

## NGT-1

## NMEA 2000® to PC Interface

**Interface your PC to the NMEA 2000 bus with a functional firewall gateway.**

### Introduction

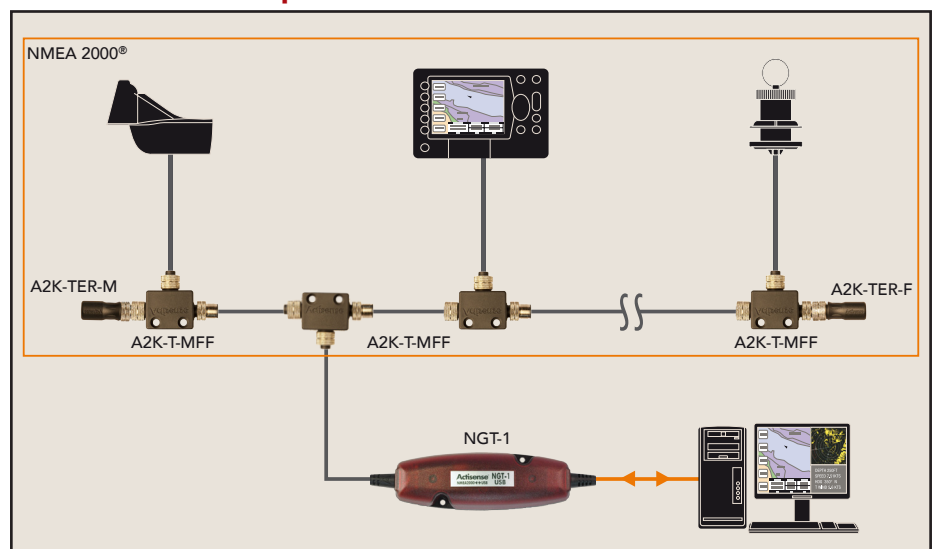
The Actisense NMEA 2000 to PC Interface (NGT-1) provides an easy way to link a PC to an NMEA 2000 network. The NGT-1 makes it possible for software applications to read from and write to the NMEA 2000 bus whilst maintaining network integrity. Enables software developers to create feature rich software applications that can fully interact with an NMEA 2000 network all of its data. With Actisense NMEA Reader, it is also becomes a vital NMEA 2000 diagnostic tool.

### Features

- Able to transfer all NMEA 2000 PGNs
- Firewall enforces NMEA 2000 bus rules
- Galvanic Opto-isolation between the PC and the NMEA 2000 network
- ISO variant: ISO-Drive™ output compatible with RS422 and RS232
- Transfer list for selecting which NMEA 2000 PGNs are sent and received
- Free Firmware updates provided when new features are added - update in the field via PC
- Pre-fitted cables for ease of installation
- Screw terminals for easy installation of custom cables if required
- Two available variants for different installation situations (see part code list on next page)
- Free SDK for software developers
- NMEA 2000 certification of software not mandatory; no certification cost
- Only required to purchase NMEA 2000 Appendix B to develop software
- Reduced software development time with Windows API
- Suitable for Windows, MAC and Linux applications
- Suitable for PC, mobile or embedded systems
- NMEA 'Third Party Gateway' status pending



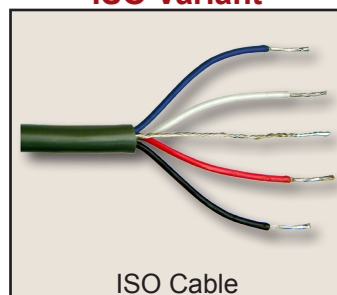
### Connection Example



### ISO & USB Variants



### ISO Variant



### USB Variant



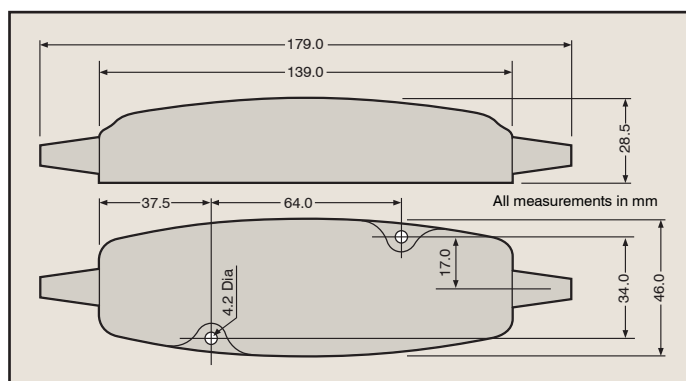
# NGT-1

## NMEA 2000 to PC Interface

### Technical Specifications

Power Supply (ISO Variant)	
Supply Voltage (NMEA 2000 Port)	10 to 29V DC
Supply Current (NMEA 2000 Port)	35mA @ 12V DC Max 50mA
LEN	1
Power Supply (USB Variant)	
Supply Voltage (NMEA 2000 Port)	10 to 29V DC
Supply Current (USB Host Port)	85mA @ 5V DC
Supply Current (NMEA 2000 Port)	10mA @ 12V DC Max 50mA
LEN	1
Mechanical	
Housing Material Lid	Polycarbonate
Housing Material Base	ABS
Weight NGT-1-ISO	220g
Weight NGT-1-USB	210g
Approvals and Certifications	
Fully NMEA 2000 Certified	
Meets all IEC 61162-3 requirements	
EMC	IEC 60945 (sections 9, 10 & 11.2)
Environmental Protection	IP54
Operating Temperature	-20°C to +55°C
Storage Temperature	-30°C to +70°C
Recommended Humidity	0 - 93% RH
Guarantee	3 years

### Dimensions



### Additional Information

The NGT-1 can only be used with compatible software, a list of which can be seen here:

[www.actisense.com/NGT-1/Compatibility](http://www.actisense.com/NGT-1/Compatibility).

Different software applications support different features. Always check with the software vendor which features and variants the application supports.

NMEA 2000 Port (All Variants)	
Compatibility	Fully NMEA 2000 certified
Galvanic Isolation	Refer to 'PC port' or 'USB port'
Speed / Baud Rate	250kbps
Connectivity	M12 Male (A polarised) connector moulded on cable
Cable Length NMEA 2000	1.5m
Cable Length STNG Adapter	0.4m (1.9m with NMEA 2000 cable connected)
PC Port (ISO Variant)	
Compatibility	Fully RS232 & RS422 compatible.
Galvanic Isolation	2500V input to ground 1500V output to ground using <b>ISO-Drive</b>
Speed/Baud Rate	4800 to 115200 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 overdrive protection to 40VDC
Connectivity	5mm stripped and tinned wire
Cable Length	1.5m
USB Port (USB Variant)	
Compatibility	USB V1.1, V2.0 and V3.0
Galvanic Isolation	2500V input to ground
Speed / Baud Rate	4800 to 230400 Baud
Connectivity	Male type A plug moulded onto cable
Cable Length	1.5m
Drivers (Latest OS)	Windows XP, Vista, 7, 8 & MAC OS X supplied on CD & <a href="http://www.actisense.com/NGT-1/Downloads">www.actisense.com/NGT-1/Downloads</a>
Drivers (Legacy OS)	Contact Actisense for full details of the legacy OS versions supported <a href="mailto:support@actisense.com">support@actisense.com</a>

All specifications are taken with reference to an ambient temperature (TA) of +25°C.

Software developers interested in integrating the NGT-1 into their software application should visit the SDK web page:

[www.actisense.com/SDK](http://www.actisense.com/SDK)

Part Number	Description
NGT-1-ISO	NMEA 2000 PC Interface, specialist version with RS422 serial
NGT-1-USB	NMEA 2000 PC Interface, standard version with USB
STNG-A06045	SeaTalkNG to NMEA 2000 adaptor cable (drop).