

**SPECIFICATIONS OF MULTI FUNCTION DISPLAY  
TZT16F**

**1 DISPLAY FUNCTION**

- 1.1 Screen 15.6-inch touch-panel color display, 1920 x 1080 (FHD)
- 1.2 Brightness 1000 cd/m<sup>2</sup> typical
- 1.3 Display colors 16,770,000 colors (plotter), 64 colors for radar/sounder echo
- 1.4 Language Bulgarian, Chinese, Danish, English (UK/US), Finnish, French, German, Greek, Italian, Japanese, Norwegian, Portuguese, Russian, Spanish, Swedish

**2 PLOTTER FUNCTION**

- 2.1 Display mode Course plot, NAV data (includes instrument and engine data)
- 2.2 Projection Mercator
- 2.3 Usable area 85° latitude or below
- 2.4 Memory capacity Track: 30,000 points, Point/MOB: 30,000 points  
Route: 200 courses w/500 points each  
ARPA: 30 targets (100 for DRS-NXT ser.), AIS: 100 targets
- 2.5 Alarm Anchor watch, XTE, Own ship alarm zone
- 2.6 GPS receiver
  - Receiving frequency 1575.42 MHz
  - Number of channel GNSS: 72 ch, SBAS: 1 ch
  - Accuracy GNSS: 10 m (2drms, HDOP<4),  
WAAS: 3 m (2drms, HDOP<4), MSUS: 7 m (2drms, HDOP<4)
  - Ship's speed range 500 m/s max. (all satellites at -130dBm)
  - Position fixing time Cold start: 100 s typical
  - Position update interval 0.1 s

**3 RADAR FUNCTION**

- 3.1 Orientation mode Head-up, North-up (heading data required)
- 3.2 Echo trail 15/30 s, 1/3/6/15/30 min. or continuous
- 3.3 ARPA target 30 point
- 3.4 Alarm Guard-zone, CPA/TCPA, Trigger, Video, Azimuth, Heading line

**4 SOUNDER FUNCTION**

- 4.1 Frequency CW: 50/200 kHz, CHIRP: 40 to 225 kHz
- 4.2 Output power 300/600 W, 1 kW or  
2 to 3 KW (optional fish finder power amplifier required)
- 4.3 Display mode ACCU-FISH™, A-scope, ResBoost™,  
Estimation for bottom composition, Temperature graph
- 4.4 Alarm School of fish, School of fish for bottom lock

**5 OTHER FUNCTIONS**

- 5.1 AIS information AIS receiver required
- 5.2 DSC display 20 target max, Target data required
- 5.3 Instrument indication Instrument data required
- 5.4 Camera monitor NTSC/PAL data required

- 5.5 Information Facsimile/NAVTEX, Weather information (external data required)
- 5.6 Alarm Wind speed\*, Depth\*, Water temperature\*,  
Sea surface temperature\*, Speed, Low fuel \*  
\*: external data required

## 6 INTERFACE

- 6.1 Number of port
  - HDMI output 1 port, 1080 p (FHD)
  - HDMI input 1 port, 1920 x 1080 (FHD) or less, HDCP, Non-interlaced
  - Video input (composite) 2 ports, NTSC/PAL
  - USB 2 port, USB2.0, for touch-monitor and control unit
  - LAN 2 ports, Ethernet 100Base-TX
  - NMEA2000 1 port
  - Serial 1 port, NMEA0183 output
  - Contact closure 2 port, event switch and external power switch
  - SD card slot 1 port, micro-SDXC
- 6.2 Wireless LAN IEEE802.11b/g/n
  - Transmit frequency 2.412 to 2.462 GHz
  - Output power 11 dBm max.
- 6.3 NMEA0183 sentences
  - Output AAM, APB, BOD, DBT, DPT, GGA, GLL, GNS, GSA, GSV, RMB, RMC, RTE, TTM, VDM, VTG, WPL, XTE, ZDA
- 6.4 NMEA2000 PGN

Input	065280, 126992, 126993, 126996, 127237, 127245, 127251, 127257, 127488, 127489, 127505, 128259, 128267, 129025, 129026, 129029, 129330, 129038, 129039, 129040, 129041, 129291, 129538, 129540, 129793, 129794, 129798, 129801, 129802, 129808, 129809, 129810, 130306, 130310, 130311, 130312, 130313, 130314, 130316, 130577, 130578, 130817, 130818, 130820, 130822, 130823, 130826, 130827, 130828, 130880
Output	126992, 126993, 126996, 127250, 127251, 127257, 127258, 128259, 128267, 128275, 129025, 129026, 129029, 129033, 129283, 129284, 129285, 130306, 130310, 130311, 130312, 130313, 130314, 130316

## 7 POWER SUPPLY

- 7.1 Multi function display 12-24 VDC (10.8-31.2 V): 4.3-2.2 A
- 7.2 Rectifier (option) 100/110/115/220/230 VAC, 1 phase, 50/60Hz

## 8 ENVIRONMENTAL CONDITIONS

- 8.1 Ambient temperature -15°C to +55°C
- 8.2 Relative humidity 93% or less at +40°C
- 8.3 Degree of protection IP56
- 8.4 Vibration IEC 60945 Ed.4

## 9 UNIT COLOR

N1.0 (fixed)