

AT

INSTRUMENTS


OCTOPUS



WHAT WE DO

A+T design and make the toughest and best instrument systems for wind, speed, heading, position, depth and a wide range of other sensors such as load and pressure. All our instruments are designed and manufactured in the UK.

They are aimed at the high-end market of Superyachts and now fitted to over 500 of the world's largest yachts, motor and sail.

The first:-

- Major step forward in yacht instrumentation since the 1980's.
- Ground-up rethink of how marine electronics systems are designed and built.
- 'Multi Fuel' bus system using Ethernet, CANbus, Fastnet, or any combination.
- To test every display and junction box under 1m of water and to 75°C for 24hours, before shipping.
- To offer 3 years warranty.

So provides:-

- High performance and very good engineering.
- Wide range and number of interfaces to take inputs from all the sensors on the largest superyachts.
- Extensive setup, diagnostic and calibration tools via a webserver.
- Cost effective upgrade path for legacy systems as existing displays, wiring, sensors and mountings can be retained and only upgraded as and when needed.

A+T also repair instruments, and systems from other manufacturers including B&G and hold many spares in stock.

All with excellent 24/7 support and service.

WHO WE ARE

Founders Richard Tinley and Hugh Agnew, have over 60 years combined experience in race navigation, marine instrument design, trouble shooting, fitting and repair.

Richard served his apprenticeship at B&G before going on to run the service department there. Then, after 7 years in the Caribbean installing electronics on large yachts, he founded Tinley Electronics and, the independent, B&G Service running this for 20 years and rebuilding many thousands of instrument systems. What he does not know about how instruments leak, split, corrode and fail is not worth knowing. He is also a gifted electronics and software designer and has made many custom products used in America's Cup projects and on Superyachts worldwide.

Hugh, a Cambridge educated mathematician and oceanographer, has spent a career building navigation systems for the offshore, military and yachting industries. He developed the first TV tracking used for the America's Cup in Fremantle in 1987, was the inventor of the Yeoman plotter and developed the first telephone based car navigation system. Throughout he has sailed professionally as a navigator and continues to do this on some of the world's largest and fastest yachts.

Design, assembly and testing is all done in Lymington, UK where owners, captains, engineers, designers, project managers, navigators and interested parties are welcome to see what we do and give us feedback and new ideas on future directions.

The A+T team is now over 20 people, dedicated to fantastic support and same day shipping of all parts.




DOUBLE HAVEN

FULL COLOUR DISPLAYS

BFD

The BFD is a 12” display, the same footprint as a conventional 40/40 with digits up to 50% larger.

Any layout of data panels may be configured in either Landscape or Portrait modes.

Like all A+T displays, every BFD is tested under 1m of water and in an oven at 75°C for 24 hours before shipping.

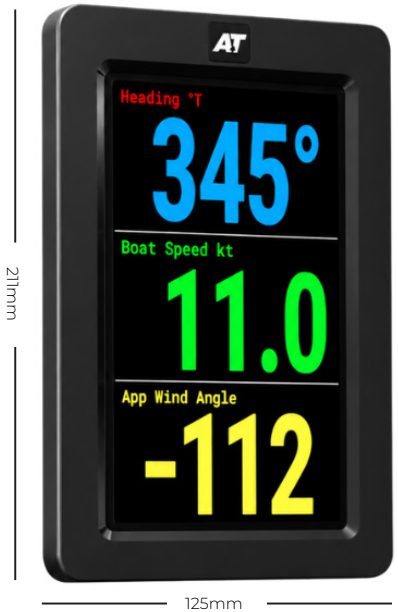
BFDs are available with interface to:-

- Ethernet for use with A+T and FaRo processors
- Fastnet for use with legacy B&G systems including H2000, H3000 and WTP2
- CANbus (N2k compatible) for use with B&G H5000 and WTP3 as well as any other N2k system

A wide range of context switching is included so as to highlight out of range variables or to see different data pre-start, upwind, reaching and downwind.

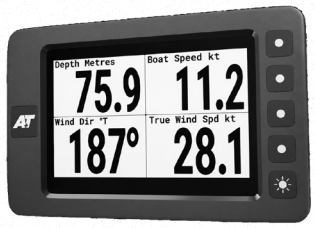
Yacht’s logo can be uploaded for display when in the dock.















QBD7

The QBD7 is the brightest and toughest colour marine display available.

7” display in either Landscape or Portrait modes. Can be supplied with buttons for use as an MFD or without as a standalone display.

Graphing, analogue and bar format panels can be added with conditional colouring – so load bar showing red when over safe load.

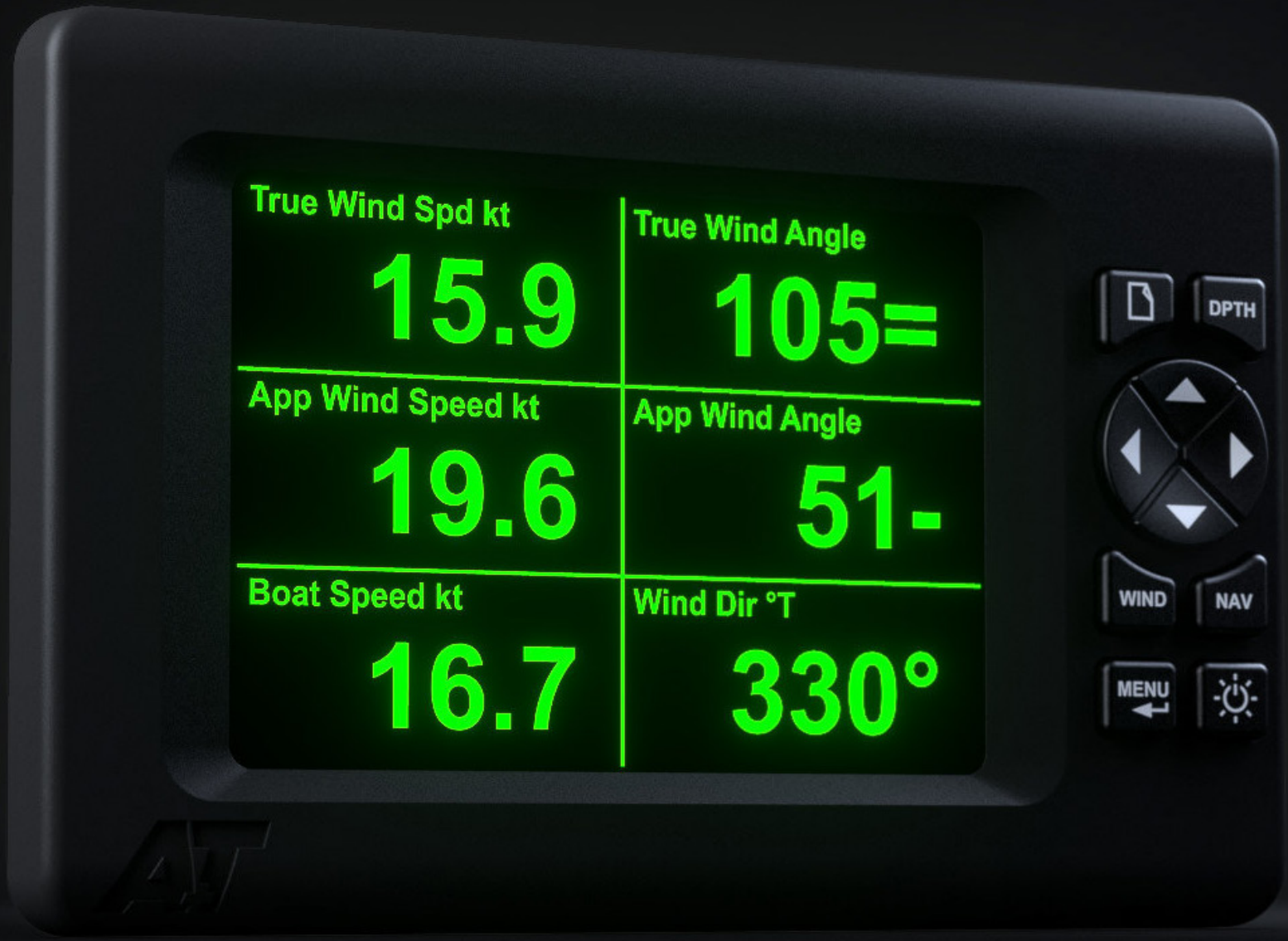
Interfaces to:-
· Ethernet for use with A+T and FaRo processors
· CANbus (N2k compatible) for use with B&G H5000, Hercules and WTP3 as well as any other N2k system.

HFD5

Toughest
· Fully immersible, each unit tested under 1m of water for 24 hrs
· Each unit oven tested to 75°C

Best
· Latest generation transflective display for superb full sunlight viewing
· Full graphics capability with user customisable layout
· Buttons for control or available with no buttons for stand-alone display
· No touch screen

Simple
· Drop in upgrade for discontinued B&G H5000 display
· Connects directly to N2k network using standard connector
· Low power draw, 2-4 LEN


True Wind Spd kt
15.9
True Wind Angle
105=
App Wind Speed kt
19.6
App Wind Angle
51-
Boat Speed kt
16.7
Wind Dir °T
330°
DPTH
WIND
NAV
MENU

CLASSIC DISPLAYS

- Beautifully engineered, CNC machined from PA66, no corrosion when mounted in carbon or aluminium.
- Fully sealed to withstand 0.5 bar over/under pressure, unlike all other instruments in the market which rely on breather holes.
- Every display tested under 1m of water and in an oven at 75 °C for 24 hours before being shipped.
- Fits into existing cut-outs and screw holes.
- In situ software upgrades via Bluetooth.
- Workshop serviceable.
- Fully serviceable.

Analogues - full range
Classic design including domed glass front, but with latest mechanical and electronic elements including user serviceable desiccant module to keep unit dry and crystal clear. A full range of functions available.



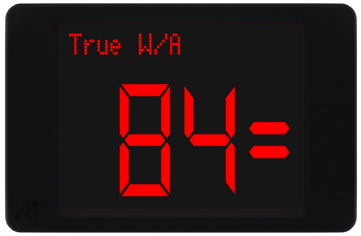
MFD
Display pages with 1 to 6 items and extensive diagnostic features. Has NMEA0183 interface and MOB input feature.



Pilot Head Display
A pilot head version of the A+T MFD, compatible with H2000, H3000 & A+T pilot systems.



3020
Single line of large digit high contrast data and fits a 20/20 cut-out. Red or green backlighting, compatible with existing systems.



The Mini
The smallest and lightest display available, typically used for load or displacement, but any data can be sent to it. It has a small foot print (91x58mm) and a low profile.

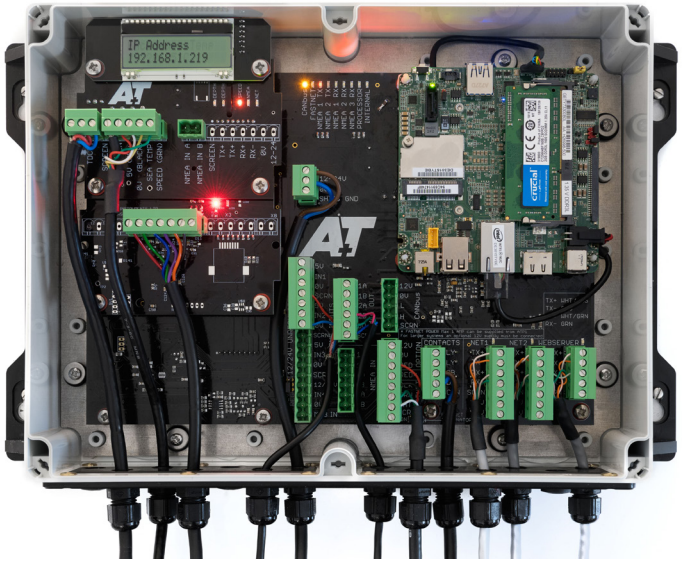


ATP PROCESSORS

- Will power any combination of existing and A+T displays.
- Very good cable entry and support, easy to swap unit out.
- Up to 3 internal interface boards for speed, depth, wind and extensions.
- Integral interfacing for Fastnet, CANbus, NMEA0183 (x3), Ethernet (x3), analogue (x4).
- Integral barometer and heel/pitch sensors.
- 50 Hz update rate, upgradeable to 100 Hz.
- Man Overboard Button implementation at any display with relay output.

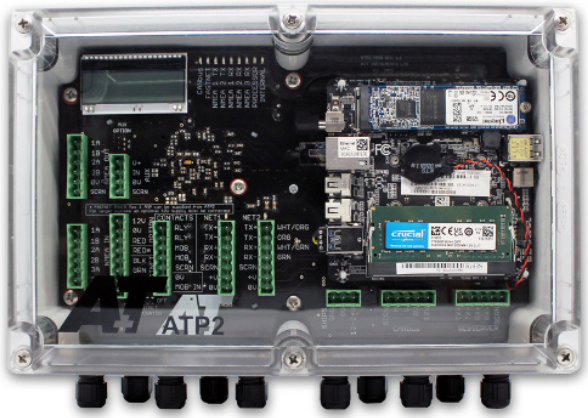
ATPX PROCESSORS

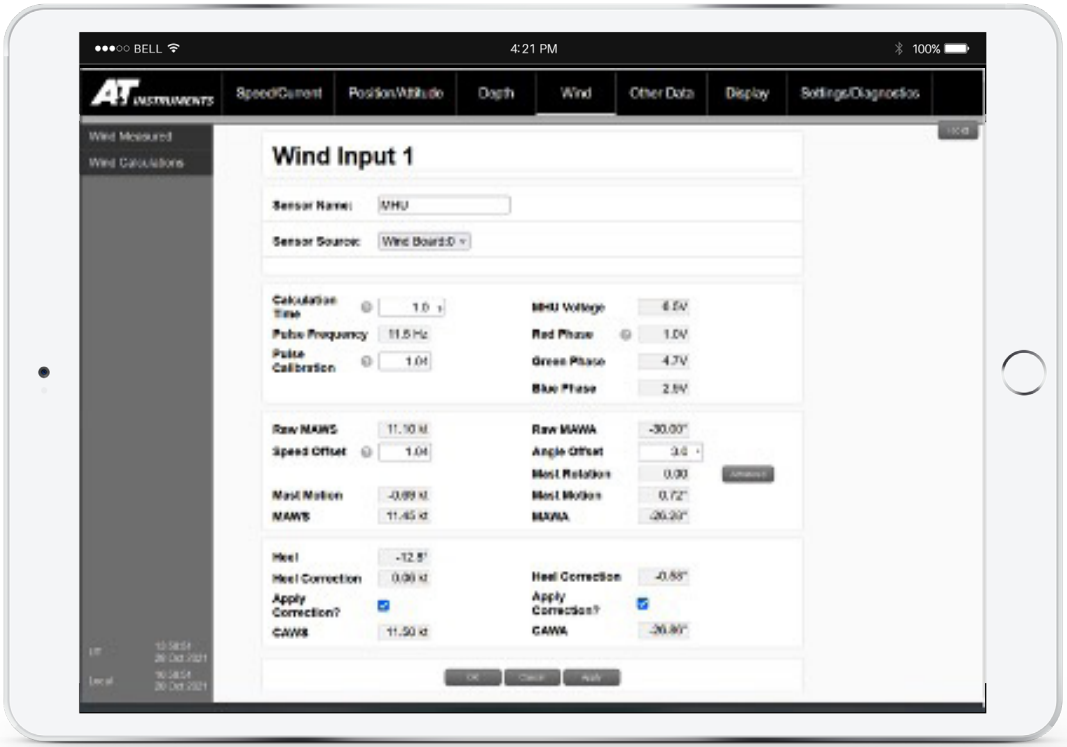
Supports Modbus/Ethernet interchange of data with a yacht plc system so that instrument data can get sent to and from Alarm and Monitoring system.



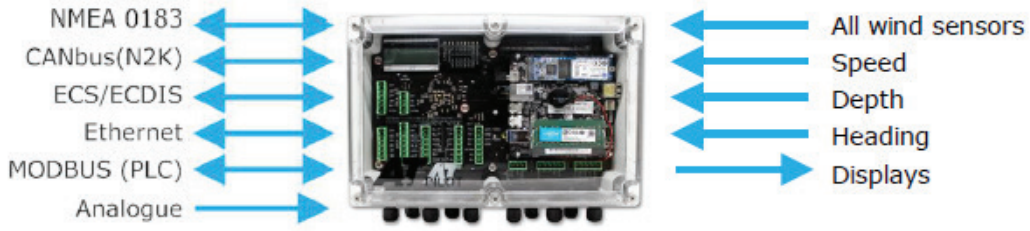
ATP1 – complete with interfaces for simple processor upgrade

ATP2 – Separate interface modules connect with Ethernet





HUB - ATP Processor used to exchange data and many formats

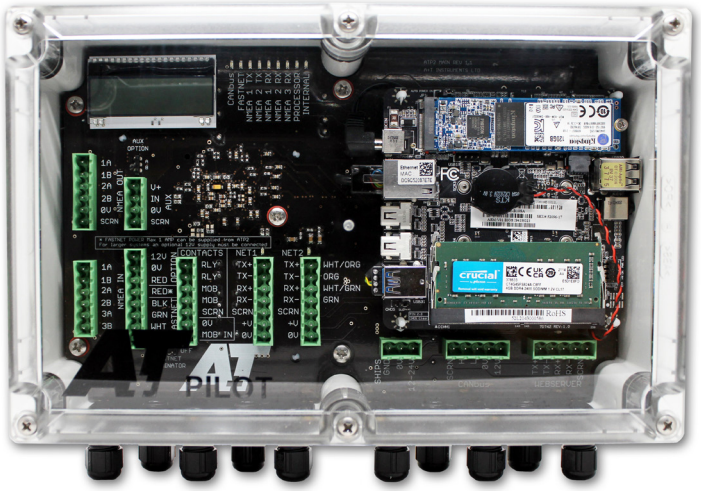


WEBSERVER

- Used for all configuration, calibration and diagnostics.
- Runs on any device, PC, Mac, tablet.
- Ethernet links to Expedition, Adrena, Furuno Time Zero, Transas.
- Ethernet links to Furuno TZ, Transas, MODBUS.
- Output for Apps including iSailor, iOnboard and Yacht Point.
- Web-served pages for crew and client information on any tablet or phone.
- Extensive diagnostics for all sensors and calculations, full visibility.

A+T AUTOPILOT

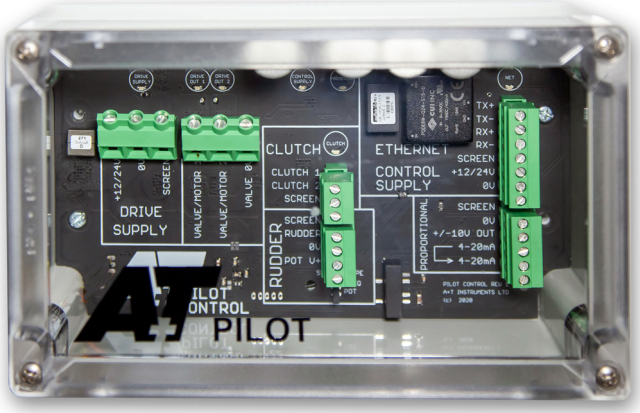
- Very well engineered
- Modular: separate pilot processor and rudder control unit
- Ethernet connectivity
- Widest range of rudder drives supported including:-
  - 50A for electric drives
  - Proportional valves, soft action
  - Clutch
- Follow up (FU) and non FU tiller control
- Wide range of interfacing to compasses, instrument systems, sensors



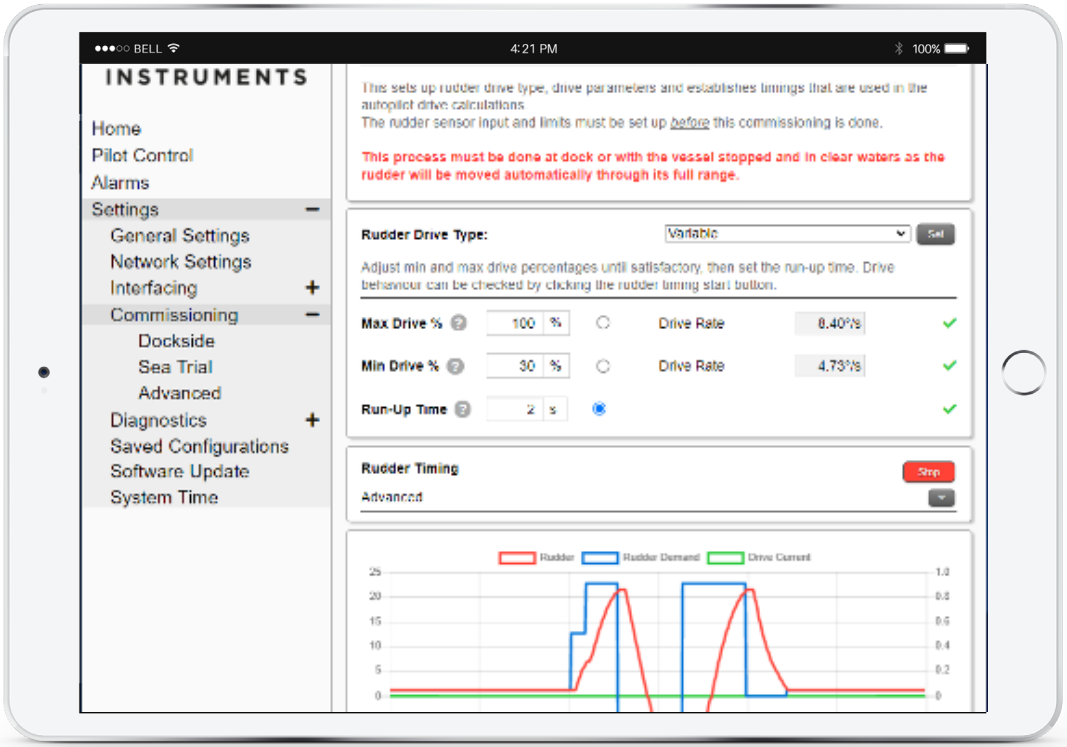
Pilot Processor

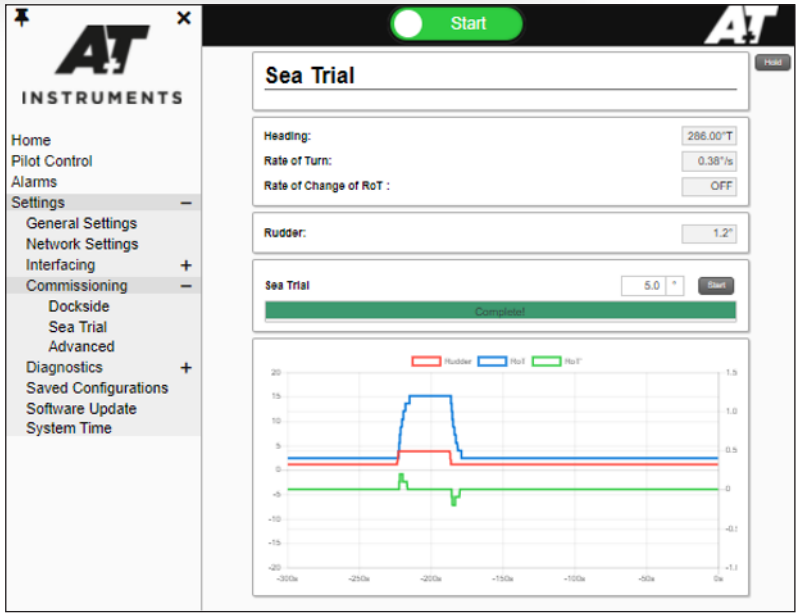


Pilot Display



Pilot Control





WEBSERVER

- First production autopilot with webserver
- User can see what is happening in pilot
- Data can be logged and sent to A+T for analysis and advice
- A+T can Teamview in to help with issues and commissioning
- Used for all set-up, calibration & commissioning

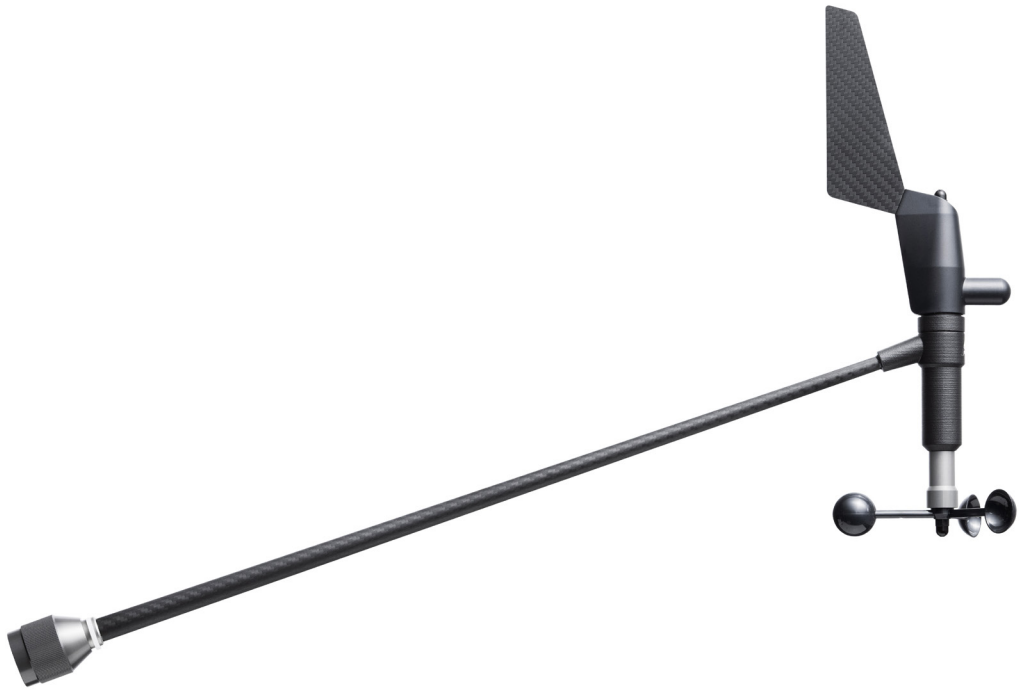
500 SERIES WIND SENSORS

The A+T 500 Series is fully compatible with many of the thousands of instruments in use worldwide.

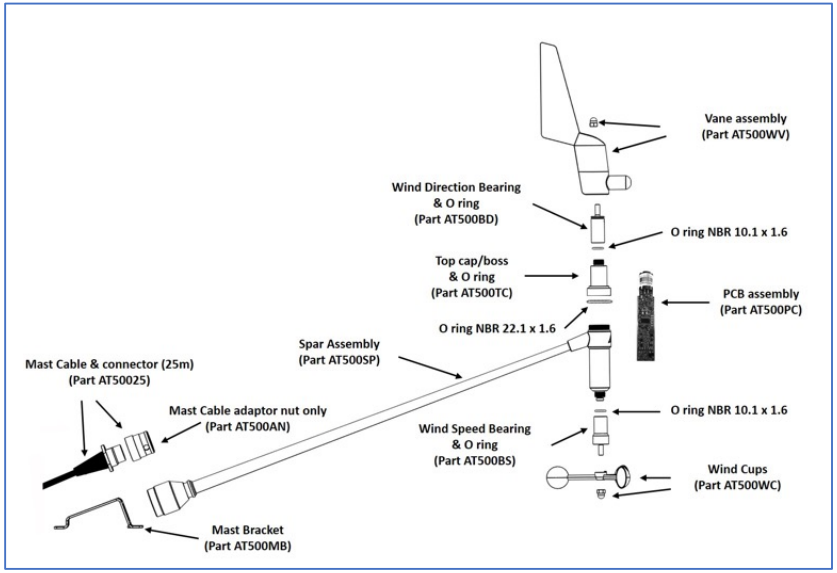
The sensor combines all the advantages of digital microprocessor sensing with the high resolution and response of analogue output.

- Complete replacement for B&G 213 wind sensor
- Faster response than anything on the market by a factor of two
- Higher angular accuracy and repeatability
- Carbon vane
- Fully ceramic bearings give better performance at low wind speeds
- 30% lighter than legacy units
- Adjustable counterweight fine-tuning balance
- Graphite-loaded body is conductive to lessen the chance of lightning/static damage.

All of the parts for this unit can be supplied separately and are replacements/upgrades for B&G 213 wind sensors



















SONIC SENSORS

While lower performance than mechanical wind sensors, A+T systems can work with any of the sonic sensors on the market including:

- Airmar
- Calypso
- Furuno
- Gill
- LJC Capteurs
- Maretron
- Vaisala

SOV -
SHUT OFF VALVES

Many large Superyachts, sail and motor, are built with gate-valves to meet class/survey requirements and to allow safe insertion and removal of speed and depth sensors with no water ingress.

A+T are the only manufacturer supplying these gate-valves for refits and new-builds as well as the depth and speed sensors for them.

Custom lengths can be supplied on request.

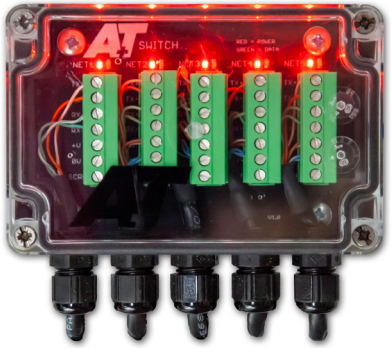
Depth sensors are supplied at 170kHz to support A+T and B&G legacy processors. We also make a converter to produce depth on CANbus (N2K compatible).







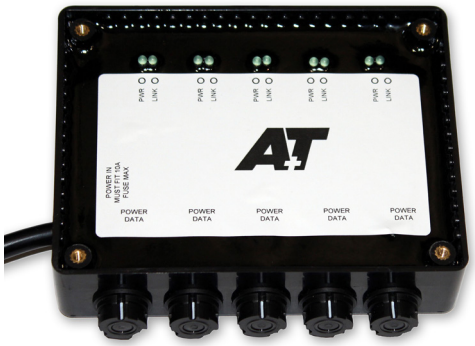
Air Temperature



Ethernet Switch



Sealed junction box



Slimline waterproof switch



Rudder sensor

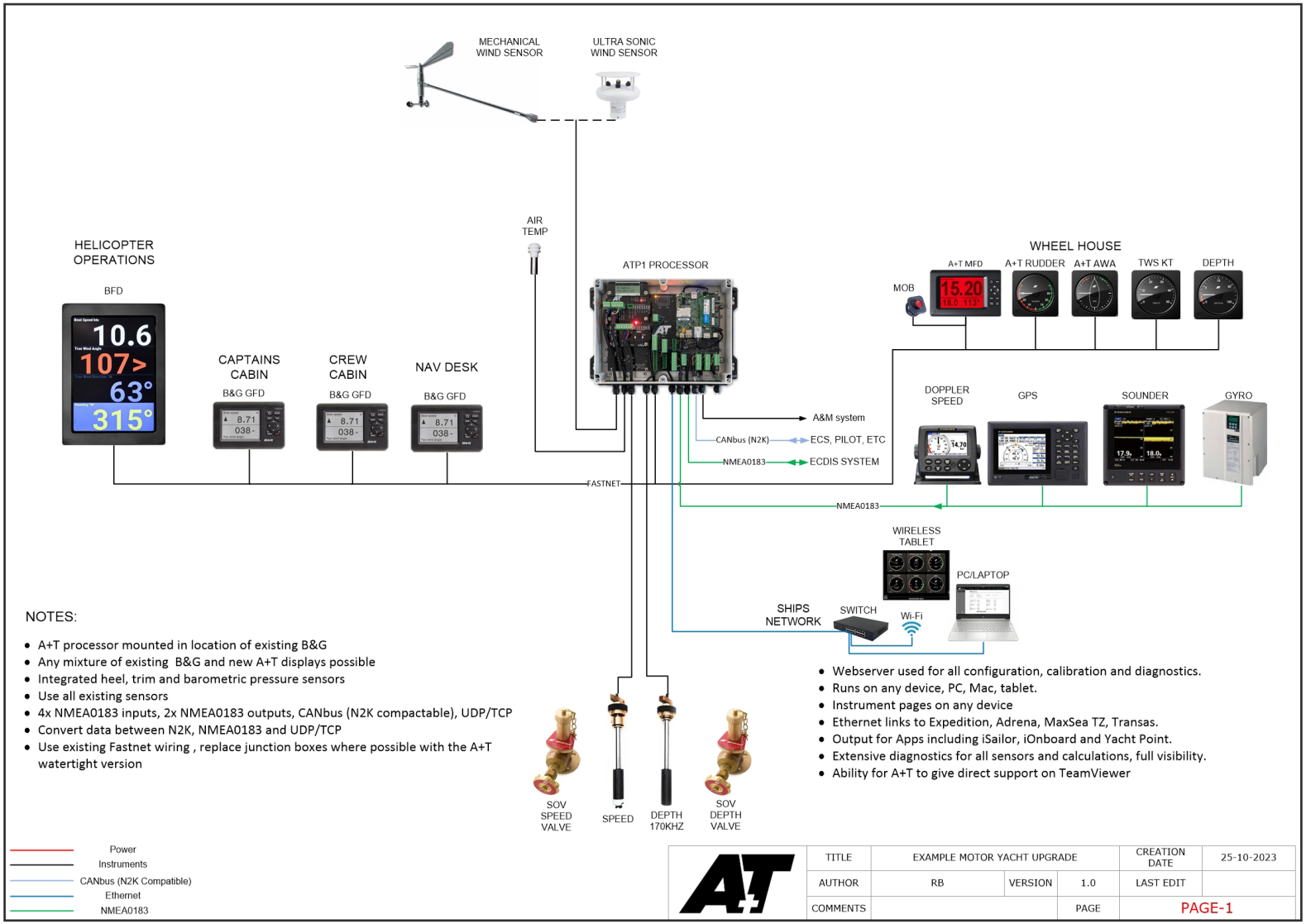
SENSORS AND CUSTOM WORK

- Speed
- Depth 170kHz
- Loadcells & amplifiers
- Pressure, displacement rudder angle, mast angle
- Air temperature
- Waterproof 5 way junction box
- Ethernet switch
- GPS
- MOB (man overboard) functions
- Change over Switches - allow two speed or depth transducers to feed a single input
- Also custom cables, interfaces and displays
- Compasses, magnetic, gyro and GPS compass

UPGRADE FOR EXISTING SYSTEMS

- Uses any mixture of existing B&G and A+T displays.
- Uses existing sensors and wiring
- Major improvement in performance with significant cost savings.
- Simple swap out for B&G H2000, or H3000 or WTP system.





NOTES:

- A+T processor mounted in location of existing B&G
- Any mixture of existing B&G and new A+T displays possible
- Integrated heel, trim and barometric pressure sensors
- Use all existing sensors
- 4x NMEA0183 inputs, 2x NMEA0183 outputs, CANbus (N2K compactable), UDP/TCP
- Convert data between N2K, NMEA0183 and UDP/TCP
- Use existing Fastnet wiring , replace junction boxes where possible with the A+T watertight version

- Webserver used for all configuration, calibration and diagnostics.
- Runs on any device, PC, Mac, tablet.
- Instrument pages on any device
- Ethernet links to Expedition, Adrena, MaxSea TZ, Transas.
- Output for Apps including iSailor, iOnboard and Yacht Point.
- Extensive diagnostics for all sensors and calculations, full visibility.
- Ability for A+T to give direct support on TeamViewer

Power
Instruments
CANbus (N2K Compatible)
Ethernet
NMEA0183

TITLE	EXAMPLE MOTOR YACHT UPGRADE			CREATION DATE	25-10-2023
AUTHOR	RB	VERSION	1.0	LAST EDIT	
COMMENTS			PAGE	PAGE-1	

MOTOR YACHT EXAMPLE UPGRADE

SPARES, REPAIRS AND REPLACEMENTS

We hold in stock a range of some 100 spare parts for A+T, B&G, Airmar and other marine electronics.

We also hold used parts for many obsolete or discontinued B&G systems.

We can repair B&G instrument processors, sensors and displays from current products (WTP3 & H5000) back through WTP2, H3000, H2000, Hydra, ACP2 pilots and of course wind sensors for these systems (B&G WS Series, 213 wind sensors & Network).

Where parts are unserviceable we can almost always suggest and supply compatible replacements.

We specialise in shipping parts on the day of order, if required, to any part of the world.





THE TOUGHEST AND THE BEST

"We chose A+T for the complete refit. I found that their products are not only industry leading in performance, but incredibly robust and support numerous formats and interfaces. More than that we were particularly impressed by A+T's outstanding service and support".

Marcel Korte, IT Specialist

"We installed the A+T system today and everything worked perfectly. It was a pleasure to work with such a well engineered system. Thanks again for your help."

Greg Pohl, Hahl Maritime
Installer MY Evviva

"I am happy to say that A+T's level of tech support is above and beyond the industry standard".

Jannette Van Gruisen
Cay Electronics, Newport RI

"I have known and worked with A+T Instruments for over 7 years now and would not hesitate to recommend them."

"Their support has always been outstanding."

Mark Stevens
Captain MY Hampshire

A+T INSTRUMENTS

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These instruments have been in this tank continuously for over 5 years.