Issue v2.1

Actisense®

Connect without limits



NGX-1

NMEA 0183 <-> NMEA 2000® Converter
NMEA 2000 - PC Interface

Available in both USB and ISO variants

Introducing the latest addition to the Actisense Gateway product range, the NGX-1 Gateway can act as an NMEA 2000 to PC Interface, or as a bi-directional NMEA 0183/2000 Converter

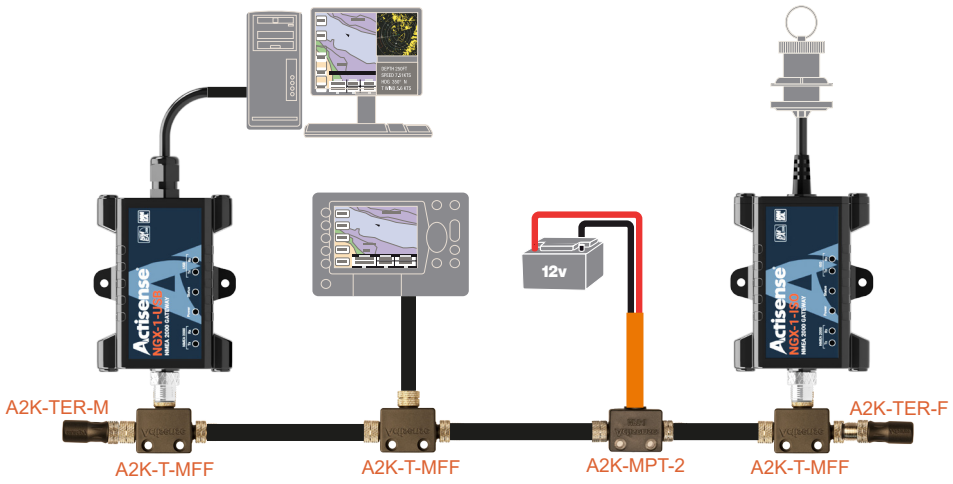
The NGX-1 is an intelligent gateway that converts NMEA 0183 data to NMEA 2000 (and vice versa), allowing you to share information between devices from the two standards. This creates the possibility of upgrading some of the vessel's electronics to NMEA 2000 and keeping the remaining NMEA 0183 devices. This can help spread the cost of transitioning to NMEA 2000, reducing the initial upgrade cost to accommodate a new NMEA 2000 device.

The ISO variant connects easily to NMEA 0183 devices with a dedicated pair of data wires for transmit and receive, allowing the NGX-1 to share data bi-directionally if required. OPTO-Isolation is included on the input and ground breaking ISO-Drive™ technology on the output to keep your devices safe from hazardous ground loops.
The USB Variant allows for quick and easy connectivity to a PC running software that requires NMEA 0183 data.

Thanks to the device being low power, it is powered directly from the NMEA 2000 network, removing the requirement for an independent power supply.

The Actisense NGX-1 also makes it possible to send and receive NMEA 2000 data safely between a PC and an NMEA 2000 network. This creates the possibility of feature rich software applications replacing or complementing dedicated hardware such as a Multifunction Display (MFD) or Chart Plotter.

Acting as an NMEA 2000 to PC Gateway allows the device to act as a rule enforcing firewall between the PC and the network, giving the user full control over what data is passed and blocked. The NGX is capable of transferring every currently available NMEA 2000 PGN from the network to a PC application.



Features:

USB version

- Vital NMEA 2000 diagnostic tool.
- USB version is fully isolated to prevent dangerous ground looops.
- Up to 230,400 baud rate data transfer rate.
- Integrated 1.8m USB cable.
- Diagnostic LED's on both input and output.

ISO version

- ISO version has OPTO-isolated input and ISO-Drive output for safely interfacing with NMEA 0183 or RS232 / RS422.
- Advanced configuration using Actisense Toolkit allows Tx / Rx lists and Tx rates to be set.
- Supports fast-heading at 10Hz.
- Up to 230,400 baud rate data transfer rate.
- Integrated 0.75m ISO cable.
- Diagnostic LED's on both input and output.

Features may change without notice.

Integrate seamlessly with Raymarine® products

The STNG-A06045 adaptor cable enables users to integrate Raymarine SeaTalk^{NG} products into the standard configured NMEA 2000® bus and vice-versa. Currently only available when purchased with an Actisense NMEA 2000® Gateway product.

Actisense®

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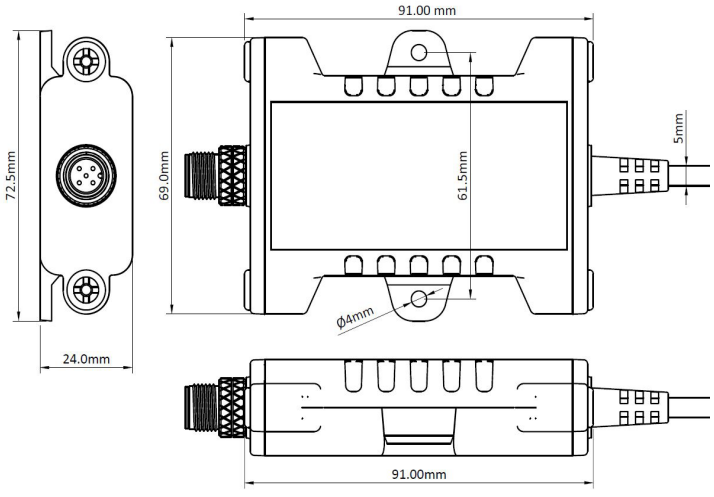
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NGX-1 Specifications

NMEA 2000 Port (All variants)	
Network Power	9 to 30V DC
Speed / Baud Rate	250kbps
Connectivity	M12 Male (A coded)
LEN	
NGX-1-USB (A-NGX-1-USB-V2)	LEN = 1 (31mA avg)
NGX-1-ISO (A-NGX-1-ISO)	LEN = 1 (32mA avg)
NGX-1-ISO (A-NGX-1-ISO-V2)	LEN = 2 (53mA avg)
ISO Port (NGX-1-ISO)	
Compatibility	Full NMEA 0183, RS232 & RS422 compatibility. RS485 Listener compatible
Speed/Baud Rate	4800 to 230400 Baud
Output Voltage Drive	>= 2.1V (differential) into 100Ω
Output Current Drive	20mA max.
Output Protection	Short circuit and ESD
Input Voltage Tolerance	-15V to +15V continuous -35V to +35V short term (< 1 second)
Input Protection	Current limited and over-drive protection to 40VDC
Connectivity	5mm stripped and tinned wire
Cable Length	0.8m
USB Port (USB Variant)	
Compatibility	USB 1.1, 2.0 and 3.0
Speed / Baud Rate	4800 to 230400 Baud
Connectivity	Male type A plug moulded onto cable
Cable Length	1.8m
Isolation	
NMEA 2000 Port to ISO Port	Uses IsoDriveTM, Hi-Pot tested to 1000V
NMEA 2000 Port to USB Port	Galvanic Isolation, Hi-Pot tested to 1000V

Mechanical	
Housing Material Body	Flame retardant Polycar-bonate
Housing Material End Caps	Flame retardant PBT
Weight NGX-1-ISO	112g
Weight NGX-1-USB	113g
Approvals and Certifications	
NMEA 2000	Fully NMEA 2000 Certified
NMEA 0183	Meets IEC 61162-1 & 61162-2 Requirements
RoHS and REACH	Compliant
Module Certification	KCC / BQB / IC / Wi-Fi / NCC / MIC / FCC DSS / FCC DTS / SRRC / CE
EMC	EN 60945:2002 Edition 4 (section 9.3) EN 301 489-1 V2.2.3 EN 301 489-17 V3.2.4 EN 300 328 V2.2.2 Radiated Spurious Emissions FCC Part 15b ICES-003 Iss 7
Environmental Protection	IP67
Operating Temperature	-25°C to +70°C
Storage Temperature	-30°C to +70°C
Recommended Humidity	0 to 93% RH @ 40°C
Guarantee	5 years
Note: Contains a Wi-Fi module which is DISABLED. Freq Band 2412-2484MHz, Max output Power 19.22dBm, int. antenna 3.4dBi	

Product Dimensions



All specifications are taken with reference to an ambient temperature of 25°C unless otherwise specified.
All specifications correct at time of print