FURUNO

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Sales Bulletin

NAVnet TZ touch 3

Model: **TZT9F**

INDEX

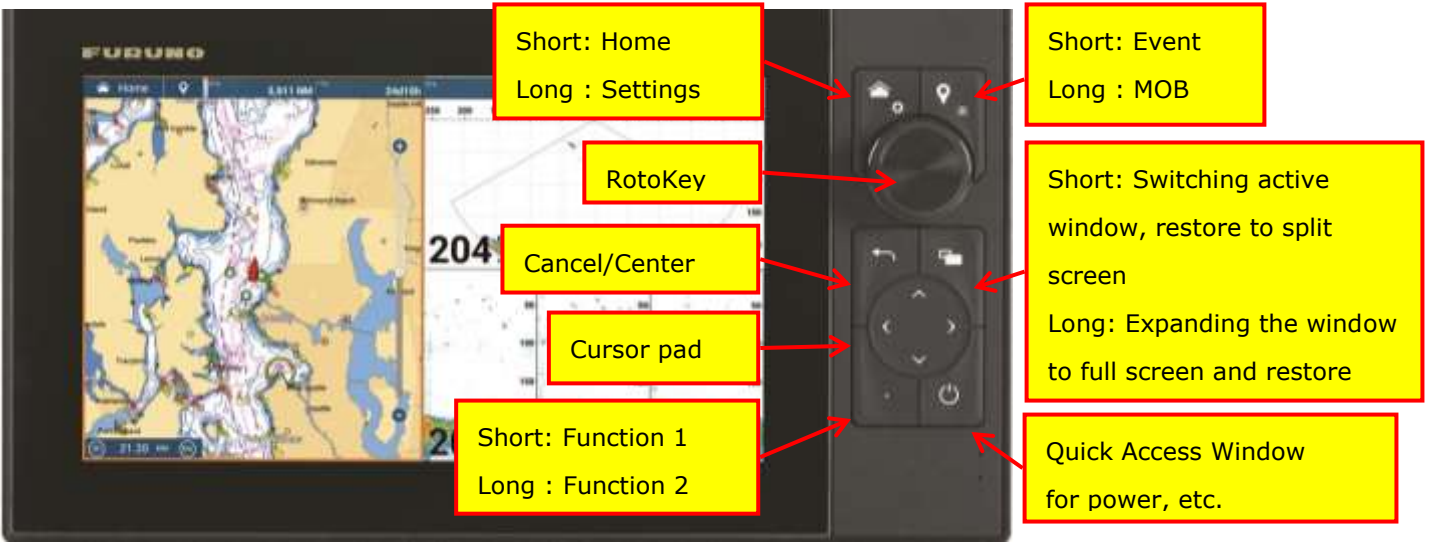# 1. New Family to NavNet TZtouch3 Series

The **TZT9F** is a **NEW 9"-wide MFD** as an additional member to the **NavNet TZtouch3 series**. While this document focuses on the overview of TZT9F, see **Sales Bulletin FSB20-0001** for details of all the NavNet TZtouch3 series MFDs as well as other bulletins, which highlight specific features.
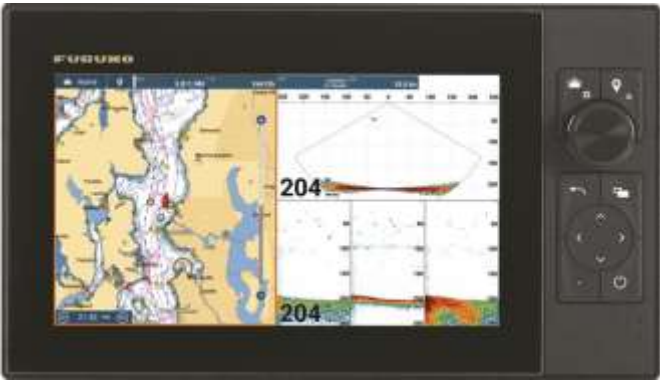
- **Hybrid Touch**
- **Powerful Quad-core CPU**
- **Refined GUI**
- **Built-in Single Band TruEcho CHIRP™**
- **Cloud Solution via TZ ecosystem**
- **Manageable Catch Log with TZ First Mate App**
- **Integration with Third Party Partners**
- **IPS LCD for consistent visibility from all directions**

2. Product Overview

2.1. Appearance – Keypad to Support Multi Touch Operation

Short: Home
Long : Settings

Short: Event
Long : MOB

RotoKey

Short: Switching active window, restore to split screen

Long: Expanding the window to full screen and restore

Cancel/Center

Cursor pad

Short: Function 1
Long : Function 2

Quick Access Window for power, etc.

2.2. Standard Comprising

Comprising	Models	Remarks
Display Unit	TZT9F	With hanger and silicone cover
Including	Power cable MJ-A3SPF0019-035C	3.5 m
	Installation materials and accessory	

2.3. Comparison Among NavNet TZtouch3 Series

The following table shows differences in specifications among TZT9F, TZT12F, TZT16F, and TZT19F.

Category	TZT9F	TZT12F	TZT16F	TZT19F
Size	9"-wide	12.1"-wide	15.6"-wide	18.5"-wide
Resolution	1280×720 (HD)	1280×800 (WXGA)	1920×1080 (FHD)	
Operation	Hybrid Touch		No Hybrid Touch (Full Flat Panel)	
Comprising	Hanger included as **standard**	Hangers as **option**		No hanger option
Comprising	Power cable: **Smaller** connector than other models (same connector type as TZTL12F/15F/2BB)	Power cable: Common connectors among three (3) models but with different part codes/types depending on the capacity of enclosed fuse type.		
	MJ-A3SPF0019-035C	FRU-3P-FF-A002M-**000** (4 A)	FRU-3P-FF-A002M-**001** (7.5 A)	
I/O	**No** Analog video input	2×Analog video input		
I/O	**No** HDMI output	1×HDMI OUT port (Clone), output resolutions depending on models		
		1280×720 / WXGA (16:9)	1920×1080 / FHD (16:9)	
I/O	1×Ethernet port	2×Ethernet ports		
I/O	No HDMI IN, No USB OUT	1×HDMI IN and 1 x USB OUT ports		
Built-in GPS	Available			N/A
Built-in Fish Finder	Compatible with **single** band for CHIRP (same as GP-1871F/1971F)	Compatible with **dual** band CHIRP		
Built-in Fish Finder	Transducer port: **10-pin** type	Transducer port: **12-pin** type (12-10 pin adapter cable FRU-CCB12-MJ-01 enclosed as standard)		
DI-FFAMP	**No** DI-FFAMP port (possible to show echoes from DI-FFAMP connected to TZT12F/16F/19F)	1×DI-FFAMP port Supporting 2/3 kW dual band CHIRP		

2.4. Comparison with NavNet TZtouch2 Series

The following tables show the specification of TZT9F/12F/16F/19F in comparison with TZTL12F/15F.

General						

Category	TZT9F	TZT12F	TZT16F	TZT19F	TZTL12F	TZTL15F
LCD Type	IPS (In Plane Switching)				-	
Size	9"-wide	12.1"-wide	15.6"-wide	18.5"-wide	12.1"-wide	15.6"-wide
Resolution	1280×720 HD	1280×800 WXGA	1920×1080 FHD	1920×1080 FHD	1280×800 WXGA	1366×766 FWXGA
Brilliance	1000 cd/㎡	900 cd/㎡	1000 cd/㎡	900 cd/㎡	1300 cd/㎡	1100 cd/㎡
View Angle	80°	89°	85°	88°	80°	
AR Coating	Available				Available	
Bonded LCD	Available				Available	

Category	TZT9F	TZT12F	TZT16F	TZT19F	TZTL12F	TZTL15F
View over Polarized Sunglasses	View angle secured by utilizing IPS LCD				View angle secured by utilizing phase difference film over the LCD	
Chart	Mapmedia mm3d format				Mapmedia mm3d format	
Chart Media	microSDXC card (Max. 256 GB)				microSDXC card (Max. 128 GB)	
Built-in GPS	72CH, SBAS 1CH (WAAS, EGNOS, MSAS)			**N/A (External GPS required)**	56CH, SBAS 1CH (WAAS, EGNOS, MSAS)	
Built-in Fish Finder	Available – TruEcho CHIRP™ (**Single** Band) and CW transmission	Available – TruEcho CHIRP™ (**Dual** Band) and CW transmission			Available – CW transmission only	
Fish Finder Output Power	300 W / 600 W / 1 kW (No DI-FFAMP port)	300 W / 600 W / 1 kW 2/3 kW (with optional DI-FFAMP)			600 W / 1 kW	
Fish Finder Frequency	TruEcho CHIRP™: LF/MF/HF CW: 50/200 kHz	TruEcho CHIRP™: LF/MF/HF CW: 50/200 kHz CW: 26.6 to 242 kHz (with optional DI-FFAMP, preset frequency set)			CW: 50/200 kHz	
Wireless LAN	Available – Approved with US (FCC), Canada (ISED, formerly IC), EU (CE), Australia, New Zealand, and Japan only				Available – Approved with US (FCC), Canada (ISED, formerly IC), EU (CE), Australia, New Zealand, and Japan only	
Maximum Qty of Displays	Max. 6 sets (Max. 4 sets with TZT2BB included)				Max. 6 sets (Max. 4 sets with TZT2BB included)	
Menu Language	English, French, Spanish, German, Italy, Portuguese, Swedish, Danish, Norwegian, Finish, Greek, Japanese, Chinese, Russian, Bulgarian				English, French, Spanish, German, Italy, Portuguese, Swedish, Danish, Norwegian, Finish, Greek, Japanese, Chinese, Russian, Bulgarian	
Operation Temperature	-15 to +55℃				-15 to +55℃	
Protection Level	IP56 (at the root of pigtail cable for rear side)				IP56 (at the root of pigtail cable for rear side)	
Supply Voltage	12-24 VDC				12-24 VDC	
Consumption	2.6-1.3 A	2.3-1.2A	4.3-2.2 A	4.7-2.3 A	3.0-1.5 A	3.6-1.8 A

Capacity

Category	TZT9F/12F/16F/19F	TZTL12F/15F v6.xx or earlier	TZT12F/15F v7.01 and later
Points	30,000 points		
Routes	200 routes (Max. 500 points per route)		
Tracks	30,000 points		
Boundary: Areas & Lines	100 objects (Max. 50 points per object)	N/A	100 objects (Max. 50 points per object)
Boundary: Circles	100 object	N/A	100 object
Photo	1,000 data	N/A	1,000 data
AIS	1,000 targets	100 targets	
DSC	20 targets		
ARPA Target Tracking (TT)	100 targets (with DRS4D-/6A/12A-/25A-NXT) 30 targets (with DRS series of magnetron types)		

Category	TZT9F	TZT12F	TZT16F	TZT19F	TZTL12F/15F
Ethernet	1 (100BASE-TX)	2 (100BASE-TX)			1 (100BASE-TX)
NMEA2000	1				1
NMEA0183	1×Output (No input)	1×Output (No input)	1×Output (No input)		1
USB	1 (TYPE A)		1 (TYPE A) / 1×Output (micro B)		1 (TYPE A)
Video Input (Analog)	N/A	2×RCA ports (NTSC/PAL)	2×RCA ports (NTSC/PAL)		2×RCA ports (NTSC/PAL)
Video Input (HDMI)	N/A		1×HDMI Recommended resolution: 1920×1080 / FHD (16:9) Compatible with HDCP for copywrite protection Not compatible with interlace Other compatible resolutions: 1280×720 / HD (16:9) 1280×1024 / SXGA (5:4) 1024×768 / XGA (4:3)		N/A
Video Output	N/A	1×HDMI (clone image) Output resolution: 1280×720 / WXGA (16:9)	1×HDMI (clone image) Output resolution: 1920×1080 / FHD (16:9)		1×HDMI (clone image)
Others	Alarm output Event switch External power switch input				Alarm output Event switch input Operator fitness (contact closure)
Card Slot	1×microSD card (Rear)				1×microSD card (Rear)
Transducer Port	1×MJ10 pin	1×MJ12 pin (Adapter cable for MJ10 pin included as standard)			1×MJ10 pin
DI-FFAMP Port	N/A	1			N/A

Apps for Local Network

| Category	TZT9F/12F/16F/19F	TZTL12F/15F
NavNet Remote	Compatible from	Compatible (from v4.xx)
NavNet Viewer	Compatible	Compatible
NavNet Controller	Compatible	Compatible
TZ First Mate	Compatible	Compatible (from v7.xx)
TZ iBoat	Connectable by local network	Connectable by local network (from v7.xx)

Internet for Open Network

| Category	TZT9F/12F/16F/19F	TZTL12F/15F
Weather Download	Available	Available
Chart Unlocking	Available	Available
TZ Cloud	Available	Available (from v7.xx)

Note:

The built-in wireless LAN of TZT9F/12F/16F/19F is approved for use in the US (FCC), Canada (ISED, ex. IC), Europe (CE), Australia/New Zealand, and Japan only. For other areas, do NOT turn on the wireless LAN.

2.5. Dimensions

Flush Mount from Rear Side
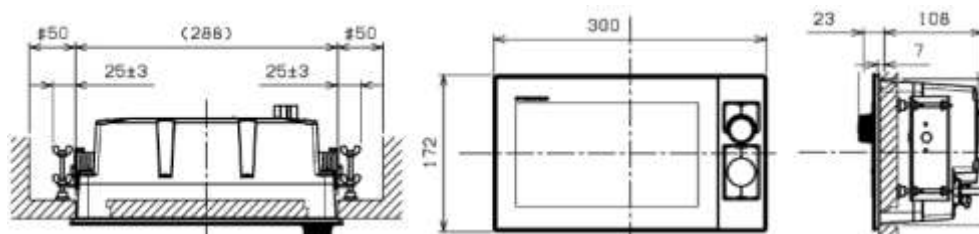
Bracket Mount (Standard)
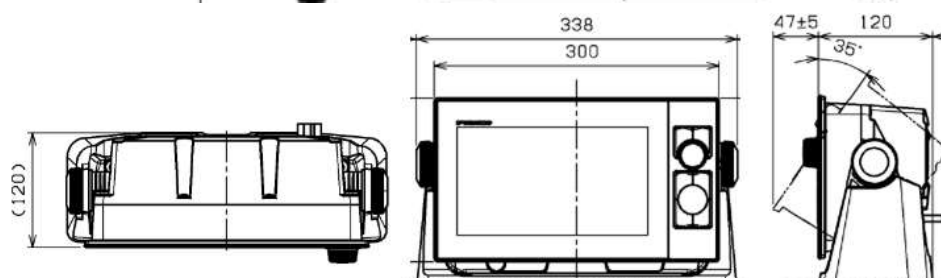
2.6. Replacement Panel for TZT9F

The optional **OP19-25 (00158779000)** can be utilized to retrofit from some models to the TZT9F, as well as simply mounting it from the front side.

OP19-25 (00158779000)	
From…	To…
MFD8 (NavNet 3D)	**TZT9F**
Garmin GPSMAP800	

3. Network Architecture

Network the TZT9F to Ethernet and NMEA sensors in the same flow as the TZT12F/16F/19F.

Common notes for NavNet TZtouch3 network:

🔸 Networkable with **NavNet TZtouch2 MFDs (TZTL12F/15F/2BB) v7.01**

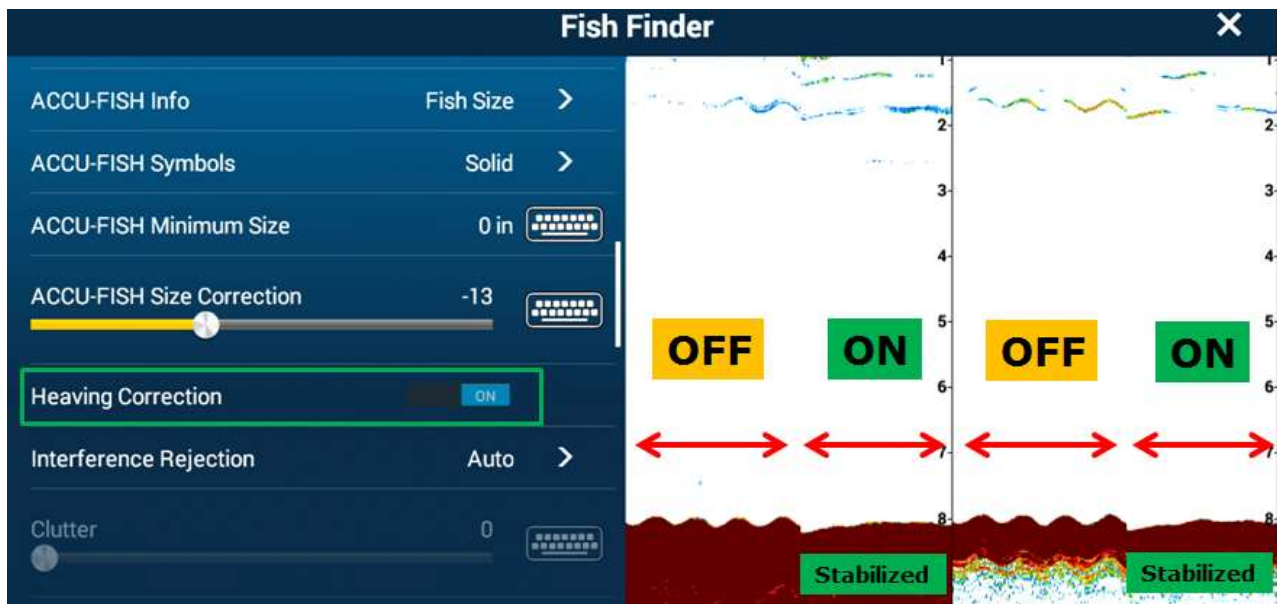🔸 **NO** network with **NavNet 3D (MFD8/12/BB)**, **TZtouch (TZT9/14/BB)**, or **TZtouch2 v6.xx or earlier**

4. Built-in Fish Finder

4.1. Heaving Correction

Even the compact 9"-wide MFD has the **heaving correction** with the built-in Fish Finder in combination with a SATELLITE COMPASS such as SCX-20 and SC-33.
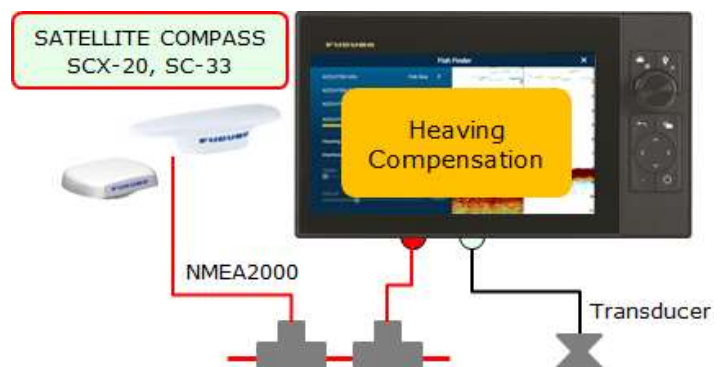
[Heaving Correction] – [ON] / [OFF] Comparison:

4.2. Compatible Transducers and Functions

The TZT9F employs the common built-in Fish Finder with the GP-1871F/1971F and supports 50/200 kHz CW (600 W and 1 kW) and single band TruEcho CHIRP™ (300 W, 600 W, and 1 kW).

Transducers for Conventional CW Transmission

Power / Band	Model	Simultaneous Transmission	ACCU-FISH™	Bottom Discrimination	RezBoost™
600 W Dual Band CW	520-5MSD	No	Yes	Yes	Yes
	520-5PSD				
	520-PLD (Airmar P319)				
	525-5PWD				
	525STID-MSD (Airmar B744V)				
	525STID-PWD (Airmar P66)				
	525T-BSD (Airmar B45)				
	525T-LTD/12 (Airmar B60-12)				
	525T-LTD/20 (Airmar B60-20)				
	525T-PWD (Airmar P66)				
	SS60-LSTD/12 (Airmar SS60-12)				
	SS60-LSTD/20 (Airmar SS60-20)				
1 kW Single Band CW	50B-6/6B *(1)		No	No	No
1 kW Dual Band CW	50B-6/6B & 200B-5S *(1)		Yes	Yes	Yes
	50/200-1T *(1)				
	526TID-HDD (Airmar B260)				

Note: *(1) The matching box MB-1100 is required.

TruEcho CHIRP™ Transducers from Airmar

| Power / Band	Model		Simultaneous Transmission	ACCU-FISH™	Bottom Discrimination	RezBoost™
300W Single Band CHIRP	B75L	SS75L	No	No	No	No
	B150M	TM150M				
600 W Single Band CHIRP	B75H	SS75H				
	B75M	SS75M				
	B785M	-				
1 kW Single Band CHIRP	B175H	B285HW				
	B175L	B285M				
	B175M	TM185HW				
	B175HW	TM185M				

For details of Airmar transducer arrangement for all types, see **Sales Bulletin FSB20-0006** for guidance of arrangement through Airmar channel.

4.3. Sample Screen

In combination with TruEcho CHIRP™ and good resolution of 9"-wide LCD, the TZT9F screen shows clear images
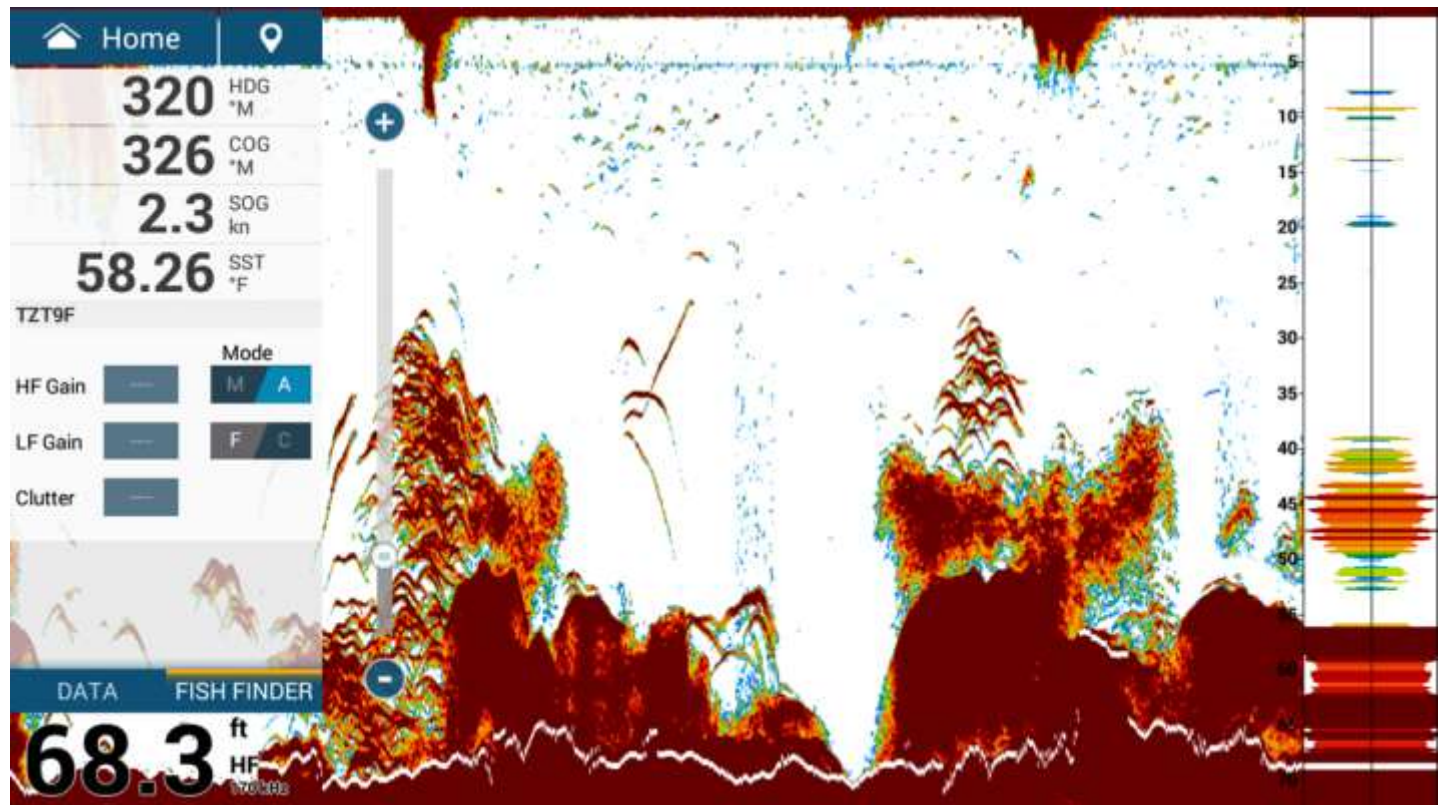
5. Note on Software Versions

The TZT9F will have the version 1.09 when it is launched, while the TZT12F/16F/19F will still have v1.08. All the TZT9F, TZT12F, TZT16F, and TZT19F will have the common version from v2.xx to be released in 2021 as summarized below.

Model	Version	Release		Version	Release
TZT9F	**V1.09**	Initial	➔➔➔		
TZT12F				V2.xx	Beg-2021
TZT16F	V1.08	Jun. 2020			
TZT19F					

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