



Maretron[®]

Vessel Monitoring & Control

Product Overview Presentation

Revision 04/22

TABLE OF CONTENTS

- Company Overview
- NMEA 2000® Intro & Benefits
- User Interface Software
- User Interface Hardware
- Gateways & Bridges
- Tank Monitoring
- Engine Monitoring
- Electrical Monitoring & Control
- General Systems Monitoring & Recording
- Navigation Instruments
- NMEA 2000® Cables & Connectors
- Software Tools
- Hardware Tools
- Maretron Web Pages



COMPANY OVERVIEW

Who is Maretron?

Maretron, a Carling Technologies brand, is a world leader in Networked Vessel Monitoring and Control solutions.

We understand that a vessel is made up of many complex systems including the engine, transmission, generators, electrical, and much, much more. Trying to keep track of this equipment to ensure a safe and secure journey can be overwhelming. Without the appropriate vessel monitoring and control system, small issues can quickly turn into dangerous situations, and can even become life-threatening. Further complicating the task at hand is the different user interfaces for each piece of equipment, all having various gauges, buttons, and ways to setup and acknowledge alarms.

At Carling, we have developed a single, common interface to monitor and control your vessel's system so you don't have to learn and remember different ways to interact with each piece of equipment. And with a built-in comprehensive alert system, you don't have to sit and stare at the gauges because you will get an alarm or warning at the slightest hint of a problem, before it turns into a larger, more serious issue. Look at it as your very own "second mate" or "engineer," continuously watching over your vessel 24 hours a day, 7 days a week, 365 days a year. Additional key features include:

- **Safety** – alarms for fire, smoke, combustible gasses, carbon monoxide and high bilge water
- **Security** – includes cameras, motion detectors, and magnetic door and port hole sensors
- **Ease of use** – provides one simple, common user interface for all systems
- **Remote monitoring and notification** – includes monitoring remotely plus video, email and text alerts
- **Future support** – easily expandable systems grow with your needs

COMPANY OVERVIEW

What can we monitor?

- Alternating Current (AC)
- Air Conditioning/Heating
- Anchoring
- Bilge Pumps
- BNWAS System
- Direct Current (DC)
- Depth
- Electrical Distribution
- Engine
- Engine Warning
- Environment
- Fuel Management
- Generator
- GPS
- Heading
- Humidity
- Icemakers
- Indicators (Safety and Security)
- Navigation
- Pressure/Vacuum
- Rudder
- Speed/Distance
- Tanks
- Temperature
- Time/Date
- Transmissions
- Transmission Warning
- Vessel (Pitch, Roll, Trim)
- Watermakers
- Wind

*The real question is...
What do you want to monitor?*

NMEA 2000® INTRO & BENEFITS

What is NMEA?

NMEA: Which stands for National Marine Electronics Association, is an organization committed to enhancing the technology and safety of marine electronics through installer training and interface standards.

NMEA2000®: A plug-and-play communications standard used for connecting marine sensors and display units within ships and boats

Plug and Play: Intended to work perfectly when first connected, without reconfiguration or adjustment by the user (pretty much)

Communication runs at 250 kilobits-per-second and allows any sensor to talk to any display unit or other device compatible with NMEA2000® protocols

Maretron NMEA2000® Network



NMEA 2000® INTRO & BENEFITS

Benefits of NMEA 2000®

- **Single Cable Network Connection**
 - ✓ Network Cable Includes Data and Power Connections
 - ✓ Connections are Waterproof and Won't Come Unplugged for Improved Reliability and Reduced Warranty Cost
 - ✓ Reduced Labor Cost Compared to Traditional Disparately Wired Systems
 - ✓ Reduced Wire and Weight Compared to Traditional Disparately Wired Systems
- **Single User Interface for Monitor and Control of All Vessel Systems**
 - ✓ Eliminates Multiple Disparate Displays, Gauges, and Switches and Frees Up Valuable Dashboard Space
 - ✓ Easy to Use and Learn User Interface for Monitor and Control All Vessel Systems
- **Comprehensive Integrated Alert System**
 - ✓ Affectively Adds a Second Mate or Engineer to the Vessel Where Every System is being Monitored 365 days/year, 7 days/week, 24 hours/day
 - ✓ Increased Safety and Security for Everyone Onboard the Vessel

USER INTERFACE SOFTWARE

Overview



N2KView® V3

Computer connected to NMEA 2000® network



N2KView® Mobile

Tablets and Smart Phones



N2KTracker®

Tablets and Smart Phones



Real Time Cloud Service

Remote Access



Telemetric Cloud Service

Remote Data Storage

USER INTERFACE SOFTWARE

N2KView® V3

Maretron's N2KView® V3 is a comprehensive vessel monitoring and control software that goes beyond simple monitoring.

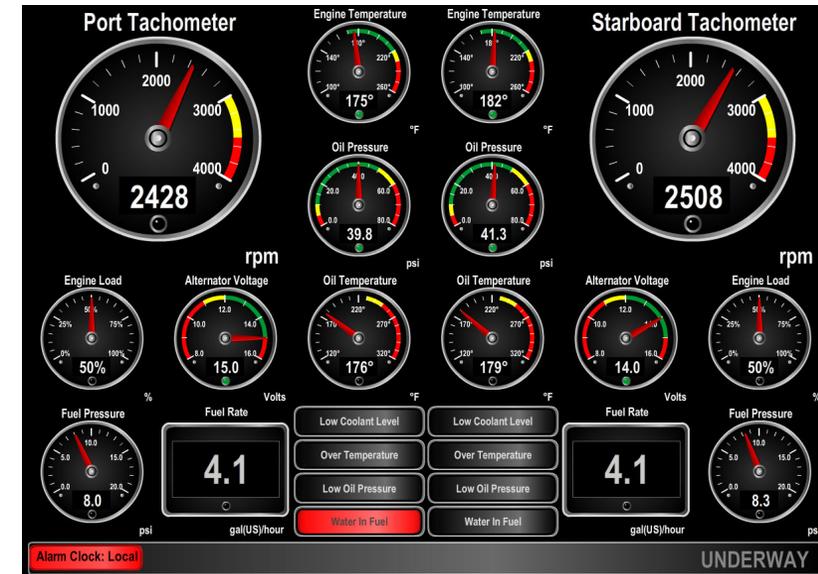
N2KView V3 is completely user-configurable, and you are free to create different screens for your exact needs while easily switching from screen to screen for monitoring all your systems.

Vessel Monitoring & Control Software for PCs

- ✓ Connects to NMEA 2000® Network via a Maretron Gateway, either USB100 (Windows®) or IPG100 (Windows & MAC)
- ✓ Comprehensive software includes services of Monitoring, Control, Alerts, Video, Power Management, and Fuel Management
- ✓ Engines, Generators, Electrical, Tanks, Rudders, Navigation instruments, and so much more.

N2KView V3 software built in!

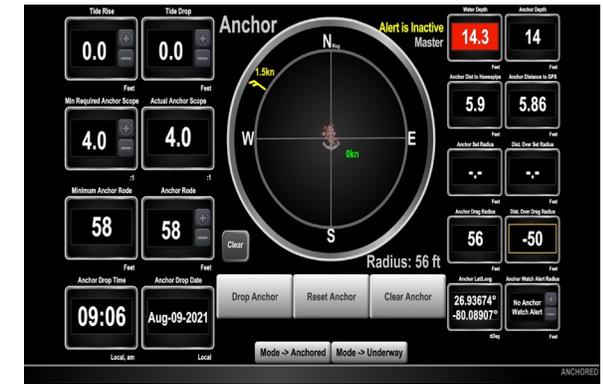
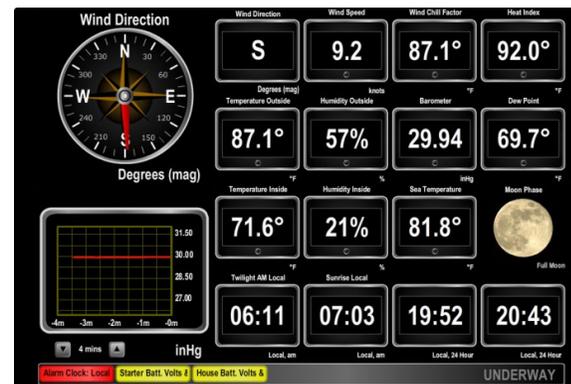
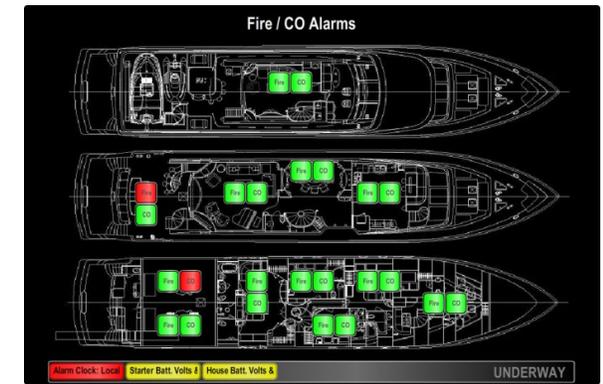
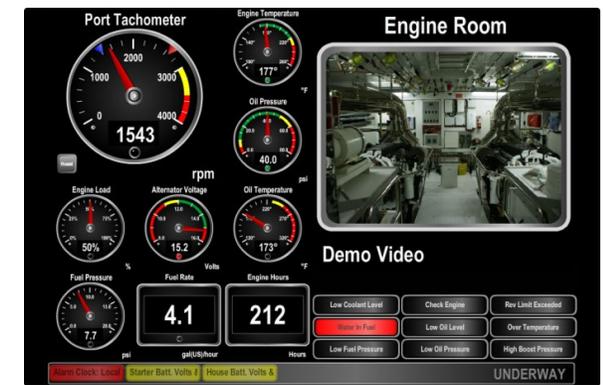
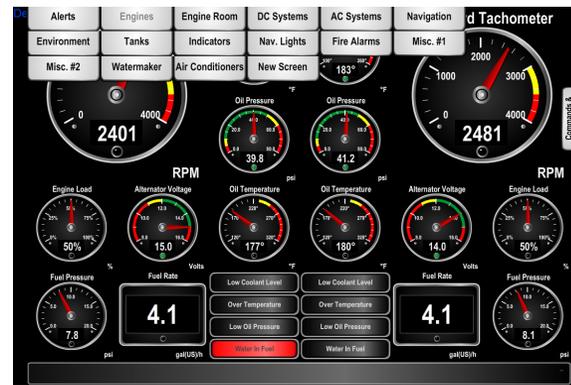
- ✓ TSM810C & MBB300C



USER INTERFACE SOFTWARE

N2KView® V3

- ✓ Optimized for Touchscreen Interface
(Full Support for Keyboard and Pointing Devices)
- ✓ Favorite Screens are Completely User Defined and Tailored for Installed NMEA 2000® Sensors
- ✓ As Many Favorite Screens as Desired, User Defined Tab Names
- ✓ User Defined Background Images
(Vessel Profiles, Deck Views, Systems Diagrams, etc.)
- ✓ Integrated Video with Pan, Tilt, and Zoom Controls
- ✓ Comprehensive Alerts System Showing Alarms and Warnings at Bottom of Screen
- ✓ Emailing/Texting On User Selectable Alerts
- ✓ User Defined Graphs for Monitoring Trends



USER INTERFACE SOFTWARE

N2KView® V3 – Training Videos

- Overview
- Alerts
- Applications
- Videos
- Documentation
- Application diagram
- BNWAS
- Video Cameras
- Screenshots
- Downloads



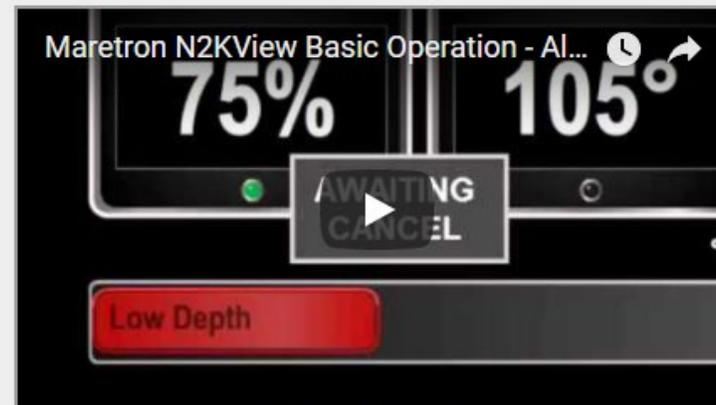
N2KView Basic Operation
Part 1 - Overview



N2KView Basic Operation
Part 2 - Component Types I



N2KView Basic Operation
Part 3 - Component Types II

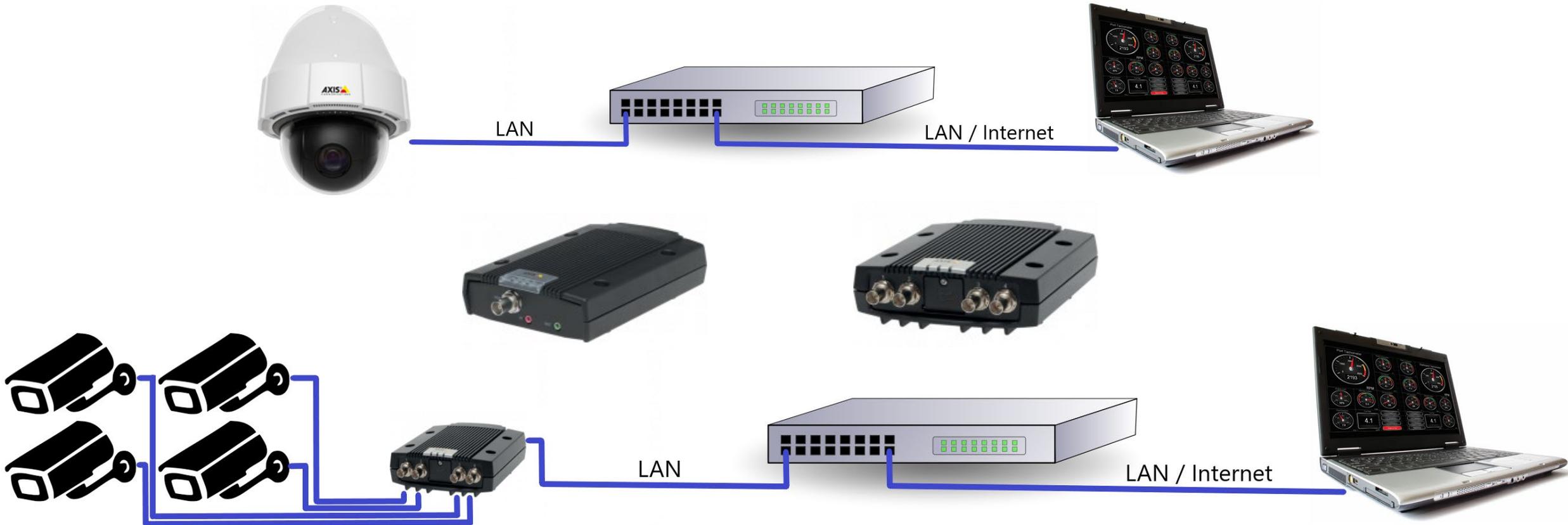


N2KView Basic Operation
Part 4 - Alerts

USER INTERFACE SOFTWARE

N2KView® V3 – Camera Integration

AXIS IP Cameras & Encoders

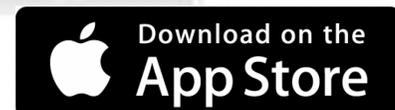


USER INTERFACE SOFTWARE

N2KView® V3 Mobile

Maretron's N2KView® in the palm of your hand!

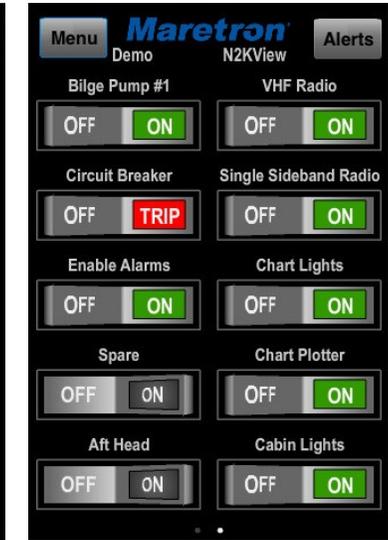
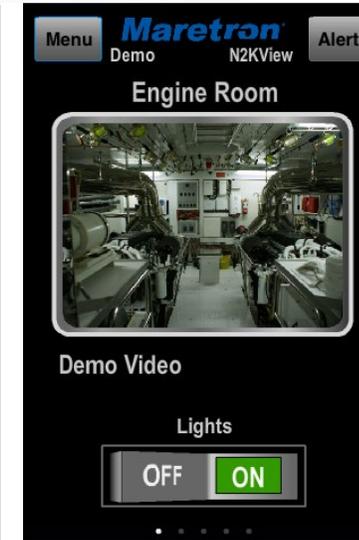
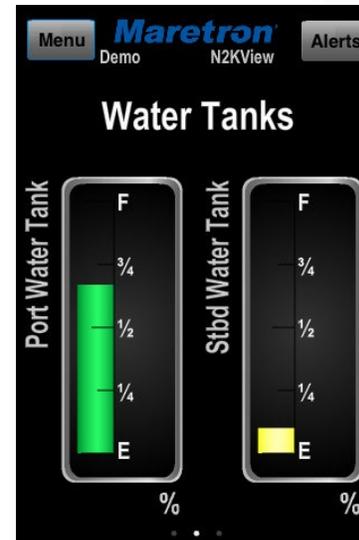
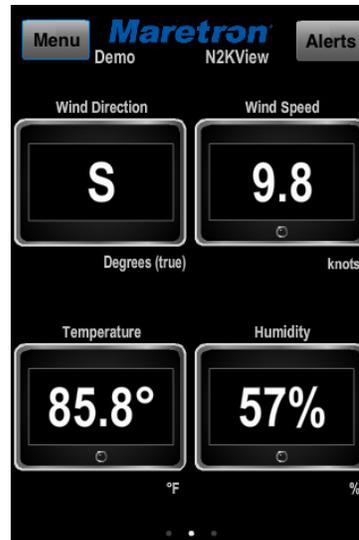
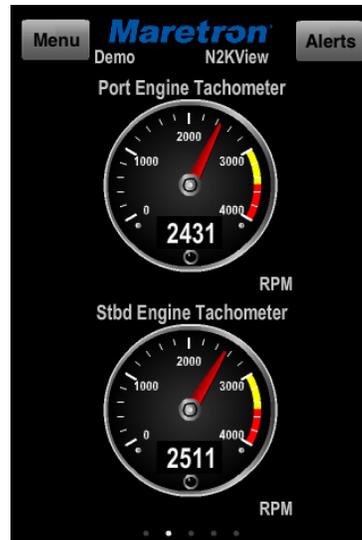
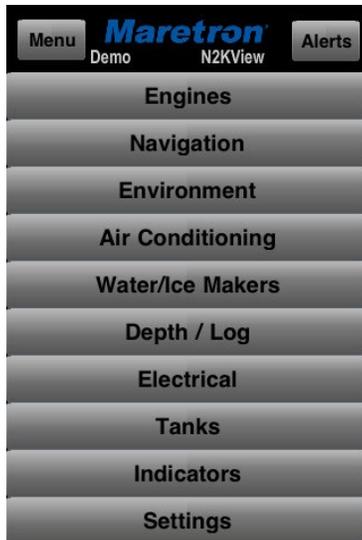
- ✓ Requires IPG100 and WiFi/Router to connect to the NMEA 2000® network
- ✓ Available Free for iPod, iPhone, iPad via the Apple App Store
- ✓ Available Free for Android Smartphones and Tablets via the Google Play Store
- ✓ Favorite Screens are Completely User Defined and Tailored for Installed NMEA 2000® Sensors
- ✓ As Many Favorite Screens as Desired with User Defined Tab Names
- ✓ Integrated Video with Pan, Tilt, and Zoom Controls
- ✓ Comprehensive Alerts System Showing Alarms and Warnings



Carling Technologies®
Marine Technology Group

USER INTERFACE SOFTWARE

N2KView® V3 Mobile



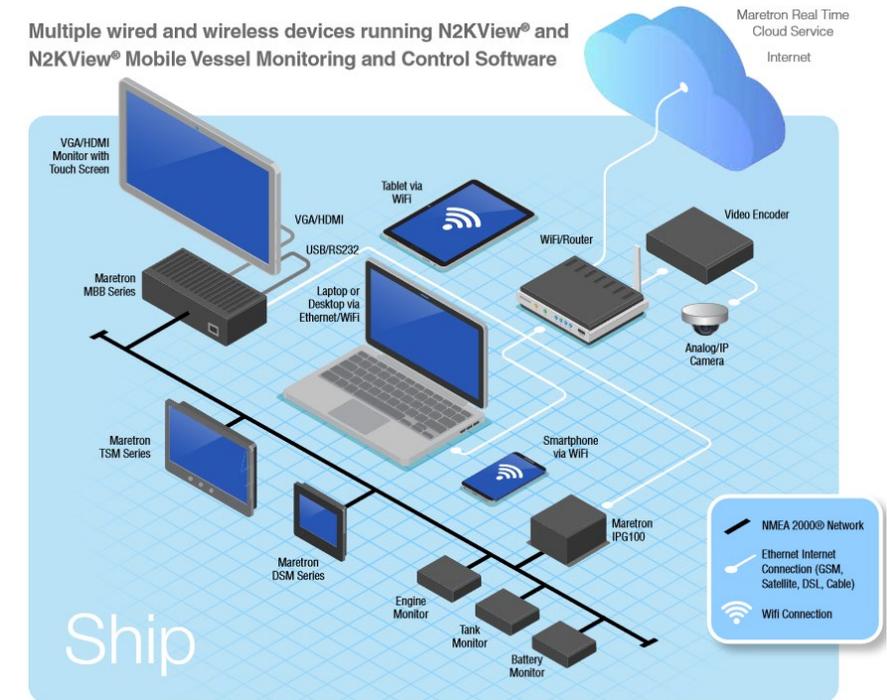
USER INTERFACE SOFTWARE

Real Time Cloud Service

Maretron's N2KView® V3 wherever you are!

- ✓ Remotely and seamlessly connect to your vessel using N2KView® V3 and N2KView® Mobile
- ✓ Uses vessel's internet connection to monitor and control NMEA2000® network data from Anywhere in the World
- ✓ Utilizes vessel's existing internet connection (WiFi, Cellular, Satellite, etc.)
- ✓ Computer access requires purchase of N2KView® Hardware Key
- ✓ Monthly Data Rates - Yearly Subscription

➤ 25GB/Month	\$24.58/Month	Paid Annually
➤ 50GB/Month	\$41.25/Month	Paid Annually
➤ 100GB/Month	\$74.58/Month	Paid Annually



USER INTERFACE SOFTWARE

Telemetric Cloud Service

Maretron's Telemetric Cloud Service allows you to manage the operation of your assets such as scheduling preventive maintenance or optimizing performance such as fuel usage.

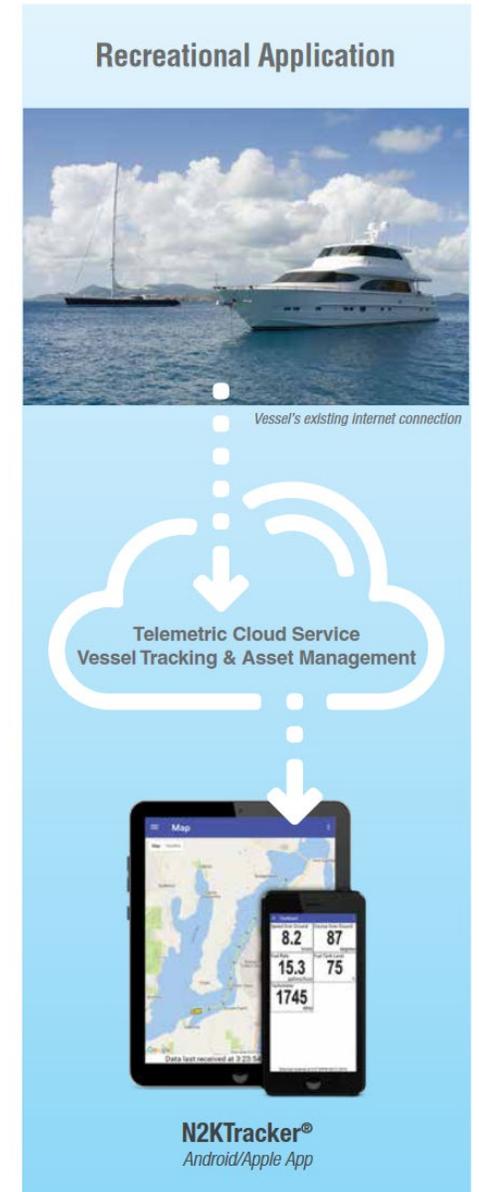
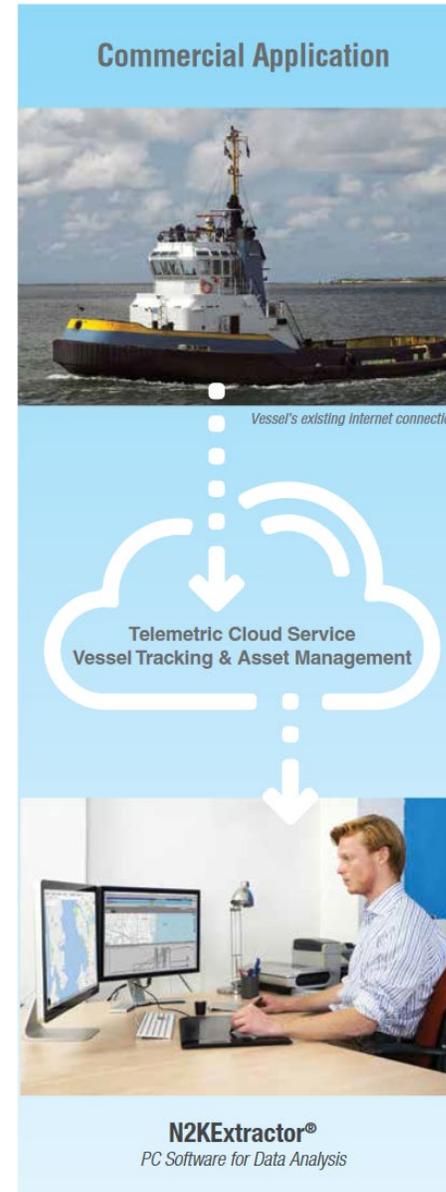
- ✓ Has a dashboard function so that you can select any data stored on the cloud for viewing.
- ✓ Utilizes vessel's existing internet connection (WiFi, Cellular, Satellite, etc.)
- ✓ Requires pairing with Maretron TSM or MBB product to transmit the selected data to the Telemetric Cloud Server
- ✓ \$19.95 / Month / Vessel



N2KExtractor® PC Software



N2KTracker™
Android/Apple app

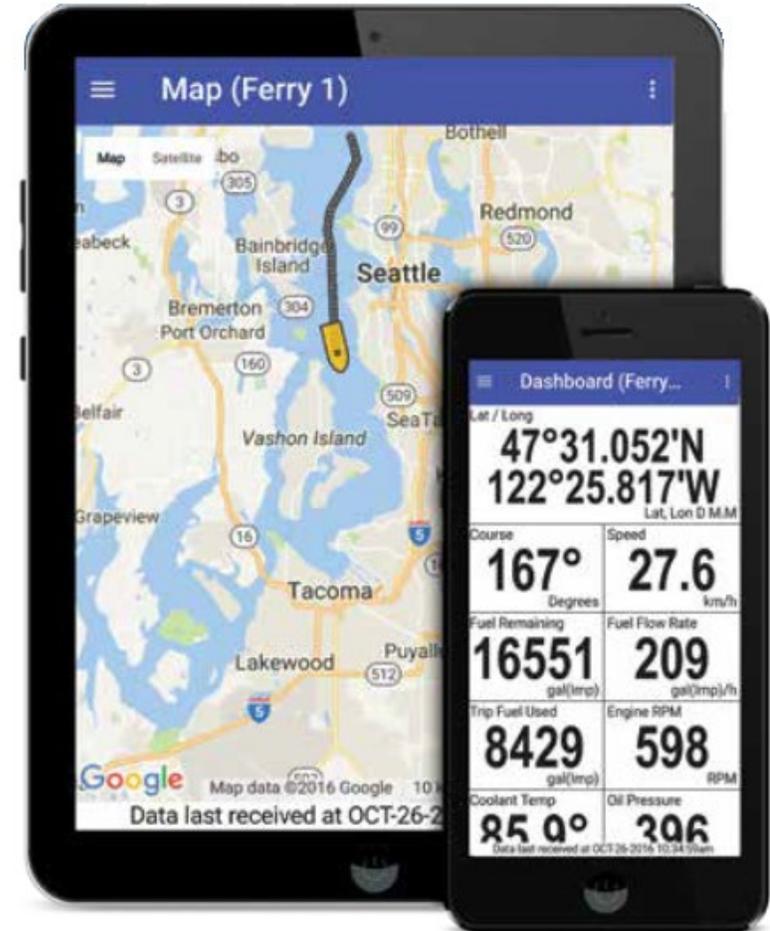


USER INTERFACE SOFTWARE

N2KTracker

Maretron N2KTracker® allows you to use your Android or iOS device to observe the position and desired selected elements of your vessel.

- ✓ Has a dashboard function so that you can select any data stored on the cloud for viewing
- ✓ Share your voyage with friends
- ✓ Manage a fleet, allowing you to quickly and easily change the selection of the vessel you are viewing.
- ✓ Geo-fence with text and email capability if boat leaves selected area
- ✓ Requires enrollment in the Telemetric Cloud Services



USER INTERFACE HARDWARE

Overview



MBB300C
Black Box Vessel Monitoring & Control



TSM810C
8" Vessel Monitoring & Control Touch Screen Monitor



DSM410
4.1" Multi-Function Color Display



DSM570
5.7" Multi-Function Color Display



ALM100
Alarm Module

USER INTERFACE HARDWARE

TSM810C - Overview

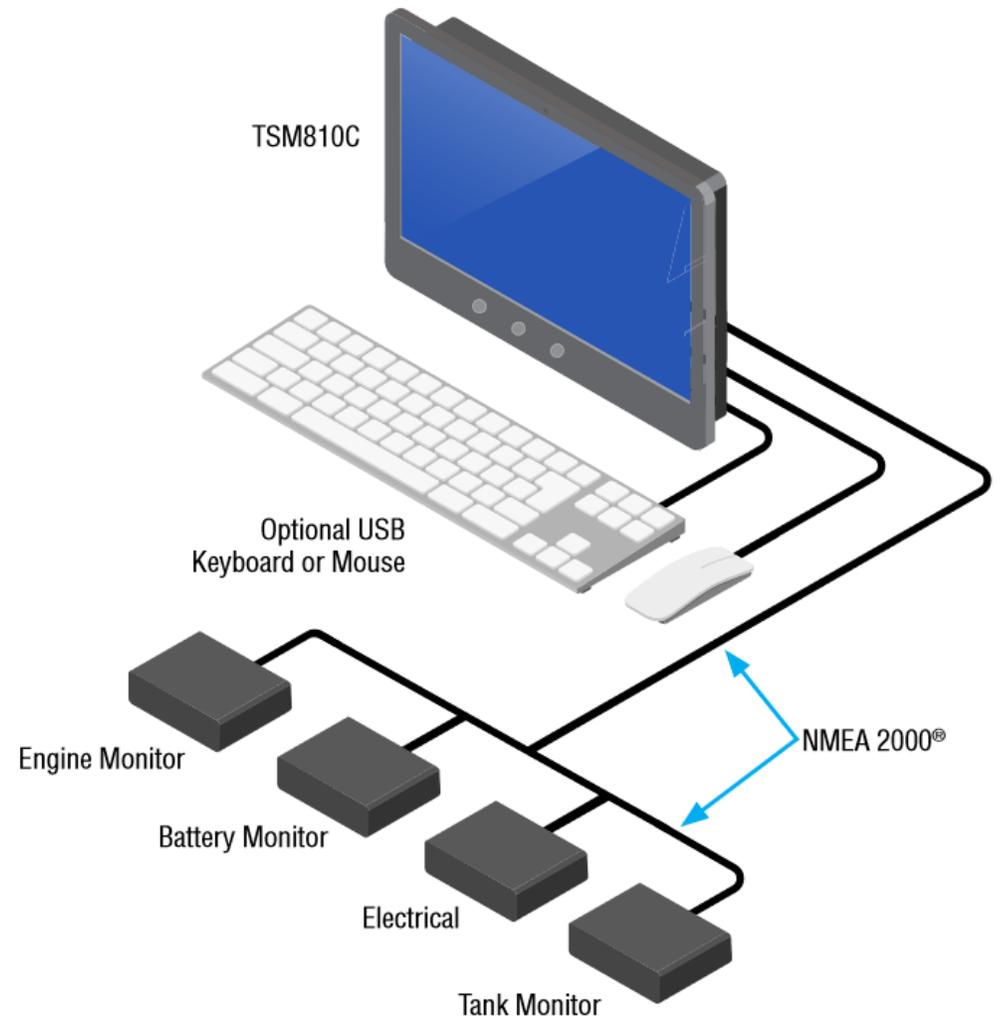
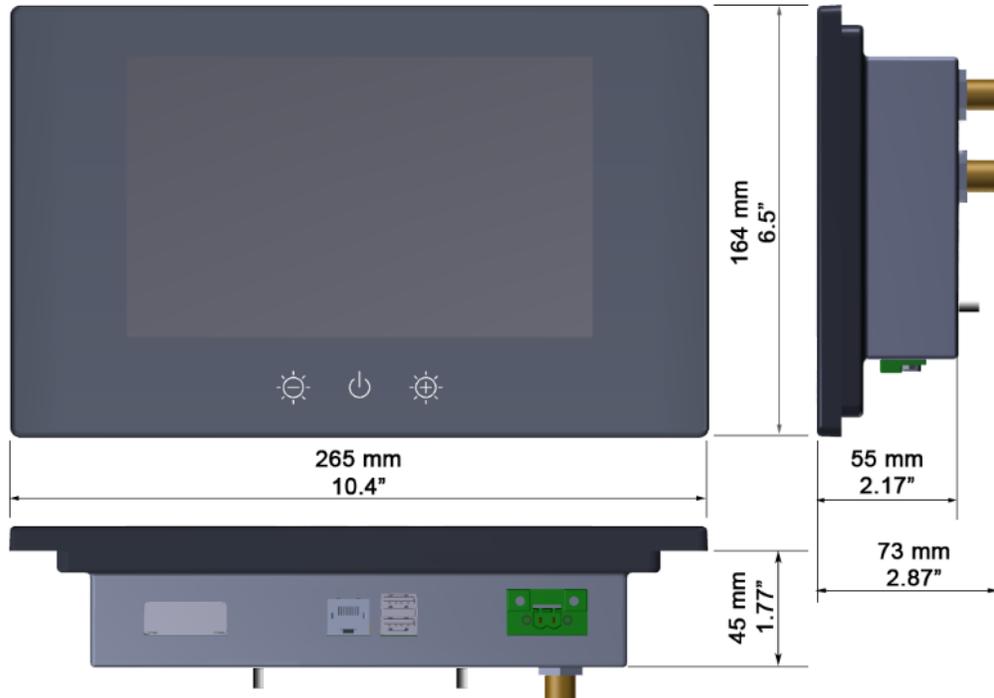
8" Vessel Monitoring and Control Touchscreen

- ✓ 800 x 480 LED backlit LCD Panel
- ✓ Widescreen aspect ratio 5:3
- ✓ 1350 nits Brightness (Optically Bonded)
- ✓ Dedicated Hardware Boots and Runs N2KView® V3
- ✓ Fanless (Salt Air Not Pulled through the Unit)
- ✓ 9-32VDC Power, Supply 2 Watts
- ✓ Solid state disk drive
- ✓ 1 x Giga Ethernet Port
- ✓ 2 x USB 2.0 Ports
- ✓ IP67 Compliant Front Panel
- ✓ Supported Drivers
 - USB "Standard" Keyboards, Mice, Trackballs
- ✓ Flush or Optional VESA Mounting
- ✓ Dual CAN Bus for single or redundant NMEA2000® Network Connections
- ✓ Dust Cover included



USER INTERFACE HARDWARE

TSM810C - Specs



USER INTERFACE HARDWARE

MBB300C - Overview

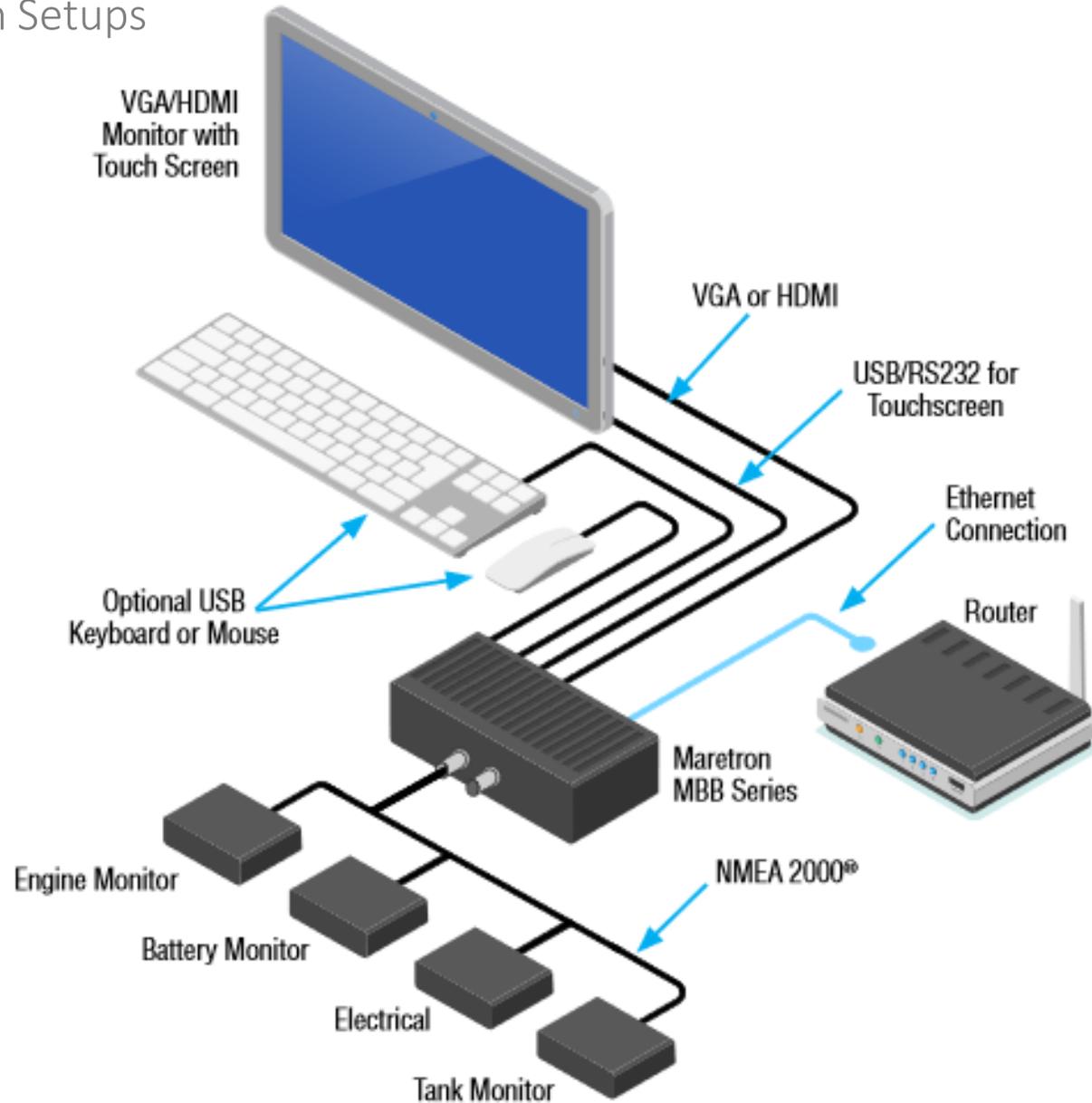
Black Box Vessel Monitoring and Control

- ✓ Dedicated Hardware Boots and Runs N2KView® V3
- ✓ Fanless (Salt Air Not Pulled through the Unit)
- ✓ 9-36VDC Power Supply, 19 Watts
- ✓ Video output using either VGA, HDMI or HTLM5
 - 2560 x 1600 Maximum Resolution
- ✓ RS232 Ports (Touchscreen Interface)
- ✓ 1 x Gigabit Ethernet (updates, email alerts, cameras, etc...)
- ✓ 4 x USB Ports (Keyboard, Mouse, Touchscreen, Thumb drive)
 - 2 x USB 2.0 (Front) and 2 x USB 3.0 (Rear)
- ✓ Supported Drivers
 - USB "Standard" Keyboards, Mice, Trackballs
 - USB Touchscreen Drivers (ELO, 3M Microtouch, Hampshire TSharc, Penmount, eGalax)



USER INTERFACE HARDWARE

MBB300C - Connection Setups



USER INTERFACE HARDWARE

DSM410 - Overview

- 4.1" High Bright Color Display
- Sunlight Viewable
- Interprets and Displays Most NMEA 2000® Data
- 16 User Configurable Favorites Screens
- Computed Fuel Management Displays
- Flush Mount
- Configures Maretron Products
- Audio and Visual Alarms
- Dust Cover included



USER INTERFACE HARDWARE

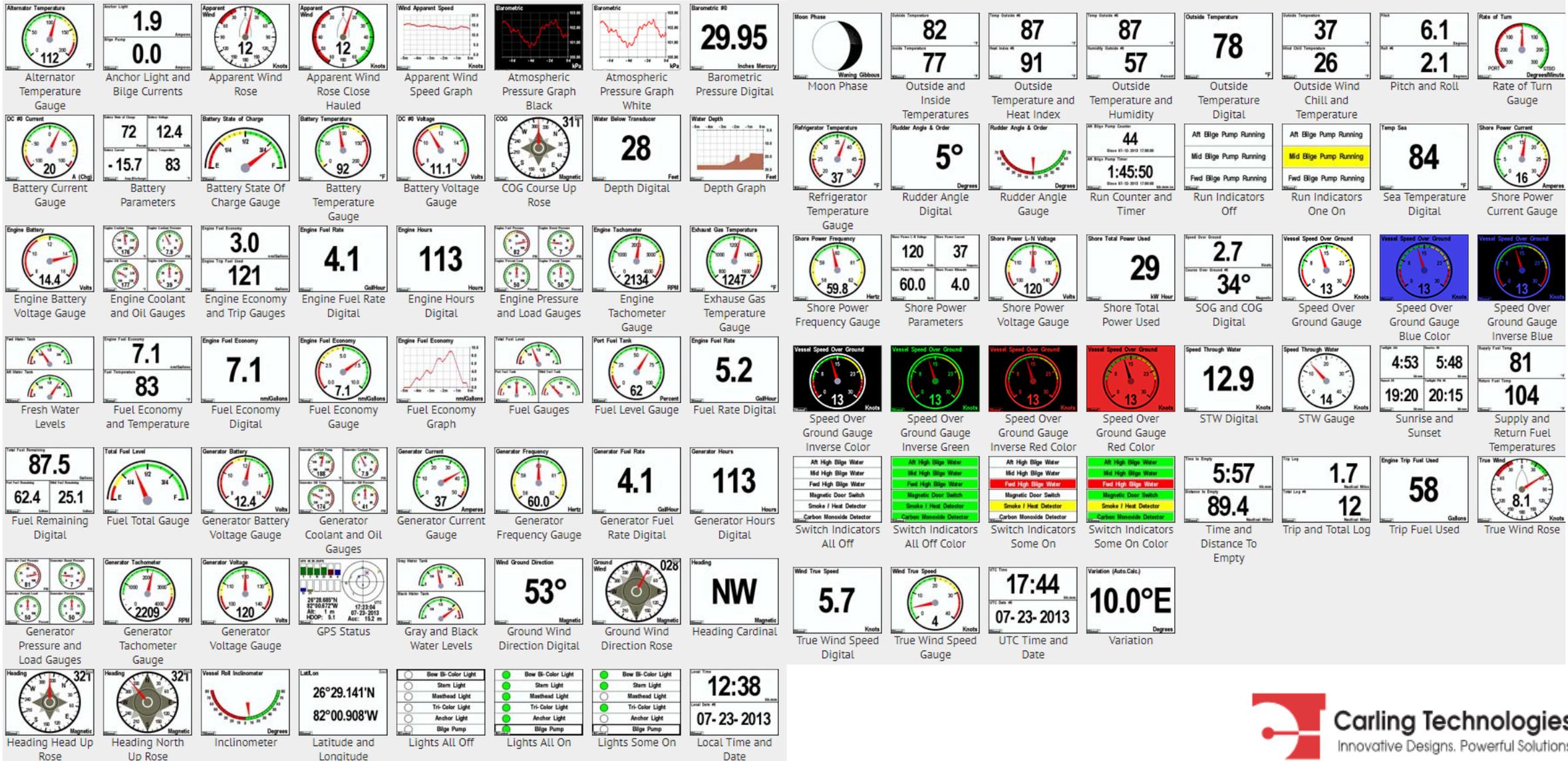
DSM570 - Overview

- 5.7" High Bright Color Display
- Sunlight Viewable
- Interprets and Displays Most NMEA 2000® Data
- 16 User Configurable Favorites Screens
- Computed Fuel Management Displays
- Flush Mount
- Configures Maretron Products
- Audio and Visual Alarms
- Dust Cover included



USER INTERFACE HARDWARE

DSM Screenshots



USER INTERFACE HARDWARE

ALM100 - Overview

- Single connection direct to NMEA 2000® Network
- Visual & Audible Alerts
 - Triggered by N2KView® V3 or DSM
- Loud Alarm (105dB)
 - Mechanical Damper
 - Distinctly Selectable Tone Patterns
- LED User Interface
 - Green Operating LED
 - Red Alarm LED
- Mounts in Standard Electrical Box
- Waterproof
- Black or White Face Plate



GATEWAYS AND BRIDGES

Overview



USB100
NMEA 2000® to USB Gateway



IPG100
NMEA 2000® to Internet Protocol Gateway



J2K100
J1939 to NMEA 2000® Gateway



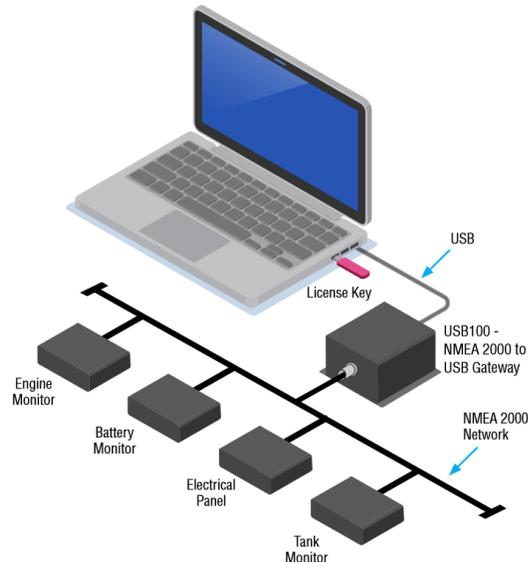
NBE100
NMEA 2000® Bridge (Network Bus Extender)



GATEWAYS AND BRIDGES

USB100 - USB Gateway

- Bridges Computer to NMEA2000® Network
- Provides PC based Vessel Monitoring Software using NMEA2000® PGNS (N2KView® V3)
- Provides PC based Diagnostic Tools by analyzing transmitted NMEA2000® PGNs (N2KAnalyzer® V3)
- Enables PC based Navigation Software using NMEA 0183 Sentences (Nobeltec, Rose Pointe, MaxSea, etc.)
- One simple connection from PC to NMEA2000® network



GATEWAYS AND BRIDGES

IPG100 - Internet Protocol Gateway

- NMEA 2000® Data Packetized and Transmitted via Ethernet
- USB Port for N2KView® Hardware License Key
- N2KView® V3 Running on PC or N2KView® Mobile Running on Tablets and Smartphones access the IPG100 using conventional Internet Protocol Technology (WiFi/Routers)
- N2KAnalyzer® V3 Running on PC, configuration & analysis software
- Required component to gain access to Maretron RTCS service



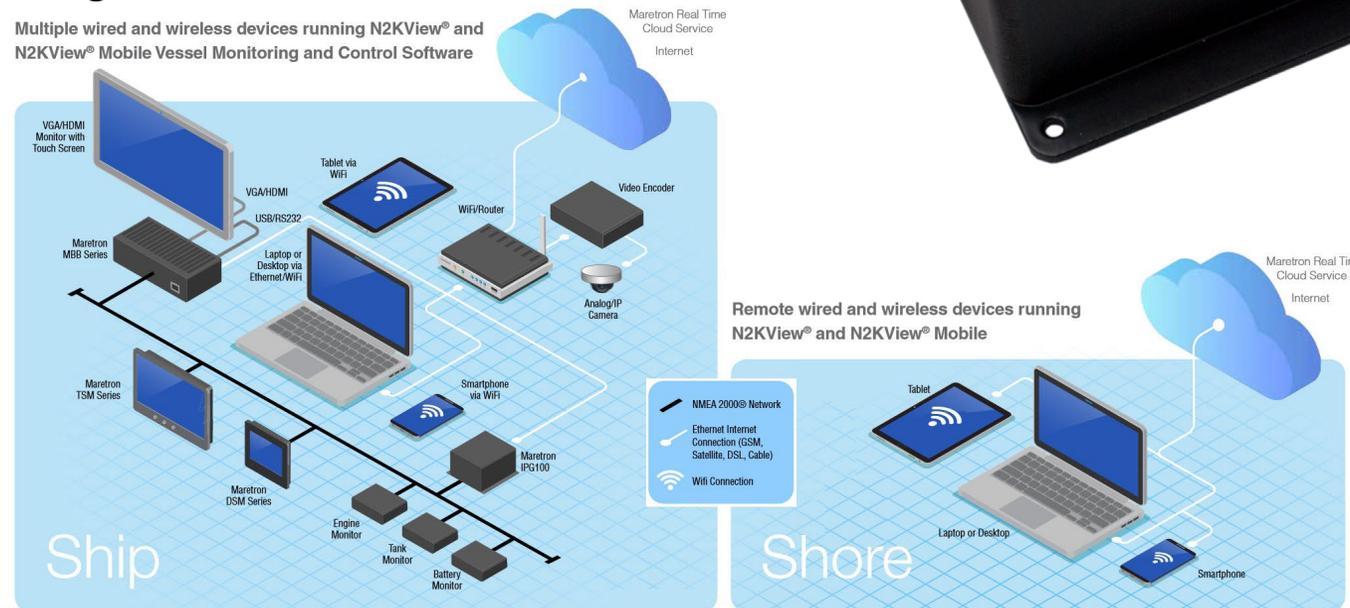
Available accessories for the IPG100:



PX0852



PX0837/5M00



GATEWAYS AND BRIDGES

J2K100 - J1939 to NMEA 2000® Gateway

- Attaches to Any J1939 Engine, Transmission, or Genset
 - ✓ Caterpillar, Cummins, Detroit Diesel, John Deere, Kohler, Northern Lights, Onan, Perkins, Steyr, Volvo Penta, Yanmar, etc.
- Converts Following J1939 data to NMEA 2000® for Display on Compatible Equipment (Furuno, Garmin, Maretron, Raymarine, Simrad)
 - ✓ AC Generator Current, Freq, & Voltage, Tach, Hours, Coolant Pressure & Temp, Oil Pressure & Temp, Fuel Rate
- Interfaces to Dometic AC, Ice makers and Watermakers
 - ✓ Observe and Set Room Temperature, Control Modes and Fan Speeds



Available accessories for the J2K100:



MCF-2M-D4



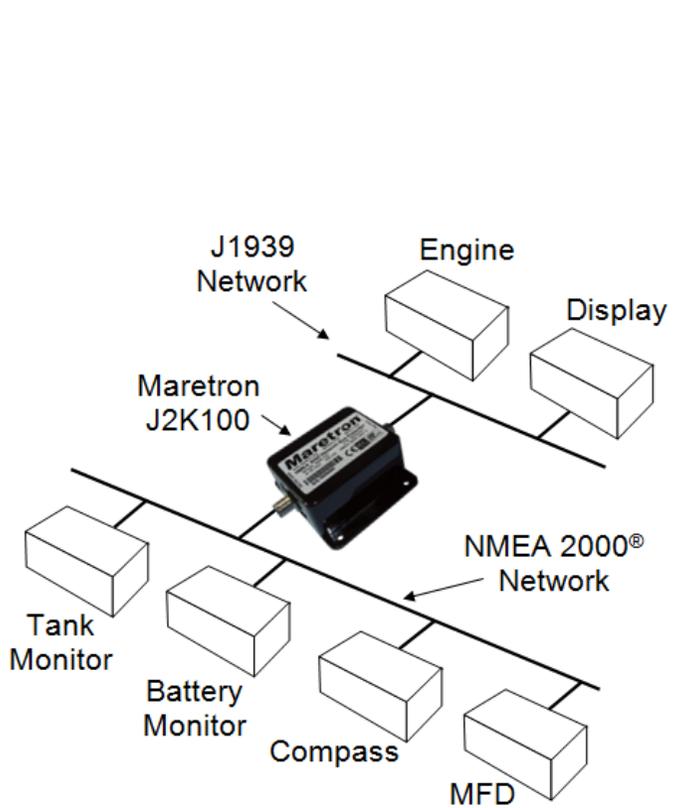
MCF-2M-D12



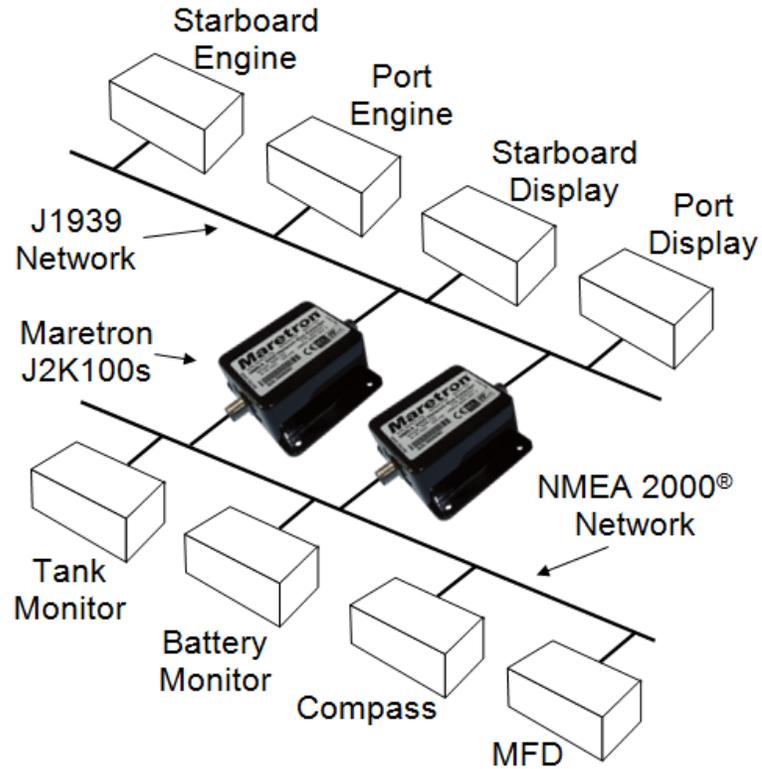
MCF-2M-D12CAT

GATEWAYS AND BRIDGES

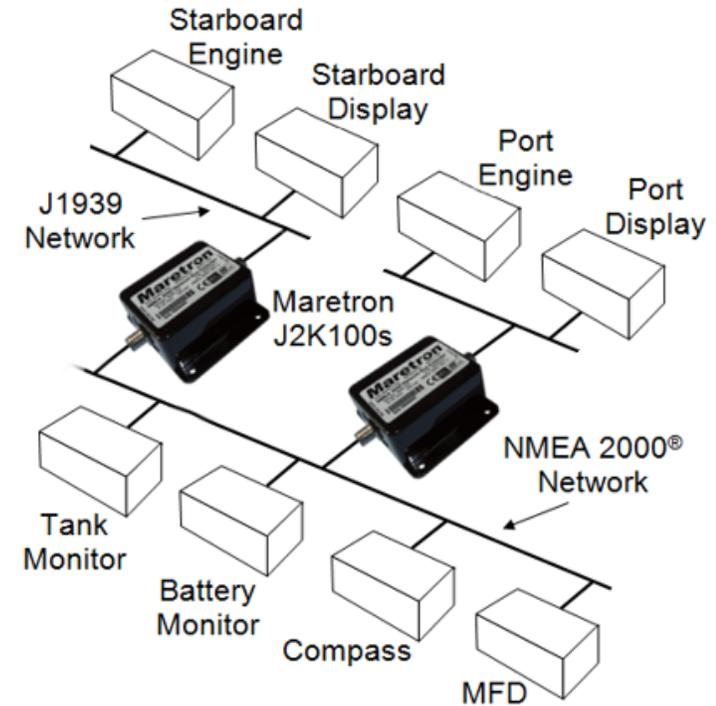
J2K100 - Network Samples



Single J1939 Engine to NMEA 2000®



Dual J1939 Engine to NMEA 2000®



Dual J1939 Engine to NMEA 2000®

GATEWAYS AND BRIDGES

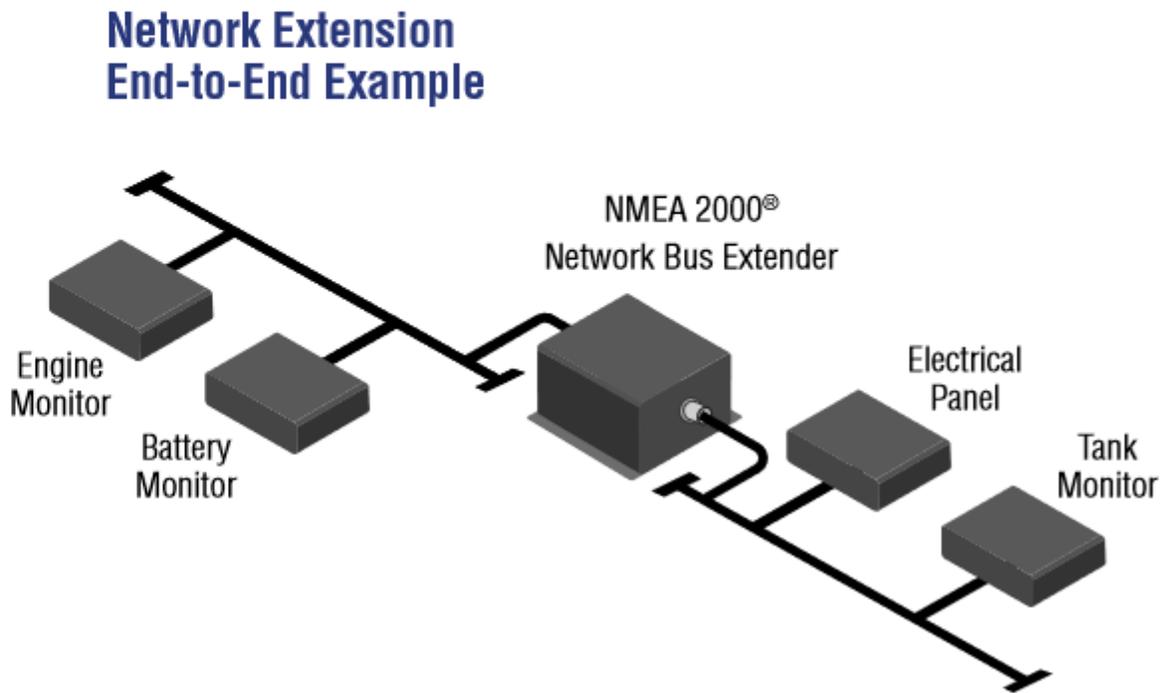
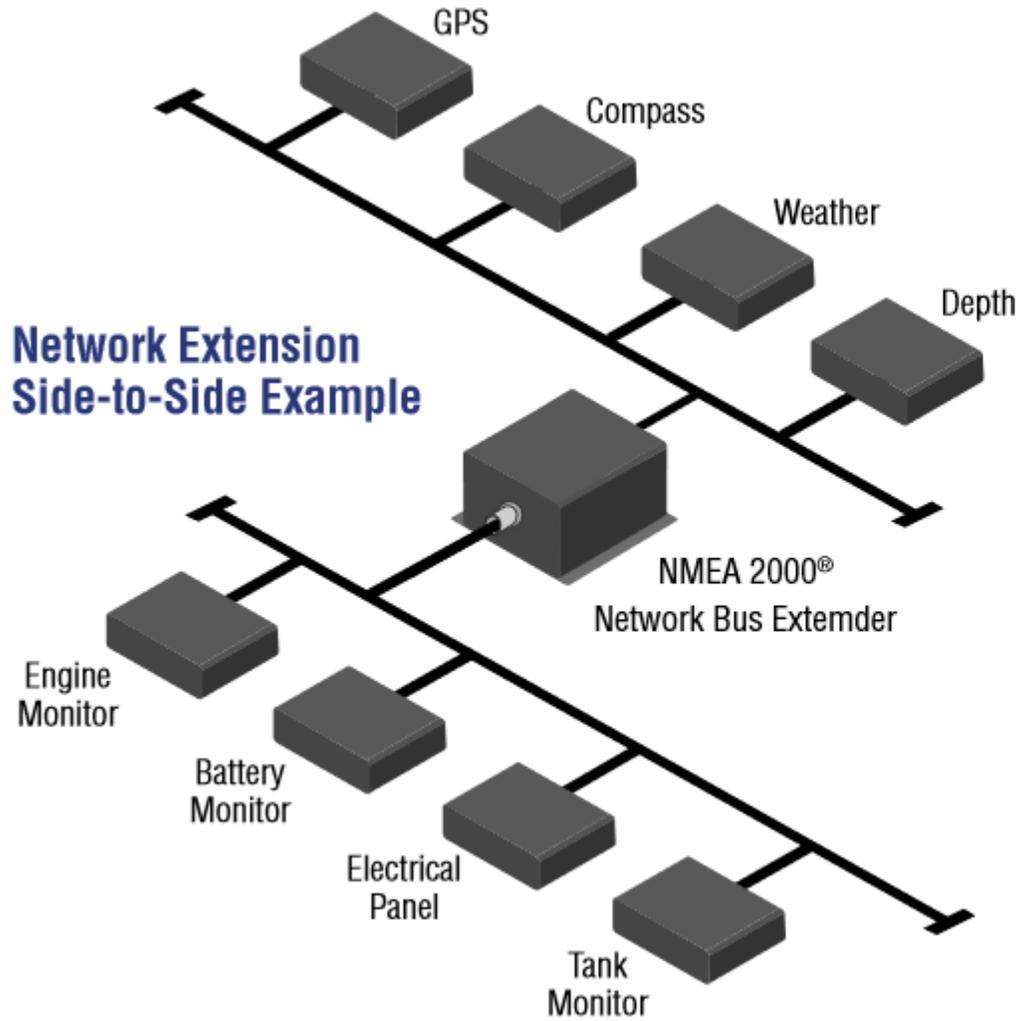
NBE100 - Network Bus Extender

- Segments a single large NMEA 2000® network into two smaller electrical segments.
- Allows you to exceed the 50 node limitation on a NMEA 2000® network.
- Allows you to exceed the 200m trunk length limitation on a NMEA 2000® network.
- Allows you to exceed the 78m cumulative drop length limitation on a NMEA 2000® networks.
- Allows all NMEA 2000® devices to operate as if they were still on a single NMEA 2000® network.
- Optically isolates network segments, increasing signal integrity and network reliability.
- Provides PGN filters from A → B and/or B → A with an allow list or block list



GATEWAYS AND BRIDGES

NBE100 - Bus Extension Diagrams



TANK MONITORING

Overview



FPM100
Fluid Pressure Monitor



TLM100
Tank Level Monitor



TLM150
Tank Level Monitor (Gasoline)



TLA100
Tank Level Adapter

TANK MONITORING

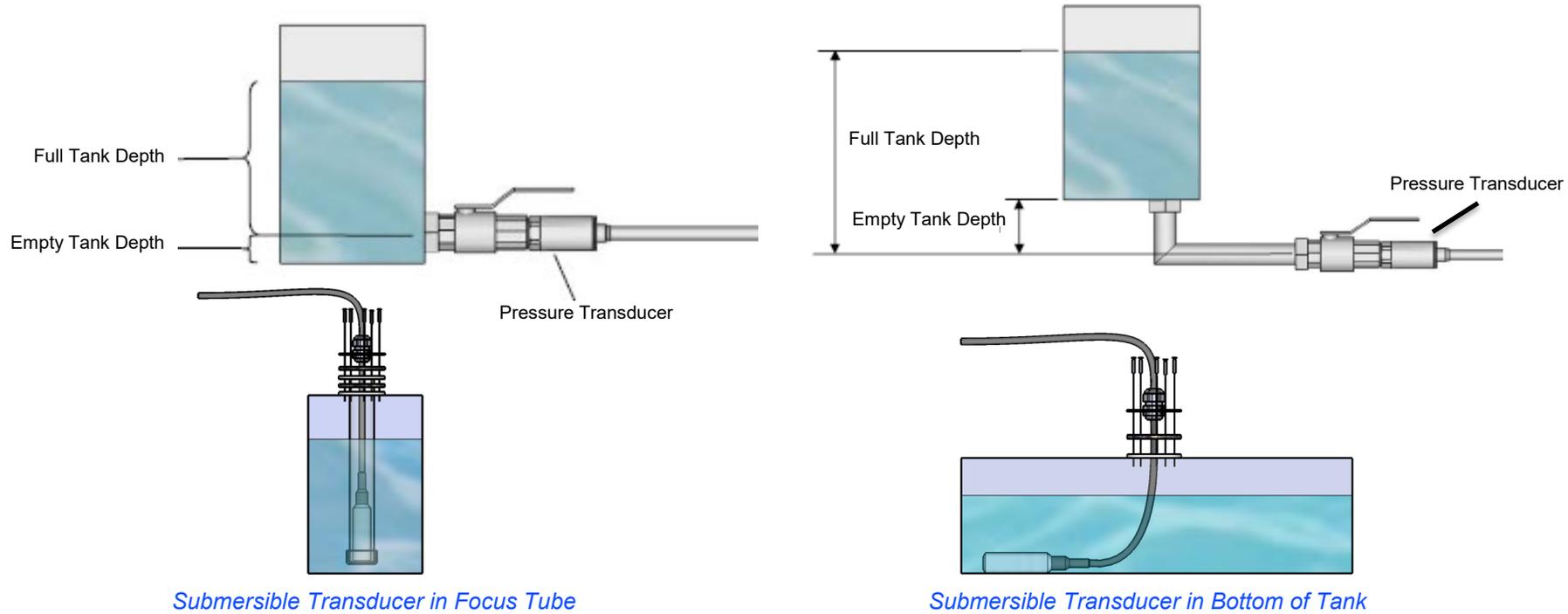
FPM100 - Fluid Pressure Monitor

- Monitor Up to Six Pressure/Vacuum Channels
- Uses industry standard 2 wire 4-20mA sensors
- Output channels are Short Circuit Protected
- Sensors powered directly from NMEA 2000® network
- Configurable for Tank Level or Pressure/Vacuum
- Many Applications – Water Pressure, Hydraulic Pressure, Pump Suction or Vacuum (Clogged Filters)
- Variety of pressure range solutions available



TANK MONITORING

FPM100 – Accessories/Tank Monitoring Solutions



Pressure Transducer



Submersible Pressure Transducer

Part #	FPM100 Accessory
PTS-0-1.5PSI-01	Submersible Pressure Transducer – max depth 41"
PTS-0-3PSI-01	Submersible Pressure Transducer – max depth 83"
PTS-0-5PSI-01	Submersible Pressure Transducer – max depth 138"
PT-0-1.5PSI-01	Pressure Transducer – max depth 41"
PTS-0-3PSI-01	Pressure Transducer – max depth 83"
PTS-0-5PSI-01	Pressure Transducer – max depth 138"
PT-V-0-1BAR-01	Pressure Transducer Vacuum 0 to 1 Bar
PT-SNUB-01	Pressure Snubber

TANK MONITORING

TLM100 - Tank Level Monitor

- Ultrasonic Tank Sender with NMEA 2000® Interface
- All Fluid Types Except Gasoline
- 1/8" Depth Accuracy (-13°F (-25°C) to 131°F (55°C))
- Up to 40" Depth Tanks
- 2" Dead Band requirement
(2" Air Gap Required Between Sender and Fluid)
- Can be Calibrated for Irregular Shaped Tanks
- 16 Point Calibration
- Supports All Tank Types
 - Diesel, Fresh Water, Waste Water, Live Well, etc
- Non-Displacement Hulls Require Focus Tubes
- Empty Tanks Require Flat bottom



TANK MONITORING

TLM150 – Tank Level Monitor (Gasoline)

- Ultrasonic Tank Sender with NMEA 2000® Interface
- **Only Gasoline/Petrol**
- 1/8" Depth Accuracy (-13°F (-25°C) to 131°F (55°C))
- Up to 24" Depth Tanks
- 2" Dead Band requirement
(2" Air Gap Required Between Sender and Fluid)
- Can be Calibrated for Irregular Shaped Tanks
- 16 Point Calibration
- Non-Displacement Hulls Require Focus Tubes
- Empty Tanks Require Flat bottom



TANK MONITORING

TLM/FPM - Accessories



Adapters Suitable for TLM100, TLM150 and submersible pressure transducers

- *TA-5H-1.5NPT* 1.5" NPT Displacement Hull Tank Adapter
- *TA-5H-1.25BSP* 1.25" BSP Displacement Hull Tank Adapter



Focus Tubes Suitable for TLM100, TLM150 and submersible pressure transducers

- *TFT-5H* SAE 5-Bolt Pattern Non-Displacement Hull Focus Tube
- *TFT-1.5NPT* 1.5" NPT Non-Displacement Hull Focus Tube
- *TFT-1.25BSP* 1.25" BSP Non-Displacement Hull Focus Tube
- *TFTDBE-5H* SAE 5-Bolt Pattern Focus Tube with Dead Band Eliminator



TANK MONITORING

TLM - Installation Profiles

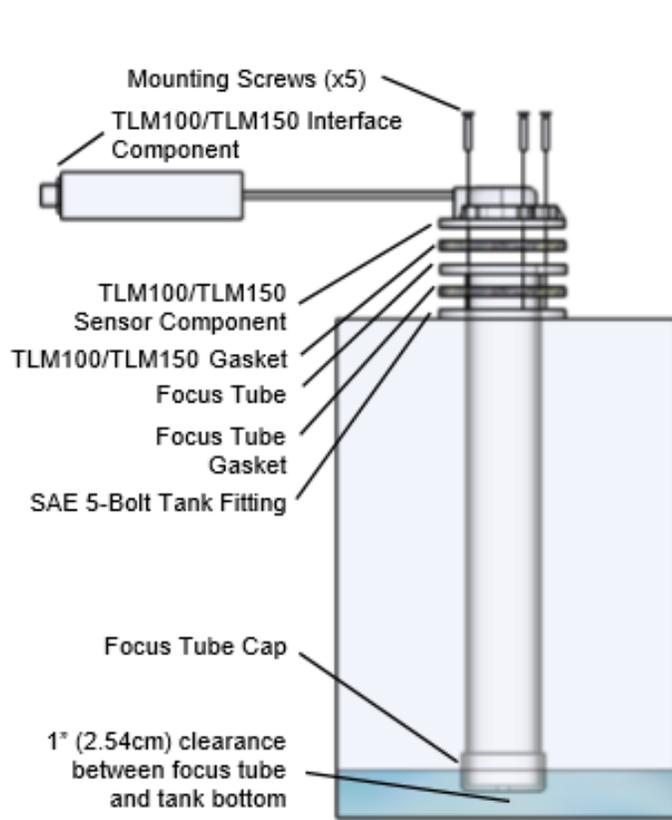


Figure 1 – Mounting TLM100/TLM150 and Focus Tube (TFT-5H) to SAE 5-Hole Tank Fitting

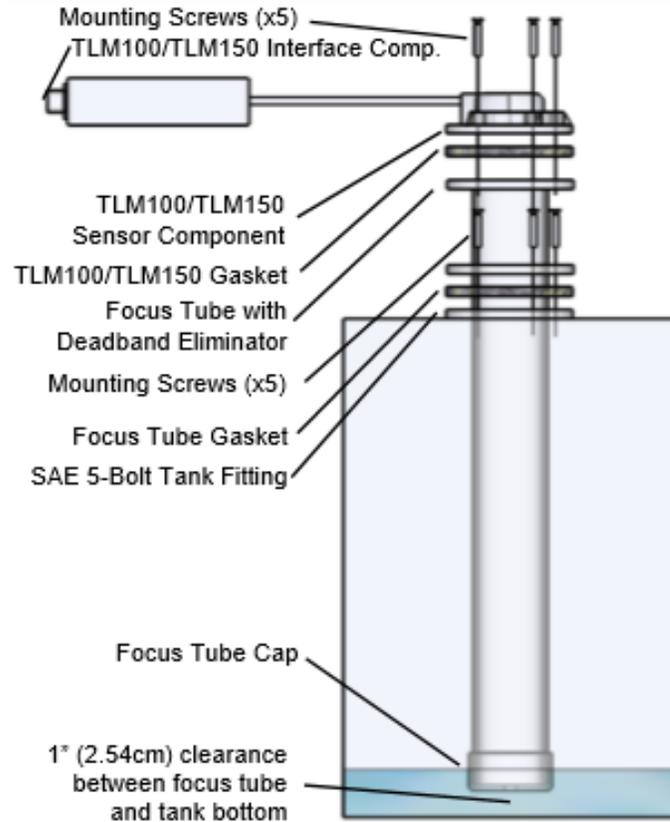


Figure 2 – Mounting TLM100/TLM150 and Focus Tube with Deadband Eliminator (TFTDBE-5H) to SAE 5-Hole Tank Fitting

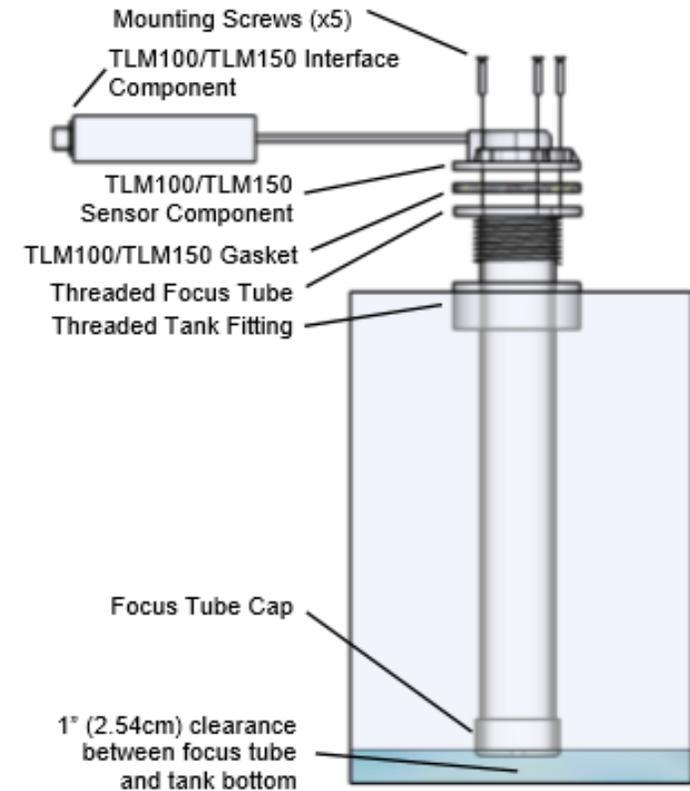


Figure 3 – Mounting TLM100/TLM150 and Focus Tube (TFT-1.5NPT or TFT-1.25BSP) on Threaded Tank Fitting

TANK MONITORING

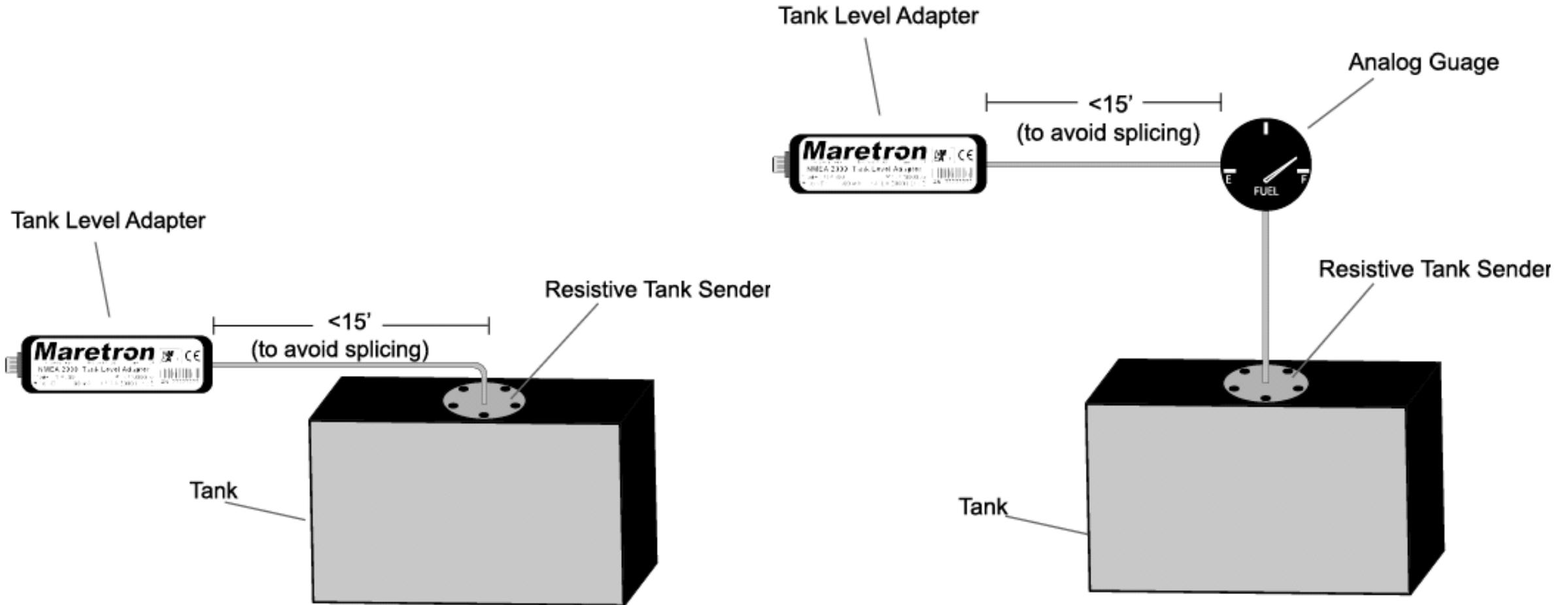
TLA100 - Tank Level Adapter

- Adapts Resistive Tank Senders to NMEA 2000® (Royce, WEMA, KUS, etc.)
- American (240-30 Ω) or European (10-180 Ω) Standard Compatible
- Can be user calibrated for any resistance range from 0 to 300 Ω or 300 to 0 Ω
- Can be Calibrated for Irregular Shaped Tanks
- Can be Used With or Without Analog Gauges
- 16 Point Calibration
- Supports All Tank Types
 - ✓ Fuel (Diesel & Gasoline), Fresh Water, Waste Water, Live Well, etc



TANK MONITORING

TLA100 – Installation Profiles



ENGINE MONITORING

Overview



CLM100
Current Loop Monitor



FFM100
Fuel Flow Monitor



J2K100
J1939 to NMEA 2000® Gateway

GENERAL SYSTEMS MONITORING & RECORDING

CLM100 - Current Loop Monitor

- Monitors commercially available 2-wire 4-20mA current loop transducers and broadcasts Status Over NMEA 2000® Network
- Measure
 - ✓ Tachometer, Tilt/Trim
 - ✓ Fuel Rate, Voltage Potential
 - ✓ DC Voltage, Current
 - ✓ Distance (Vibration), Linear Velocity, Linear Acceleration
 - ✓ Angle, Angular Velocity, Angular Acceleration, Rotational Rate
 - ✓ Mechanical Strain, Force, Resistance
 - ✓ Decibels
 - ✓ Temperature, Humidity
 - ✓ Pressure
 - ✓ and growing



GENERAL SYSTEMS MONITORING & RECORDING

CLM100 - Accessories

Part #	CLM100 Accessories
IRHT-01	Indoor Humidity/Temperature Sensor
PT-0-1.5PSI-01	Pressure Transducer 0 to 1.5 PSI
PT-0-3PSI-01	Pressure Transducer 0 to 3 PSI
PT-0-5PSI-01	Pressure Transducer 0 to 5 PSI
PT-0-10PSI-01	Pressure Transducer 0 to 10 PSI
PT-0-50PSI-01	Pressure Transducer 0 to 50 PSI
PT-0-100PSI-01	Pressure Transducer 0 to 100 PSI
PT-0-500PSI-01	Pressure Transducer 0 to 500 PSI
PT-0-1000PSI-01	Pressure Transducer 0 to 1000 PSI
PT-0-5000PSI-01	Pressure Transducer 0 to 5000 PSI
PT-V-0-1BAR-01	Pressure Transducer Vacuum 0 to 1 Bar
PT-SNUB-01	Pressure Snubber



Indoor Humidity Temperature Sensor



Pressure Transducer



Pressure Snubber

GENERAL SYSTEMS MONITORING & RECORDING

CLM100 - Popular 3rd Party Sensors

Distance (Vibration), Velocity, Acceleration Transducers used for Machinery Diagnostics/Health or Boat Builders for Hull Performance	https://buy.wilcoxon.com/vibration-sensors-4-20ma.html
Voltage, Current, Frequency	http://www.crmagnetics.com/analog-transducers?s=Name%20ASC&ps=48
Mechanical Strain, Force (Clevis Pins)	https://www.stellartech.com/sti-products/clevis-pin-load-cells/
Decibels (Microphones)	http://www.directindustry.com/cat/optical-acoustic-measurement/measurement-microphones-acoustic-sensors-AJ-311.html
Rotational Rate, Shaft Speed, Temperature, Bearing sensors	http://www.electro-sensors.com/

ENGINE MONITORING

FFM100 - Fuel Flow Monitor

- Converts a variety of flow senders (e.g., fuel, water, etc.) to NMEA 2000® Network Data
- Monitors Two Independent Flow Meters (Gas Engines) or Two Flow Meters Associated with Single Diesel Engine
- Flow Meters Powered Directly from NMEA 2000® Network
- True Temperature Compensation with Built In Thermistors
- Reverse Flow Detection and Compensation Due to Lift and Injector Pump Pulsations
- Positive Displacement Meter Doesn't Require Flow Conditioning Like Turbine Meters (i.e., Pulsation Dampers and Straighteners)



Available accessories for the FFM100:



M1AR



M2AR



M4AR



M8AR



M16AR



ENGINE MONITORING

FFM100 - Accessories

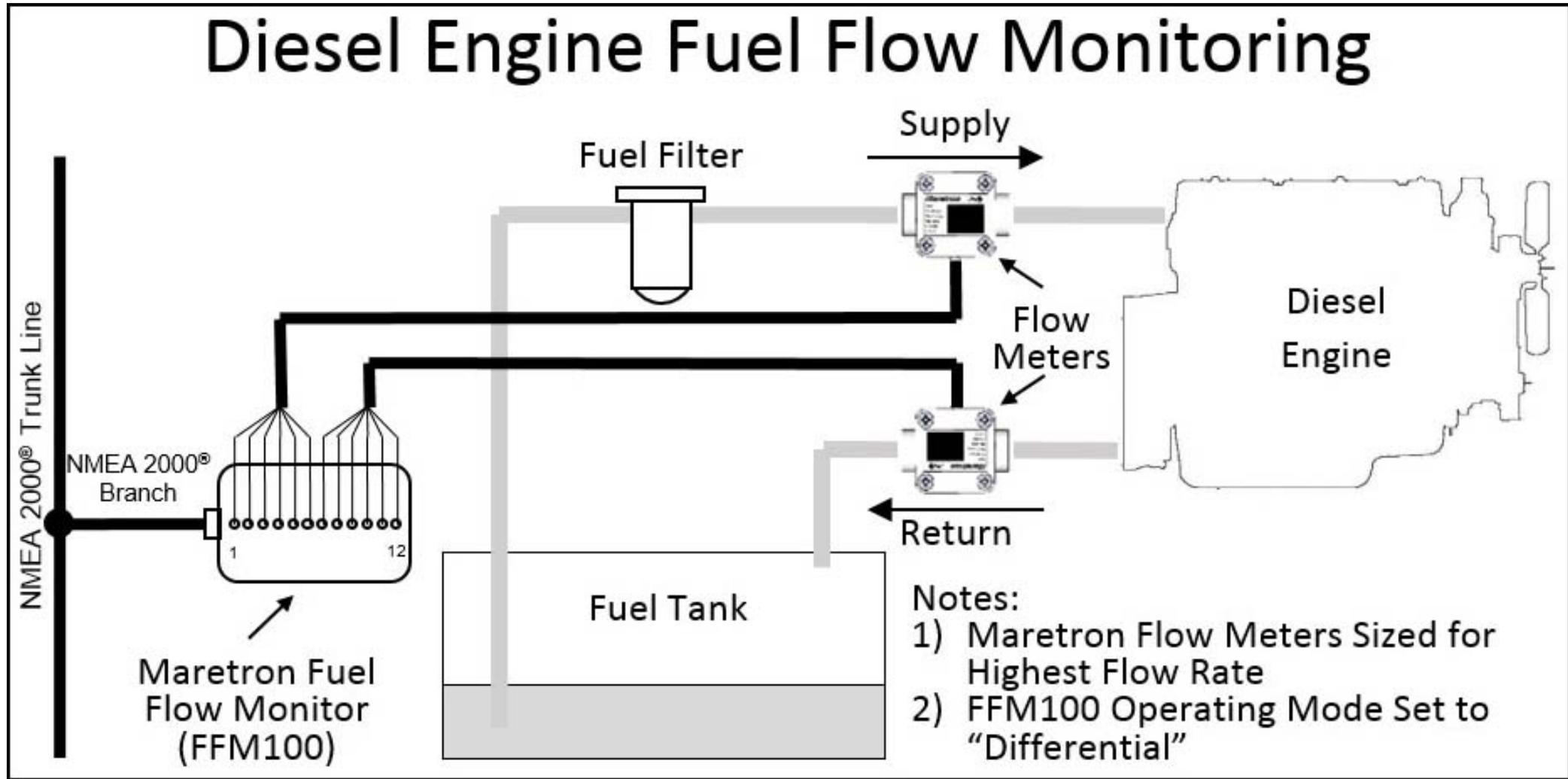
Fluid Flow Sensor	Flow Rate Range	Diesel Engine Power Range <i>*Approximate*</i>
M1AR	0.53 to 26.4 GPH 2 to 100 LPH	20 to 200 HP 14.9 to 149 kW
M2AR	6.6 to 132 GPH 25 to 500 LPH	200 to 1000 HP 149 to 746 kW
M4AR	47.6 to 396 GPH 180 to 1500 LPH	1000 to 3000 HP 746 to 2237 kW
M8AR	127 to 1110 GPH 480 to 4200 LPH	3000 to 8400 HP 2237 kW to 6266 kW
M16AR	158.5 to 1585 GPH 600 to 6000 LPH	8400 to 12000 HP 6266 kW to 8952 kW



**The table above shows the maximum fuel supply flow rates that can be sensed by each fuel flow sensor, and approximate engine power ranges for each fuel flow sensor type. Please consult your engine's documentation or contact your engine manufacturer for the maximum supply fuel flow rate (occasionally referred to as fuel feed rate) for the specific engine whose fuel consumption you wish to monitor.*

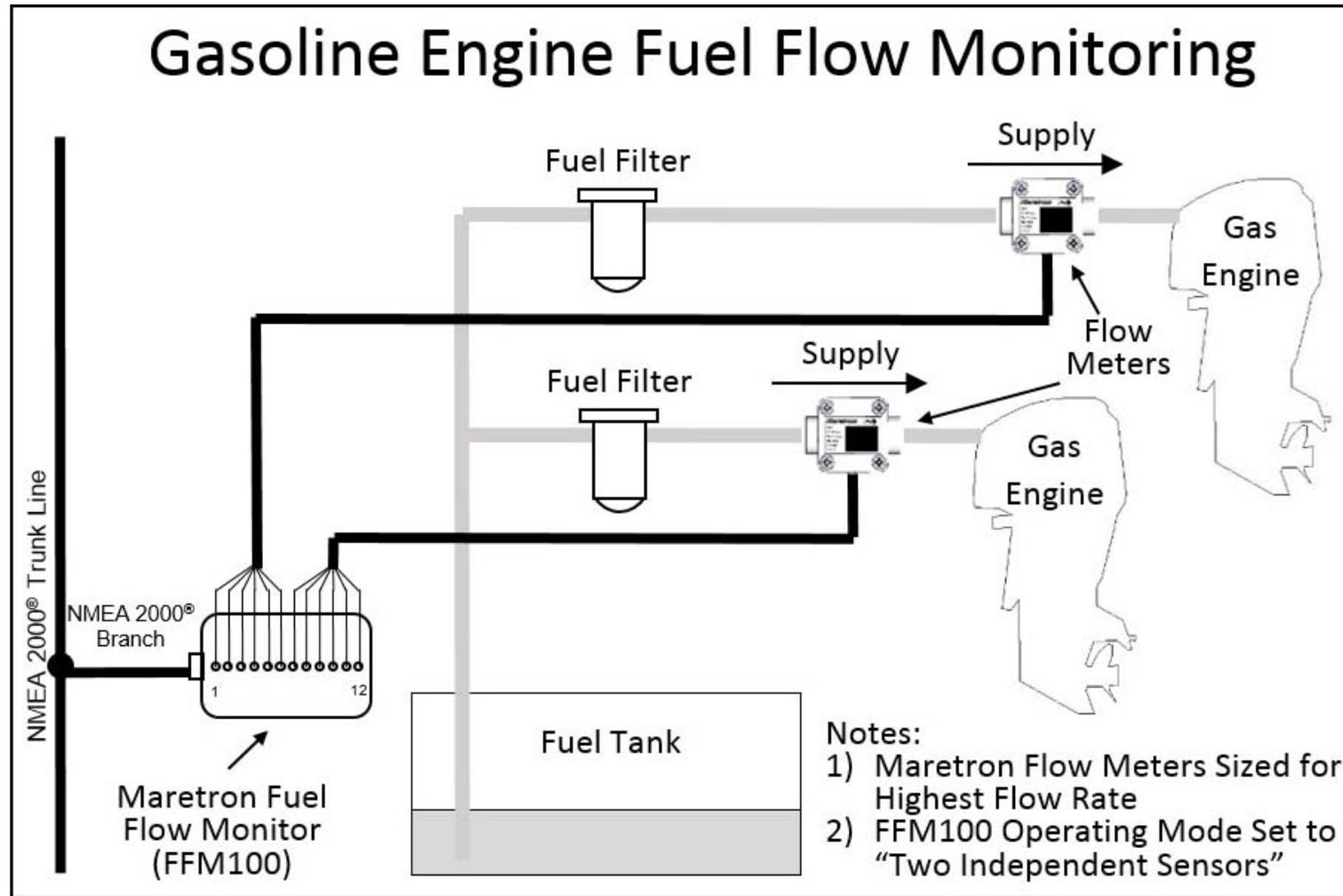
ENGINE MONITORING

FFM100 - Installation Profile (Diesel Engine)



ENGINE MONITORING

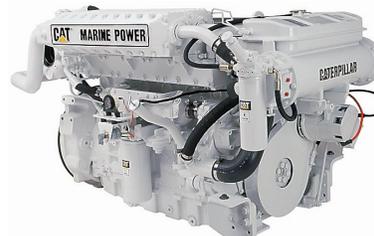
FFM100 - Installation Profile (Gasoline)



ENGINE MONITORING

J2K100 - J1939 to NMEA 2000® Gateway

- Attaches to Any J1939 Engine, Transmission, or Genset
 - ✓ Caterpillar, Cummins, Detroit Diesel, John Deere, Kohler, Northern Lights, Onan, Perkins, Steyr, Volvo Penta, Yanmar, etc.
- Converts Following J1939 data to NMEA 2000® for Display on Compatible Equipment (Furuno, Garmin, Maretron, Raymarine)
 - ✓ AC Generator Current, Freq, & Voltage, Tach, Hours, Coolant Pressure & Temp, Oil Pressure & Temp, Fuel Rate, etc.
- Interfaces to Dometic AC and Ice makers
 - ✓ Observe and Set Room Temperature, Control Modes and Fan Speeds



Available accessories for the J2K100:



MCF-2M-D4



MCF-2M-D12



MCF-2M-D12CAT

ELECTRICAL MONITORING & CONTROL

Overview



ACM100
Alternating Current Monitor



DCM100
Direct Current Monitor



DCR100
Direct Current Relay



RIM100
Run Indicator Module



ELECTRICAL MONITORING & CONTROL

MPower



CLMD12
12-Channel DC Load Controller Module



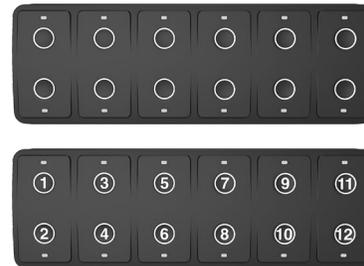
CLMD16
16-Channel DC Load Controller Module



MConnect
HTLM5 Web Server



CBMD12
12-Channel Manual Bypass Module



CKM Series
12-Button Customizable Keypad



VMM Series
6 Rocker Contura Digital Switch Module

ELECTRICAL MONITORING & CONTROL

ACM100 - Alternating Current Monitor

- Monitors AC Sources and Outputs Data to NMEA 2000® Network
- Monitors Utilities (Shore Power), Generators, and Bus Power
- Provides Voltage, Current, Frequency, Real Power, Reactive Power, Apparent Power, Power Factor, and Imported & Exported Energy
- Supports Single Phase and Three Phase Systems
- Sealed Waterproof Enclosure



Available accessories for the ACM100:



M000630



M000612

ELECTRICAL MONITORING & CONTROL

DCM100 - Direct Current Monitor

- Monitors DC Sources and Outputs Data to NMEA 2000® Network
- Measures Voltage & Current of any DC Source or Load
- Advanced Battery Monitoring Including Temperature, Load Current, Charging Current, and Terminal Voltage
- Computes Battery State of Charge, and Time Remaining
- Hall-Effect Sensor Slips Over Wire
 - No Connection Breaks as with Shunts



Available accessory is for the DCM100:



LEMHTAx00-S



FC01



TR3K

ELECTRICAL MONITORING & CONTROL

DCR100 - Direct Current Relay

- Six 10 Amp Max DC Relays Controlled through NMEA 2000® Network (Solid State Relay)
- Individual channels can be configured with default power up state (On/Off/Previous)
- Controllable (Switched On and Off) from N2KView
- Each Channel has Current Monitoring (Alarm on Burnt Out Bulb Detection) and On/Off Counter and Timer
- Can be Activated via N2KView-Alerts or DSM Alerts (Ideal for Pumps, Horns, Bells/Buzzers, and Lights)



ELECTRICAL MONITORING & CONTROL

RIM100 - Run Indicator Module

- Monitors and reports the running statuses of six independently connected devices
- Monitors **Both** AC & DC Circuits and Reports Running Status Over NMEA 2000® Network
 - Manual or Auto Switched Loads
- Can indicate the status of a wide variety of loads
 - Bilge Pumps
 - Winches
 - Running Lights
 - Transfer Pumps
 - Exhaust/Intake Fans
 - Water in Fuel
- Each Channel offers an On/Off Counter and Timer



Available accessories for the RIM100:



WIF-RK30880-E Water in Fuel Detector

A WIF-RK30880-E Fuel detector mounted on the bottom of a fuel filter will provide a voltage when water is detected in the fuel. This voltage can be detected by the RIM100 and used to trigger an Alert or display an Indicator.

GENERAL SYSTEMS MONITORING & RECORDING

Overview



SIM100
Switch Indicator Monitor



FPM100
Fluid Pressure Monitor



CLM100
Current Loop Monitor



RAA100
Rudder Angle Adapter



VDR100
Vessel Data Recorder



TMP100
Temperature Module

GENERAL SYSTEMS MONITORING & RECORDING

SIM100 - Switch Indicator Module

- Monitors Switch Closure Devices and Broadcasts Status Over NMEA 2000® Network
- Detects and Reports Opens, Shorts, etc.
- Each Channel provides an On/Off Counter and Timer
- Works with a variety of sensors
 - Heat, smoke, carbon monoxide, High bilge water, motion
 - Vacuum, water flow
 - Magnetic switches, glass break, door, hatch, portholes, etc.



GENERAL SYSTEMS MONITORING & RECORDING

SIM100 - Safety Accessories



• Smoke/Heat Detector Kit High Temp

- ✓ Part #: SH-003
- ✓ 24 Volt Supply
- ✓ Kit includes Relay Base, Auxiliary Relay and Sounder
- ✓ Photoelectric Smoke Detector
- ✓ Operating Temperature: -13°F (-25°C) - 158°F (70°C)
- ✓ Self Diagnostics, Trouble Relay indicates Loss of Power and Smoke Detector Out of Sensitivity



• Bilge Monitor

- ✓ Part #: BHW100
- ✓ No Moving Parts (Proximity Switch)
- ✓ Mount Directly in Bilge at High Water Indication Mark
- ✓ Inadvertent Disconnect Detected and Signaled



• Smoke/Heat Detector Kit

- ✓ Part #: SH-004
- ✓ 12/24 Volt Supply
- ✓ Photoelectric Smoke Detector
- ✓ Operating Temperature: 32° F (0°C) - 100°F (37°C)
- ✓ Sounder 85dB at 10 feet
- ✓ Self Diagnostics, Trouble Relay indicates Loss of Power and Smoke Detector Out of Sensitivity



• Carbon Monoxide

- ✓ 12/24 Volt Supply
- ✓ UL Standard 2075
- ✓ Sounder 85dB at 10 feet
- ✓ Self Diagnostics, Trouble Relay indicates Loss of Power and Smoke Detector Out of Sensitivity



• Smoke Detector Kit

- ✓ Part #: SH-005
- ✓ 12/24 Volt Supply
- ✓ Photoelectric Smoke Detector
- ✓ Operating Temperature: 32° F (0°C) - 100°F (37°C)
- ✓ Sounder 85dB at 10 feet
- ✓ Self Diagnostics, Trouble Relay indicates Loss of Power and Smoke Detector Out of Sensitivity

GENERAL SYSTEMS MONITORING & RECORDING

SIM100 - Security Accessories



IS216 Motion Detector

- ✓ Shock Algorithm reduces false alarms
- ✓ Mounts on walls or in corners



MS-1035
Magnetic Switch Rectangular
(Indoor)



MS-1085N
Magnetic Switch Rectangular
(Outdoor)



MS-1075
Magnetic Switch Recessed
(Indoor/Outdoor)



MS-1055-N
Magnetic Switch Cylinder
(Indoor/Outdoor)

GENERAL SYSTEMS MONITORING & RECORDING

SIM100 - Vacuum Switch Accessories

- ✓ Maretron Part Number VS-07.0HG
- ✓ Connects To a single channel of SIM100 (Normally Open Contact)
- ✓ Maretron Fits End-of-Line Resistor for Inadvertent Disconnect of Signal Wires to SIM100
- ✓ No Power Required, thus No Need for Power Supervision
- ✓ Switch Point Set to 7" Hg Vacuum (0.24 Bar, 24 kPa, 3.4 PSI)
- ✓ 1/8" NPT Male Threads
- ✓ Vacuum Switch is Part of a Comprehensive Fuel Monitoring System



Vacuum Switch and Hood



Replace or Supplement Traditional Analog Gauges

GENERAL SYSTEMS MONITORING & RECORDING

RAA100 - Rudder Angle Adapter

- Adapts Resistive Rudder Senders to NMEA 2000®
- American (240-30 Ω) or European (10-180 Ω) Standard Compatible
- Can be calibrated for any resistive sender ranging from 0-300 Ω or 300-0 Ω
- Can Be Used With or Without Analog Gauges
- End Point Calibration for Different Rudder Stop Angles
- Three Point Electronic Calibration eliminates need for mechanical adjustment or calibration



GENERAL SYSTEMS MONITORING & RECORDING

TMP100 - Temperature Module

- Monitors Up to 6 External Temperature Probes and Broadcast Data Over NMEA 2000® Network
 - Two Channels of K-Type Thermocouple Probes
32°F (0°C) to 1,652° F (900°C)
 - Four Channels of J-Type Thermistor Probes
-4°F (-20°C) to 176° F (80°C)
- Probe Applications
 - Cabin, Engine Room, Equipment, Air Duct, Tanks, Exhaust Gas Temperature (EGT), etc.



GENERAL SYSTEMS MONITORING & RECORDING

TMP100 - Accessories



Ring Terminal Probe
-4°F (-20°C) to 176° F (80°C)



Immersion Probe
-4°F (-20°C) to 176° F (80°C)



Ambient Air Probe
-4°F (-20°C) to 176° F (80°C)



Exhaust Gas Temperature Probe
32°F (0°C) to 1,652° F (900°C)

GENERAL SYSTEMS MONITORING & RECORDING

VDR100 - Vessel Data Recorder

- All NMEA 2000® Data Recorded on Solid State Memory via Removable USB Flash Drive
- Circular Buffer Preserves Latest Recorded Data While Oldest Data Overwritten when Memory is Full
- Recorder Data Available for Performance Analysis, Vessel Tracking, Preventive Maintenance
- Free Data Extraction Software (N2KExtractor™) Builds Comma Delimited Files (CSV) for Comprehensive Spreadsheet Analysis



Available accessories for the VDR100:



PX0852



PX0837/5M00



M003029



N2KExtractor® Screen Shot

NAVIGATION INSTRUMENTS

Overview



DST110
Depth / Speed / Temp Transducer



GPS200
GPS Antenna / Receiver



SSC300
Solid State Compass

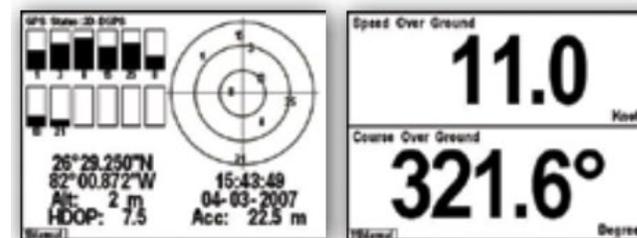


WSO200
Ultrasonic Wind & Weather Station

NAVIGATION INSTRUMENTS

GPS200 - GPS Antenna/Receiver

- Connects directly to any NMEA 2000® network and communicate with navigational software, chart plotters, autopilots and dedicated instrument displays
- 32 Channel with Satellite Based Augmentation System (SBAS) Including WAAS, EGNOS, MSAS and GAGAN
- Five Position Fixes per Second
- World Magnetic Model (WMM2020) for Accurate Magnetic Variation Anywhere In World
- Easily mounted to a standard marine mount with 1"-14 TPI male pipe end or directly to a deck.
- Provides Position, Satellite Status, Accuracy, COG, SOG, and Variation



DSM Series Screen Shots

NAVIGATION INSTRUMENTS

SSC300 - Solid State Compass

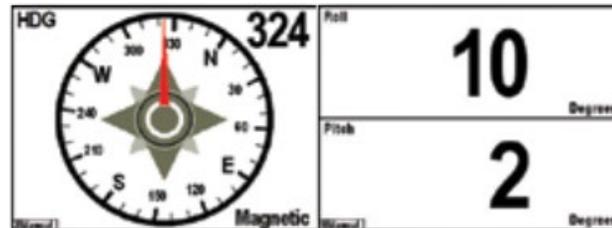
- Solid State Technology
 - No Moving Parts, No Overshoot, Ultrafast Response Time
- Rate Gyro Compensation for Stable Heading in Dynamic Conditions
- Optimum for Steering Autopilots in Rough Water
- Optimum Performance for Aligning Radar Images on Charts
- Outputs NMEA 0183 and NMEA 2000® data simultaneously
- No Northerly Heading Problems Like fluxgate
- Installs on Steel-Hull Boats



Available accessories
for the SSC300:



MARE-004



DSM Series Screen Shots

NAVIGATION INSTRUMENTS

DST110 - Depth/Speed/Temp Triducer

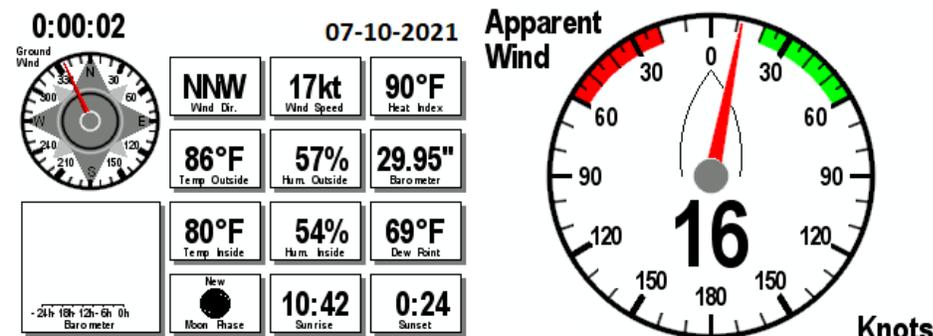
- Depth Operates at 235KHz Up to 100 Meters
- Speed, Trip and Cumulative Log
- Water Temperature from 14° F (-10°C) to 104°F (40°C)
- Removable Without Hauling Boat
- Programmable Transducer Offset Via Maretron DSM Displays or N2KAnalyzer® V3
- Includes a blank plug to replace its sensor unit when the vessel will be docked for extended periods or trailered.



NAVIGATION INSTRUMENTS

WSO200 - Ultrasonic Wind and Weather Station

- Wind Speed and Direction, Air Temp, Barometric Pressure and Relative Humidity all within a single device
- Ultrasonic – No moving Parts!!!
- When paired with Speed Through Water (DST110), GPS (GPS200) and Compass (SSC300), you can view True Vessel referenced Wind Speed and Direction as well as ground referenced Wind Speed and Direction
- Accurately measures Wind Speed and Direction under tilt of up to 30°
- Easily mounted to a standard marine mount with 1"-14 TPI male pipe



DSM Screen Shots

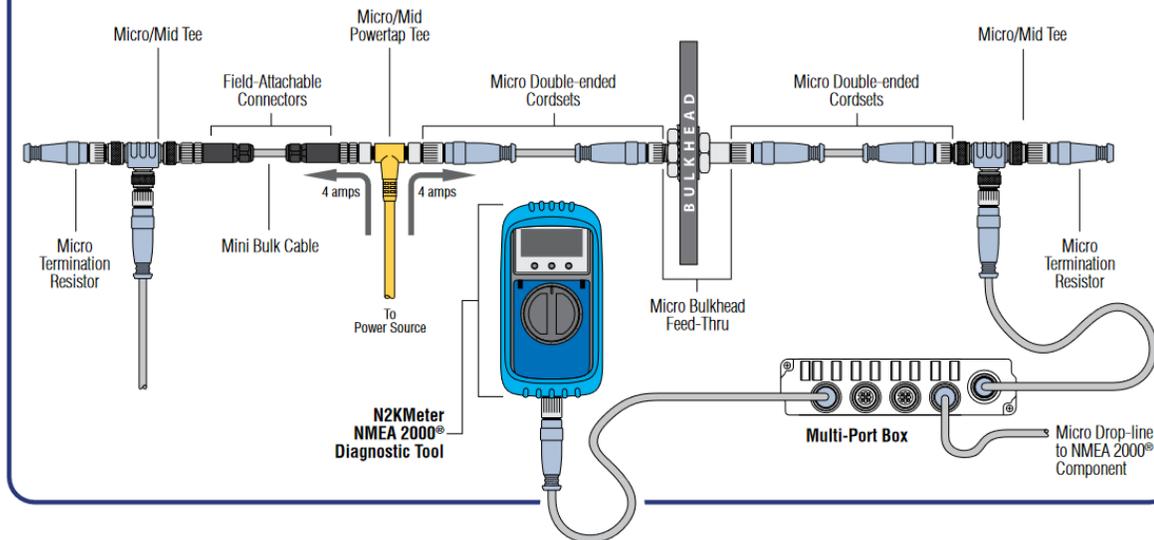
NMEA2000® CABLES AND CONNECTORS

Overview

- Simple trunk and drop line topology interconnects all NMEA 2000® equipment
- Drop line topology allows component removal or re-connection while rest of network remains operational
- Cable includes power and ground for powering equipment drawing less than 1 amp/device
- Connectors include keys and keyways for simple error free connections
- Screw thread connectors reduce chances of accidental disconnects of essential equipment
- Waterproof connection system prevents corroded intermittent connections and continues to operate even while submerged in the bilge
- Three independent cable shields (power pair, signal pair, and overall cable) protects system from external noise sources such as high-power radio transmitters and radar units
- Nickel plated brass connector ends ideally suited to harsh marine environment
- Phosphor bronze contact base material with gold over nickel plate for reliable connections
- Over molded cable connector ends provide strain relief
- Simple easy to use diagnostic components enable trained and untrained personnel to diagnose and troubleshoot network installations

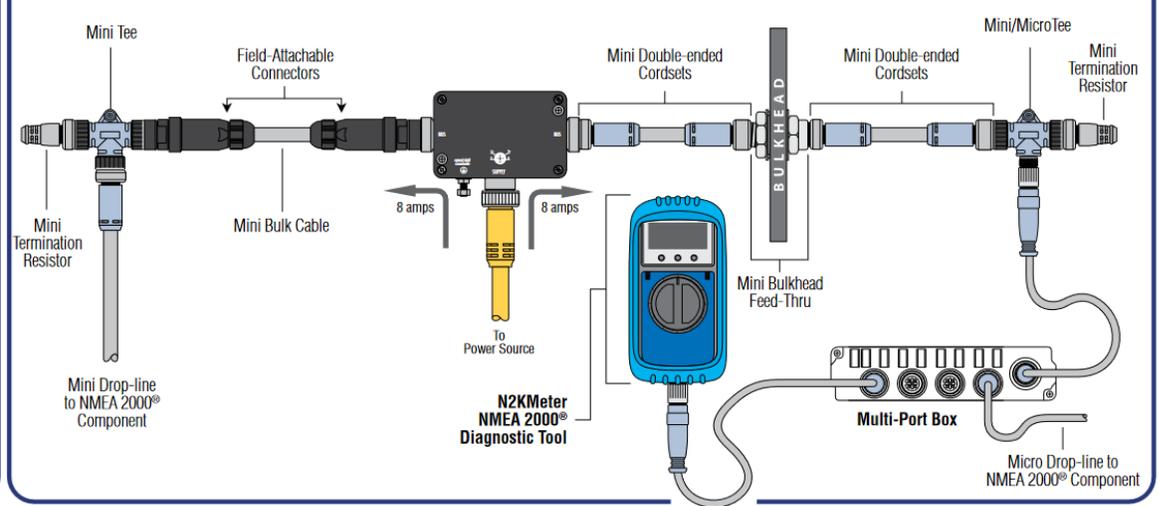
Micro/Mid NMEA 2000® Network Example

(Up to 4 amps per leg)



Mini NMEA 2000® Network Example

(Up to 8 amps per leg)



NMEA2000® CABLES AND CONNECTORS

Micro/Mid Cables and Connectors



Micro Bulk Cable



Field Attachable Connectors (Straight)



Field Attachable Connectors (90°)



Micro Double Ended Cordsets



Tee



Powertap



Termination Resistors



Bulkhead Feed-Thru



Multiport Box



Mid Bulk Cable



Mid Double Ended Cordsets (Gray)



Mid Double Ended Cordsets (Blue)



Nylon to Metal Connector Cable



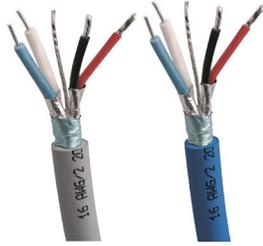
90° Male to Female Connector



Mid Cordset Female to Open Pigtail

NMEA2000® CABLES AND CONNECTORS

Mini Cables and Connectors



Mini Bulk Cable



Mini Field Attachable Connectors (Male/Female)



Mini Double Ended Cordsets (Gray)



Mini Double Ended Cordsets (Blue)



Mini Tees



Mini 90° Male to Female Connector



Mini Powertap & Power Cord



Mini Terminating Resistors (Male/Female)



Mini Male to Micro Female Reducer



Mini Gender Changers



Mini Bulkhead Feed-Thru

SOFTWARE TOOLS

Overview

Maretron N2KAnalyzer V3 Version 3.0.0.0 - VesselName

Expanded	Node Address	Manufacturer	Mfg Model ID	Mfg Serial Number	Source	Unique Instance	Label	Current Software	Available Software	Installation Description #1	Installation Description #2	Device Instance	Bandwidth
CD	Maretron	ACM100	1381751		0	ACM100 #1	11.1.2	11.1.2	EXTERNAL POWER...	MARETRON	0	0.7%	
ET	Maretron	ALM100	1461702		0	LAB	1.0.6	1.0.6		MARETRON	0	0.0%	
66	Maretron	CLM012	1601717		60		2.01.00				0	0.2%	
38	Maretron	CLM100	1830206			CLM100	1.2.1.1	1.2.1.1		MARETRON	0	0.3%	
30	Maretron	CLM012	1671323			CLM012-1	01.11.08	11.03.08	MFD's		46	0.1%	
36	Maretron	CLM012	1671309			Lighting	01.11.08	11.03.08		JAPCO	48	4.6%	

Channel Label

- 0 FWD State Room Lights
- 1 PORT State Room Lights
- 2 STBD State Room Lights
- 4 Salon Lights
- 6 Cockpit Lights
- 7 Galley Lights
- 8 Pump Room Lights

Hardware Channel Source Instance Label

- [2] Sand/Combined Fuel - 0 Port Wing Engine
- [3] Return Fuel Flow - 0 Port Wing Engine
- [3] Channel 0 Temperature User Defined #129 5 Port Wing Engine Supply Temp
- [3] Channel 1 Temperature User Defined #129 7 Port Wing Engine Return Temp
- [3] Channel 2 Flow Rate Fuel 3 Port Wing Engine Flow
- [3] Channel 3 Flow Rate Fuel 0
- [3] Channel 0 Top Volume Fuel 5 Port Wing Engine Volume
- [3] Channel 1 Top Volume Fuel 0

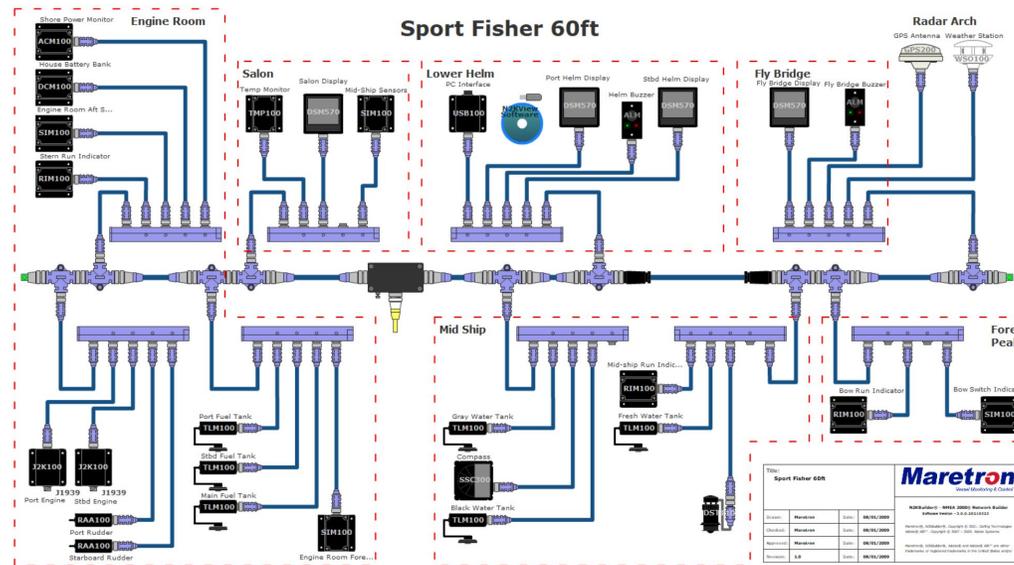
05 Maretron FPM100 1561075 58 Fuel 11.2.1 11.2.1 58 Fuel 199 0.1%

AA Maretron GPS200 1561087 1 GPS 1 402.12 402.12 MARETRON 1 4.4%

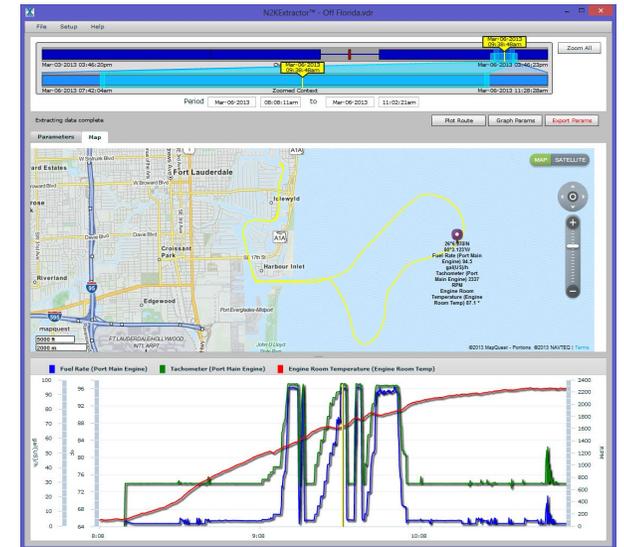
65 Maretron GPS200 1561709 0 GPS 0 402.12 402.12 MARETRON 0 5.9%

Connected to NMEA 2000 Network 10.75.1.1184500 NMI

N2KAnalyzer® V3
NMEA 2000® Network Analysis Software



N2KBuilder® V3
NMEA 2000® Network Design Software

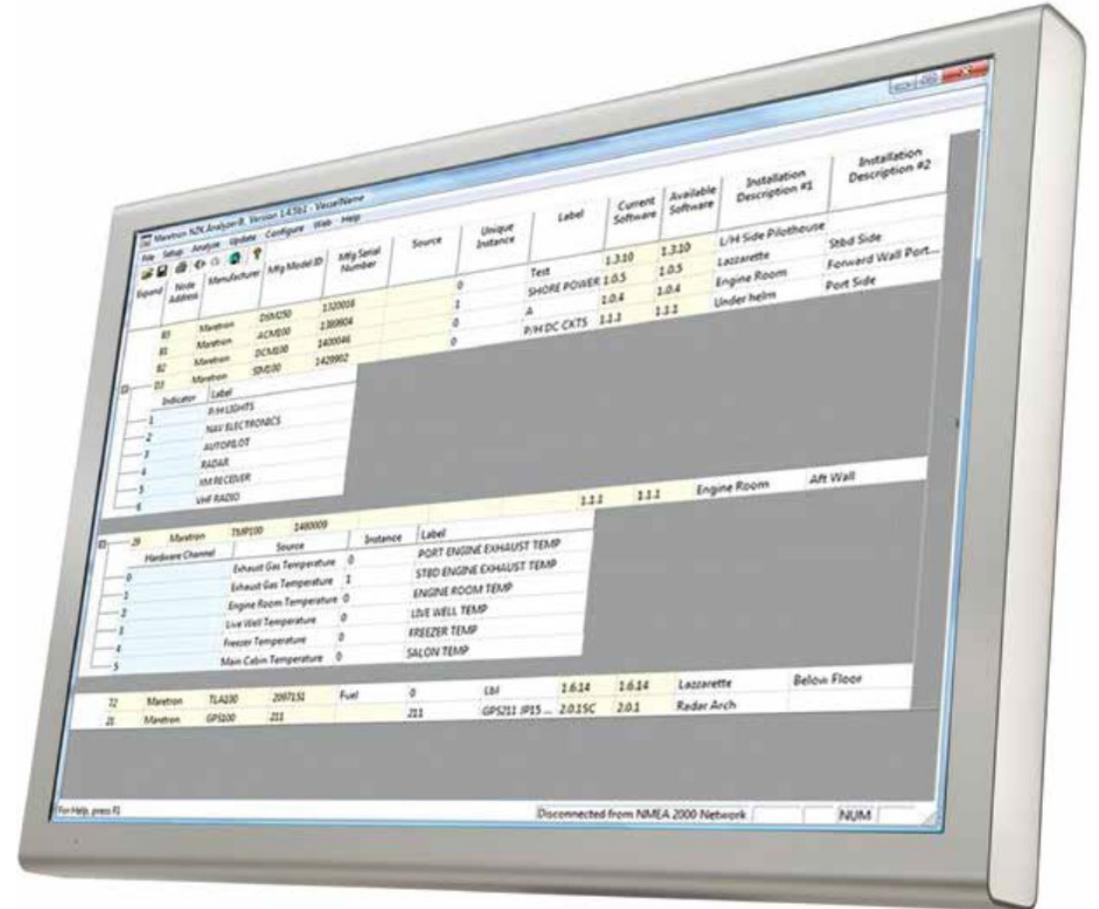


N2KExtractor®
NMEA 2000® Data Extractor for VDR100 & TCS

SOFTWARE TOOLS

N2KAnalyzer® V3 - NMEA 2000® Analysis Software

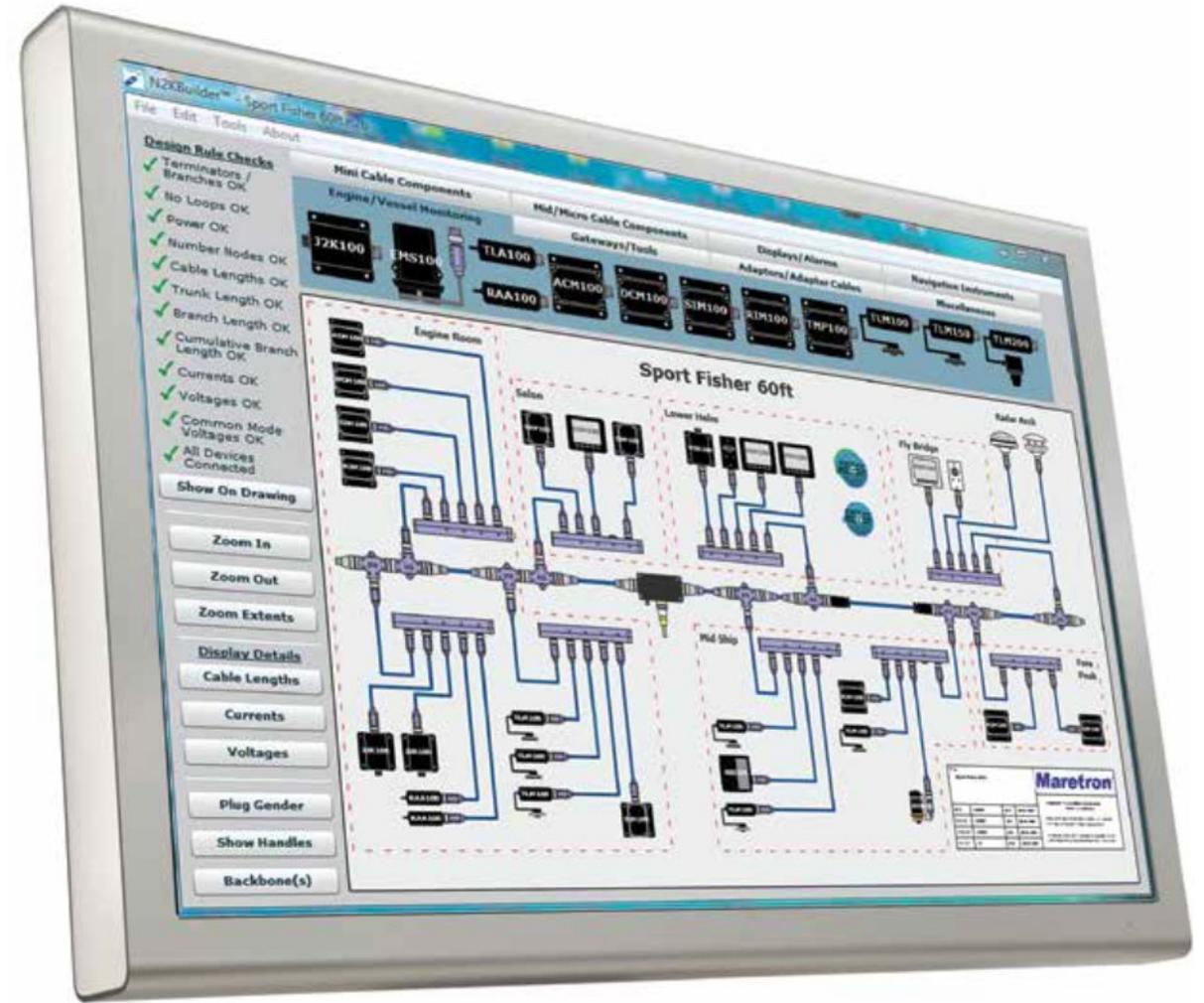
- FREE application that provides a Windows® PC access to the NMEA 2000® network when paired with a Maretron gateway (USB100 or IPG100)
- Lists all NMEA 2000® devices on the network
- Display a wealth of information for each device
- Display NMEA 2000® messages transmitted by each device in an easy-to-understand, human-readable format
- Modify installation description information on devices which support user-programming of this information
- Modify source and instance information on devices which support user-programming of this information
- Analyze the devices on the network and their transmitted data to ensure that there are no instancing conflicts which can cause “bouncing needles” on displays
- Program label information on devices which support user-programming of this information to assign meaningful text strings to every device and channel
- Configure / calibrate Maretron devices and select devices from other manufacturers
- Update firmware on supported Maretron NMEA 2000® devices



SOFTWARE TOOLS

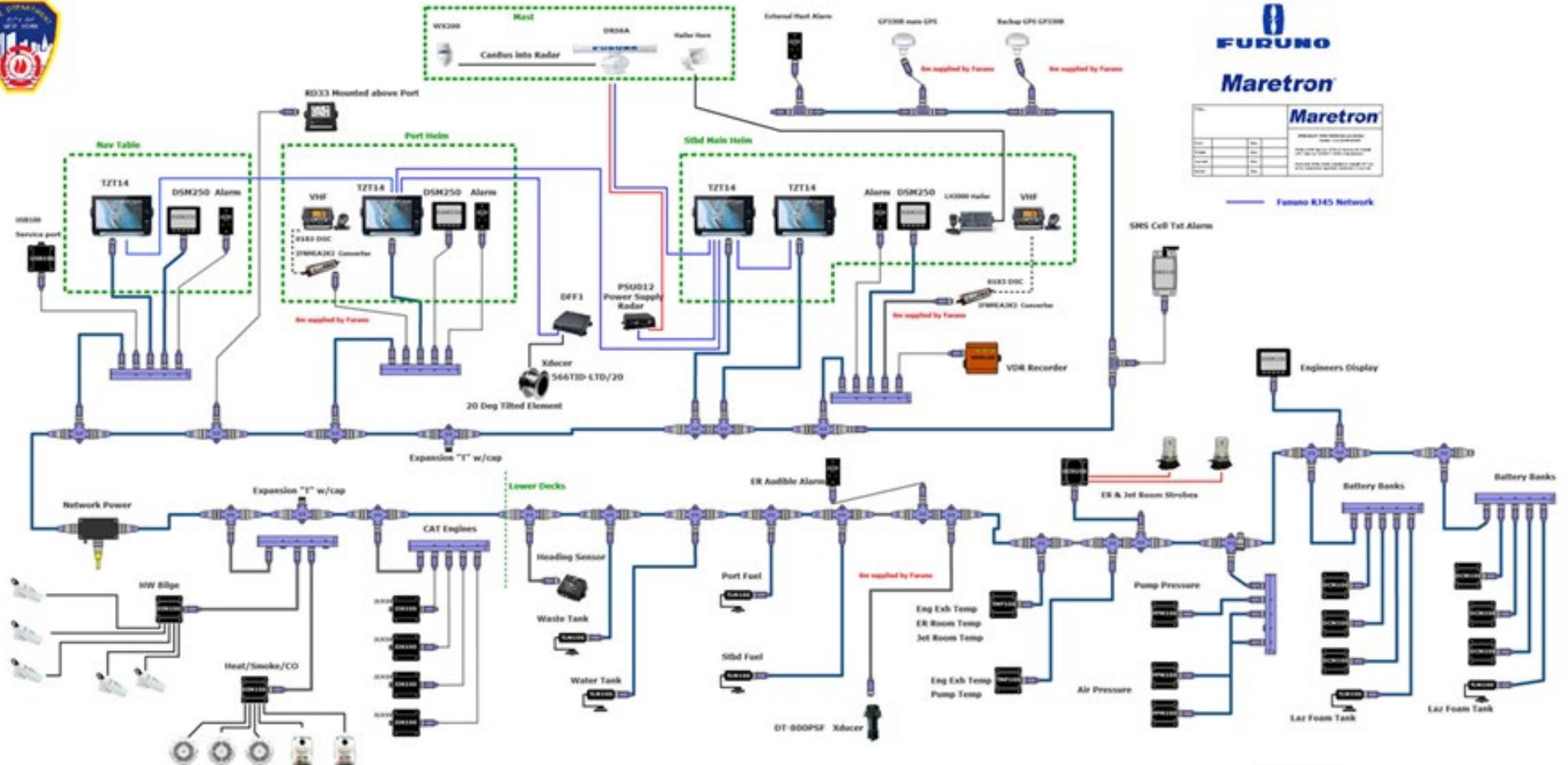
N2KBuilder® V3 - NMEA 2000® Network Design Software

- FREE PC-based tool for designing and verifying the integrity of NMEA 2000® networks
- Available for both Windows® and MAC® computers
- Produce Bill of Materials (BOM)
- Produce design report
- Produce network configuration table which matches N2KAnalyzer® V3 format
- Analyze the network layout for compliance to NMEA 2000® standards
- Assign device and data instance numbers



SOFTWARE TOOLS

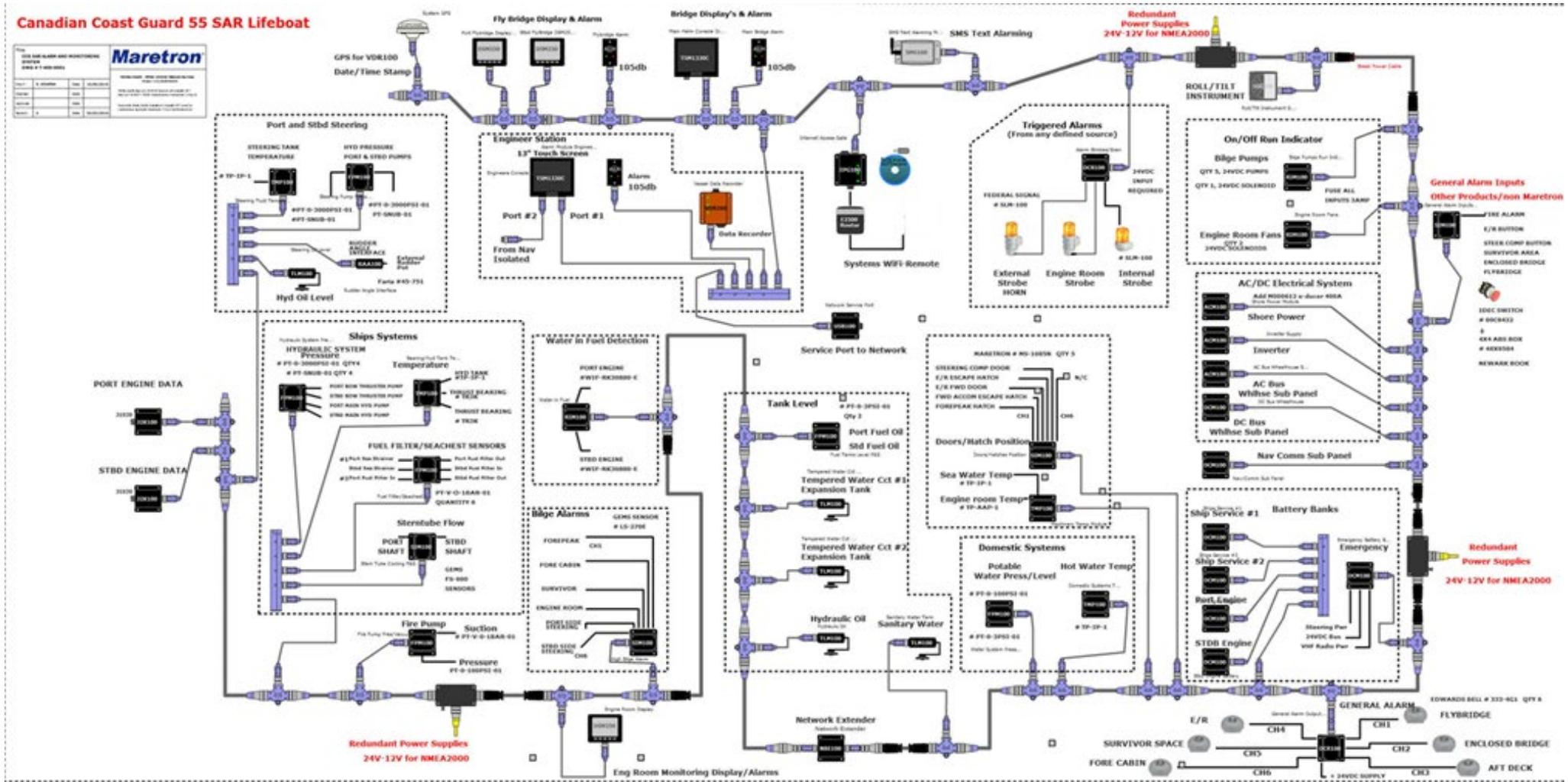
N2KBuilder® V3 - Sample Vessel



72' New York City Fire Boat- Metalcraft 2015

SOFTWARE TOOLS

N2KBuilder® V3 - Sample Vessel

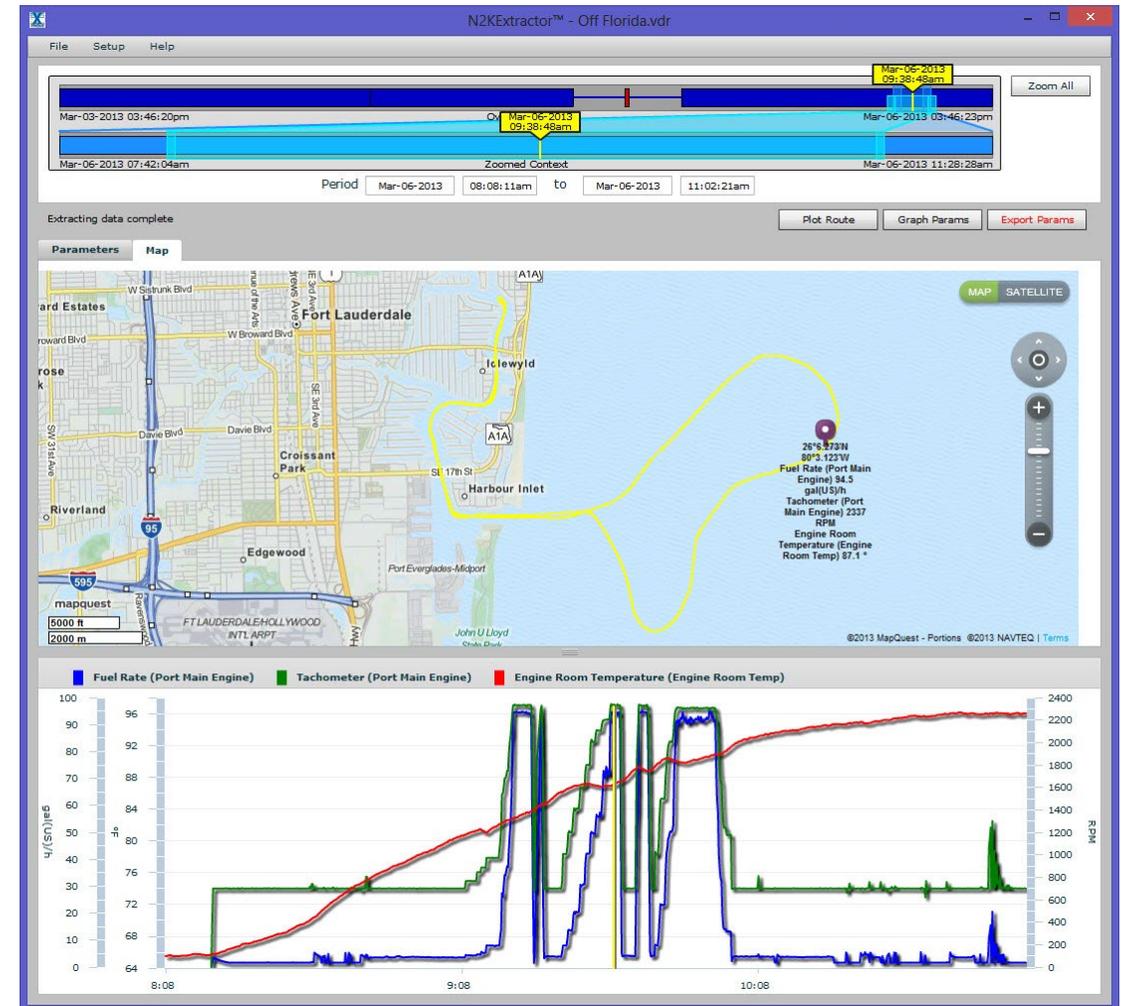


Canadian Coast Guard (CCG) SAR 55'

SOFTWARE TOOLS

N2KExtractor® - NMEA 2000® Data Extractor for VDR100 & TCS

- FREE Windows® PC based application used to extract information from the VDR100 and Telemetric Cloud Services (TCS)
- Accessing recorded data from a VDR100 can be completed either via direct from removable USB Flash drive or over the connected LAN
- Accessing recorded data from your TCS account with an active subscription and internet access to you PC
- Easily select time period for extracting data with context driven time lines
- Automatically identify available parameters for data extraction within selected time period
- Quickly Graph up to four parameters for quick analysis
- Extract as many parameters as desired to a comma delimited file (csv) type file and analyze within Microsoft® Excel®
- Drag position on map and see corresponding point within time scales and graphs



HARDWARE TOOLS

N2KMeter® - NMEA 2000® Diagnostic Tool

- Used to Validate and Troubleshoot NMEA 2000® Networks
- Automatically Scans 250 Different Parameters and Provides Network Health (Sad, Neutral, Happy Face)
- Rotate Dial to Indicated Number for In Depth Analysis of Problematic Parameter
- Able to identify multiple parameters across the CAN network
 - ✓ Bus Voltage
 - ✓ Opens & Shorts
 - ✓ Incorrect topology
 - ✓ Bad Nodes
 - ✓ Improper Shield Connection
 - ✓ Intermittent Problems
 - ✓ Excessive Scan Rate
 - ✓ Common Mode Voltage



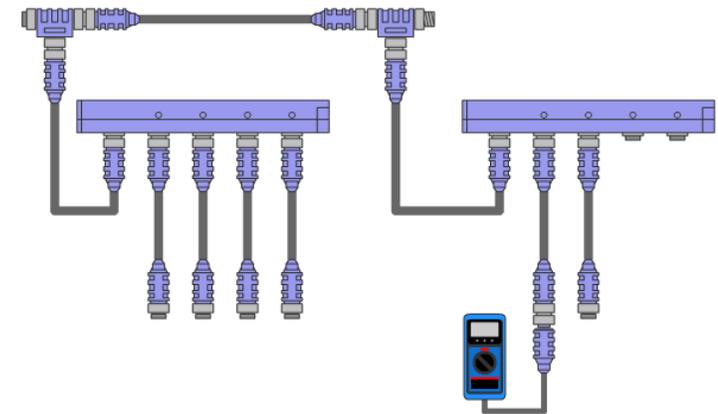
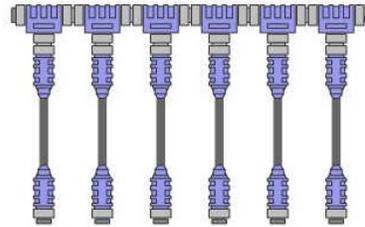
HARDWARE TOOLS

N2KMeter® - NMEA 2000® Diagnostic Tool

Imbalanced CAN Impedance

*“A worst-case occurrence is during an arbitration when multiple dominant bits are simultaneously sent from two or more nodes.....
As this signal wave propagates down the line and arrives at the loaded section of the bus, the mismatch in impedance reflects the voltage back towards the source”*

Gremlins in your network



- Section: Critical Spacing of CAN Bus Connections
 - Application Report 279a
www.ti.com

HARDWARE TOOLS

N2KMeter® - NMEA 2000® Diagnostic Tool

Common issues observed by technicians today using the N2KMeter:

1. The smallest of cabling or device issues can interrupt a systems capability to operate at 100% effectiveness.
2. Devices that have to work harder on poor cabling networks do not last long and require early replacement.
3. The network crashes every time you add a device or perform a over the CAN network device update.



Maretron
Vessel Monitoring & Control



N2K/DVOM Meter Readings

Static Measurements, Power "OFF"

		<u>Expected Range</u>
Network Resistance Net-H/Net-L	_____ Ohms	60 Ohm
Shield/ DC Negative Resistance	_____ Ohms	< 0.5 Ohms

* Confirm that Shield & DC Negative are only connected at power insertion (one point)

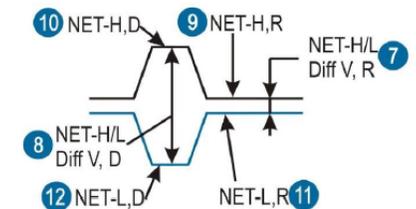
Dynamic Measurements, Power "ON"

<u>Mode</u>		<u>Expected Range</u>
1 Auto Search	☺	
2 Bus Errors	_____ ERR/SEC	Zero Errors
3 Bus Traffic	_____ %	35% Max
4 Bus Voltage	_____ VDC	> 9.8V @ Ends
5 Shield Voltage	_____ VDC	0.2V
6 Common Mode Voltage (CMV)	_____ VDC	< 2.5V
7 NET H/L Differential Voltage "R" State	_____ VDC	0.0V
8 NET H/L Differential Voltage "D" State	_____ VDC	2.0V
9 NET-H Voltage "R" State	_____ VDC	2.5V
10 NET-H Voltage "D" State	_____ VDC	3.5V
11 NET-L Voltage "R" State"	_____ VDC	2.5V
12 NET-L Voltage "D" State	_____ VDC	1.5V

Vessel Name: _____

Test Date: _____

Technician: _____



MARETRON WEB PAGES

Home Page



ENHANCED BY Google

Search

Like 1.4K

Share

Products ▾ Suggested Systems ▾ Support ▾ Company ▾ How to buy



News

- [Carling Technologies Introduces New MPower® Digital Switching Platform](#)
- [Carling Technologies Names New Marine Sales Manager](#)
- [Frank Emmett, Maretron's Vice President of Monitoring and Control Software, and Ben Stein of Panbo sit down to discuss MPower. MPower is Maretron's digital switching platform and it's scheduled to be available in mid-February for both new builds and retrofit installations.](#)

Suggested Systems

- Sailboat Example Systems
- Trawler Example Systems
- Recreational Fishing Yacht Example Systems
- Workboat Example Systems
- Application Example Systems
- Product Example Systems

Product Categories

- User Interface Products
- NMEA 2000® Gateways and Bridges
- Tank Monitoring
- Engine Monitoring
- MPower Digital Switching Platform
- Electrical Monitoring and Control
- General Monitoring
- Navigation Instruments

MARETRON WEB PAGES

Systems ▾ Support Company

- Downloads
-  Knowledge base
- Product data sheets
- Product manuals
- Videos
- Links to 3rd party web pages
- Hardware tools ▶
- Software tools ▶
- TeamViewer Support
- Warranty and RMA Process



Vessel Monitoring & Control

ENHANCED BY Google

Products ▾ Suggested Systems ▾ Support ▾ Company ▾ How to buy

Knowledge Base

KB Home | Search | Glossary | Ask Question |  English

Browse Categories

 Applications & DIY (13) Vessel Monitoring and Control Applications and Do it yourself	 Electrical Monitoring and Control (80) AC and DC Monitoring, Relays, Run Indication	 Engine Monitoring (107) Engines and Generators
 General Systems Monitoring (84) Flow, Rudder, Dry Contacts, Pressure, Temperature	 Maretron Technical Service Bulletin (109) Latest Hardware, Software, and Firmware Updates	 Navigation Instruments (259) Depth/Speed/Temp., GPS, Compass, Weather
 NMEA 2000 Cables and Connectors (26) Maretron Cabling	 NMEA 2000 Gateways/Bridges (42) Ethernet, USB, Bus Extender	 NMEA 2000 Network Design and Maintenance Tools (45) N2KBuilder, N2KAnalyzer
 Tank Monitoring (126) Adapters, Ultrasonic, Pressure	 User Interface Hardware (563) Annunciators, Displays, Black Boxes	 User Interface Software (60) N2KView and N2KView Mobile

Recently Added Articles 

-  [AXIS Camera Setup for N2KView](#)
Published on Tue, Feb 16, 2021
-  [Can the FFM100 monitor Jet Fuel A?](#)
Published on Thu, Jul 16, 2020
-  [What firmware changes have taken place on the Maretron DSM570?](#)
Published on Tue, Jul 14, 2020
-  [What firmware changes have taken place on the Maretron DSM410?](#)
Published on Tue, Jul 14, 2020
-  [How do I install my SIM Card in the SMS100?](#)
Published on Tue, Jun 30, 2020
-  [N2KView Configuration Offline - Alerts & Cameras](#)
Published on Thu, Mar 12, 2020
-  [Connecting MBB300C to Garmin Network](#)
Published on Thu, Feb 6, 2020

Most Popular Articles 

-  [How do I choose the right Maretron tank monitoring product for my particular application?](#)
Viewed 85518 times since Mon, Aug 21, 2017
-  [Why is the DST110 Speed Through Water \(STW\) reading different from the Speed Over Ground \(SOG\) reading?](#)
Viewed 41679 times since Tue, Jun 17, 2008
-  [How do I check the health of my NMEA 2000 cabling before powering my network?](#)
Viewed 41013 times since Mon, Sep 12, 2011
-  [Does Maretron have a interface cable for Caterpillar engine networks to the J2K100 device?](#)
Viewed 37164 times since Tue, Apr 5, 2011
-  [Connecting MBB300C to Garmin Network](#)
Viewed 35905 times since Thu, Feb 6, 2020

MARETRON WEB PAGES

Technical Support

Maretron, Carling Technologies Inc., Marine Group

Monday – Friday 8am-5pm (EST)

Toll Free: (866) 550-9100

Phone: (602) 861-1707

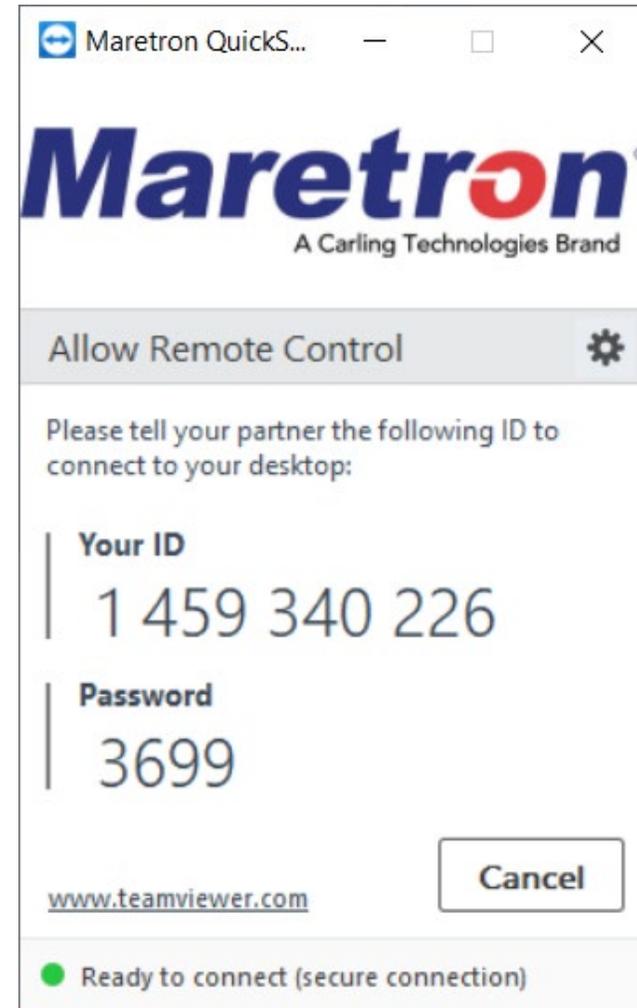
Marine.Support@carlingtech.com

Carling Technologies Ltd (Europe/Middle East/Africa)

Monday – Friday 8am-5pm (GMT)

Phone: + 44 1392-364422

Tech.Support@carlingtech.co.uk



MARETRON WEB PAGES

Warranty/RMA



ENHANCED BY Google

- Products ▾
- Suggested Systems ▾
- Support ▾
- Company ▾
- How to buy

RMA (Return Merchandise Authorization) request

- Systems ▾
- Support
- Compar

Downloads
Knowledge base
Product data sheets
Product manuals
Videos
Links to 3rd party web pages
Hardware tools ▶
Software tools ▶
TeamViewer Support
Warranty and RMA Process

Customer Information

Company:
*Contact Name:
*Address:
*City:
*State/Province:
*Zip/Postal Code:
*Country:
*Phone:
*E-mail Address:
*Re-enter E-mail Address:

Product Information

*Product:
*Product is part of an Octoplex System: Yes ▾
*Serial Number:
*Reason for Return:
*Product has been cleaned:
Date Purchased:
Retailer from Which Purchased:
Retailer City:
Retailer State/Province:

Vessel Information

*Builder:
*Hull Number:

* Denotes required information





Maretron[®]

Vessel Monitoring & Control

End of Product Overview Presentation