FURUNO

Total Control, Simply Refined

NAVnet

TZtouch2

www.navnet.com

Total Control, Simply Refined

With a sleek all glass front, refined graphical user interface, built-in RezBoost™ Fish Finder, and internal GPS antenna, NavNet TZtouch2 is a beauty to behold and use.

TimeZero
Designed by MAXSEA

MTC
Multi Touch Control

RezBoost

BDS
Bottom Discrimination Sounder

ACCU-FISH

NMEA2000
Certified

AUTO

Target Tracking

AIS

Enhanced Sunlight Viewable

Bonded LCD

Polarized Friendly

GPS Internal Antenna

FISH FINDER Internal

Ethernet Plug&Play

CAN bus

VIDEO IN/OUT

NEW
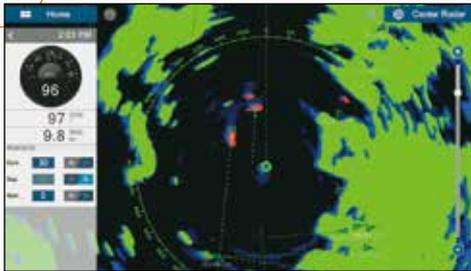
Target Analyzer with Echo Trail

Revolutionary Target Analyzer function instantly identifies hazardous targets with Echo Trail.

>> See page 15 for details

NEW
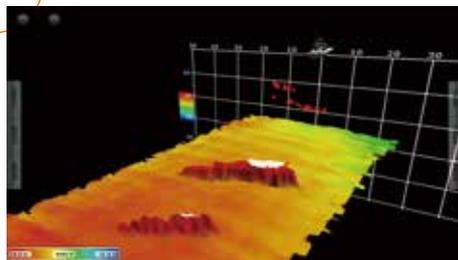
Advanced multi-beam technology with DFF-3D*

Deep and wide-range water column and seabed are displayed in real time.   *Coming soon

>> See page 14 for details

NEW

Digital Switching At Your Fingertips

Monitoring and Controling digital switching CZone system from your NavNet TZtouch2.

>> See page 5 for details
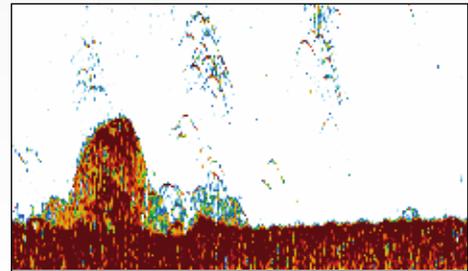
Built-in Fish Finder with RezBoost™

RezBoost™ technology makes it easier to spot individual fish in tightly packed fish schools as well as discerning game fish from bait fish.

>> See page 13 for details

Instrument Display & Customization

An instrument display like nothing you have seen before. Totally customizable, totally simple.

>> See page 6 for details
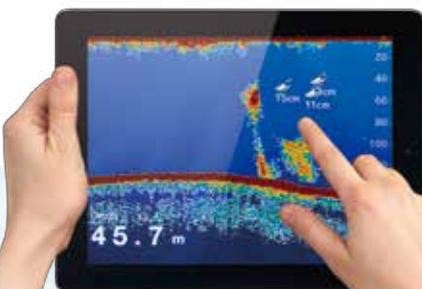
iOS & Android™ Apps

View information from your NavNet TZtouch2 and control it on your iOS and Android™ devices.

>> See page 7 for details

Simply refined, simply beautiful

Following in the footsteps of the original NavNet TZtouch, TZtouch2 features a refined user interface that is all about usability. Whether you are searching for hot fishing grounds, plotting your next route, using your Radar to navigate through the fog, you can expect smooth operation with familiar touch gestures. Sporting an edge-to-edge glass front, NavNet TZtouch2 is beautifully designed, allowing you to build a navigation suite that is not only functional, but offers a luxurious look and feel.
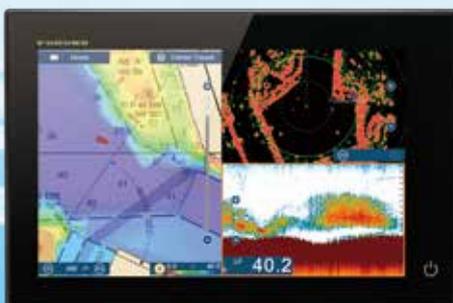
Model TZTL12F

12.1" Multi Function Display

Resolution: WXGA (1280 x 800 pixels)
Brightness: 1300 cd/m² (typical)

Model TZTL15F

15.6" Multi Function Display

Resolution: FWXGA (1366 x 768 pixels)
Brightness: 1000 cd/m² (typical)

All-glass front, smooth to the touch

Bonded LCD - Clear Readability

Our bonded LCDs offer a fog-free design that is used in both the TZTL12F and TZTL15F. This bonding ensures that the display is protected from condensation by sudden temperature changes. Optical bonding works by closing the air gap between the LCD and the cover glass, something that also enhances contrast.

Polarized Friendly - Clearly Remarkable

NavNet TZtouch2 TZTL12F and TZTL15F have an LCD screen that does not "black out" when wearing polarized sunglasses. You are free to move around the vessel while maintaining clear visibility from virtually any angle.

Multi Touch Control

With NavNet TZtouch, FURUNO introduced the industry's first multi touch MFD, and NavNet TZtouch2 is no disappointment. Improved touch control gives better response, as well as allowing you to swipe your fingers from the edge of the screen. Looking around your vessel in 3D, with the comprehensive charts available, Multi Touch Control makes navigating as simple as touch... and go!

New Features

Echo Trail/Echo Average

Echo Trail and Echo Average features have been added to the latest version of NavNet TZtouch2 series. Using the new functions, Bird mode detects and accurately tracks birds, providing a clear view of the target by reducing noise. Echo Trail enhances and amplifies the Target Analyzer and doppler technology to help prevent hazardous situation and gives an intuitive understanding of nearby vessel's movements.

Birds

True Echo Trail
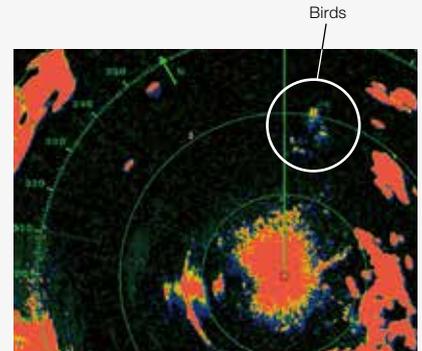
Bird mode with Echo Average

CZone Digital Switching

CZone digital switching simplifies the installation and operation of complex electrical systems. Change effortlessly from Dock Mode to Cruising Mode with a single press on your iPad, remote Keyfob or directly from your Navnet TZtouch2 display.

Learn more about CZone Digital Switching at www.czone.net

NMEA2000
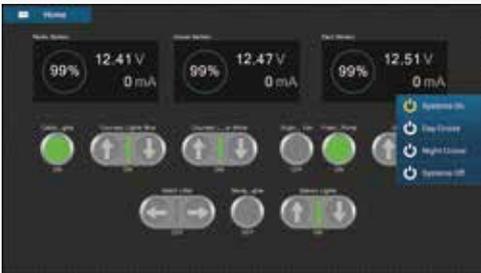
CZone Control & Monitoring

CZone   NMEA2000

CZone, engine, navigation and various NMEA2000 data can be laid out on the same screen.

Manual Fuel Management*

NavNet TZtouch2 calculates and displays the remaining fuel based on the manually entered tank capacity, as well as fuel consumption information from NMEA2000 network.

The gauge allows the user to evaluate precisely the fuel level without equipping the ship with a fuel gauge. The NavNet TZtouch2 gives you the low fuel alarm when the fuel runs out.

* 1) NMEA 2000 PGN127489 (Fuel Rate) input is required.

2) While the engine is running, at least one TZTL12F/TZTL15F in the network should be always turned on in order to keep calculating the fuel consumption.

3) The fuel indication may be inaccurate if the values entered are not correct, or the fuel rate sensor is not functioning correctly.
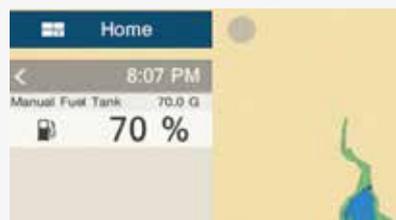
Data box

Manual Fuel Tank display in Instrument mode

*All new functions require software v4.01 or later.

New Graphical User Interface

NavNet TZtouch2 features a graphical user interface that has been renewed and refined, focusing on usability and ease of operation.

Home Screen

The new home screen, with its bright and crisp graphics, is easy to understand and operate. The colors and icons have been carefully chosen to provide maximum visibility, allowing you to know instantly which screen is displayed, just by seeing the color and icon. Changing to different display screens is just a simple matter of dragging and dropping.

Quick Page

Swiping your finger down from the top edge of the screen displays the Quick Page. As the name implies, the Quick Page allows you to quickly change between the different screens from your current display. With bold colors, the previews are easy to differentiate and quickly choose from.

NavData

Swiping from the left edge of the screen reveals the NavData panel, where you can customize contents to simplify navigation and chart usage. You can set the autopilot, check tide information and much more.

Slide-Out Menu

The slide-out menu provides quick and easy access to often-used functions, and is available in every mode.
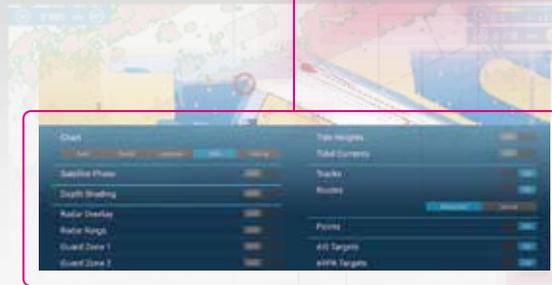
Layers

One of the new features is the layers menu, just swipe up from the bottom edge of the screen. The layers menu is a practical way of changing settings on the fly without having to venture into deeper menu systems. Since the screen is visible at all times, understanding and using the different settings becomes a breeze.

Instrument display set up

Instruments

The instrument page is impressive just on its own rights, but where it really shines is it's customizability. No matter if it is for navigation, engine and tank motoring, autopilot control, or a combination, data can be displayed according to your personal tastes and needs.

Fully Customizable

Instrument rearrangement is available at your figertips. You are free to customize the display to precisely fit your unique needs. Also note that instruments can overlap each other, giving you even more space to work with.

APPS

View information on your smart devices via wireless network

NavNet TZtouch2 open the door to cutting edge Wireless LAN features, such as iOS and Android™ apps, real-time weather data, software updates and much, much more.

NavNet Remote App

Take full control of your NavNet TZtouch2 in a whole new way. The NavNet Remote app allows you to remotely operate and view your system with your smart devices when connected to the Wireless LAN network.
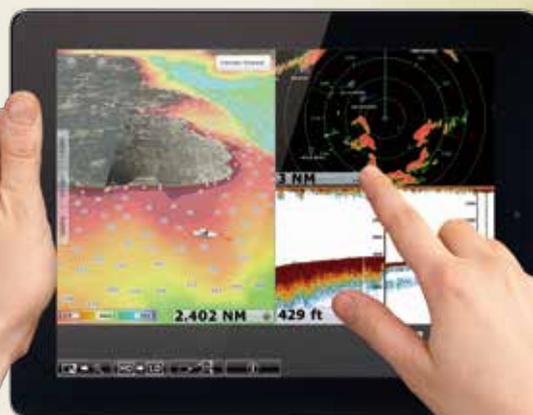
NavNet Viewer App

Conventiently view instruments as well as the fish finder of your NavNet TZtouch2 on your smart devices over the Wireless LAN network. Key navigational information such as Depth, Temp, Wind, COG as well as Engine information can all be accessed from the palm of your hand. Even if you change the display on your NavNet TZtouch2, you can still view the fish finder on your smart devices.

NavNet Controller App

Wirelessly control the NavNet TZtouch2 with touch controls just like the real thing. With a scroll pad, cursor pad and dedicated keys within the app, controlling the NavNet TZtouch2 is simple and straightforward.

	NavNet Remote	NavNet Viewer	NavNet Controller
Compatible NavNet products	NEW NavNet TZtouch2 (TZTL12F/TZTL15F) - software version 4.01 or later.	NavNet TZtouch2 (TZTL12F/TZTL15F)	NavNet TZtouch2 (TZTL12F/TZTL15F)
Languages	English/Japanese		

WIRELESS

Marine Weather Forecast

The weather tool is completely free and easy to use, giving you unlimited access to weather forecasts worldwide 24 hours a day provided by NavCenter. Select the coverage you want, what type of data it is you need and for what time period, then it is simply a matter of choosing how to download the data. Navnet TZtouch2 can display up to 16 days of downloaded weather forecasting.

ActiveCaptain*, points of interest directly on your NavNet TZtouch2

NavNet TZtouch2, the world's first Multi Function Display with ActiveCaptain functionality. Share the experience together with other boaters around the world, browse and discover new points of interest. With a community of 250,000 users, reliable and updated information on fuel prices, marinas and obstructions are all available at the tip of your fingers. You can even rate and comment on points of interests, such as marinas and anchorages, straight from your NavNet TZtouch2.

*Software version 3.01 or later is required.
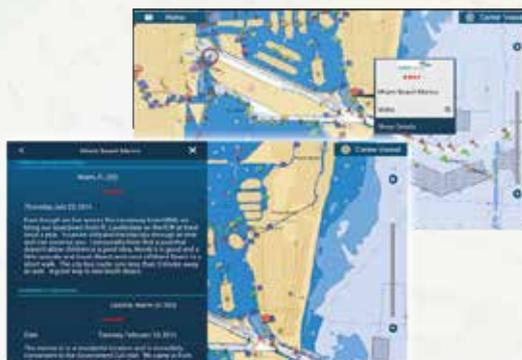
My TimeZero™ Cloud Data Service*

My TimeZero™ cloud data service allows you to back up your data on the cloud and synchronize it among your TimeZero™ devices. Connect your NavNet TZtouch2 to the internet and login on your My TimeZero™ account, and you are able to back up or restore points, routes, tracks and settings to/from the cloud server. Plan routes on your tablets at home and transfer them to your NavNet TZtouch2 onboard through cloud. You won't have to carry memory cards from device to device ever again.

*Coming soon.

BBWX3 – Sirius Satellite Weather Receiver*

Keeping track of weather is easier than ever with Furuno's BBWX3 Third-Generation Sirius Satellite Weather Receiver! The weather information is obtained from the weather industry's leading experts and is delivered via digital receiver through Sirius' Marine Weather services. You can receive high-quality and comprehensive weather information and forecasting for use while navigating.

*Satellite weather receiver service is available for all NavNet TZtouch2, TZtouch and NavNet 3D models. Requires Sirius weather service subscription, sold separately. Sirius weather coverage is currently available only in U.S and Canada.

NavNet TZtouch2 Network

NAVnet Connect

RADAR

NEW **NEW**

Radar Sensor
DRS4DL/DRS4D/NXT
DRS6A X-Class/DRS12A X-Class
DRS25A X-Class
`Ethernet`

FISH FINDER

NEW

Network Fish Finder
DFF1-UHD/DFF1/DFF3
`Ethernet`

Bottom Discrimination Sounder
BBDS1
`Ethernet`

Multi Beam Sonar
DFF-3D
`Ethernet`

AIS

NEW

AIS Receiver
FA-30
`Ethernet`

Class-B AIS Transponder
FA-50
`Ethernet`

Class-A AIS Transponder
FA-170
`Ethernet` `NMEA0183`

WEATHER/ PC PLOTTER

**TIMEZERO
Marine Software**
`Ethernet`
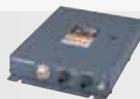
Network Weather
Facsimile Receiver
FAX-30
`Ethernet`

Network Satellite Weather
and Radio Receiver
BBWX3[*1]
`Ethernet`

OTHERS

Marine Entertainment System
MS750 Series, etc.
FUSION
`Ethernet`

Analog Camera
`Video`

Digital Switching System
CZONE
`CAN bus`

GPS Internal Antenna — Internal GPS Antenna

CONVERTER

NMEA Data Converter
IF-NMEA2K2
`CAN bus` `NMEA0183`

Analog NMEA Data Converter
IF-NMEAFI
`CAN bus` `ANALOG`

NMEA2000 Certified

NavNet TZtouch2 is NMEA2000 certified.
NMEA2000 offers improved data transfer
rates and true plug-and-play operation.

*1 Sirius weather coverage is currently available only in U.S and Canada. Sirius subscription required.

Perfect match!

NavNet TZtouch2, NAVpilot-711C and the FI-70 have been designed to match each other beautifully, both in appearance and in function. Sporting a clean and functional design in all black, they will make a great addition to your helm.

NavNet TZtouch2   NAVpilot-711C   FI-70

AUTOPILOT

NAVpilot-700
CAN bus   NMEA0183

NAVpilot-711C
CAN bus   NMEA0183

COMPASS

Integrated Heading Sensor
PG-700
CAN bus

Satellite Compass
SC-30   **SC-50**
CAN bus   NMEA0183

GPS

GPS/WAAS
Receiver Antenna
GP-330B
CAN bus

GPS Navigator
GP-33
CAN bus

SENSOR

Depth/Speed/Temp Sensor
DST-800
CAN bus

INSTRUMENT

FI-70
CAN bus

FISH FINDER Internal

Internal Fish Finder
with RezBoost™ technology

OPTION

Remote Control Unit
MCU-004
USB

Remote Control Unit
MCU-002
USB

SD Card Unit
SDU-001
USB

Nothing Is Faster Than TimeZero™

NavNet TZtouch2 TimeZero™ technology delivers chart processing like you've never seen before – seamless chart handling, zooming and panning without the screen disappearing. TimeZero™ technology redefines the meaning of stress-free operation by smoothing out your chart handling actions.

The Only Acceptable Wait Time is Zero:
TimeZero™ Technology Changes Your Perspective on Chart Redraw

Equipped with powerful TimeZero™ technology, NavNet TZtouch2 will completely transform the way you navigate. You can scroll, pan, zoom in/out with a smooth, fast and seamless graphics engine. Navigating in a 3D environment offers you a true perspective and wider area of view around the ship, which allows you to better plan your routes. TimeZero™ technology updates the information on your screen with virtually no redraw as you go.

Chart Plotter

Mapmedia Vector and Raster Chart Library

With NavNet TZtouch2 it's possible to freely choose the charts that fit your individual needs. With the optional NOAA raster and vector charts, Mapmedia brings an authentic vector and raster chart library to your NavNet TZtouch2. "C-MAP" as well as "Datacore by Navionics" vector cartography are optional charts that can be downloaded to your TZtouch2 with ease. Mapmedia cartography integrates cutting edge algorithms with high resolution image processing techniques to deliver a fusion of digital navigation charts and satellite photography.

2D Raster

2D Vector

Satellite PhotoFusion™

Satellite photography is included in the Mapmedia Raster and Vector charts, simply called Satellite PhotoFusion™. Land areas (zero depth) are completely opaque, displayed as satellite photos on the chart. As the depth increases, the satellite image is merged with the chart data to provide you with added detail on seabed areas in shallow water, without losing vital chart information. In deeper water, where the satellite photos have no detail to offer, the chart is displayed without alteration.

Raster+Satellite

Vector+Satellite

Depth Shading

A depth color scale can be applied to both 2D and 3D vector and raster charts. Transparency levels can be adjusted so that chart data is visible beneath the color shading. This unique feature allows you to view water depths at-a-glance with vibrant colors. No more searching for depth numbers, when you can simply set depths to your specified colors. Whether you want to see the depth for navigation or fishing purposes, this feature makes it easier than ever before.

AIS Target Tracking

When connecting a FURUNO FA-30/50/170 AIS unit to your NavNet TZtouch2, up to 100 AIS targets can be tracked and displayed on the Chart Plotter 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.

Fish Finder

NavNet TZtouch2 is the first product from FURUNO to feature the brand new RezBoost™ technology. Accurately spot individual fish and increase your catch.

RezBoost

Up to 8 times sharper image than conventional FDF*1

RezBoost™

Rezboost™ is a revolutionary new technology utilizing FURUNO's advanced digital signal processing to provide fantastic resolution without having to change your transducer.
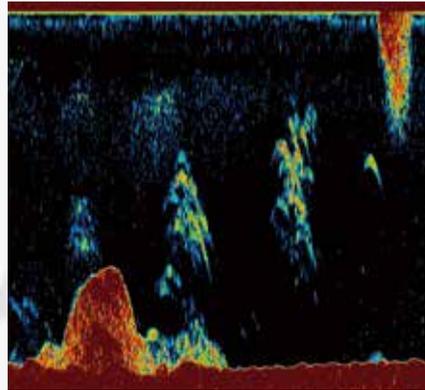
Conventional Signal Processing   RezBoost™ Signal Processing
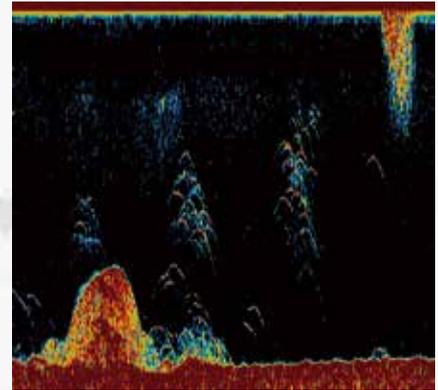
RezBoost™ improves target separation close to the seabed, as well as giving an unprecedented boost in resolution. With RezBoost™ technology, resolution and target separation previously limited to FURUNO commercial-grade Fish Finders can now be achieved. RezBoost™ technology makes it easier to spot individual fish in tightly packed fish schools, as well as discerning game fish from bait fish. Since RezBoost™ technology is software based, you can use transducers* already installed on your vessel.

* To check if your transducer supports the "Enhanced Mode", see FURUNO.com for further information.
   In-hull mounted transducers not compatible with RezBoost™ technology.
*1 RezBoost™ performance may vary depending on depth, range and signal frequency used.

FDF
FURUNO Digital Filter

FURUNO Digital Filter (FDF™) Fish Finder

FURUNO Digital Filter (FDF™) fish finders feature advanced filtering capabilities and digital auto tuning, which eliminates noise. FURUNO FDF™ fish finders deliver the ability to spot individual fish with clarity, accuracy and detail. Whether in shallow or deep water, FURUNO FDF™ fish finders give you what you would expect from a fish finder at all times.

ACCU-FISH

ACCU-FISH™ (Fish Size Analyzer)

The ACCU-FISH™ algorithm analyzes echo returns in order to compute individual fish size. The algorithm is capable of computing fish size ranging from 10 cm up to 199 cm long. Fish depth can also be displayed.

In some instances, fish size indicated on the NavNet TZtouch2 may differ from its actual size. Please carefully read the operator's manual prior to utilizing this feature.

23 cm   22 cm

BDS
Bottom Discrimination Sounder

Bottom Discrimination Display

Bottom discrimination provides detailed information about Knowing the make-up of the seabed, categorizing it into four different categories; "Rocks", "Gravel", "Sand" and "Mud". The make-up of the seabed can be tremendously helpful information when looking for fishing grounds, as well as for finding good anchoring spots.
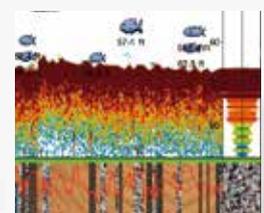
Multi-Beam Sonar
Innovative tool for exploring a wide range of water column and seabed

New Multi-Beam Sonar model DFF-3D gives you real-time 120 port-starboard view of the water column and seabed up to 200m depth*. The DFF-3D allows you to explore fishing spots and find fish in deep water by far faster than conventional single beam sounders. On the other hand, the main beam penetrate right under the boat at a depth of approximately 300 m*. Installation is made easy, thanks to a compact transducer design. The built-in motion sensor gives you clear images under your boat even in rough water.

* Maximum depth dependent on installation, bottom type and water conditions.
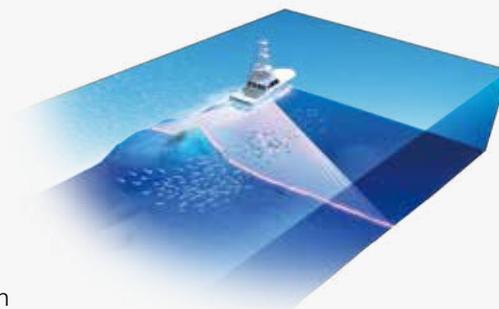
Scanning image of Multi Beam Sonar
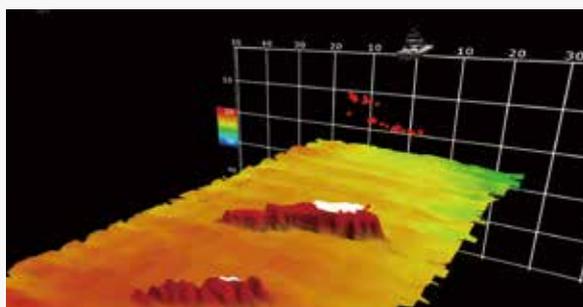
3D history
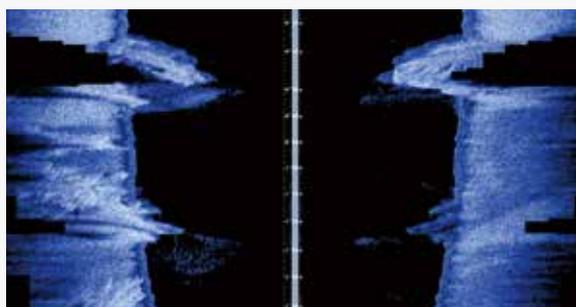
Side Scan

Find More Fish With TruEcho CHIRP™ Fish Finder

An advanced technology for both professional and enthusiast fishermen. Designed to operate across a wide range of frequencies utilizing a broadband transducer, the TruEcho CHIRP™ network fish finder delivers significant advantages in signal clarity and target definition. Due to the constant sweep of frequencies the TruEcho CHIRP™ network fish finder is capable of gathering more and higher quality data than a traditional single frequency fish finder. The clear presentation marks individual game fish and bait fish, even when tightly schooled together.

Up to 10 times sharper image than conventional FDF*2
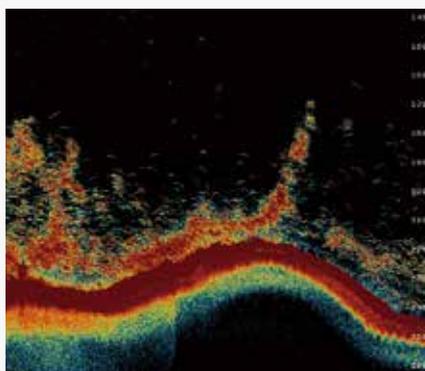
High Frequency CHIRP
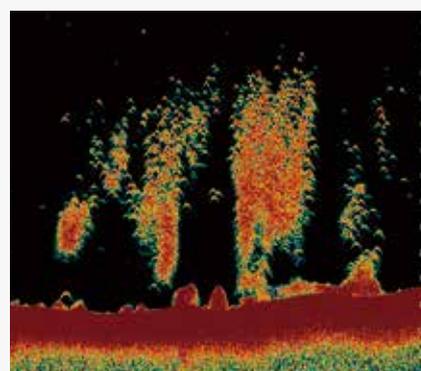
Low Frequency CHIRP

*2 TruEcho CHIRP™ performance may vary depending on depth, range and signal frequency used.

FISH FINDER Internal

BLACK BOX NETWORK FISH FINDER

BLACK BOX NETWORK FISH FINDER

BLACK BOX NETWORK MULTI BEAM SONAR***

	Internal Fish Finder	DFF1-UHD	DFF3	DFF-3D NEW
Frequency	Dual frequency 50kHz and 200 kHz	Dual frequency 50±20 and 200±25 kHz	The synthesized transducer works with dual frequencies between 28 and 200 kHz	165 kHz
Range Scale	Up to 1,200 m		Up to 3,000 m	Up to 1,200 m
Transducers	600 W or 1 kW*	1 kW	1, 2 or 3 kW	800 W
3D Mode	N/A			Available
ACCU-FISH™	Available**			N/A
Bottom Discrimination	Available		N/A	N/A
TruEcho CHIRP™	N/A	Available	N/A	N/A
RezBoost™	Available		N/A	
Display Mode	Auto (Fishing/Cruising/Manual), Bottom Zoom, Bottom Lock, A-Scope			Triple/Single Beam Sounder, Side Scan, Cross Section,3D history

DFF1/BBDS1 are fully compatible with NavNet TZtouch2.

*Matching Box MB-1100 required for some specific FURUNO transducers.
** For DFF3, with 50/200-1T transducer only.
***Coming soon.

14

Radar

**NEW**

Model **DRS25A X-Class**

Model **DRS6A X-Class**

NEW

Model **DRS12A X-Class**

Model **DRS4DL**

Model **DRS4D-NXT**

Radar Sensors

UHD Ultra High Definition

NMEA
Winner of the NMEA awards
2008, 2009, 2010, 2011,
2012, 2013, 2014 and 2015

Doppler TARGET ANALYZER RezBoost
Exclusive DRS4D-NXT features

DRS4D-NXT, the NXT step in Radar technology

Solid-State Radar with pulse compression, Target Analyzer and Fast Target Tracking™ utilizing Doppler technology. Combined with FURUNO exclusive RezBoost™ technology for echo sharpening, DRS4D-NXT packs the performance of an open array radar, in a compact 24" radome. Target Tracking™ automatically show you hazardous targets by displaying them in bright red. Stationary targets are displayed in green.

* TZtouch2 software version v3.01 or later.

New Target Analyzer function*
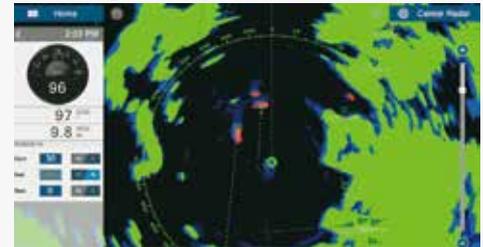
With Target Analyzer, hazardous targets are displayed in red

X-Class series a whole new class of Radar

Pushing the boundaries of what is possible with conventional Radar technology, X-Class series mark yet another leap forward for FURUNO. Improved in almost all aspects, X-Class Radar features improved short range detection as well as an impressive long range detection of up to 96 nautical miles. And that's not all, the new "Bird Mode" gives you incredible bird detection performance.

*1 TZtouch2 software version v3.01 or later.
*2 Bird mode is also available with DRS4D-NXT.
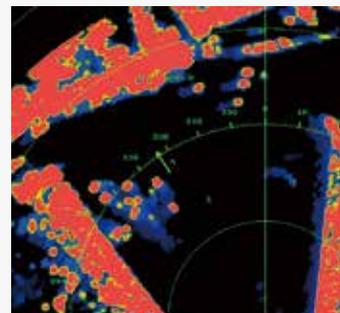
The radar detects and distinguishes several small yatchs with high accuracy.

Bird Mode*


Vessel heading toward flocks

Two flocks of birds
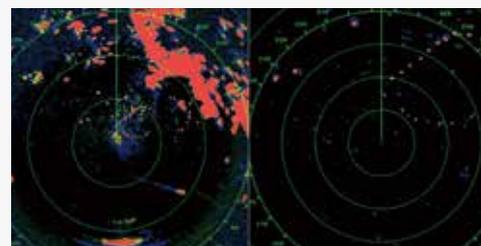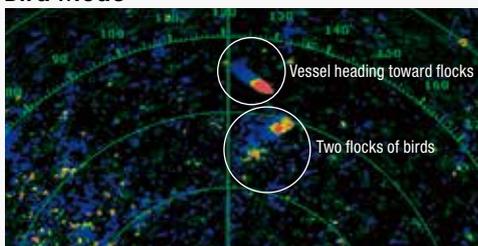
Bird mode and navigation mode can both be displayed via a simultaneous dual mode scanning. Possibility to track the birds while navigating safely
* DRS X-Class Series

ARPA Target Tracking

With ARPA Target Tracking enabled, up to 30* different targets can be tracked simultaneously. Targets can be acquired either manually or fully automatically. Automatic Radar Plotting Aid (ARPA) calculates the tracked objects course and speed, as well as the CPA (Closest Point of Approach). With this information, the Radar is capable of predicting possible collision courses and sound relevant alarms. In combination with AIS, this spells increased security and ease of mind on your vessel.

*100 different targets for DRS4D-NXT, not available on DRS4DL
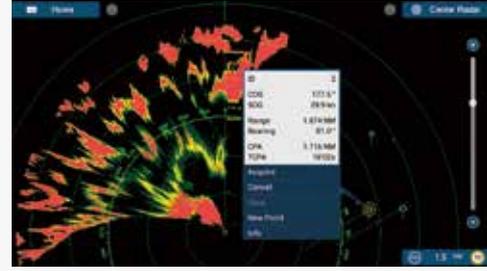
Real-Time Digital Auto Gain/Sea Controls

NavNet TZtouch2 employs revolutionary real-time digital auto Gain/Sea controls to deliver a crystal clear radar presentation. With this new technology, NavNet TZtouch2 computes and applies an adaptive omni-directional anti-clutter filter with variable intensity according to vessel bearing. With the use of this technology, automatic gain and sea clutter have achieved such a high level of proficiency that one rarely needs to venture into the manual modes. Set the Radar to auto and focus on more important things at hand.
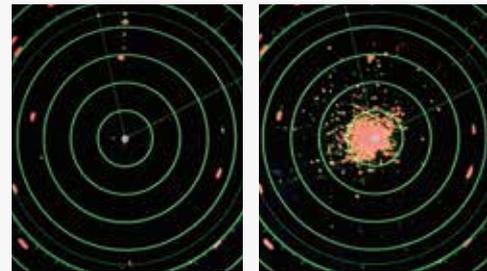
Auto Gain/Sea Controls On   Auto Gain/Sea Controls Off

## Simultaneous Dual Range Radar Scanning

Simultaneous scanning technology sends out a dual progressive scan that is processed and presented on the NavNet TZtouch2. This technology allows for two different radar ranges to be displayed simultaneously, each range with autonomous control over gain and anti-clutter settings.

Not available on DRS4DL, Limited to 12 nm on DRS4D-NXT
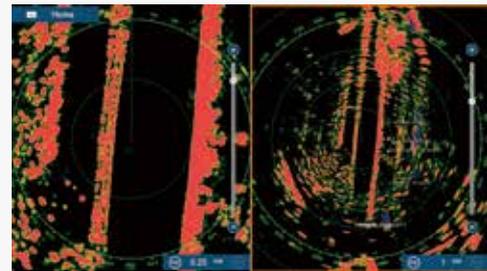
AIS Target Tracking

When connecting a FURUNO FA-30/50/170 AIS unit to the NavNet TZtouch2, 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.

NavNet TZtouch2 Radar Sensor Options

		DRS4DL	DRS4D-NXT	DRS6A X-Class	DRS12A X-Class NEW	DRS25A X-Class NEW
Output Power		4 kW	Solid-state, 25 W	6 kW	12 kW	25 kW
Size		19 inch	24 inch	3.5 ft/4 ft/6 ft	4 ft/6 ft	4 ft/6 ft
Antenna Type		Radome	Radome	Open	Open	Open
Beam Width	Horizontal	5.2°	3.9°	2.3°/1.9°/1.4°	1.9°/1.4°	1.9°/1.4°
	Vertical	25°	25°	22°/22°/22°	22°/22°	22°/22°
Max. Range		36 nm	36 nm	96 nm	96 nm	96 nm
48 rpm Capability		—	●	●	●	●
Functions		Head-up, North-up*	Head-up, North-up*, Echo Trail, Target Analyzer, Bird mode, Fast Target Tracking, AIS	Head-up, North-up*, Echo Trail, Bird mode, Fast Target Tracking, AIS	Head-up, North-up*, Echo Trail, Bird mode, Fast Target Tracking, AIS	Head-up, North-up*, Echo Trail, Bird mode, Fast Target Tracking, AIS
Dual Range Scanning		—	● (Range is limited to 12 nm)	●	●	●
ARPA		—	●	●	●	●
MFD version required		2.0	3.01	3.01	4.01	4.01

* Heading input required.   ** Not available for 12 V.
The radar antenna complies with IEC62252 Ed. 1:2004 (Clauses 4.33, 5,33, Annex D) relevant to radio characteristic.
Not available for NavNet 3D.

Specifications

Model TZTL12F

Bracket is optional supply.

| MULTI FUNCTION DISPLAY		TZTL12F
DISPLAY UNIT		
Type		Color TFT multi touch LCD
Screen Size		12.1" Wide
Screen Resolution		WXGA 1280 x 800
Screen Brightness		1300 cd/m^2 (typical)
Language		English (US & UK), French, Spanish, German, Italian, Portuguese, Swedish, Danish, Norwegian, Finnish, Greek, Chinese (simplified Chinese chracters), Japanese
GPS/WAAS		
Receiver Type	GPS	56 channels
	SBAS	1 channel (C/A mode, WAAS)
Receiving Frequency		L1 (1575.42 MHz)
Time to First FIX		100 s (cold start)
Tracking Velocity		999 kn
SBAS		WAAS, EGNOS, MSAS
ACCURACY		
Internal Antenna	GPS	10 m Max
	WAAS	3 m Max
	MSAS	7 m Max
CHART PLOTTER		
Cartgraphy		MapMedia mm3d chart (C-MAP/Navionics/NOAA)
Memory Capacity		30,000 user points, 30,000 points for ship's tracks, 200 planned routes (500 points per route)
Alarms		Anchor Watch, XTE, Proximity, Depth, Temperature, Speed, etc.
RADAR		
Display Modes		Head-up, North-up* *Heading input required.
Target Tracking**		30 Targets* *Heading input required.
FISH FINDER (Built-in)		
Transmit Frequency		50/200 kHz
Transmission Power		600 W or 1 kW* *Matching Box MB-1100 required for some specific FURUNO transducers
Modes		RezBoost™, ACCU-FISH™, Bottom Discrimination, A-Scope, Auto (Fishing/Cruising/Manual), Bottom Zoom, Bottom Lock
INTERFACE		
CAN bus/NMEA2000		1 Port
Interface (CAN bus/NMEA2000)	Input	059392, 059904, 061184, 060928, 065280, 126208, 126720, 126992/996, 127237/245/250/251/257/258/488/489/505, 128259/267, 129025/026/029/033/038/039/040/041/291/538/540, 129793/794/798/808/809/810, 130306/310/311/312/313/314/316/577/578/817/818 /820/822/823/826/827/828/880
	Output	059392, 059904, 061184, 060928, 126208/464/720/992/996, 127250/251/257/258, 128259/267, 129025/026/029/033/283/284/285, 130306/310/312/313/314/316/821/822/823/827
NMEA0183		1 Integrated Output Port
Interface (NMEA0183)	Output	AAM, APB, BOD, GGA, GLL, GNS, GSA, GSV, RMB, RTE, VTG, WPL, XTE, ZDA, DPT***, DBT***, RMC***, TTM***
LAN		1 Port (100BASE-TX)
USB		1 Port (USB2.0)
Video Output		1 Port (HDMI)
Video Input		2 Ports (NTSC/PAL)
AUX I/O		1 Port (External Event/MOB Input/Operator Fitness/Alarm Output)
SD Card Slot		1 Slot (Micro SDXC, rear), 2 Slots Card Unit (optional)
Wireless LAN		IEEE802.11b/g/n, Transmit frequency: 2.4 GHz band
Transducer		1 Port
ENVIRONMENT		
Temperature (IEC60945)		-15°C to +55°C
Waterproofing		IP56
POWER		
		12-24 VDC
		3.0-1.5 A

** Not available with DRS4DL
***Available with v4.01 or later

Multi Function Display (Tabletop Mount) TZTL12F
3.8 kg 8.4 lb

365 14.4"
325 12.8"
217 8.5"
243 9.6"
210 8.3" 4xØ6
55 2.2" 112 4.4" 150 5.9"
35°
245 9.6"
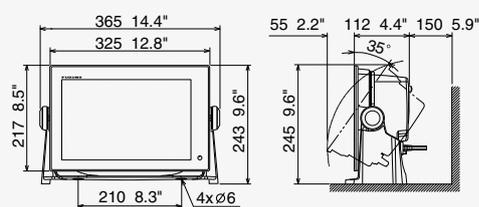
Bracket is optional supply.

Multi Function Display (Flush Mount) TZTL12F
3.7 kg 8.2 lb

325 12.8"
217 8.5"
7 0.3" 105 4.1" 150 5.9"
5 0.2"
205 8.1"
5 0.2"
205 8.1"
313 12.3"
4 xØ10 (R5)
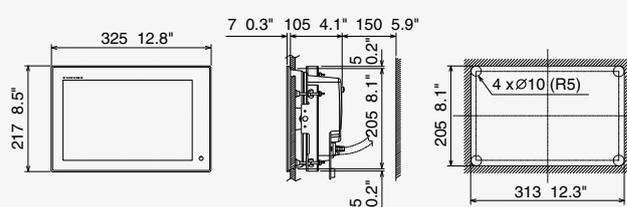
| Model | TZTL15F |

Bracket is optional supply.

MULTI FUNCTION DISPLAY		TZTL15F
DISPLAY UNIT		
Type		Color TFT multi touch LCD
Screen Size		15.6" Wide
Screen Resolution		FWXGA 1366 x 768
Screen Brightness		1000 cd/m² (typical)
Language		English (US & UK), French, Spanish, German, Italian, Portuguese, Swedish, Danish, Norwegian, Finnish, Greek, Chinese (simplified Chinese chracters), Japanese
GPS/WAAS		
Receiver Type	GPS	56 channels
	SBAS	1 channel (C/A mode, WAAS)
Receiving Frequency		L1 (1575.42 MHz)
Time to First FIX		100 s (cold start)
Tracking Velocity		999 kn
SBAS		WAAS, EGNOS, MSAS
ACCURACY		
Internal Antenna	GPS	10 m Max
	WAAS	3 m Max
	MSAS	7 m Max
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Cartgraphy		MapMedia mm3d chart (C-MAP/Navionics/NOAA)
Memory Capacity		30,000 user points, 30,000 points for ship's tracks, 200 planned routes (500 points per route)
Alarms		Anchor Watch, XTE, Proximity, Depth, Temperature, Speed, etc.
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Transmit Frequency		50/200 kHz
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	Output	059392, 059904, 061184, 060928, 126208/464/720/992/996, 127250/251/257/258, 128259/267, 129025/026/029/033/283/284/285, 130306/310/312/313/314/316/821/822/823/827
NMEA0183		1 Integrated Output Port
Interface (NMEA0183)	Output	AAM, APB, BOD, GGA, GLL, GNS, GSA, GSV, RMB, RTE, VTG, WPL, XTE, ZDA, DPT***, DBT***, RMC***, TTM***
LAN		1 Port (100BASE-TX)
USB		1 Port (USB2.0)
Video Output		1 Port (HDMI)
Video Input		2 Ports (NTSC/PAL)
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Wireless LAN		IEEE802.11b/g/n, Transmit frequency: 2.4 GHz band
Transducer		1 Port
ENVIRONMENT		
Temperature (IEC60945)		-15°C to +55°C
Waterproofing		IP56
POWER		
		12-24 VDC
		3.6-1.8 A

** Not available with DRS4DL
***Available with v4.01 or later

Multi Function Display (Tabletop Mount) TZTL15F
5.5 kg 12.1 lb
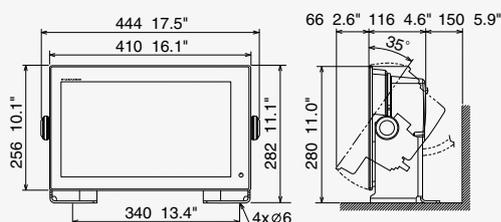
Bracket is optional supply.

Multi Function Display (Flush Mount) TZTL15F
4.9 kg 10.6 lb
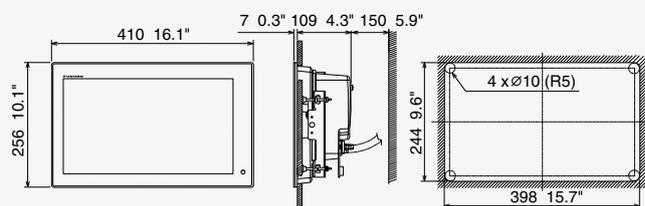
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