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## Focus: Apps Afloat With Digital Yacht AIS



10 years ago, Apple introduced the first iPad. Since then, over 360 million iPads have been sold and it's fair to say, they make a great on board, navigation device. The latest generation of Pro products are blisteringly fast and support fantastic, high resolution displays.

Our new range of wireless products including WLN NMEA Gateways, the NavLink NMEA 2000 Gateway and our latest iAISTX and AIT5000 AIS transponder products integrate seamlessly to create a sophisticated navigation solution.

In this edition we review two new apps. One of the great features of iPad navigation is you can have multiple apps and chart types on the same device and keep them easily updated as features evolve. Welcome to next generation navigation from Digital Yacht.

**Check our reviews on:** 

Weather 4D with new chart formats NV Charts with AIS Overlays

# DIGITAL UPDATE June 2020

NEW Solutions! Weather 4D iPad app gets a chart upgrade NEW Solutions! NV Charts for iPad & Android with Digital Yacht AIS Integration NEW Solutions! Upgrade to TriNav GNSS with the GPS160

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#### **Advanced iPad Navigation With Multiple Chart Formats**

Weather4D is a sophisticated navigation, charting and weather app for iOS. Global charts are available for download and most are based on official Government agency formats such as UKHO, NOAA or SHOM. Weather 4D now supports Imray charts and we took an iPad connected to our AIT5000 AIS transponder out for a quick test. Our AIT5000 is a wireless transponder so can send AIS and GPS data to the connected tablet for a fully integrated solution.



Imray charts are based on Admiralty (UKHO) data but have a unique crystal clear appearance and allow better scaling thanks to their digitisation process. The screen shot below shows Weather4D with a full screen Imray chart image. Panning and zooming the chart is super fast and slick. Click on a live AIS target and bring up a detailed data window.



Weather4D also supports dual chart windows – the charts can be linked so you can zoom to the same scales as we show below with a UKHO chart and Imray for comparison



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The chart windows can also be "unlinked" allowing a zoomed in and zoomed out chart as in the image above which is based on two Imray charts. This is great where you want an overall view of your complete route with a detailed view of what's around you. Note the AIS target overlay and the heading vector on the moving target which allows easy collision avoidance visibility. Check out our blog at www.digitalyacht.net and search for Weather 4D for more reviews.







#### Paper Charts, iPad & Android Navigation & Digital Yacht AIS Integration

For decades, NV Charts have been creating nautical charts for the Baltic Sea, North Sea, Kattegat, Skagerak and the Norwegian south coast. Chart coverage now extends to the UK, European Atlantic Coast, E Coast USA, Caribbean and Mediterranean. With a keen eye on detail and precise local knowledge, every nautical chart is designed from the best available data. In many cases, their own detailed survey data supplements official hydrographic office charts. NV Charts are also easy to read have have a nice colour palette and font/symbol schema. Their charts are available in paper and digital format – and if you purchase a paper chart, it comes with a free app download too. That's great – traditional navigation meets the iPad!

The electronic version is now compatible with Digital Yacht AIS products and NMEA to wireless interfaces. This means the boat's AIS, instrument and GPS data can be overlaid onto the detailed charts turning your device (iPad or tablet) into a full function electronic chart system with routing, real time tracking and AIS overlays. We took an iPad for a test with NV and the Digital Yacht AIT3000 and iAISTX Class B transponder. You'll see in the screen shot below the bright, easy to use colour scheme and icons for navigation marks. Your current position from the boat's AIS transponder (which is much better than the battery thirsty internal GPS on some tablets) shows as a bold, red triangle with a heading vector. Using the boat's system means you don't need an expensive GPS/Cellular enabled iPad and of course, no connection to the internet is required.





Just enable AIS and targets display automatically. In the screen shot above, you'll see the target just to the east of South Haven Point with a heading predictor showing a potential collision point. Click on the target and more information is displayed in the data window – also calculating CPA (closest point of approach) and TCPA (time to CPA), range and bearing.



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#### GPS, Glonass, Galileo Positioning With TriNav Technology



The GPS160 is a new, high performance positioning sensor using GPS, Glonass and the new Galileo satellite systems. It provides exceptional position accuracy and redundancy. Typical accuracy is better than 1m. Data can also be set to output at up to 18Hz for smoother plotter track displays. TriNav<sup>™</sup> software technology also improves positioning inaccuracy that could occur through spoofing and local interference.

It's super flexible in terms of interfacing so can be used to replace failing GPS sensors on legacy systems as well as integrating with the latest NMEA 2000 and wireless devices. The device has a variety of modes selectable through field programming. This includes single GNSS operation (eg Galileo only) as well as output configurations such as update rate, NMEA sentence structure etc.

The GPS160 with NMEA 0183 output can be configured for 4800, 38400 and 115200 baud rates. There's also a USB variant for PC, MAC and Linux. For NMEA 2000 systems, we offer a bundle with a Digital Yacht iKonvert NMEA 2000 gateway. This allows easy and flexible install via NMEA 2000 without the need for cumbersome drop cables.

The GPS160 also supports a simple external MOB (man-over-board) switch or device. When triggered, the GPS160 creates a "synthesised" AIS SART MOB message on its NMEA output. This can then interface with a local plotter to identify the MOB. Most modern plotters support this with a clear MOB icon. As well as instant bearing and distance data to navigate to the casualty.





Use as a NMEA 0183 sensor on legacy and commercial systems and benefit from TriNav performance

Connect to NMEA 2000 systems with our GPS160 plus iKonvert bundle pack

Replace broken Raystar sensors on legacy systems using our GPS160 and SeaTalk gateway bundle

Integrate via wireless for tablet and iPad navigation with our GPS160 plus WLN10 bundle pack

#### **Key Features**

- 72 channel GPS, Glonass and Galileo GNSS positioning receiver
- Typically sub 1m accuracy thanks to TriNav technology combines all satellite data for optimum accuracy
- Can be configured as dedicated GPS, Glonass or Galileo only device
- Sophisticated anti-spoofing algorithm for robust positioning performance and interference rejection
- Available in NMEA 0183, NMEA 2000 (with iKonvert interface)and wireless (with WLN10SM) variants
- GPS160USB also available with USB connection for PC/MAC
- User/field selectable 4800, 38400 and 115200 baud operation through simple internal DIP switches
   Multiple formation of 01450
- Multiple formats of NMEA data output including datum information – user configurable through internal DIP switches
- Up to 18Hz update rate (user selectable)
- Ultra low (<20mA) power consumption at 12V DC
- Input for MOB switch/system when activated generates synthetic AIS MOB NMEA output to activate MOB position on plotter
- Professional system (ECDIS) support with datum sentence structure (DTM/GBS/GNS/GRS/GSA/GST)
- Puck installation or fits 3rd party industry standard 1" x 14TPI threaded mount



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