Wireless and Wired
Analog to NMEA 2000
Converter Option
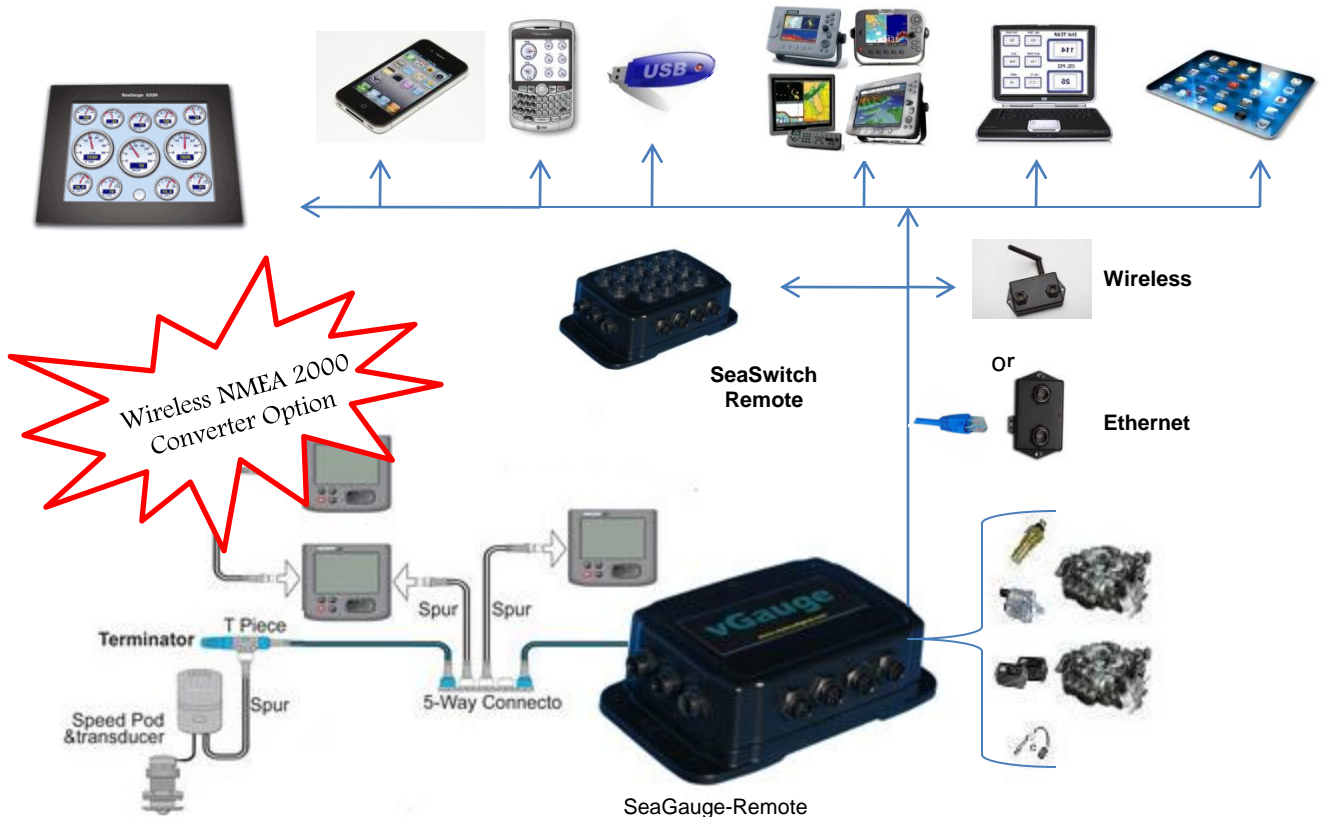
Chetco Digital Instruments, Inc.

Advanced Marine Instrumentation

SeaGauge Performance Monitoring System

Chetco Digital Instruments SeaGauge line consist of 4 products levels - Remote Gauge units, Remote Switch units, Instrument Displays, and interface adapters such as wireless and NMEA 2000. All SeaGauge products are controlled and configured by the vDash software for real-time display on PC/Laptop. SeaGauge Remote can utilize already installed senders or new senders for expanded instrumentation. All products are modular and can be integrated into a master networked marine vessel monitoring and switching system. Each Gauge function has user settable Hi-Low alarms with audio and visual indicators. Adding a SeaSwitch Remote unit allows alarms to control switch activation or de-activation - adding an advanced level of security.

Chetco Digital Instruments products are designed to work with older diesel/gasoline engines or the newest NMEA 2000 enabled power plants. SeaGauge units interface with standard analog engine senders/sensors and provide a bridge to NMEA 2000 data devices such as GPS/Sonar displays. SeaGauge products offer affordability and long life while the vDash software gives users the freedom to control the way performance data is viewed, logged and remotely accessed. Its wireless options include Bluetooth, LAN (Ethernet) and Internet.

Wireless NMEA 2000 Converter Option

Wireless

or

Ethernet

SeaSwitch Remote

Terminator

T Piece

Spur

Spur

Spur

Speed Pod &transducer

5-Way Connecto

vGauge

SeaGauge-Remote

SeaGauge Remote units act as an interface bridge allowing older diesel and gasoline engine sensor input data to be displayed on any SeaGauge color touch screen display or compatible NMEA 2000 devices.

SeaGauge Remote can combined traditional VDO type sensor data with newer NMEA 2000 senders into a common protocol for distribution throughout the vessel. Older gauges can now be replaced with large color SeaGauge displays or other NMEA 2000 devices. The SeaGauge Remote units feature two data, ports allowing SeaGauge displays and NMEA 2000 devices to operate individually or in tandem.

SeaGauge vDash software allows users to select and download a wide range of sensor algorithms and display themes. vDash enables users to layout the design and look of the gauge panel, enabling the user to choose the format such as dials, bar graphs, text and more. Formats can be mixed and matched to fit the users preference. vDash software also allows users to view and data log engine performance in real time engine using any windows based PC or Smartphone. This feature offers reviewing of data and can act as an engine diagnostic tool.

SeaGauge optional Wi-Fi and Bluetooth wireless transmitters enable Gauge data to be displayed around the vessel on any SeaGauge color display or other enabled device such as PDA or Smartphone. This feature allows for wireless placement of displays in any area of the vessel . With Wi-Fi and internet connection, users can view and control gauges and switches from home or away. From any internet connection users can monitor and control bilge, battery level, fuel level, waste water, fresh water levels or turn on or off vessel lighting, radio's etc.

All SeaGauge products are easy to install and operate.

Color Touch Screen Displays for use with SeaGauge and SeaSwitch Remote Modules

SeaGauge Displays are designed for use with the SeaGauge Remote Engine interface unit and the SeaSwitch Remote Switch unit to create a complete marine instrumentation system. These displays utilize a sealed ABS or aluminum case for durability and resistance to moisture and corrosion. A wide assortment of display sizes make it easy to view high resolution 3D graphics and text. Multiple displays can be easily added.

12.1" SVGA 1000nit now available

Available with Aluminum Bezel

SeaGauge G24N
8.4" Color Touch Screen Display

SeaGauge G24N 8.4" diagonal display is compatible with SeaGauge Remote or SeaSwitch Remote units. This advanced large format (VGA) graphic LCD "Touch Screen" is easy to read in bright sunlight. Simply attach to compatible SeaGauge Remote and get real-time color display of engine data with 8 user "touch" selectable graphical data layouts. It is ideal for multiple engines.
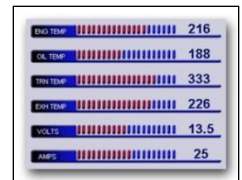
SeaGauge G12C
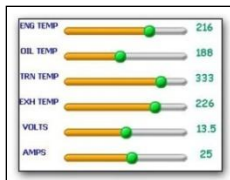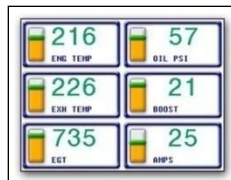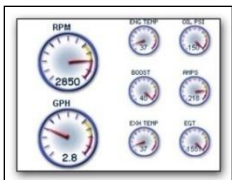## 5.7" Color Touch Screen Display

SeaGauge G12C 5.7" diagonal display is for use with any SeaGauge Remote or SeaSwitch Remote unit. This advanced large format (QVGA) graphic LCD "Touch Screen" display is a touch sensitive LCD display and is easy to read in bright sunlight. Simply attach to SeaGauge Remote for a complete digital instrumentation system. This unit is perfect for single engine or duel engine dash panels. Also available in High Definition 640 x 480 (G12HD)

As shown with optional aluminum bezel

SeaGauge G12N
4" Color Touch Screen Display

SeaGauge G12N 4" diagonal display is meant to be used with SeaGauge Remote Gauge and SeaSwitch Remote units. This advanced sealed (QVGA) graphic LCD "Touch Screen" display is rugged enough for exposed locations such as flying bridges and open cockpits. The touch sensitive LCD display is easy to read in bright sunlight. Simply attach to compatible SeaGauge Remote .

Aluminum bezel

Touch the screen --- Change the view

Chetco Digital Instruments P.O. Box 5359, Brookings, Or. 97415 Ph: 1-541-469-4783
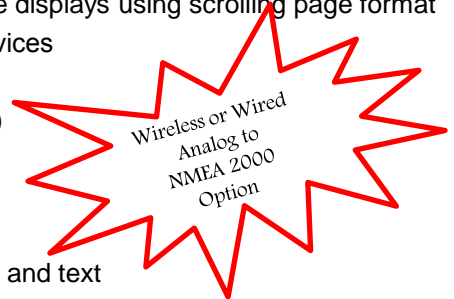
SeaGauge Remote Digital Marine Gauge

SeaGauge Remote is a multi-function digital marine gauge with optional NMEA 2000 Interface bridge. Now get digital instrumentation for a variety of performance parameters such as tachometer, rpm, oil pressure, engine temperature, fuel level, voltmeter, main and auxiliary battery, and much more all in a compact sealed design. The addition of the NMEA 2000 interface allows existing marine engines and equipment to be monitored in multiple locations using compatible displays. Housed in a solid ABS water-tight box measuring only 8.2" long x 2.37" tall x 4.7" wide. to fit easily into any configuration.

SeaGauge Remote replaces existing gauges while using already installed senders. Programmable calibration tables can be matched to almost any instrument. When coupled with an optional SeaGauge or NMEA 2000 display the SeaGauge Remote is a stand alone engine monitoring solution. Easily connect to a PC to data log and perform engine diagnostics for all analog sensor inputs and optional NMEA 2000 inputs.

SeaGauge Remote Features

✓Included vDash Software allows your SeaGauge remote to interface with SeaGauge displays, Windows based PC products or NMEA2000 devices as well as engine performance data logging, system setup and user programmable screen design

✓Gauges and Switches can be displayed and controlled from one or more displays using scrolling page format

✓Compatible with all SeaGauge displays, Windows PC's, NMEA2000 devices

✓User defined gauge labels (multiple languages) and sensor types

✓User defined downloadable sensor calibration tables (virtually unlimited)

✓Water resistant ABS housing for long life

✓Virtually unlimited sender interface (Fluid, Pressure, Temp, Volt, Pulse)

✓3 Pulse inputs and 12 digital gauge functions

✓User selectable mix and match screen layouts offering dials, bar graphs and text

✓"Touch Screen Scrolling" feature for instant access to 8 screen formats (with SeaGauge displays)

✓Modular design for easy upgrades and expansion using optional accessories

✓Serial and USB ports for data logging to PC, software upgrades, system enhancements

Wireless or Wired Analog to NMEA 2000 Option

Dimensions

SeaGauge Remote Optional Accessories

❖SeaSwitch: 12 Channel water resistant electrical switch module

❖VGBT: Wireless Bluetooth adaptor. View data on other BT enabled display's and Smartphone's

❖VGENET: Wired Ethernet (with web server) for remote viewing from any internet or local connection

❖VGWIFI: Wireless Wi-Fi (with web server) for remote viewing from any internet or local connection

❖VGNMEA2K: NMEA2000 Interface for bridging engine sensor data to compatible devices

❖SeaGauge "C" series display's: 8.4", 5.7" , 4" and 4.3" color touch screens add real time instrument viewing in multiple locations on your vessel.

❖Extended length serial RS232 cables (300 feet)

SeaSwitch Remote
Sealed Digital Switch

SeaSwitch Remote is a multi-function digital switch that replaces mechanical switches in marine and other applications. SeaSwitch provides sealed digital control over bilge pumps, GPS, sonar, radios, NAV lights, wipers, blowers, water pumps and more in a compact water resistant design. The wireless Bluetooth and Wi-Fi option supports NMEA 0183 formatting. Switch status can be transmitted, controlled and displayed on NMEA 0183 or NMEA 2000 devices in multiple locations simultaneously. The network interface options allows all switches to be remotely controlled via SeaGauge color Touch screens, PC based applications, or other devices.

SeaSwitch Remote is housed in a solid ABS water-tight box measuring 8.2" wide x 2.28" tall x 2.5" deep.

SeaSwitch Remote Features

✓12 function digital switch (with optional NMEA 2000 interface)

✓Switches and Gauges can be displayed and controlled from one display or multiple displays using touch activated screens

✓NMEA 2000 and NMEA 0183 command status via serial ports

✓15 Amp relay on each circuit

✓Remote control and status viewing on Windows PC, PDA or SeaGauge color d...

✓Sealed water resistant design

✓User defined switch labels (multiple languages) and display positions

✓Ethernet, Bluetooth and Wi-Fi wireless data transmission option available

Wired or Wireless Analog to NMEA 2000 Converter Option

SeaSwitch Remote Optional accessories

✓SeaGauge: Remote gauge interface module for viewing 16 gauge readings

✓VGBT: Wireless Bluetooth adaptor. View and control switch on BT enabled display's, PC's and Smartphone's

✓VGWIFI: Wireless Wi-Fi (with web server) for remote viewing and switch control from any internet or local connection. Control switch functions from onboard, home or anywhere there is internet access

✓VGNMEA2K: NMEA2000 Interface for bridging to compatible devices

✓SeaGauge "C" series display's: 8.4", 5.7" and 4" diagonal color touch screens add real time instrument viewing in multiple locations on your vessel

SeaSwitch Remote   **Optional Display**

Output to single or multiple displays

Wireless   **or**   **Ethernet**

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vGauge G18Si
Integrated Digital Gauge Cluster

vGauge G18Si is a multi-function color digital gauge panel designed to provide full engine instrumentation in one compact unit. It's advanced sunlight readable color "Touch Screen" replaces virtually all analog gauges in automotive applications. View a variety of performance parameters such as **tachometer, EGT, oil pressure, engine temperature, boost pressure, O2, fuel pressure, fuel level, voltmeter, battery, tire pressure** and more in a compact water resistant design.
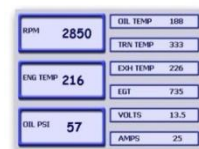
Touch the screen   *Change the view*

Dozens of themes to choose or easily custom design your own

SeaGauge G18Si Features

✓vGauge G18Si : 1 Tachometer, 5 digital gauge functions (Optional EGT module for Pyro's)

✓Easy installation, use existing senders and wiring or add new senders to expand instrumentation

✓Up to 8 gauge screens can be viewed using "Touch Screen Scrolling" to show data in a wide range of user defined graphical formats

✓Included vDash Software interfaces all vGauge products for engine performance logging, system setup, and user programmable screen design

✓Display GPS Direct, Speed, Location, from 3rd party instruments such as Garmin

✓Large 54.3" QVGA color graphics, sunlight readable LCD display

✓Night screen setting for easy low light viewing

✓Wide range of text and font sizes for easy high resolution viewing of 2D graphics

✓Water resistant ABS housing for long life

✓Virtually unlimited sender interface allows monitoring of all engine perameters

✓User selectable mix and match screen layouts offering dials, bar graphs, and text gauges

✓Modular design for easy upgrades and expansion using optional accessories

✓RS232 Serial port for data logging to PC, software upgrades, and system enhancements

❖Compact Color multi-function digital gauge with touch screen interface

❖Rugged ABS plastic enclosure measures 5" X 4" X 1.5"

❖Pedestal mount to dash or windshield for easy installation

❖Customizable sensor calibration tables match any sender

❖Color and audio warning indicators prevent engine damage

❖Large 480 X 272 graphic sunlight readable 4.3" LCD display

vGauge G18Si Options

❖VGBT: Wireless Bluetooth adaptor

❖VGWIFI: Wireless Wi-Fi (with web server)

❖VGENET: Wired Ethernet (with web server)

SeaGauge Wireless NMEA 2000 Compatible Interface

iPad™, iPhone™, Blackberry™, Android™ and Laptops

SeaGauge™ Wi-Fi Wireless NMEA 2000 Internet or Intranet based viewer

- ✓ *View directly on all Smart Phones and tablets "No Apps to download"*
- ✓ *Wi-Fi connectivity with built in web server*
- ✓ *User configurable data display themes*
- ✓ *View text based NMEA 2000 data*
- ✓ *Internal or external mounting options*
- ✓ *Local or Web (Internet) based data viewer buttons*
- ✓ *Direct NMEA 2000 network interface option*

Chetco Digital Instruments has introduced a new line of "Plug-and-Play" wireless browser based adapters which directly interface to NMEA 2000™ and NMEA 0183 compatible networks and provide viewing via common Web Browser enabled devices. SeaSmart.Net™ interface modules consist of a NMEA 2000™ to Ethernet/WiFi gateway with full function built in web server. These small self-powered modules allow vessel operators to view live NMEA 2000™, NMEA 0183, and analog engine information via any onboard PC display, iPad™, iPhone™, Android™, Blackberry™ or other browser compatible devices.

Available in wired Ethernet or wireless 802.11 b/g formats, the adapters can be purchased stand alone or integrated into the SeaGauge™ line of digital gauges and switch units. SeaSmart.Net™ allows digital, analog and switch status data streaming over the NMEA 2000™ bus to be funneled to either a AD HOC or Infrastructure network. All modules have a built in web server with support for CGI and AJAX allowing users to setup a wireless NMEA 2000™ network in minutes without special IT expertise. The Open Source HTML based user interface eliminates additional license fees or app downloads while providing a cooperative environment for creating dynamic web pages to view and analyze vessel data.

Pricing starts at $395 for the base unit, no additional licenses needed. Other configurations and network options are also available including Ethernet.
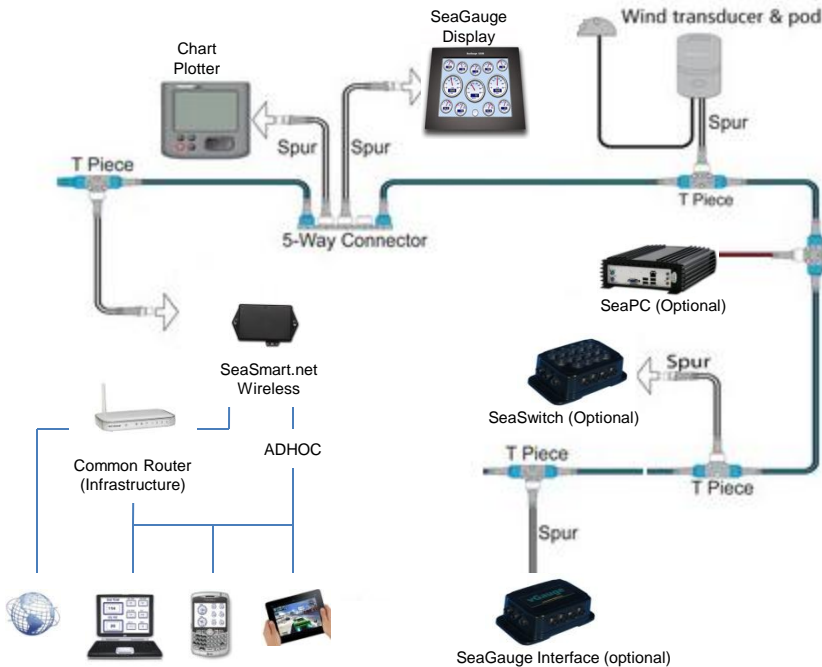
Wired Ethernet NMEA 2000™ Protocol Gateway

SeaSmart ENet

Plug and Play Wired NMEA 2000™ and NMEA 0183™ compatible interface module consists of a USB/Serial gateway, 100Base-TX Ethernet and built in CGI/AJAX web server. Compatible with most browser enabled devices such Smart Phones, iPhone, iPad, and Android, SeaSmart.Net™ allows users to view NMEA 2000™ and 0183 serial data via integrated web pages eliminating add-on license fees. Open Sourced HTML Protocol allows simple customization to fit any application from weather station, dual engines, battery banks, fluid tanks and more. Now view all gauges, switch positions and GPS information from any browser enabled device.

SeaSmart.Net™ innovative interface technology includes an embedded Ethernet module to directly support both infrastructure and Ad Hoc networks without additional equipment. SeaSmart.net firmware translate native NMEA 2000 protocol to compatible HTML pages which are automatically updated Live and feed to the embedded web server. CGI and AJAX protocols allow JavaScript Web Browsers to view the dynamic graphics with minimum network loading so that performance is maintained over Dial-Up and Cell based networks. The Open Protocol allows for license free viewing of vessel data equal to other helm station displays and is easily shared among other devices. This data can be logged and viewed on vessel based systems or pushed to internet based remote servers for access anywhere in the world.
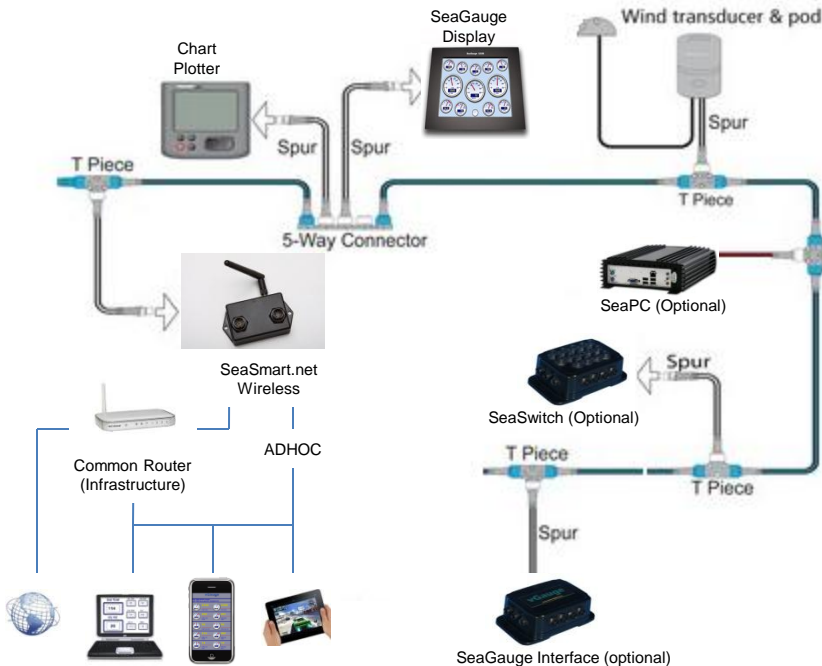
Chetco Digital SeaSmart.Net™ technology makes wireless gauge viewing, data access and data storage as easy as using a smart phone and browser. SeaSmart ENet is bundled with sample Web Pages for instant setup. Custom development tools are also included.

Wireless NMEA 2000™ Protocol Gateway

SeaSmartWiFi

Plug and Play Wireless NMEA 2000™ and NMEA 0183™ compatible interface module consists of a USB/Serial gateway, 802.11 b/g Wi-Fi transmitter and built in CGI/AJAX web server. Compatible with most browser enabled devices such Smart Phones, iPhone, iPad, and Android, SeaSmart.Net™ allows users to view NMEA 2000™ and 0183 serial data via integrated web pages eliminating add-on license fees. Open Sourced HTML Protocol allows simple customization to fit any application from weather station, dual engines, battery banks, fluid tanks and more. Now view all gauges, switch positions and GPS information from any browser enabled device.

SeaSmart.Net™ innovative interface technology includes an embedded Wi-Fi module to directly support both infrastructure and Ad Hoc networks without additional equipment. SeaSmart.net firmware translate native NMEA 2000 protocol to compatible HTML pages which are automatically updated Live and feed to the embedded web server. CGI and AJAX protocols allow JavaScript Web Browsers to view the dynamic graphics with minimum network loading so that performance is maintained over Dial-Up and Cell based networks. The Open Protocol allows for license free viewing of vessel data equal to other helm station displays and is easily shared among other devices. This data can be logged and viewed on vessel based systems or pushed to internet based remote servers for access anywhere in the world.

Chetco Digital SeaSmart.Net™ technology makes wireless gauge viewing, data access and data storage as easy as using a smart phone and browser. SeaSmartWiFi is bundled with sample Web Pages for instant setup. Custom development tools are also included.

Senders and Sensors

The most common senders are listed for sale below. SeaGauge works with virtually all senders including FloScan. Call for items not listed below.

❖**Fuel Flow Sender 1-30GPH, * Requires 2 for fuel injection and diesel**

❖**Inductive Flywheel Pickup for Tachometer**

❖**Hall Effect Current sender**
+/- 50 Amps 5 volt input Manufacture # AMP100
+/- 100 Amps 5 volt input Manufacture # AMP200

❖**Exhaust Gas Temperature Sender**
80-1800 degrees F 1/8"-27 NPT threads K-type thermocouple

❖**Wideband Bosch O2 sensor with amplifier**
7-20 AFR 12 volt input Manufacture # LC-1

❖**VDO style Temperature Sender**
250 degrees F 1/8"-27 NPT threads Manufacture # 323-095
400 degrees F 1/8"-27 NPT threads Manufacture # 323-086
250 degrees F 1/2"-14 NPT threads Manufacture # 323-419

❖**VDO style Pressure Sender**
0-150 PSI 1/8"-27 NPT threads Manufacture #360-004
0-80 PSI 1/8"-27 NPT threads Manufacture #360-003
0-30 PSI 1/8"-27 NPT threads Manufacture VDO #360-043

❖**VDO style Fuel Tank Sender**
 2-1/8" SAE bolt circle for tank depth 6" - 23" Manufacture # 226002

❖**MAP/Boost Sender**
30PSI - 30 in Hg 12 volt input Manufacture # ODYR-09

NMEA 2000 Display

NMEA 2000 Network

Smartphone

SeaGauge
Touchscreen Display

Windows PC