

**SPECIFICATIONS OF MULTI FUNCTION DISPLAY  
TZT2BB**

**1 EXTERNAL MONITOR SPECIFICATIONS (REQUIRED)**

- 1.1 Screen type Color display with touch panel control, 1920 x 1080 (FHD), 1024 x 768 (XGA) or 1280 x 1024 (SXGA)
- 1.2 Signal interface
  - Picture HDMI
  - Touch panel USB2.0, Windows®7 multi-touch

**2 PLOTTER FUNCTION**

- 2.1 Display mode Course plot, NAV data
- 2.2 Projection Mercator
- 2.3 Usable area 80 latitude or below
- 2.4 Memory capacity Track: 30,000 points (including MOB)  
Route: 200 courses w/ 500 waypoints each  
ARPA: 30 targets, AIS: 100 targets
- 2.5 Picture colors 16,770,000 colors

**3 RADAR INDICATION**

- 3.1 Orientation mode Head-up, North-up (heading data required)
- 3.2 Echo trail 15/30s, 1/3/6/15/30 min. and continuous
- 3.3 Picture colors 64 colors

**4 ECHO SOUNDER INDICATION**

- 4.1 Transmit frequency 50/200 kHz alternative
- 4.2 Output power 600 W or 1 kW
- 4.3 Display mode ACCU-FISH™, A-scope, ResBoost, Temperature graph, Estimation of bottom composition
- 4.4 Echo colors 64 colors

**5 OTHER FUNCTIONS**

- 5.1 Instrument data display Weather sensor, engine monitoring sensor or other data required
- 5.2 Camera monitor IP camera or NTSC/PAL data required
- 5.3 FAX/NAVTEX indication A facsimile FX-30 is required
- 5.4 Language Chinese, Danish, Finnish, French, German, Greek, Italian, Japanese, Norwegian, Portuguese, Russian, Spanish, Swedish, UK/US
- 5.5 Alarms Anchor watch, Cross track error, Proximity, CPA/TCPA\*, Ship's speed\*, Sea surface temperature\*, Depth\*, Fish\*, Hardware  
\*: External data required

**6 INTERFACE**

- 6.1 Number of port HDMI output 2 ports, type-A, 1920 x 1080 (FHD), 1024 x 768 (XGA) or 1280 x 1024 (SXGA)

	HDMI input	1 port, 1920 x 1080p (FHD) or less, HDCP, non-interlace
	Composite video input	2 ports, RCA, NTSC/PAL
	USB	5 ports (type-A: 4 ports, micro B: 1 port), USB2.0
	LAN	3 ports, Ethernet 100Base-TX HUB
	NMEA0183 output	1 port
	NMEA2000	1 port
	SD card I/F	2 slots (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, VTG, WPL, XTE, ZDA
6.4	NMEA2000 PGN	
	Input	059392/904, 060928, 061184, 065280, 126208/464/720/992/996, 127245/250/251/257/258/488/489/493/505, 128259/267, 129025/026/029/033/038/039/040/041/291/538/540/793/794/798, 129808/809/810, 130306/310/311/312/313/314/316/577/578
	Output	059392/904, 060928, 065280, 126208/464/720/992/996, 127237/245/250/251/257/258/488/489/505, 128259/267, 129025/026/029/033/038/039/040/041/291/538/540/793/794/798, 129808/809/810, 130306/310/311/312/313/314/316/577/578

**7 POWER SUPPLY**

7.1	Processor unit	12-24 VDC: 2.6-1.3 A (includes switch box)
7.2	Control unit (MCU-005, option)	48 VDC: 0.1 A or less, IEEE802.3af, Class 2 (PoE HUB required) Alternative A only
7.3	Rectifier (option)	100/110/115/220/230 VAC, 1 phase, 50/60Hz

**8 ENVIRONMENTAL CONDITIONS**

8.1	Ambient temperature	
	Processor unit	-15°C to +55°C
	Control unit	-15°C to +55°C
8.2	Relative humidity	93% or less at +40°C
8.3	Degree of protection	
	Processor unit	IP22
	Switch box	IP56 (front panel), IPX2 (chassis)
	Control unit	IP56 (front panel), IPX0 (chassis)
8.4	Vibration	IEC 60945 Ed.4

**9 UNIT COLOR**

9.1	Processor unit	N2.5
9.2	Switch box/ Control unit	N1.0 (front panel), N2.5 (chassis)