

# DIGITAL RADAR



## Radar Sensors

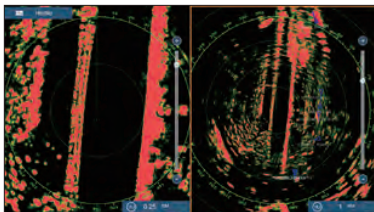
### Ultra High Definition (UHD™) Digital Radar

FURUNO has taken its NMEA award-winning radar technology to the next level with Ultra High Definition Digital Radar. UHD™ offers crystal clear target presentation with automatic real-time digital signal processing. The antenna rotation speed (24/36/48 rpm) is automatically shifted according to the pulse length needed for optimal performance\*. Commercial-grade radar performance is now available in the ultimate MFD navigation suite.

»» Spec P66-67



\*Not available on DRS4DL



NavNet TZtouch2

### Simultaneous Dual Range Radar Scanning\*

NavNet series' simultaneous scanning technology sends out a dual progressive scan that is processed and presented on the MFD. This technology allows for two different radar ranges to be displayed simultaneously, each range with autonomous control over gain and anti-clutter settings. One of the many things that can be done with dual range scanning is for example to set one range for bird location and the other for navigation. This way the user can easily find promising fishing grounds as well as being able to have full awareness of the surroundings.

\*Not available on DRS4DL

### Radar-Chart Overlay

A Radar image of spot-on accuracy can be overlaid onto the chart screen on your NavNet series devices. It's not just available in the conventional 2D chart format, but it can also be projected onto a 3D chart presentation. Depending on the range scale selected, the Radar-Chart Overlay adjusts accordingly. This allows you to view the Radar-Chart Overlay at whatever magnification level you find comfortable.

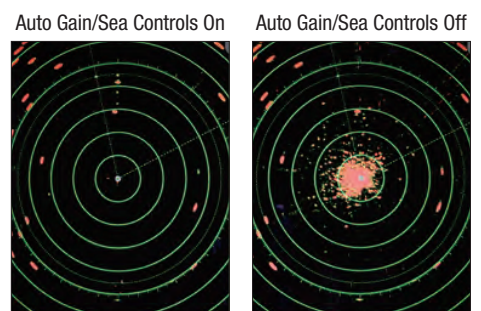


NavNet TZtouch2

\* An appropriate heading sensor is required.

### Real-time Digital Auto Gain/Sea Clutter Controls

NavNet employs revolutionary real-time digital auto Gain/Sea controls to deliver crystal clear radar presentation. With this new technical application, NavNet computes and applies an adaptive omni-directional anti-clutter filter with variable intensity according to bearing.



NavNet TZtouch

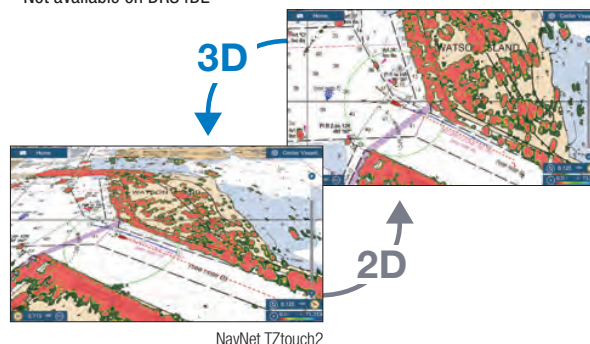
## Digital Radar Features

- Digital Signal Processing enhances short and long range target detection
- Advanced side lobe reduction technology
- Real-time true dual range radar with independent/automatic clutter controls
- Enhanced auto gain anti-clutter controls and auto tuning
- Antenna rotation speed is automatically set according to pulse length needed (24/36/48 RPM) \*\*
- Spot-on Radar-Chart Overlay on both 2D/3D chart presentations\*
- Built-in TT processor can simultaneously acquire and track up to 30 targets\*
- AIS overlay “AIS-over-Radar” presentation for precise vessel tracking\*
- True color Radar shows you the density of targets
- Radar Guard Zone and Watchman features alert you to potential dangers

- Dual VRM (Variable Range Markers) and dual EBL (Electronic Bearing Lines) give distance and bearing indications
- Built-in CAN bus port provides external sensor input directly to the radar sensor\*\*

\* Appropriate sensor required

\*\* Not available on DRS4DL



## NavNet TZtouch2/TZtouch/3D Radar Sensor Options

		DRS2D	NEW DRS4DL	DRS4D	DRS4A	DRS6A	DRS12A	DRS25A
Output Power		2.2 kW	4 kW	4 kW	4 kW	6 kW	12 kW	25 kW
Size		19 inch	19 inch	24 inch	3.5 ft	4 ft	4 ft/6 ft	4 ft/6 ft
Antenna Type		Radome	Radome	Radome	Open	Open	Open	Open
Beam Width	Horizontal	5.2°	5.2°	4.0°	2.3°	1.9°	1.9°/1.4°	1.9°/1.4°
	Vertical	25°	25°	25°	22°	22°	22°/22°	22°/22°
Max. Range		24 nm	36 nm	36 nm	48 nm	64 nm	72 nm	96 nm
48 rpm Capability		•		•	•	•	•	•
Power Amp Unit required	NavNet TZtouch2 (TZTL12F/TZTL15F)	PSU017	—	PSU017	PSU012	PSU012	PSU012	PSU013
	NavNet TZtouch (TZT9/TZT14)	PSU012/PSU017	—	PSU012/PSU017	PSU012	PSU012	PSU012	PSU013
	NavNet 3D (MFD8)	—	N/A	—	PSU012	PSU012	PSU012	PSU013
	NavNet 3D (MFD12)	—	N/A	—	—	—	PSU012	PSU013
Functions		Head-up, North-up*, Echo Trail, Target Tracking, AIS	Head-up, North-up*	Head-up, North-up*, Echo Trail, Target Tracking, AIS	Head-up, North-up*, Echo Trail, Target Tracking, AIS	Head-up, North-up*, Echo Trail, Target Tracking, AIS	Head-up, North-up*, Echo Trail, Target Tracking, AIS	Head-up, North-up*, Echo Trail, Target Tracking, AIS

\* Heading input required.

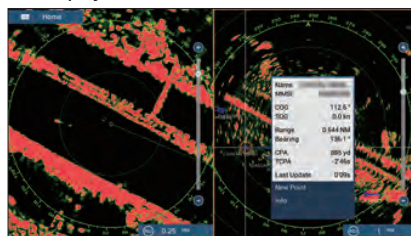
The radar antenna complies with IEC62252 Ed.1:2004 (Clauses 4.33, 5.33, Annex D) relevant to radio characteristic.

## AIS (Automatic Identification System)

### AIS Target Tracking

When connecting a FURUNO FA30/50/150 AIS unit to your NavNet series devices, up to 100 AIS targets can be tracked and displayed on the Radar screen. The Automatic Identification System (AIS) improves safety during travel by sharing the status and position of your vessel with other AIS-equipped vessels nearby. You can easily read detailed information about AIS-equipped vessels nearby such as speed, heading, Closest Point of Approach and Time to Closest Point of Approach.

AIS Display



NavNet TZtouch2



Model FA150

»»» Spec P88



Model FA30/50

»»» Spec P88