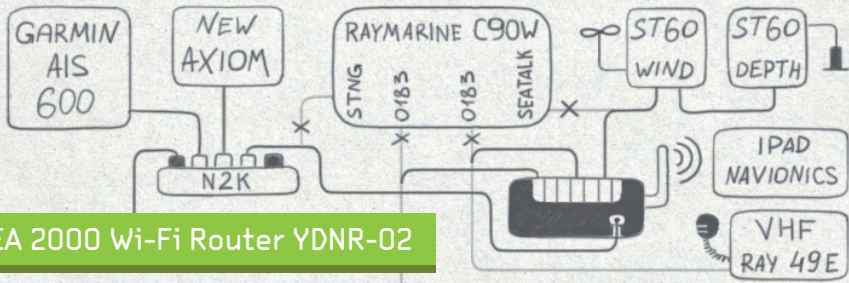
You can share your boat's data to registered users of the Cloud Service or to anyone by a "secret" link. In both cases, no app is required. All data are available from a web browser, you can view the vessel's track on the map and run playback to virtually repeating your sailing.

Unlike popular boat tracking systems, we collect a lot of different boat data, like a rudder angle, atmospheric pressure, yaw, roll and pitch, fuel rate, engine coolant temperature, etc. It can help to analyze your races or sailings in all details.



Learn more: <https://cloud.yachtd.com/>

FREWARE



## NMEA 2000 Wi-Fi Router YDNR-02

The Router easily connects to all marine and mobile devices. It supports all popular marine protocols, is compatible with virtually all marine software, and even allows management of your vessel from a web browser without an internet connection or installed software.

The Router is equipped with NMEA 2000 and SeaTalk ports, two NMEA 0183 ports, has three TCP/UDP data servers and a built-in web server, where you can easily configure it or update the firmware. It creates its own Wi-Fi network (Access Point) or can be connected to a boat's existing Wi-Fi.

### Features:

- ▶ built-in Web Gauges allow viewing the vessel's data in any web browser;
- ▶ automatically records your track and vital vessel's data to the internal memory and can upload them to the Cloud (see page 4);
- ▶ flexible routing, data conversion and filtering between all ports, servers and protocols;
- ▶ can act as a NMEA 2000, 0183 or SeaTalk wireless extender and allows wireless connection of two or more physical devices;
- ▶ free NMEA 2000 diagnostic software for Microsoft Windows, Mac OS X and Linux is supplied;
- ▶ all data streams can be viewed in a web-browser for debugging purposes.



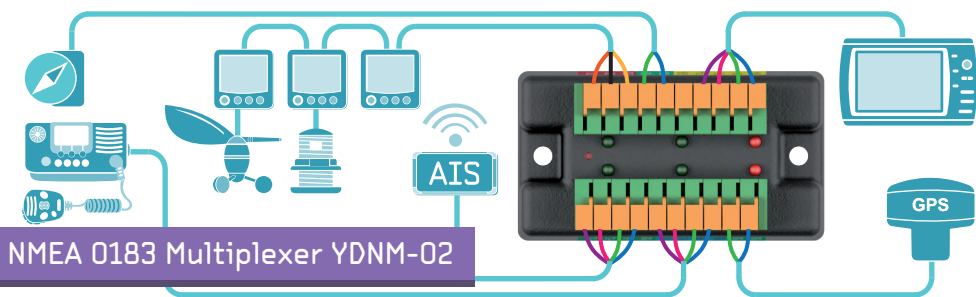
### Use cases:

- ▶ connecting old (NMEA 0183, SeaTalk) equipment (sensors, autopilots) to modern chart plotters with NMEA 2000 interface only;
- ▶ connecting of equipment with different port speed or protocol (e.g. SeaTalk sensors to NMEA 0183 and NMEA 2000 equipment, or 4800 bps GPS receiver to 38400 bps AIS or VHF with built-in AIS receiver);
- ▶ connect marine equipment with software and apps (compatible with virtually all marine software, including **OpenCPN**, **Expedition**, **Coastal Explorer**, **iNavx**, **Navionics Boating**, **iSailor** and others);
- ▶ managing and monitoring of a vessel over Internet (VPN access to boat's Wi-Fi is required).

5

Wi-Fi module: 2.4 GHz 802.11b/g/n  
 Wi-Fi range (open space): 50 m / 160 feet  
 Max. current consumption, all NMEA 0183 ports with 100 Ohm load: 60 mA  
 Device case without antenna (LxWxH): 85x45x28 mm

USD \$ 349



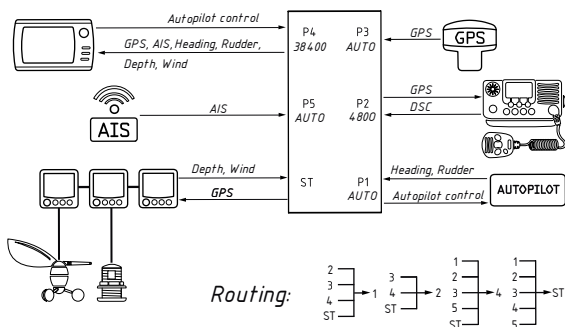
Smart multiplexer with five NMEA 0183 ports and one SeaTalk port, auto detection of port speed and easy configuration with a click of a button! And, of course, it has flexible filters, routing rules, and supports firmware updates.

It is the easiest multiplexer to install: instead of a laptop and software, you'll only need a paperclip. The Multiplexer has six configuration presets with different port speeds and routing schemes. Presets can be selected by pressing a hidden button. Ports can be configured to auto-detect the speed of connected equipment.

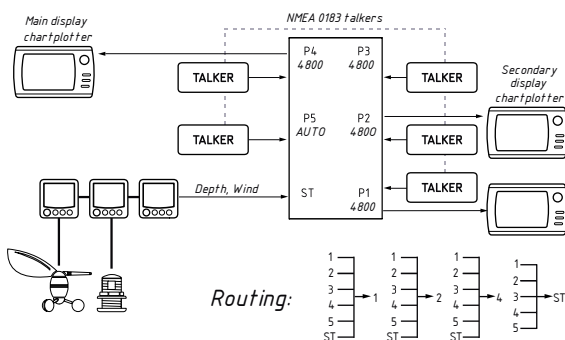
### Features:

- ▶ 5 x NMEA 0183 ports (2 x TX/RX, 1 x TX/RX with galvanic isolation 2500 VRMS, 2 x RX only);
- ▶ 1 x SeaTalk port (multiple devices can be connected);
- ▶ both "single ended" (RS-232) and "differential" (RS-422) NMEA 0183 connections are supported;
- ▶ NMEA ports can be configured for any speed from 300 to 115200 bps, and to AUTO speed;
- ▶ bi-directional data conversion between SeaTalk and NMEA 0183 with autopilot support;
- ▶ individual filters on all ports (by datagram number, NMEA 0183 sentence formatter or talker ID) for incoming and outgoing messages;
- ▶ "tunnel" mode to connect old, non-standard and Navtex equipment;
- ▶ ports can be routed to themselves (preset #6), to use device as NMEA amplifier, expander or buffer.

#### Preset #1



#### Preset #6



Configuration presets #1 and #6

Supply voltage: 7..16 V  
 Current consumption, maximum, all ports with 100 Ohm load: 60 mA  
 Receiver input resistance (port #1, #2, #3, #5 / port #4): 12 / 96 kOhm  
 Device case dimensions (LxWxH): 85x45x28 mm

USD \$ 189

6



## NMEA 0183 Wi-Fi GATEWAY YDWN-02

The Gateway allows you to see data from NMEA 0183 marine devices on a PC or smartphone and control the vessel from software.

With this device, you get marine data including vessel course, speed, position, wind speed and direction, water depth, AIS messages from vessels and aircrafts and other navigation data in popular software applications. The Gateway works in both directions and enables control of the vessel from virtually any marine software including **OpenCPN**, **iNavx**, **Expedition**, **Coastal Explorer**, **MaxSea** and others.

NMEA 0183	SeaTalk	TCP/UDP	Web Gauges	Logging
2 TX/RX	NO	3	YES	YES

The Gateway has three TCP/UDP network servers with individual settings and filters; it allows setting an individual configuration for different software applications.

A built-in web server allows easily modifying Gateway's settings, updating firmware and monitoring messages flow. It also has built-in Web Gauges which allows viewing the vessel's data in any web browser. Web Gauges has four data pages with a configurable layout, set of gauges and data bars, and preferred units.



Built-in Web Gauges

The Gateway automatically records your track with weather, depth and other data to the internal memory (up to 32000 points). These data can be saved from the internal web site to GPX (for Garmin MapSource, Google Earth or other cartographic applications) or CSV (spreadsheet) files.

### Features:

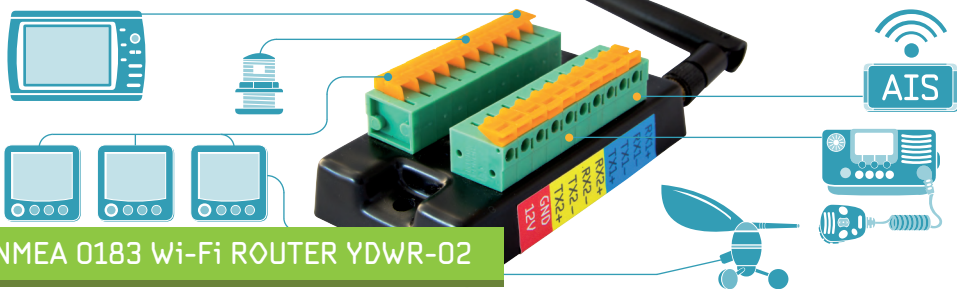
- ▶ configurable NMEA 0183 ports speed from 300 to 115200 baud;
- ▶ both "single ended" (RS-232) and "differential" (RS-422) NMEA 0183 connections are supported;
- ▶ can be used to pair equipment with different NMEA 0183 speed or connection type;
- ▶ creates it's own Wi-Fi network or can be connected to an existing Wi-Fi network;
- ▶ a pair can act as an NMEA 0183 wireless extender and allows connection of two or more physical devices.

7

Wi-Fi module: 2.4 GHz 802.11b/g/n  
 Wi-Fi range (open space): 50 m / 160 feet  
 Average current consumption: 47 mA  
 Device case without antenna (LxWxH): 85x45x28 mm

USD \$ 249





The Router is a smart NMEA 0183 and SeaTalk multiplexer which also allows you to see data from marine devices on a PC or smartphone.

The Router has all the features of the Gateway YDWN-02 (on the left), but has four physical NMEA 0183 ports and a SeaTalk port (multiple SeaTalk devices can be connected). An internal bi-directional converter between SeaTalk and NMEA 0183 allows use of SeaTalk data in NMEA 0183 and vice versa, including SeaTalk autopilot control from NMEA 0183.

NMEA 0183	SeaTalk	TCP/UDP	Web Gauges	Logging
4 TX/RX	YES	3	YES	YES

For a price of a usual NMEA multiplexer, you are getting a device with very flexible settings which can be easily configured using a web browser on a smartphone or PC. You can change the port speed or stop forwarding data from one port to another with a click.

The Router can also multiplex Navtex data streams and NMEA 0183 sentences without a checksum. This is called "tunnel mode" and can be turned on for any physical port or data server.

This product is an ideal solution if your new chart plotter has only one NMEA 0183 port and you need to connect it with all your other older equipment.

Input	Tunnel	Output							
		NMEA Port				ST	TCP/UDP Server		
Port/Server		1	2	3	4	1	2	3	
Port #1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Port #2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Port #3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Port #4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SeaTalk (ST)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Server #1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Server #2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Server #3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Update									

Routing Settings

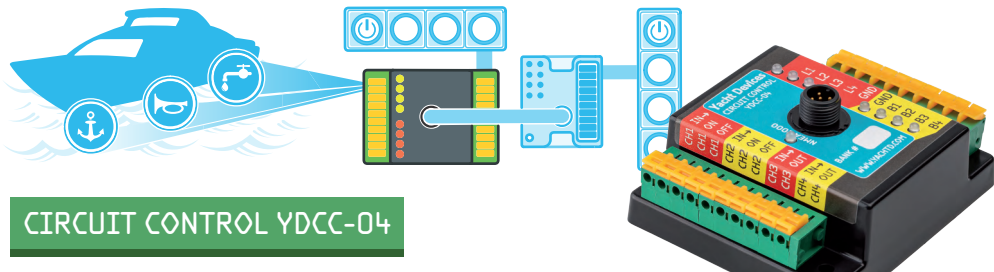
### Features (in addition to YDWN-02):

- ▶ four bi-directional NMEA 0183 ports, one is galvanically isolated (2500 VRMS);
- ▶ one SeaTalk port, can pair SeaTalk equipment with NMEA 0183 hardware or software;
- ▶ allows control of SeaTalk autopilots from NMEA 0183 hardware or software;
- ▶ a pair of routers can act as a SeaTalk or NMEA wireless extender and allows joining of two or more physical devices;
- ▶ supports \$STALK sentence of NMEA 0183 for raw SeaTalk datagrams.

Wi-Fi module: 2.4 GHz 802.11b/g/n  
 Wi-Fi range (open space): 50 m / 160 feet  
 Average current consumption: 47 mA  
 Device case without antenna (LxWxH): 85x45x28 mm

USD \$ 289

8



## CIRCUIT CONTROL YDCC-04

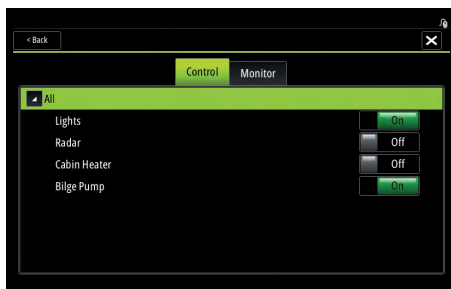
The Circuit Control contains four latching (bi-stable) relays, which can be managed from connected control buttons with LED indicators or over NMEA 2000 with standard messages.

The Circuit Control is the core component of our digital switching system. In addition to connected buttons, loads can be managed with "virtual buttons" on the Web Gauges of our NMEA 2000 Wi-Fi Gateway, or automatically from our sensors. To set up additional control posts with duplicate physical buttons and indication, use Switch Control YDSC-04.

Loads can also be managed from all chart plotters with **CZone** support: all modern models of **Garmin**, **B&G**, **Lowrance**, **Simrad**, **Furuno** and recent models from **Raymarine** (Axiom, eS, gS).

### Electrical specifications of Circuit Control:

- ▶ four channels: two with normally open contacts (ON-OFF, SPST) and two with switching contacts (SPDT);
- ▶ latching (bi-stable) relays consume electricity only during the process of switching and stay in their last state after the device is powered off;
- ▶ maximum constant load current per channel is 10A, peak is 20A (4 seconds, duty cycle 10%);
- ▶ capable of switching both direct current (DC) and alternating current (AC) loads up to 400 V;
- ▶ high voltage isolation from a load, 5000 VRMS;
- ▶ average device consumption is only 30 mA.

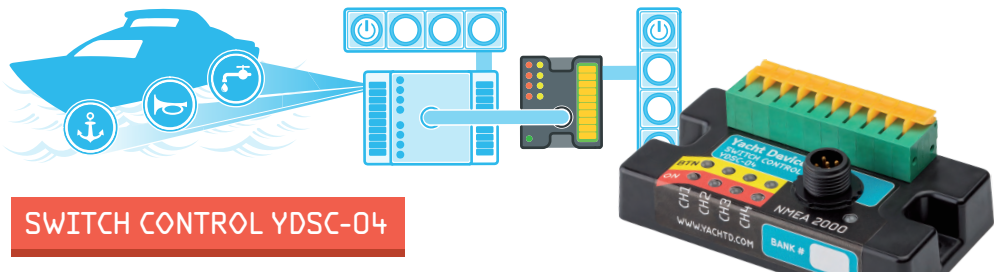


B&G Vulcan with YDCC-04 loads

The Circuit Control and Switch Control are designed to be compatible with Oceanic Systems, Offshore Systems, Chetco Digital, Maretron and Carling Tech displays and relay modules, and with other NMEA 2000 digital switching devices managed with standard NMEA 2000 PGN 127501 "Binary Status Report" and PGN 127502 "Binary Switch Control".



Web Gauges of Wi-Fi Gateway YDWG-02



## SWITCH CONTROL YDSC-04

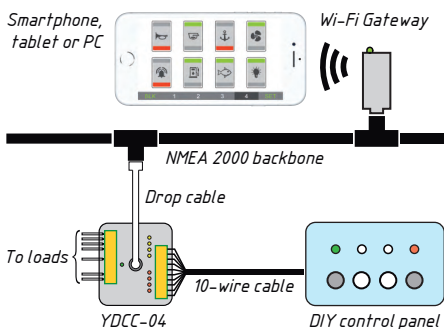
The Switch Control allows viewing of the state and the management of four channels of an NMEA 2000 switch bank from the connected buttons with LED indicators.

It is designed to work in tandem with Circuit Control YDCC-04 (contains four latching relays) and is compatible with other NMEA 2000 digital switching devices managed by standard NMEA 2000 PGNs 127501 and 127502.

The Device has terminals for connection of four momentary push buttons with an LED indicator. External buttons are not supplied with this device; you can choose any to match your boat's interior.

### Benefits of Circuit Control and Switch Control:

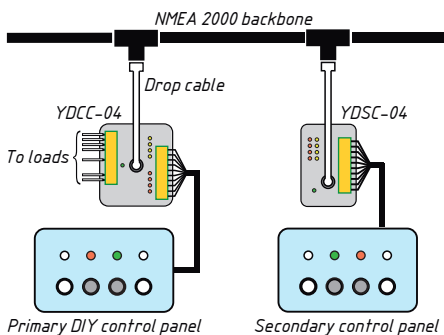
- ▶ no special requirements for buttons, you can choose any momentary push buttons to match your boat's interior;
- ▶ no special knowledge, software or hardware is required for installation;
- ▶ price and size are suitable for small vessels;
- ▶ pure NMEA 2000 product, compliant to the Standard and certified by NMEA;
- ▶ support firmware updates, free software for PC is available (Wi-Fi or USB Gateway is required).



Basic system, with single Circuit Control unit

The Circuit Control unit can work in parallel with other units and can be managed from multiple Switch Control units with a matched bank number (252 unique bank numbers are allowed in NMEA 2000). Multiple independent digital switching systems (with different bank numbers) can co-exist in a single NMEA 2000 network.

If you have external access to your boat's Wi-Fi network, the NMEA 2000 Wi-Fi Gateway with built-in Web Gauges will allow you to manage loads from everywhere using a web browser on any device (smartphone, PC, tablet, etc.).



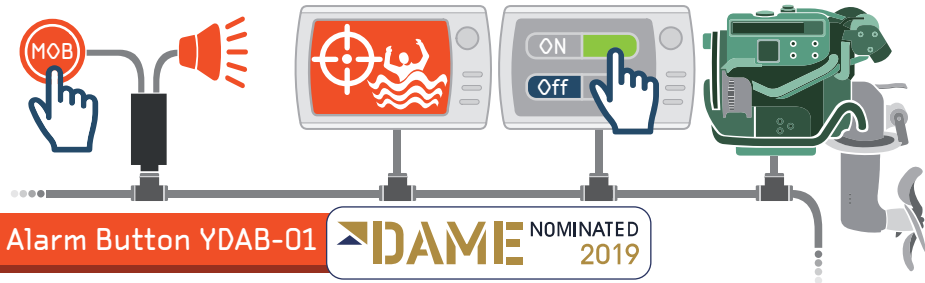
Typical system with multiple control panels



Certified by the National Marine Electronics Association  
 Operating voltage (from an NMEA 2000 network): 7..16 V  
 NMEA 2000 consumption current (max): 30 mA  
 Dimensions with connector (LxWxH): 85x45x28 mm

USD \$ 149

10



Alarm Button YDAB-01

**DAME** NOMINATED  
2019

The Alarm Button is a multi-function NMEA 2000 device with wires for connecting an external button with an LED indicator and a standard 4 or 8 Ohm speaker. It contains a 10W amplifier and a bank with 28 sound signals (car anti-theft alarm, ship horns, whistles, tone signals, etc.).

The device can be configured for one of the following functions:

- ▶ **MOB button (default mode).** Pressing the connected button for two seconds sounds an alarm and sends AIS MOB messages (emulating the message received from EPIRB and SART devices with AIS VHF support) with the current GPS position. It sets an MOB mark position on a chart plotter. Pressing the button a second time cancels transmission of MOB messages. Note that messages sent from the Device are not transmitted externally via VHF or AIS, but are available to all NMEA 2000 devices on the vessel.
- ▶ **Digital switching alarm unit.** The device acts as an NMEA 2000 binary switch bank with 28 channels, each channel has a unique sound alarm and LED flashing sequence. Channels (and corresponding sound alarms) can be turned on/off from other equipment, including our smart sensors or from the screen of a modern chart plotter.
- ▶ **Engine monitoring unit.** In this mode, the Device produces sound alarms according to engine alarms sent by the engine control unit or gateway to NMEA 2000. This mode is useful on boats where the regular engine monitoring instruments are already in need of replacement. The Device can also be programmed to produce a sound alarm itself at a specified temperature, engine revolution reading, etc.
- ▶ **Anchor alarm.** This mode requires GPS data on the network. The radius can be configured, and the alarm can be armed or disarmed with a single keystroke. Although this feature is available on all MFDs, we can shout much louder.



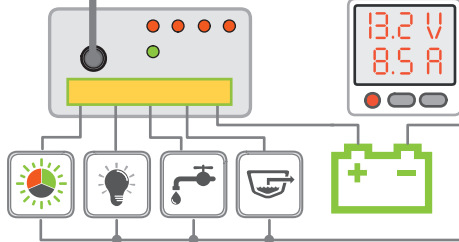
### Features:

- ▶ updating firmware and uploading of user sound files with CAN Log Viewer (p.30);
- ▶ can be managed from modern Raymarine, B&G, Simrad, Furuno, Lowrance chart plotters.

11

Equipped with NMEA 2000 Micro Male or Raymarine SeaTalk NG connector  
Compatible with 4 Ohm and 8 Ohm audio speakers  
Audio amplifier output (8 Ohm load at 13V): 10 W  
Device case length (without connector) / cable length: 54 / 600 mm

USD \$ 189



## Run Indicator YDRI-04

The Run Indicator measures current and voltage of four connected loads (40V/10A constant load per channel, 15A peak), displays their status on a chart plotter and/or other NMEA 2000 equipment, and can be configured to manage digital switching equipment (including the Alarm Button) with a flexible rules system.

Flexible rules allow the activation of digital switching channels when the electrical circuit is energized or not, when the load is on for too long (water tap left on) or when switching is too frequent (leak in fresh water system).

### Well-suited for:

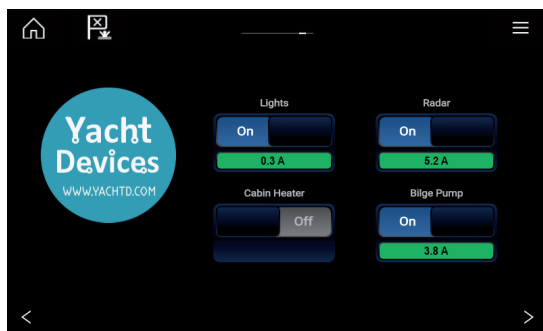
- ▶ visualizing of manually switching loads (running lights, water makers, etc.) on MFD screen;
- ▶ digitizing performance of solar panels (up to 200W per channel) and wind generators;
- ▶ monitoring bilge and fresh water pumps, detecting leaks.



Run Indicator

### Features:

- ▶ easy installation, no external shunts are required;
- ▶ compatible with legacy chart plotters (NMEA 2000 PGN 127508);
- ▶ compatible with modern chart plotters with CZone support;
- ▶ inexpensive web access using Web Gauges of our Wi-Fi Gateway or Router (see p.7-8);
- ▶ device can be programmed and firmware can be upgraded with the CAN Log Viewer (p.30).

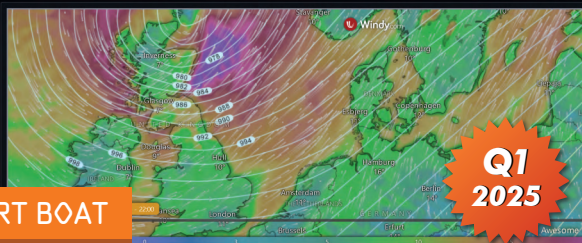


Raymarine Axiom with YDRI

With NMEA 2000 Micro Male connector and 10 wire terminals (AWG 14)  
Operating voltage (from an NMEA 2000 network): 7..16 V  
NMEA 2000 consumption current (max): 60 mA  
Dimensions with connector (LxWxH): 85x45x28 mm

USD \$ 249

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## SMART SENSORS FOR A SMART BOAT

We are pleased to introduce a new generation of our well-known sensors: Digital Barometer, Digital Thermometer, Exhaust Gas Sensor and Humidity Sensor. They are built on a new platform with high performance microcontroller and Wi-Fi.

### Wi-Fi and Web server

Sensors can create an access point or connect to an existing network. Built-in web server makes it easy to update firmware, customize the device, or access measurement history for a minimum of 3 months of data. Wi-Fi can be completely disabled for security or power savings. Like the previous generation, the sensors can also be configured via CAN bus.

### Smart Boat

The day has come when you can ask your boat, "What's the temperature in the engine room?". All sensors support the MQTT protocol (versions 3.1.1 and 5.0) and can be connected to your smart home or smart boat. You can use a Raspberry Pi or other microcomputer to install the Home Assistant or free edition of Grafana and create colorful panels with boat data.

### Digital Switching:



All of our sensors can be configured by the user to turn on or off specific channels of digital switching equipment managed by the NMEA 2000 protocol. One sensor can manage up to eight different channels with eight different conditions.



The Digital Thermometer and Exhaust Gas Sensor operate by actual temperature. The conditions for the Digital Barometer can be either the actual atmospheric pressure or the difference between actual pressure and the pressure 30 minutes or 1 hour ago. This allows a warning to be set concerning the rise or fall of pressure and upcoming weather changes. The Humidity Sensor operates by air temperature, relative humidity and by the difference between air temperature and dew point temperature. In other words, it can ventilate your boat when she needs it or it can turn on the radar if fog is coming.



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The new sensor generation has similar current consumption (with Wi-Fi turned off), and the same measurement sensor characteristics as the previous generation. We have also retained all the features of the older devices so that the new generation can serve as a full replacement. The only significant difference with the Exhaust Gas Sensor is that its body length is now 54 mm, while all other sensors are (as before) 40 mm long.

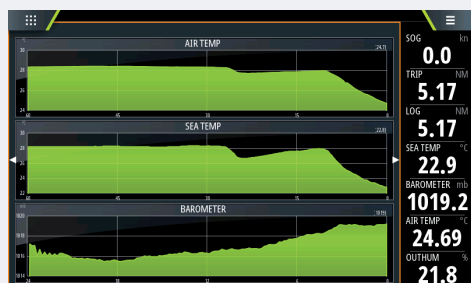


## DIGITAL BAROMETER YDBC-06

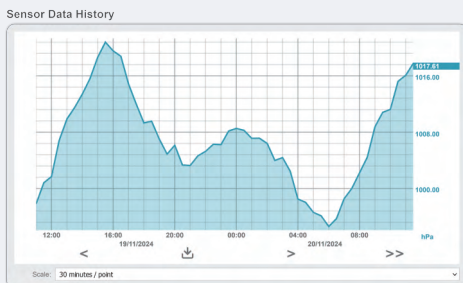
The Barometer is intended for measuring atmospheric pressure within the range from 300 to 1100 hPa or mbar (225 to 825 mmHg), it provides chart plotters and instrumental displays with barometric pressure data.

Pressure data output resolution to a NMEA 2000 Version 3 network is 0.01 hPa (mbar), absolute measurement accuracy is  $\pm 1$  hPa, relative measurement accuracy is  $\pm 0.12$  hPa.

This product is designed for weather monitoring. The sensor is located inside the instrument housing. Many chart plotters and digital navigation instruments are able to display pressure data in the form of graphs (even the old Raymarine ST70) or show a trend indicator; this allows tracking trends in weather changes. Built-in web server allows access to at least 4 months of historical data stored in non-volatile memory, if you sail only 5 days a month, you will have 2 years of history of your sailing. So it's not just a barometer, but a real barograph with excellent accuracy!



B&G Vulcan 7 with YDBC data



History in the web interface



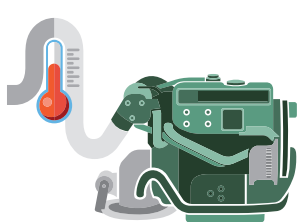
The device is plug and play, works right out of the box and requires no adjustments. It is the best gift for your friend's boat. If you are new to marine electronics, this is the one product you should buy first and install yourself. It may be a good idea to add a T-connector to your purchase. This will allow you to install the unit on any part of the NMEA 2000 network. The barometer has been calibrated by the manufacturer. Therefore, you can set an offset from -10.0 to +10.0 hPa for the sensor readings to match readings from other marine equipment.



Certified by the National Marine Electronics Association  
Operating voltage (from an NMEA 2000 network): 7..30 V  
Current consumption (max), with and without Wi-Fi: 38 / 15 mA  
Device case length (without connector): 40 mm

USD \$ 149

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## EXHAUST GAS SENSOR YDGS-02

The Sensor measure the temperature of extremely hot gases, solids and liquids within the range from 0 to +800 °C (+32 to 1472°F).

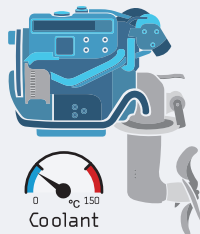
The Exhaust Gas Sensor is designed not only for exhaust gas. With factory settings it transmits measured data as "Exhaust Gas Temperature", but can be reconfigured to display "Heating System Temperature", "Engine Room Temperature" or any other of 15 NMEA 2000 temperature types. The Device is plug and play; you only need to plug it into a NMEA 2000 backbone to get readings on all NMEA 2000 chart plotters and instruments onboard.

### Technical details:

Temperature is measured by the thermocouple which is placed outside the Sensor case and has a flexible 90-cm (3 feet) sheath with an internal heat-resistant fiberglass insulation layer. The trade-off for such a wide temperature range is that the accuracy is  $\pm 5.5$  °C in the range up to 330 °C (and much better below 100°C), and at the upper limit (800°C) the accuracy is  $\pm 11.5$  °C. If you need better accuracy, we can recommend our Digital Thermometer YDTC-14, which has  $\pm 0.5$  °C measurement error and a range from -55 to +125 °C (-67 to +257°F).



### Support in other products:



Data from the Exhaust Gas Sensor (as well, as from the Digital Thermometer YDTC-14) can be used by our Engine Gateway, J1708 Gateway and Outboard Gateway to replace missing data from coolant or oil or other engine temperature sensors. They can be used to replace a defective sensor, or if a simple sensor is used that only indicates excess temperature.

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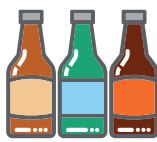
Equipped with NMEA 2000 Micro Male or Raymarine SeaTalk NG connector  
Current consumption with and without Wi-Fi: 42 / 18 mA, 7...30 V  
Cable length: 900 mm  
Device case length (without connector): 54 mm

USD \$ 189





LIVE WELL



FRIDGE



FREEZER



AIR and WATER



HEATING

## DIGITAL THERMOMETER YDTC-14

The Thermometer performs measurements within the range from  $-55$  to  $+125^{\circ}\text{C}$  ( $-67..+257^{\circ}\text{F}$ ) with absolute measurement accuracy of  $\pm 0.5^{\circ}\text{C}$ .

The sensor is placed outside the case on a flexible, 95cm wire in a sealed stainless steel sleeve and can be used to measure the temperature of gases or liquids. If necessary, the wire can be elongated up to 100 meters. The Thermometer can be configured by the user to display data as "Air temperature" (factory setting), "Sea temperature", "Temperature in the refrigerator", "Temperature in the engine room", "Bait Well Temperature", etc.

Temperature data output resolution to a NMEA 2000 network is  $0.01^{\circ}\text{C}$ , absolute measurement accuracy is  $\pm 0.5^{\circ}\text{C}$ .



## HUMIDITY SENSOR YDHS-02

The sensor provides chart plotters and instrumental displays with humidity, air temperature measurements and calculated dew point and wind chill temperatures.

This product can be used for weather monitoring and fog prediction; mold prevention by monitoring of water intake or moisture condensation in lockers; and remote monitoring of living quarters. From the helm you can see how comfortable it is in the cabin.

The Device is equipped with a high quality sensor that provides  $\pm 2\%$  RH and  $\pm 0.3^{\circ}\text{C}$  accuracy in most of the operating range, which is  $0-100\%$  RH and  $-40..120^{\circ}\text{C}$  ( $-40..248^{\circ}\text{F}$ ).

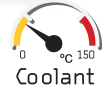
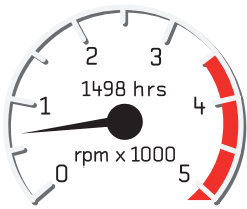
The Device can be configured to display inside (saloon, cabin) or outside air temperature and humidity. Configuration of the data instance is also supported. For example, "Inside Humidity" with data instance 0, 1, 2 can indicate humidity in the saloon, and the bow and aft cabins.



Devices are certified by the National Marine Electronics Association  
Current consumption with and without Wi-Fi: 38 / 15 mA, 7..30 V  
Cable length: 950 mm (Thermometer), 1000 mm (Humidity Sensor)  
Device case length (without connector): 40 mm

USD \$ 149  
189

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## J1708 ENGINE GATEWAY YDES-04

A gateway for engines with a J1708 serial interface to an NMEA 2000 marine digital network. With it, you can see engine revolutions, temperature, working hours, fuel rate and other engine data on the screen of a chart plotter and other display devices on your NMEA 2000 network.

The Gateway supports three protocols that work over J1708: the standard J1587 used by many manufacturers (Detroit Diesel), Caterpillars with ATA Data Link, like 3176B, 3412C and 3408C, etc.); the proprietary Volvo Penta protocol used in engines with EDC I (KAD 44, KAD 300, TAMD 72P-A, 73..75, also compatible with EDC II (e.g. D12C-A MP); and Cummins KCM II protocol (Cummins KTA19 and KTA38 gensets).

### Features:

- ▶ first (and only!) device with support of proprietary Volvo Penta KAD protocol;
- ▶ user alert settings for high revolutions, boost pressure, coolant temperature, low oil pressure and low alternator voltage;
- ▶ easy configuration with a simple text file on a MicroSD card;
- ▶ high-voltage galvanic isolation between J1708 and NMEA 2000 interfaces;
- ▶ J1708 and NMEA 2000 data recording for diagnostics and configuration;
- ▶ one engine and transmission, 2 batteries and 2 fuel tanks may be reported by one Device.

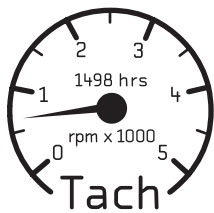
### Connection:

The Device is equipped with a female connector compatible with Volvo Penta EDC diagnostics connectors used on EDC I and EDC II engines. Owners of other engines can use the disassembled male connector supplied with the Gateway to make a DIY adaptor cable. Models with NMEA 2000 Micro Male or Raymarine SeaTalk NG connector are available.

### Reasons to buy:

- ▶ duplicate existing or replace broken instruments;
- ▶ monitor engines on an NMEA 2000 instrument display or MFD;
- ▶ monitor your engines from PC or smartphone using a web browser with our Wi-Fi Gateway;
- ▶ log engine and fuel usage by crew or renters with our Voyage Recorder;
- ▶ record your engine data to apply for service remotely.





## ENGINE GATEWAY YDEG-04

Gateway for Volvo Penta, Mercury, Yanmar, BRP Rotax and J1939 engines to NMEA 2000 marine electronics networks. It will provide you with engine revolutions, motor hours, coolant temperature, battery voltage, warning and alarms, fuel rate and other data on the screen of your chart plotter.

This gateway is compatible with BRP Rotax, SmartCraft (Mercury, MerCruiser), J1939 (Caterpillar, Yanmar 4JH, MAN MMDS, etc.) and most Volvo Penta engines. Has a genset mode, support J1939 and SmartCraft generators, including Cummins ONAN with NIM module.

### Compatible Volvo Penta engines:

- ▶ all versions of EVC-B, EVC-C, EVC-D, EVC-E (most modern engines since 2006);
- ▶ EVC-A MC (e.g. D3-160A-A) and EVC-A EC (also known as EVCmc and EVCec);
- ▶ D1 and D2 series with MDI (Mechanical Diesel Interface), for example D2-40F;
- ▶ EDC III and EDC IV diesel engines (EMS 2.0, EMS 2.2);
- ▶ EFI engines with MEFI4B ECU or later (gasoline, 2004-2005), with or without EVC;
- ▶ all EGC engines (gasoline, 2005 and later), with or without an EVC system installed.

### Connection:

The Gateway is supplied with an NMEA 2000 Micro Male or Raymarine SeaTalk NG connector. On most vessels with Volvo Penta engines, all that you need is to plug the device into an empty socket of the NMEA 2000 network backbone and connect the engine cable to a Multilink hub or, using the built-in Y-connector on the engine cable of the Gateway, to connect it in series with any of the EVC tachometers. Inexpensive adaptor cables for other engines are available.

### Features:

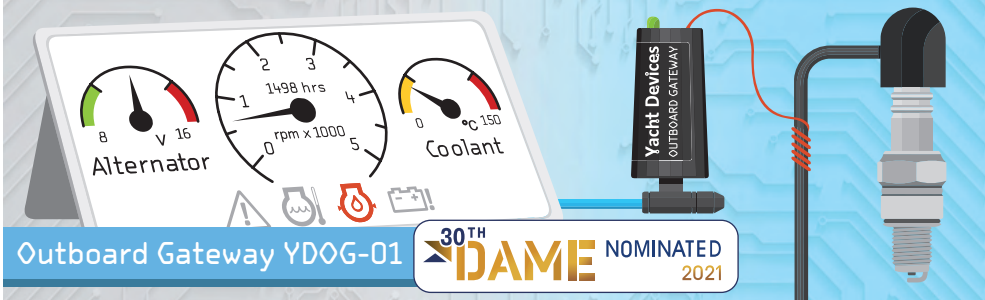
- ▶ high-voltage galvanic isolation between engine and NMEA 2000 interfaces;
- ▶ with factory settings, the Gateway only listens to J1939 network;
- ▶ easy configuration with a simple text file on MicroSD card;
- ▶ engine data recording for diagnostics and configuration;
- ▶ free diagnostic software for Microsoft Windows, Mac OS X and Linux is supplied;
- ▶ up to 8 engines and transmissions, 8 batteries and 10 fuel tanks are supported by one device;
- ▶ fuel tank capacity settings and 12-point sensor calibration for all tanks.



Certified by the National Marine Electronics Association  
Average current consumption from NMEA 2000 network: 38 mA, 10..30 V  
Engine cable length (to Deutsch male connector): 500 mm  
Device case length (without connector): 54 mm

USD \$ 249

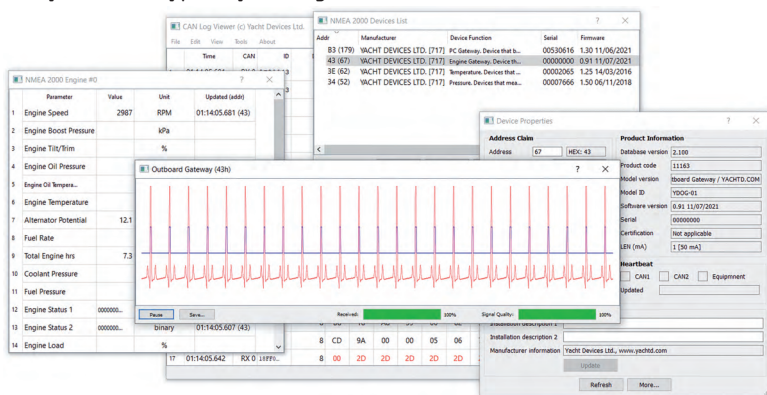
18



The Gateway is designed for petrol engines without digital interfaces, and provides NMEA 2000 equipment with engine revolutions (RPM), alternator voltage (measured at the NMEA 2000 interface) and engine hours.

It can also be programmed to use data from NMEA 2000 temperature or pressure sensors and send these data as coolant and oil pressure or temperature, boost or fuel pressure. The Device can be programmed to issue high revolutions, high temperature and low voltage warnings, and set the state of the charge indicator (displayed on MFD or NMEA 2000 display).

To connect the Gateway, you only need to connect it to the NMEA 2000 backbone and make 4-5 turns of its wire around the spark plug wire, and affix the loops with tape. In most cases, no additional settings are required, but you might need to set the RPM divider according to the ignition system and type of your engine.



Free software

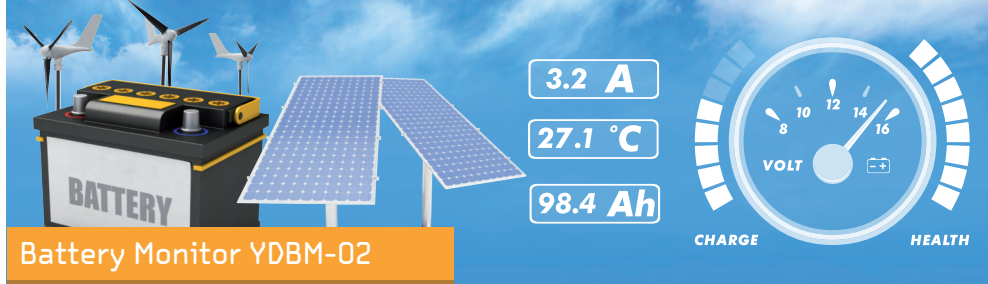
## Features:

- ▶ can be configured with a hidden button or via any NMEA 2000 gateway and software that allows editing of devices "Installation Description" fields;
- ▶ the firmware can be updated with our NMEA 2000 gateways;
- ▶ free diagnostic software for Windows, Mac OS and Linux allows viewing oscillograms in a real-time (see the screenshot above);
- ▶ pulse counting range (per minute): 200..70000;
- ▶ pulse divider can be set from 0.5 (multiply by 2) to 8;
- ▶ device's case length is only 40mm and it can be placed inside the engine.

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The Device wire has no electrical contact with the engine.  
 Wire temperature range: -50 to +180 °C  
 Supply voltage (from NMEA 2000 network): 9..16V  
 Current consumption: 30 mA (1 LEN)

USD \$ 149

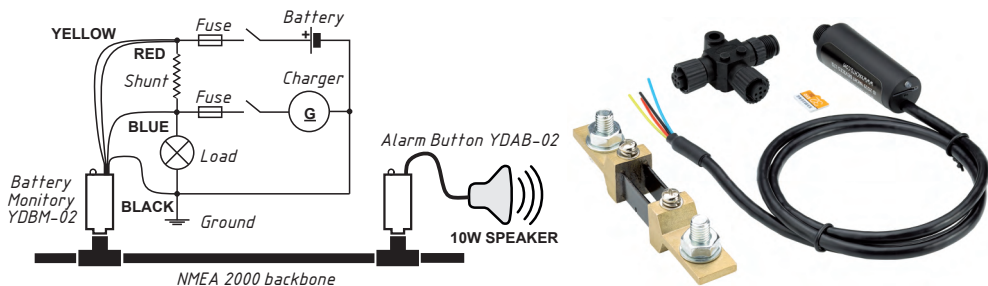


## Battery Monitor YDBM-02

The device reports measured voltage and current, calculated state of health and state of charge, and user defined static data (e.g. nominal capacity and chemistry) to NMEA 2000 and can turn on the genset or issue a warning when the battery state is critical.

The Battery Monitor can be used with any single DC source (i.e. alternator, wind generator, etc.) or load (**windlass, refrigerator**, etc.), but it is primarily designed for monitoring a vessel's battery. To operate as intended, it requires an appropriate external shunt (not supplied with the Device). It can be configured to use data from a **NMEA 2000 thermometer** connected to the battery to detect the charge state and health more accurately and report temperature along with voltage and current data. The Device can be configured and updated from MicroSD card or over NMEA 2000.

The Battery Monitor can be configured to manage channels of an NMEA 2000 **digital switching** system, and/or trigger a digital alarm unit compatible with standard NMEA 2000 PGNs 127501/127502. For example, you can configure the Battery Monitor to automatically raise a sound or voice alert about low battery charge with the Alarm Button (p.11), or to turn some equipment on or off, or to start a genset to recharge the battery with the **Circuit Control** (p.9).



### Electrical characteristics:

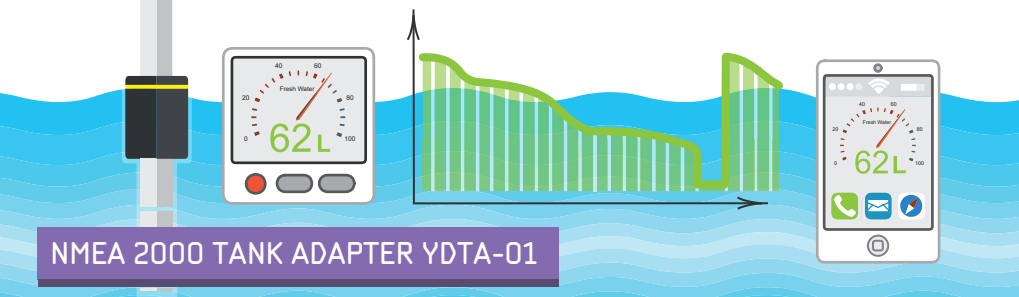
- ▶ external shunt rated current: 5..2500 A;
- ▶ external shunt's nominal voltage drop (recommended): 75 mV;
- ▶ current (see note below) / voltage measurement accuracy:  $\pm 0.5\%$  FSR / 0.1 V;
- ▶ maximum allowed DC voltage on inputs (with respect to GND input): 40 V;
- ▶ unlike the previous model YDBM-01, the YDBM-02 model has an extra wire and can be used with a shunt connected to either the positive or negative battery terminal;
- ▶ high-voltage galvanic isolation between NMEA 2000 and analog inputs (2500 VRMS).



Note: do not account for shunt accuracy which is typically  $\pm 0.25\%$  or  $\pm 0.5\%$ , and  $\pm 20..25$  ppm/ $^{\circ}$ C for temperature drift.  
 Supply voltage (from NMEA 2000 interface): 7..16V  
 Consumption current (NMEA 2000 interface), average: 50 mA

USD \$ 189

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## NMEA 2000 TANK ADAPTER YDTA-01

The Tank Adapter allows you to connect an existing resistive, voltage- or current-output type fluid level sensor installed on a tank and display the fluid level on NMEA 2000 devices, including chart plotters and instrumental displays. It also supports pressure sensors.

The Adaptor can be configured to report one of the seven fluid types defined in the NMEA 2000 standard: Diesel Fuel, Gasoline Fuel, Oil, Fresh Water, Waste Water, Black Water (Sewage), or Live Well. The tank number can be configured; up to 16 tanks of one type are allowed in NMEA 2000.

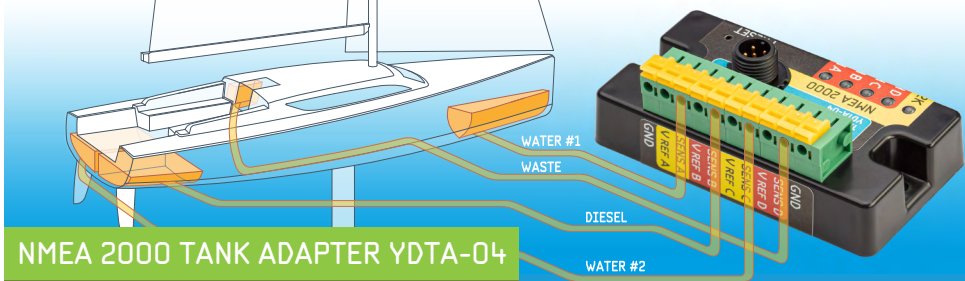
Adapter can be switched to the «pressure sensor» mode, and report one of the 15 pressure data types (Atmospheric Pressure, Water Pressure, Oil Pressure, etc.) instead of fluid level.

The Device can be used with European (10 to 180 Ohm range) American (240 to 33 Ohm range) or Japanese (0 to 310 Ohm range) standard fluid level sensors as well as with any nonstandard sensors with maximum resistance less than 400 Ohm.

### Features:



- ▶ can be installed as a standalone measuring device or in parallel with an existing analog gauge (1-coil, 2-coil, KUS 5-pin and modern high-impedance smart gauges);
- ▶ can be installed in parallel with Volvo Penta MDI (D1 and D2 engines);
- ▶ voltage reference input compensates for fluctuations in the gauges power supply voltage;
- ▶ 12 calibration points allows to accommodate sensor non-linearity and compensates for an irregular tank shape;
- ▶ equipped with a MicroSD card slot, intended for configuration, logging and firmware updates;
- ▶ high-voltage galvanic isolation between NMEA 2000 and sensor inputs.



## NMEA 2000 TANK ADAPTER YDTA-04

Offering the same connectivity capabilities as the YDTA-01 model (at left), it allows you to connect up to four tanks at the same time. The four measuring channels of the Tank Adapter YDTA-04 have individual reference inputs and may have individual settings.

The Device is equipped with a hidden button that allows switching among 15 configuration presets. For typical use cases (for example: two water tanks, one fuel and one black water tanks with EUR sensors), it allows to configure the Device in seconds! Just find suitable configuration in the manual and make a few clicks.

However, for advanced configuration (calibration curves, digital switching functions, connection in parallel with analog gauges, using voltage sensors) the NMEA 2000 PC gateway (from any manufacturer) is required. Firmware updates are available only with Yacht Devices gateways (Wi-Fi, USB or Ethernet).

Unlike the YDTA-01 model, YDTA-04 has no MicroSD slot and does not offer data logging capabilities. And it is supplied with the NMEA 2000 Micro Male connector only, and for Raymarine SeaTalk NG the adaptor cable is required. However, in the settings you can join several tanks for correct calculation of "Estimated Fuel Remaining" data for PGN 127496 "Trip Fuel Consumption, Vessel" which displays the sum of the fuel volume in selected tanks.

If you have more than one tank, the YDTA-04 model is a good choice, because it has the better price and less power consumption than two YDTA-01 adapters.



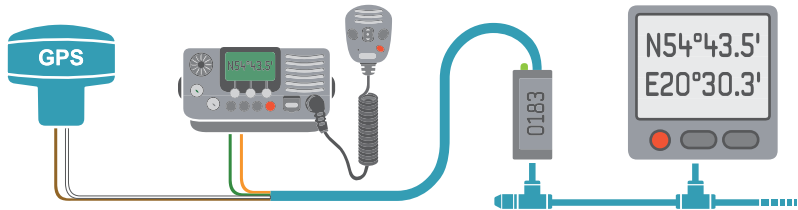
	YDTA-01	YDTA-04
Configuration	MicroSD / N2K	Button / N2K
Input channels	1	4
Digital switching	Yes	Yes
Logging to card	Yes	No
Consumption, mA	45	51
SeaTalk NG / NMEA 2000 connector	Yes / Yes	No / Yes
Pressure sensors support	Yes	No



Certified by the National Marine Electronics Association  
 Average current consumption: 51 mA, 7..16 V  
 Number of measurement channels: 4  
 Device case dimensions (LxWxH): 85 x 46 x 29 mm

USD \$ 249

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## NMEA 0183 GATEWAY YDNG-03

The NMEA 0183 Gateway allows you to connect NMEA 0183 equipment to an NMEA 2000 network and vice versa. It has a bi-directional converter with wide support of message types including AIS, VHF DSC/DSE, waypoints, routes, and autopilot.

The Gateway has one NMEA 2000 connection and one NMEA 0183 port with "transmit" and "receive" data lines. The baud rate is configurable from 300 to 115200 baud for the NMEA 0183 port and allows connection of AIS transceivers (38400 baud), fast NMEA 0183 multiplexers and PC adaptors, as well as standard NMEA 0183 equipment.

### Features:

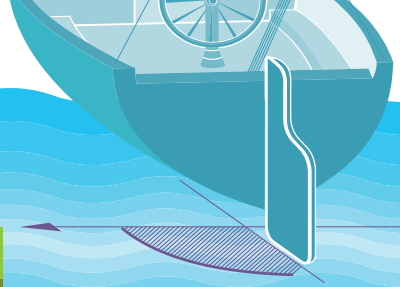
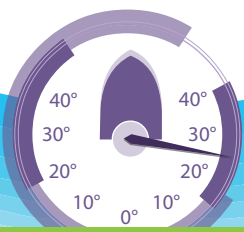
- ▶ allows control of Raymarine SeaTalk NG autopilots from NMEA 0183;
- ▶ flexible system of filters allows blocking of NMEA 0183 messages by sentence and NMEA 2000 messages by PGN, sender address, or 29-bit message identifier;
- ▶ powered from the NMEA 2000 with high voltage galvanic isolation between NMEA 2000 and NMEA 0183 ports;
- ▶ NMEA 2000 may act as a multiplexer for NMEA 0183 equipment;
- ▶ routing between RX and TX lines of NMEA 0183 port;
- ▶ fast heading (12 Hz) option for radar;
- ▶ compatible with PC via COM (serial) ports and with USB-to-serial adaptors;
- ▶ both "single-ended" (RS-232) and "differential" (RS-422) NMEA 0183 connections are supported.



The Device is equipped with a Micro SD card slot used for configuration, firmware updates and logging of diagnostic data. No special software is required to update or configure the Gateway. You only need a device (laptop or smartphone) with a MicroSD card reader and simple text editor.

Models with NMEA 2000 Micro Male or Raymarine SeaTalk NG connector are available.





## NMEA 2000 RUDDER ADAPTER YDRA-01

The Adapter connects resistive angle sensors, voltage- or current-output type rudder angle sensors to NMEA 2000 and supplies NMEA 2000 autopilots, chart plotters and other devices with the rudder angle.

The Device can be used with a rudder angle sensor with maximal resistance less than 400 Ohm, including European (10 to 180 Ohm range) or American (240 to 33 Ohm range) standard sensors, and with voltage output sensor (any voltage in range 0..16 V), and with 4..20 mA current-output sensor (with an extra load resistor).

You don't need to change anything in your current installation to add the Adapter. Seven-point calibration helps you avoid making mechanical adjustments. And it can be used standalone or together with digital gauges, or in parallel with most types of 12V analog gauges.

### Connection schemes:

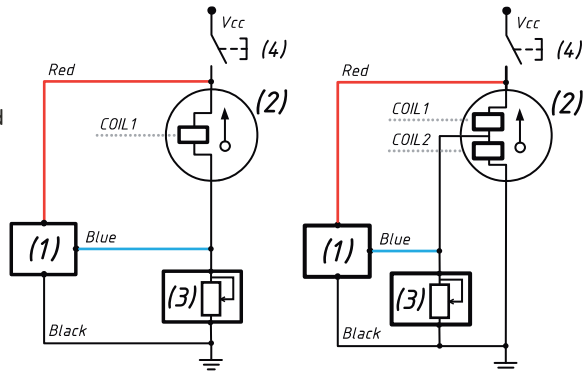
The Adapter can work together with a digital gauge, or in parallel with an existing analog gauge (1-coil, 2-coil, KUS 5-pin and modern high-impedance smart gauges);. If you have a combined gauge where you choose the value to display with a button, the Adapter will smoothly work with it, too.

Rudder angle readings can be calibrated with up to 7 calibration points to compensate for non-linearity of the sensor's resistance value vs rudder angle.

The Adapter is equipped with a Micro SD card slot intended for configuration, firmware updates, diagnostics and data logging. No special software is required.

You only need a device (laptop or smartphone) with a MicroSD card reader and a simple text editor.

The Device is powered from the NMEA 2000 network and provides high voltage galvanic isolation between NMEA 2000 and sensor inputs.



Connection in parallel with an existing analog 1-coil (left) and 2-coil (right) gauges: (1) - YDRA, (2) - Gauge, (3) - Rudder sensor, (4) - Optional button



## VOYAGE RECORDER YDVR-04

Voyage Recorder keeps GPS tracks, wind, depth, temperature, AIS, heeling and all other data which flow through the NMEA 2000 network on an SD card. Never forget exciting moments of your voyages, have proof of strong winds and great storms, accumulate data for future voyages, analyze your races, generate logbooks and diagnose problems.

The Recorder writes all NMEA 2000 data into the memory card and supports all message types broadcasted through the network by any other equipment present on the vessel's network. Estimated recording capacity for 32 GB card is 100..200 days of sailing.

### How to view the data

The software that comes with the Recorder is available for Microsoft Windows, Mac OS X and Linux. It allows export of data into the following formats:



GPX files with the vessel's track and extensive information about sailing conditions, including weather, depth, engine, and even tracks of nearby vessels with

AIS. GPX files can be viewed in Google Earth, Garmin MapSource and other cartographic applications. They can also be loaded into a modern MFD from Garmin or Raymarine.



XML, CAN, OpenSkipper, CanBoat and Signal K formats. Load the data to open source OpenSkipper or CAN Log Viewer applications to decode NMEA

2000 messages and "replay" recording. With Voyage Recorder, you may also "replay" your recordings to a physical network to emulate the specific equipment or onboard network in a lab.



CSV files to open data in spreadsheet applications like Microsoft Excel or LibreOffice Calc to visualize data using charts and build the graphic reports.



Printable logbook file (ODF). With Voyage Recorder software you can get a real multi-page, editable and printable logbook of your voyage with just a few mouse clicks.

### Voice or VHF recording



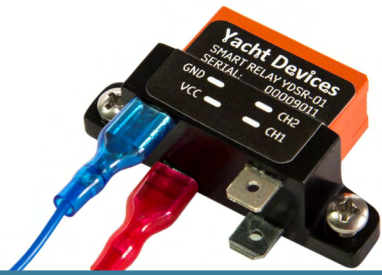
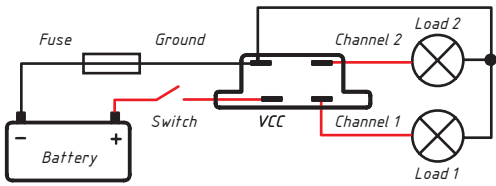
The device has a 3.5mm audio jack socket (line-in, adjustable gain and activation level). Audio data are stored to standard files with a .WAV extension. Data files contain internal links to the audio files, and the software places links to audio files at the geographical points in the GPX file where they were recorded. You can use it as a "voice log book" or to automatically save VHF weather forecasts and conversations.

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Equipped with Raymarine SeaTalk NG or NMEA 2000 Micro Male  
Average current consumption: 23 mA, 10..16 V  
Recommended MicroSD card (not included): Class 10, 16 – 32 GB  
Device case length (without connector): 54 mm

USD \$ 289



## SMART RELAY YDSR-01

The device helps you when you have two loads and only one power switch. Smart Relay powers the first channel when you turn the power switch on, and it powers the second channel when you cycle the power switch twice in one second.

Smart Relay contains a bi-stable RT424F05 relay and uses power only when the channels are switching; at all other times it consumes less than 0.5 mA. It can switch loads from 7 - 28V DC with continuous current up to 10A and peak current of 20A (4 seconds, 10% duty rate). To switch between channels, you should cycle the power in one second. If you need to have one load constantly on and the other should be on after the fast cycling of the power, just connect the first load to the incoming power terminals and the second load to channel 2.

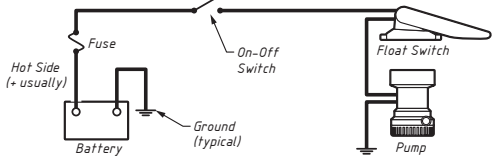
### Use Case

For example, you have a bilge pump and wish to add a float switch. However, you also want to keep the manual control and do not wish to replace the 2-wire cable with a 3-wire one. And, of course, you do not like the idea of changing the button on your panel to 3-position switch.

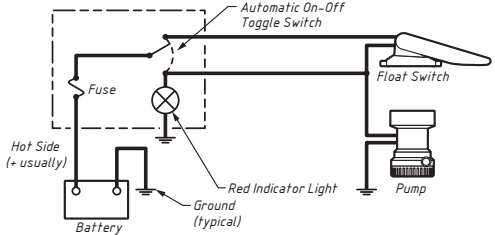
The Smart Relay is an ideal solution for this case. It has two output channels (CH1 and CH2 in Picture 2). When powered, Smart Relay always turns on channel 1, and fast cycling of the power switch engages switching between channels.

In Picture 2, channel 2 of the Smart Relay is connected to the power terminal of the pump in parallel to the float switch. When you turn the On-Off Switch on, channel 2 of Smart Relay is not active and the float switch controls the pump. Cycle the On-Off Switch in one second and channel 2 becomes active, the current will flow from the VCC to CH2, and the pump will turn on.

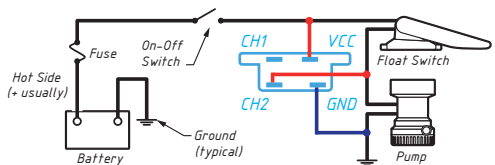
Simple System - Provides Automatic Operation of Pump



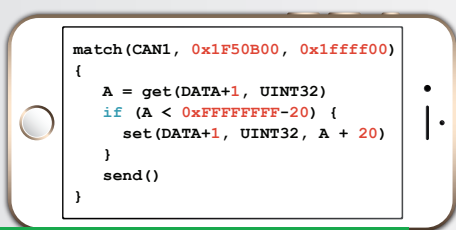
Best System - Provides Manual On/Automatic Control of the Pump and Red Light Indication of Operation



Pic. 1. Wiring diagram from the Rule Industries



Pic. 2. Manual/automatic control with the Relay



## NMEA 2000 BRIDGE YDNB-07

Unifies two physical NMEA 2000 networks into a single logical network, smoothly exchanging messages between them. The Device also supports filtering and processing of transmitted messages.

The Bridge contains a built-in compiler of a simple programming language. You can create programs on any device with a MicroSD socket and a text editor, and upload these programs to the Bridge with a MicroSD card.

- ▶ **Bypass the physical limits of NMEA 2000 networks** concerning the length of networks (100 meters for regular cable and 250 meters for heavy or mid-type cable) and concerning the maximum number (50) of physical devices attached to the network. On a network with address capacity of 252, multiple bridges can be engaged to expand to around 250 physical devices.
- ▶ **Isolate devices from each other.** Using the simple filter, you can block transmission of all or of selected messages from a given device in a separate subnet.
- ▶ **Ensure proper functioning of equipment.** Correct the transducer offset of the depth sounder, or "delete" invalid data in messages from equipment that is only partially operational using a 2- or 3-line script.
- ▶ **Ensure compatibility of equipment** from different generations. You can create and send any type of NMEA 2000 message using data from other messages in the network.
- ▶ **Diagnose malfunctions** in the NMEA 2000 network. The Device can record network messages and debug data from custom programs on a MicroSD card in a text file. You can view the data in a standard text editor on a smartphone or tablet with a MicroSD slot, there is no need for a computer.
- ▶ **Safely connect devices** that do not meet NMEA 2000 standards. One of the CAN-interfaces on the device has high-voltage galvanic isolation and can operate at a higher supply voltage.
- ▶ **Create gateways** for networks based on CAN protocol operating at a speed from 50 to 1000 kbps (for example, a gateway from a J1939 to NMEA 2000). Bridge's language has math and trigonometric functions to convert data.
- ▶ **Distribute encrypted programs** protected from unauthorized copying and/or modification.

Programming the device requires knowledge of NMEA 2000 standard, which can be obtained from the National Marine Electronics Association: <http://www.nmea.org>.



## PYTHON GATEWAY YDPG-01

```

Thony - D:\battery.py @ 1:1
File Edit View Run Tools Help
battery.py
1 # Sends data from the internal voltmeter in
2 # PGN 127508 "Battery Status"
3 import struct
4
5 def send_battery_status():
6     tail = (0x7FFF, 0xFFFF, 0xFF)
7     i16 = int(round(ydpg.busvoltage() * 100))
8     data = struct.pack('<BhhRB', 0, i16, *tail)
9     n2k.sendpgn(data, 127508)
10
11 while True:
12     send_battery_status()
13     time.sleep(1.5)

```

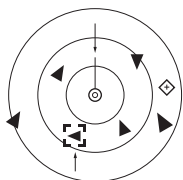
The Yacht Devices Python Gateway connects NMEA 0183 devices to the NMEA 2000 network and provides unbeatable data processing and filtering capabilities using the power of the Python 3 programming language and the Yacht Devices library.

This can be used to perform the following tasks:

- ▶ **Create custom gateways.** In the case of proprietary or non-standard messages, the Gateway is the best platform for rapid development thanks to the flexibility of the Python language and power of the Yacht Devices NMEA library.
- ▶ **Ensure proper functioning of the equipment.** For example, with a few lines of code you can create a virtual NMEA 2000 or NMEA 0183 depth sounder that sends the corrected value from a real instrument or adds sensor offset data.
- ▶ **Ensure equipment compatibility.** The Gateway allows you to set different speeds for NMEA 0183 transmit and receive lines. User code can forward messages, add checksums (not required in early NMEA versions), fix transducer names in sentences, etc.
- ▶ **Not just NMEA.** You can use the Gateway on any CAN network (J1939, BRP CAN, CANopen) with speeds up to 1 Mbps and with any RS-232 or RS-422 device.
- ▶ **Diagnose faults.** Just like in a hacker movie, you can connect your laptop via USB and type commands into the terminal to view live network data or run tests.
- ▶ **Log network data.** An internal 16 MB flash drive allows you to create data logging or streaming applications. For example, you can create a digital log book or collect data for your own depth chart.

The Gateway is equipped with an NMEA 2000 (CAN bus) interface with NMEA 2000 Micro Male or SeaTalk NG connector depending on the model, two serial ports (one NMEA 0183 TX and one RX), and a USB Mini Type-B connector that provides both USB serial port and USB disc interfaces. User programs can be copied from a PC to the Gateway's internal disc using the USB connection.

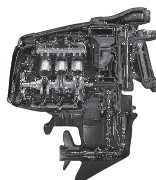
Check out the cool code examples online



AIS converter from NMEA 0183 to NMEA 2000



B&G FastNet protocol gateway



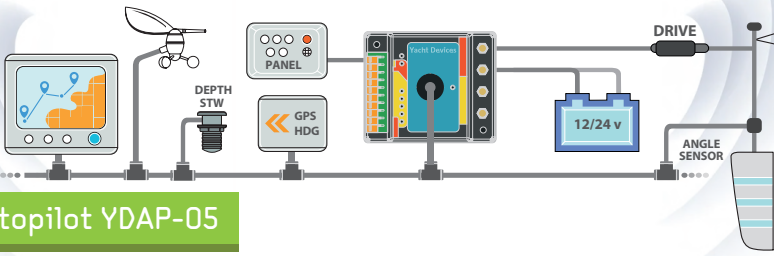
BRP Rotax engine gateway, 11-bit CAN frames

Equipped with Raymarine SeaTalk NG or NMEA 2000 Micro Male  
Current consumption from NMEA 2000 network, max. / avg.: 68 / 32 mA  
Device case length (without connector): 54 mm  
NMEA 0183 cable length: 450 mm

USD \$ 249

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**Q2  
2025**



## Autopilot YDAP-05

It is a course computer and actuator control unit in a single housing. It can control vessels up to 40" and 12 tonnes displacement, with a hydraulic pump or a reversible linear drive with electric clutch, providing 15A maximum continuous current (21A peak) and 12/24 volt supply.

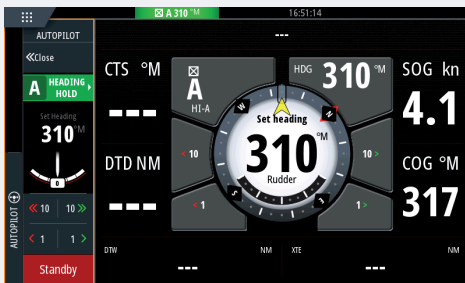
For minimal installation, apart from the drive, you will also need the NMEA 2000 network or SeaTalk NG network with the heading sensor and rudder angle sensor. Unlike the previous model YDAP-04, this model has a higher operating current and Wi-Fi. The built-in web server allows you to update the software, easily configure the autopilot and control it. You don't need to have a display, or physical buttons and can install the device everywhere.

The Autopilot can also be controlled with five (or even two, STANDBY and AUTO) buttons connected to its terminals. Feedback from the Autopilot can be obtained using internal LEDs and external LEDs and buzzer connected to the unit's terminals. Wi-Fi can be totally turned off.

The Autopilot supports AUTO, WIND and TRACK modes. To operate in WIND mode, the boat's network must include the wind sensor. For TRACK mode, you need a GPS and MFD on the NMEA 2000 network, or navigation software on a PC or mobile.



Autopilot YDAP-04 and YDAP-05



Simrad MFD works with our Autopilot



Autopilot's built-in control panel (web)

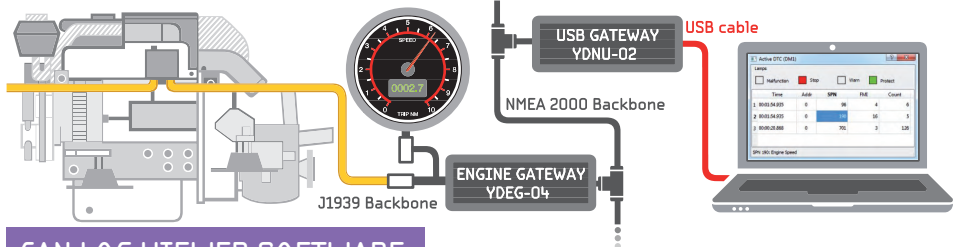
The Autopilot is compatible with modern Simrad, B&G, Lowrance and Raymarine displays and can be controlled with their native controls. It is also compatible with legacy Raymarine autopilots and displays (e.g. Raymarine ST70), and can be used to replace older autopilots such as the SmartPilot SPX 30.

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Certified by the National Marine Electronics Association  
NMEA 2000 supply voltage / current: 7.16 V / 20 mA  
Battery terminals voltage range, drive / clutch output: 7.29 V  
Maximum continuous current, drive / clutch: 15 A / 10 A

USD \$ 349



## CAN LOG VIEWER SOFTWARE

A freeware viewer, player, recorder and converter of CAN (Controller Area Network) logs. It can play your CAN recordings or display live data from our USB, Wi-Fi and Ethernet gateways on a PC screen in real time and highlight changing data.

CAN logs contain network level data and are compatible with any high-level protocol, including J1939 and NMEA 2000. The CAN Log Viewer runs on Microsoft Windows, Mac OS X and Linux.

### Features:

- ▶ record files from serial, TCP and UDP ports of YD gateways and routers;
- ▶ list, configure and update NMEA 2000 devices;
- ▶ display historical data from our sensors;
- ▶ manage loads of NMEA 2000 digital switching banks;
- ▶ view N2K log files of Engine Gateway, NMEA 2000 Bridge and other YD devices;
- ▶ view log files of Raymarine and Lowrance MFDs;
- ▶ built-in viewers for major J1939 and NMEA 2000 data types;
- ▶ convert data between different formats.

This product is designed for protocol analysis and troubleshooting of NMEA 2000, SeaTalk NG and J1939 equipment. It has an internal database with thousands of J1939 diagnostic trouble codes, J1939 and NMEA 2000 PGNs.

Time	CAN	ID	DLC	D0	D1	D2	D3	D4	D5	D6	D7	Count
00:00:21.751	RX 0	9F20000	8	00	E4	DA	FE	FE	FE	FE	FE	217
00:00:21.169	RX 0	9F20100	3	4								
00:00:21.741	RX 0	CEF0100	8	8								
00:00:21.746	RX 0	CF00400	8	F								
00:00:21.691	RX 0	CFE6200	8	F								
00:00:20.868	RX 0	18FEC600	8	4								
00:00:21.160	RX 0	18FEE500	8	6								
00:00:21.165	RX 0	18FEE600	8	3								
00:00:21.671	RX 0	18FEEF00	8	F								
00:00:21.676	RX 0	18FEEF00	8	5								
00:00:21.681	RX 0	18FEEF00	8	F								
00:00:21.185	RX 0	18FEEF00	8	F								
00:00:01.54.935	RX 0	1CEBF700	8	0								
00:01:54.795	RX 0	1CECF700	8	2								

Active DTC (D11)

Lamps:  Malfunction  Stop  Warm  Protect

Time	Addr	SPN	FMI	Count
00:01:54.935	0	96	4	6
00:01:54.935	0	190	16	5
00:00:20.868	0	701	3	126

SPN 190: Engine Speed

### J1939 DTC Viewer

Time	CAN	ID	DLC	D0	D1	D2	D3	D4	D5	D6	D7	Count
00:00:56.928	RX 0	9F20100	7	E3	00	00	00	00	7F	7F	...	800
00:00:56.930	RX 0	9F20500	8	01								
00:00:56.837	RX 0	9F50303	8	FF								
00:00:56.243	RX 0	9F50304	8	FF								
00:00:56.634												
00:00:56.966												
00:00:56.896												
00:00:56.895												
00:00:48.717												
00:00:56.414												
00:00:56.421												
00:00:56.390												
00:00:56.372												
00:00:56.817												
00:00:56.922												
00:00:56.897	RX 0	DF11300	8	00	AB	4F	FE	FE	00	FF	FF	565

NMEA 2000 Engine #0

Parameter	Value	Unit	Updated
1 Engine Speed	593	RPM	00:00:56.923
2 Engine Boost Pressure	0	kPa	00:00:56.923
3 Engine Tbl/Trim	14	%	00:00:56.923
4 Engine Oil Pressure	386	kPa	00:00:56.928
5 Engine Oil Temperature	56.0	°C	00:00:56.928
6 Engine Temperature	60.8	°C	00:00:56.928
7 Alternator Potential	14.0	V	00:00:56.928
8 Fuel Rate	2.4	L/hr	00:00:56.928
9 Total Engine hrs	9.0	hr	00:00:56.928
10 Coolant Pressure	26	kPa	00:00:56.928

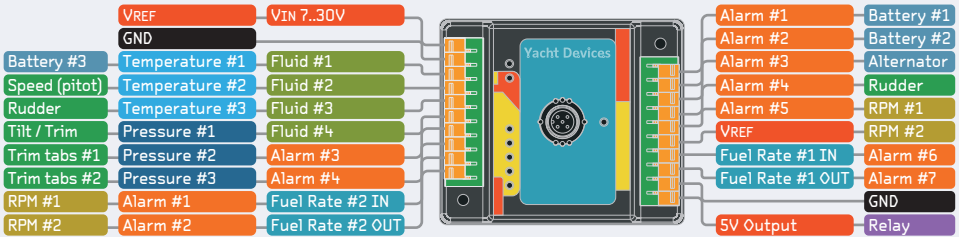
### NMEA 2000 Engine Data Viewers

Free for commercial and non-commercial use  
Runs on Microsoft Windows, Mac OS X and Linux  
Compatible with PC Software of Voyage Recorder

**FREEWARE**

**30**

## ANALOG GATEWAY



We have been recommending ActiSense or AlbaCombi products for analogue motors for eight years. But now it is time to offer something new. Easy and extremely flexible configuration thanks to the web interface and integrated Wi-Fi. The ability to view all engine data on a customizable web panel from any mobile phone or tablet. Fuel flow meter pulse counters for two diesel engines. Ability to monitor not only the engine, but also the batteries, tanks, rudder and trim tabs. All output to a NMEA 2000 MFD or tablet.

## RESELLERS



### United Kingdom

Marine Devices Ltd  
Phone: +44 7971 895 895  
[www.marinedevices.uk](http://www.marinedevices.uk)



### USA

Yacht Devices U.S.  
Phone: +1 239 688 7680  
[www.yachtdevicesus.com](http://www.yachtdevicesus.com)



### Australia

Yacht Devices Australia  
Phone: +61 493 043 798  
[www.yachtdevices.com.au](http://www.yachtdevices.com.au)



### Netherlands

SlimSchip  
Phone: +31 653 920 004  
[www.slimschip.nl](http://www.slimschip.nl)



### Norway

SEATRONIC  
Phone: +47 69 25 09 60  
[www.seatronic.no](http://www.seatronic.no)



### New Zealand

Beacon Marine  
Phone: +64 09 3600121  
[www.beaconmarine.nz](http://www.beaconmarine.nz)



### Sweden

Odelco SE  
Phone: +46 8 718 03 00  
[www.odelco.se](http://www.odelco.se)



### Germany

Busse Yachtshop  
Phone: +49 4347 909 2840  
[www.busse-yachtshop.de](http://www.busse-yachtshop.de)



### Finland

ProNav  
Phone: +358 10 2291 900  
[www.pronav.fi](http://www.pronav.fi)



### Denmark

Dansk Marine Center – Udstyr  
Phone: +45 98 162206  
[www.nordjysk-marine.dk](http://www.nordjysk-marine.dk)



### France

YD Boat Solutions  
Phone: +33 630042065  
[www.ydboatsolutions.fr](http://www.ydboatsolutions.fr)



### Austria

Werner Ober GmbH & Co KG  
Phone: +43 5577 824 19  
[www.yachtelektronik.at](http://www.yachtelektronik.at)



### Spain

Disvent Ingenieros SA  
Phone: +34 933 63 63 85  
[www.disvent.com](http://www.disvent.com)



### Turkey

Electromarine Gemi Elektronikçi San.ve Tic.Ltd.Şti.  
Phone: +90 850 532 0048  
[www.mavidenizsepeti.com](http://www.mavidenizsepeti.com)