PRODUCT SPECIFICATION

Doc. Number:

□Tentative Specification

□ Preliminary Specification

■ Approval Specification

MODEL NO: MC190GFL01,TPM

PN: 9BM19000-041 3ZTKJPUC01B(Z0461)

Date: 2025/3/12

Version: 1.6

Customer: DIVA

APPROVED BY **SIGNATURE**

設計驗證
工程課
2025 -06- 16
發行
鈺鐘科技開發股份有限公司

Name / Title

Note

Please return 1 copy for your confirmation with your signature and comments.

Approved By	Checked By	Prepared By
Steve.Lin	Hy.Chen	Ashley

Form No.：AI2RD-0003-17(V1)The copyright belongs to GIS. Any unauthorized use is prohibited.

Record of Revision

Version	Revise Date	Page	Content
1.0	2020/12/25	All	Initial release ,
1.1	2021/6/17	11	PN change from 0PM19000-01 to 9BM19000-001 Update TPM drawing Rev V2.2
1.2	2021/10/5	11	PN change from 9BM19000-001 to 9BM19000-011 Update TPM drawing Rev V2.3
1.3	2021/12/13	3	Add TPM SN label picture
1.4	2022/01/10	11	PN change from 9BM19000-011 to 9BM19000-021 Update TPM drawing Rev V2.4
1.5	2022/09/7	11	PN change from 9BM19000-021 to 9BM19000-031 Update TPM drawing Rev V3
1.5.1	2023/5/5	9 &11	Update shipping label and TPM drawing Rev V3.1
1.6	2025/3/12	11	PN change from 9BM19000-031 to 9BM19000-041 Update TPM drawing Rev V4

Form No.：AI2RD-0003-17(V1)The copyright belongs to GIS. Any unauthorized use is prohibited.

Contents

1. General Specifications 1
1.1. Touch Panel Module General Parameters 1
2. Mechanical Specifications 1
2.1. Stack-up structure 1
2.2. Product Label Definition 2
3. Touch Panel Specifications 3
3.1. General parameters of touch panel 3
3.2. Supply voltage and Power Consumption 3
3.3. Connector Pin Assignment 3
3.4 OS Support Matrix 4
3.5 TP Controller block Diagram 5
4. Reliability test specification 6
5. Safety and Attention 7
6. Packaging 9
6.1. Packaging Information 9
6.2. Shipping using pallet 10
7. Drawing 11
7.1. TPM drawing 11

Form No.：AI2RD-0003-17(V1)The copyright belongs to GIS. Any unauthorized use is prohibited.

1. General Specifications

Touch Panel Module General Parameters

General	
Touch Module Type	Projected Capacitive Type
Touch Cover Material	Glass
Touch Cover Color	Black
Touch Panel Module Outline	426.7mm x 362.7mm (w/o FPC)
Touch Active Area (Width x Height)	381.32mm x 306.06mm
Touch Window Visible Area	378.32mm x 303.06mm
Touch Window Surface Treatment	Etching AG
Chemical Strength	Cs>450Mpa,DOL>8um
AG Gloss	80 +/- 10
Haze	3%~8%
Transmission	85%
Reflection	<10%
Weight (g)	0.8kg
TPM Operate Temp.	0 ~ 50 °C
TPM Storage Temp.	-20 ~ 60 °C
Electrical	
IC solution (Model name)	EETI EXC81W84
Supply Voltage	5V
Interface	USB

2. Mechanical Specifications

Stack-up structure



The copyright belongs to GIS. Any unauthorized use is prohibited.

Item	Part Name	Thickness (mm)	Note
1	Cover Lens	1.8	Soda Lime Glass Etching CG/Gloss 80
2	OCA -1	0.1	
3	ITO Film-1	0.125	ITO Film
4	OCA -2	0.05	
5	ITO Film-2	0.125	ITO Film
Total		2.2	

Product Label Definition

TPM S/N label, product ID and bar-code stick on FPC.
bar-code + S/N label+ product ID code size is 30x10x0.05mm.



Example：YCT E2 0B 19129 00001

Character	Definition	Comment	Remark
1~3	Component Code	YCT	
4	Config code	Z: TPM K: TDM	
5	Plant code	1. E4 2.H3	
6~7	Phase code	0A: Proto 0B. EVT 0C: DVT 0D: MP	
8~9	Year	2019:19 2020:20	

Form No.：AI2RD-0003-17(V1)The copyright belongs to GIS. Any unauthorized use is prohibited.

The copyright belongs to GIS. Any unauthorized use is prohibited.

		…etc	
10~11	Month	Month：01,02,…,10,11,12	Generated by system
12	Day	Day:1,2,3,…9,A,…V,W,X (except I&O)	Generated by system
13~17	Serial number	5 digit (00001~99999)	Generated by system

3. Touch Panel Specifications

General parameters of touch panel

No	Item	Spec.	Remark
1	Structure type	GFF	
2	Sensing method	Capacitance	
3	Multi-touch support	10 points	
4	Control IC	EETI EXC81W84	
5	Channel numbers	TX: 40 ch, Rx: 50 ch	
6	Sensor Pitch	7.65mm x 7.65mm	
7	Interface	USB 2.0 compliant full speed with LPM L1 supported.	
8	Linearity	<+/- 1.5 mm	All area
9	Accuracy	<+/- 1.5 mm	All area
10	Jitter	<+/- 1.5 mm	All area
11	Report rate	>100 Hz	

Supply voltage and Power Consumption

Item	Symbol	Min	Typ	Max	Unit	Remark
Supply voltage	VDD	4.5	5.0	5.5	V	
Power Supply Current (Active mode)	IDD		84		mA	Base on FW tuning

Connector Pin Assignment

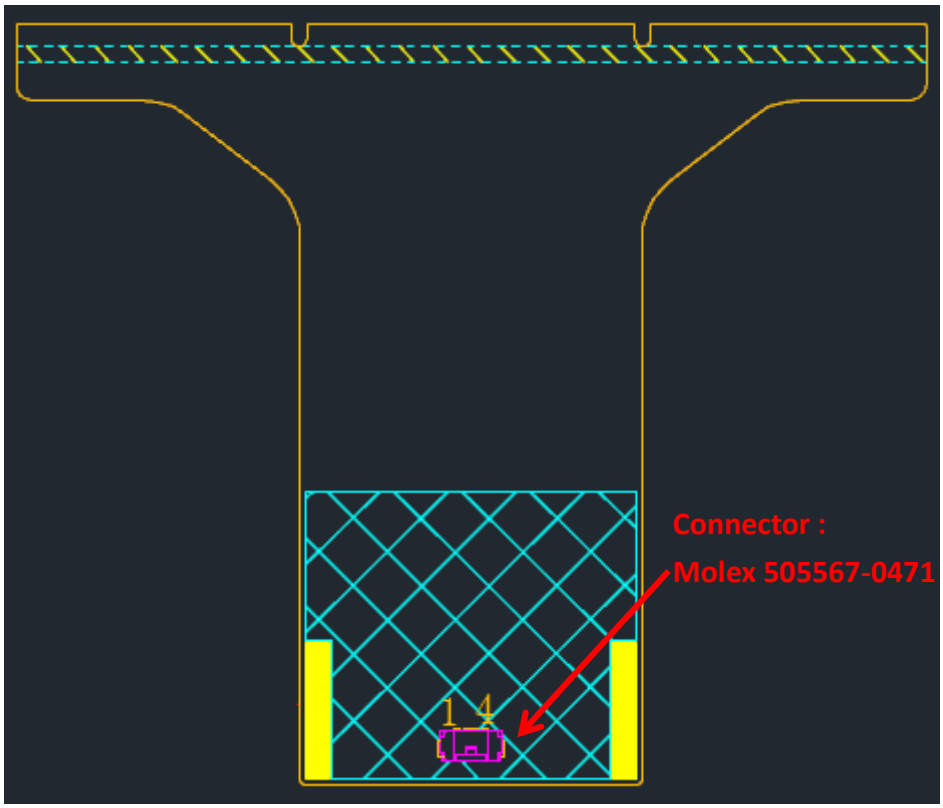
Connector Type: Molex 505567-0471

Pin#	Signal Name

The copyright belongs to GIS. Any unauthorized use is prohibited.

1	5V0_SYS
2	USB_TS_D-
3	USB_TS_D+
4	GND

Touch Panel FPC (top view)

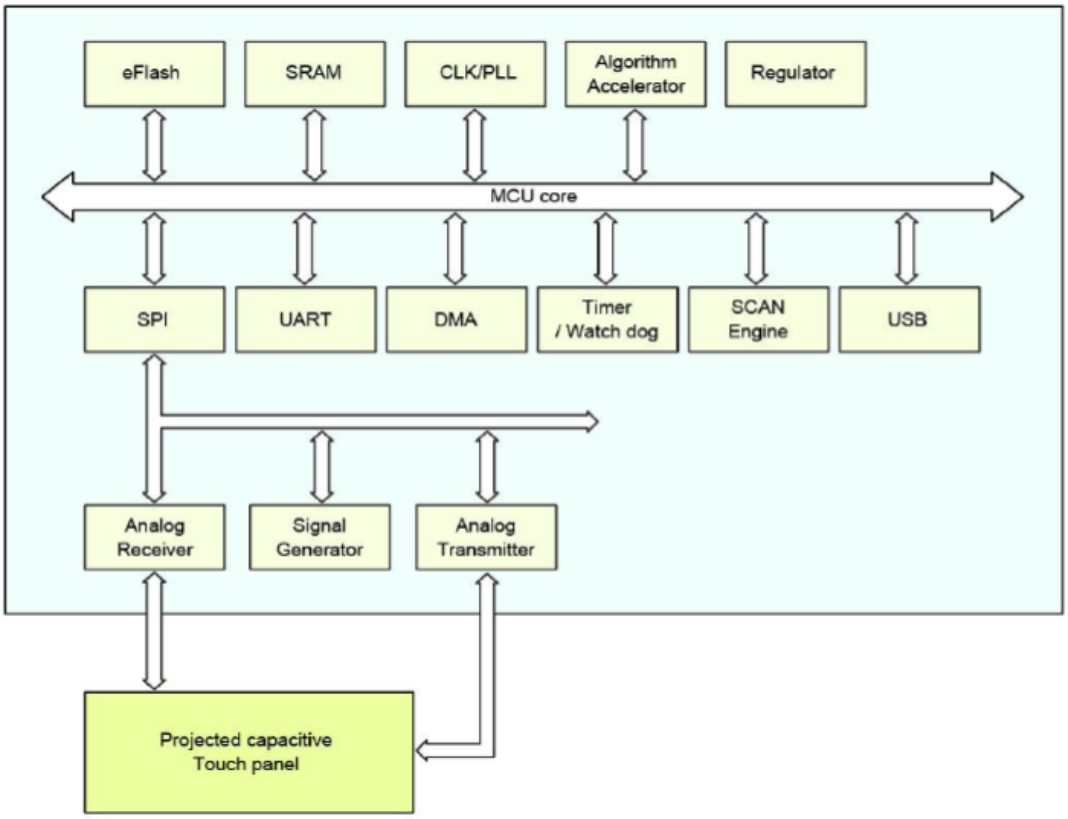


The copyright belongs to GIS. Any unauthorized use is prohibited.

OS Support Matrix

OS	Version	Interfaces
Windows	Windows 10 IOT (#1) / Windows 10 / Windows 8 / Windows 7 Windows Vista / Windows 2000 / Windows XP (#1: Windows 10 IOT: support it with inbox driver only) (#2: I2C interface: need additional system configuration)	USB / RS232 I2C (#2)
Win CE	Win Embedded Compact 2013 / Win Embedded Compact 7 WinCE 6 / WinCE.Net	USB / RS232
Linux	CentOS, Debian, Fedora, Gentoo, Mandrake (Mandriva), Meego, Red Hat, Slackware, SuSE (OpenSuSE), Ubuntu (Xubuntu) and Yellow Dog etc. *Support most 32/64 bit Linux distribution versions,* *including Kernel 2.6.x / 3.x.x / 4.x.x*	USB / RS232 I2C
Android	Android 2.3 to latest version	USB / I2C
Mac	OSX 10.7.5 to 10.12	USB
QNX	RTOS V6.3 to V6.6	USB/ I2C

TP Controller block diagram

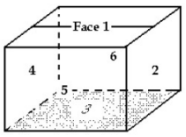


The copyright belongs to GIS. Any unauthorized use is prohibited.

4. Reliability test specification

Item	Conditions	Acceptance
High Temperature Storage	Ta = 60℃ 240h	- No permanent cosmetic damage after test - No functional failure after test
Low Temperature Storage	Ta = -20℃ 240h	- No permanent cosmetic damage after test - No functional failure after test
High Temperature Operation	Ts = 50℃ 240h	- No permanent cosmetic damage after test - No functional failure after test
Low Temperature Operation	Ta = -0℃ 240h	- No permanent cosmetic damage after test - No functional failure after test
High Temperature and Humidity (Power off)	60℃, 90%RH 240h	- No permanent cosmetic damage after test - No functional failure after test
Temperature Cycle	-25℃(30 mins)←→+70℃(30 mins) 50cycle	- No permanent cosmetic damage after test - No functional failure after test
Electro Static Discharge	Contact Mode electric discharge ± 8kV Air Mode electric discharge ±15kV Conditions: 150pF, 330ohm	- No permanent cosmetic damage after test - No functional failure after test
Vibration Test _ packaging box	The package is tested in four positions. See picture 1 and tabel 1 as bellow. 1. The first phase is the Face number 3 downward and it lasts 30 minutes; 2. Three other phases (Face1,Face2 or Face 5 or 6 downwards) last 10 minutes. Picture 1	- No permanent cosmetic damage after test - No functional failure after test

The copyright belongs to GIS. Any unauthorized use is prohibited.

	 Table 1 Break point / Frequency (Hz) / Amplitude (g²/Hz) / Slope (dB/Oct) 1 / 5.0 / 0.01 / 0.0 2 / 100.0 / 0.01 / -0.126xE+02 3 / 300.0 / 0.0001	
Drop Test _ packaging box	Drop test must be done 6 times at concrete floor. 1 corner, 3 edges, 6 sides. Height Settings : 1. Box weight 0.5kg-9.5kg Height 76cm 2. Box weight 9.5kg-18.5kg Height 61cm 3. Box weight 18.5-27.5kg Height 46cm	- No permanent cosmetic damage after test - No functional failure after test

[Note1]Ta=Ambient Temperature

[Note2]In the Reliability Test, Confirm performance after leaving in room temp.

[Note3]In the standard condition, there shall be no practical problems that may affect the Touch function 24 hours later after reliability test. After the reliability test, we can guarantee The production when the corrosion is causing its malfunction. The corrosion causing No functional defect can not be guaranteed

5. Safety and Attention

5.1. Prohibit put a heavy shock or stress on Touch Panel.

5.2. Don’t lift Touch Panel by FPC (Cable).

5.3. Please use dry clothes or soft clothes with neutral detergent or one with ethanol to clear surface. Forbid wiping the boundary between upper and lower ITO film

5.4. Don’t use any organic solvent acid or alkali solution

5.5. Don’t pile Touch Panel. Don’t put heavy goods on Touch Panel.

5.6. Don’t twist or pull the FPC (Cable) of Touch Panel for prevent happen to line cut failure.

5.7. Cover the protective film repeatedly could cause oil stain the panel.

5.8. Panel be attached protective film in long-term storage, the glue on it could stain the panel.

The copyright belongs to GIS. Any unauthorized use is prohibited.

5.9. Please pay attention for the matter as stated below at mounting design of Touch Panel and enclosure.

a. Enclosure support to fix Touch Panel must be out if View area.

b. We recommend the material of support to fix Touch Panel is elastic material.

c. Don’t bond top of surface (film) of Touch Panel W/O enclosure.

d. The corner parts have conductivity. Don’t touch any metal part after mounting.

5.10. The following are maximum values which, if exceeded, may cause faulty operation or damage to the unit.

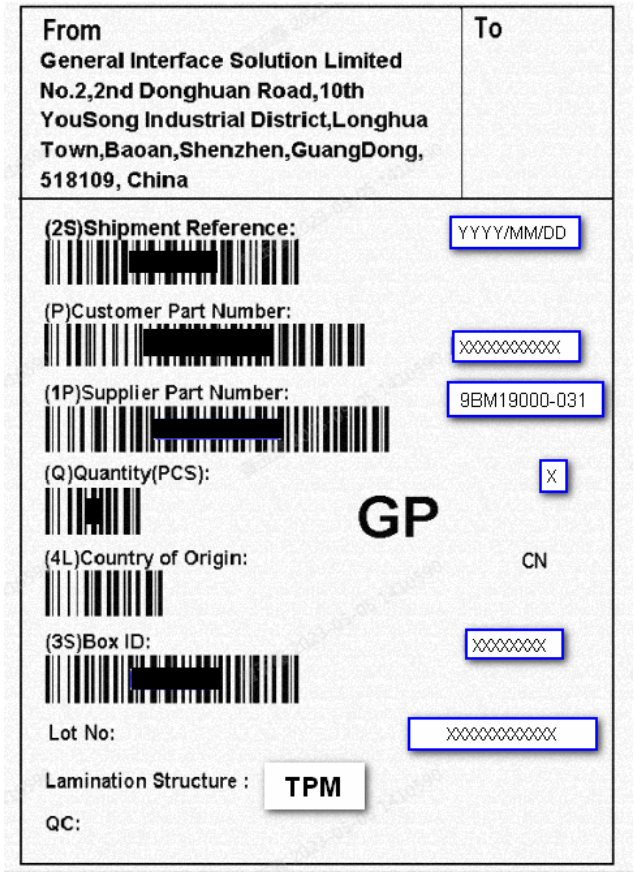
Item	Symbol	MIN.	MAX	Unit	Remark
Storage temperature	T_{stg}	-20	60	℃	
Operating temperature	T_{op}	0	50	℃	
Storage humidity	H_{stg}	5	90	%	Below 39℃ wet bulb temperature
Operating humidity	H_{op}	5	90	%	

The copyright belongs to GIS. Any unauthorized use is prohibited.

6. Packaging

Packaging Information

Shipping label definitions:



Note :

1. From :
2. (2S)Shipment Reference : YYYY/MM/DD
3. (P)Customer Part Number: XXXXXXXXXXX
4. (1P)Supplier Part Number : 9BM19000-XXX
5. (Q)Quantity(PCS) : X
6. (4L)Country of Origin : CN
7. (3S)Box ID :XXXXXXXX
8. LOT No:XXXXXXXXXXXX
9. Lamination Structure TPM

The copyright belongs to GIS. Any unauthorized use is prohibited.

Shipping using pallet

(1) Pallet dimension: 1100mm*1300mm

(2) Packaging Specification and Quantity

NO.	Module/Carton(pcs)	Carton/Floor	Floor/Pallet	Module/pallet (pcs)
Qty.	10	8	3	240

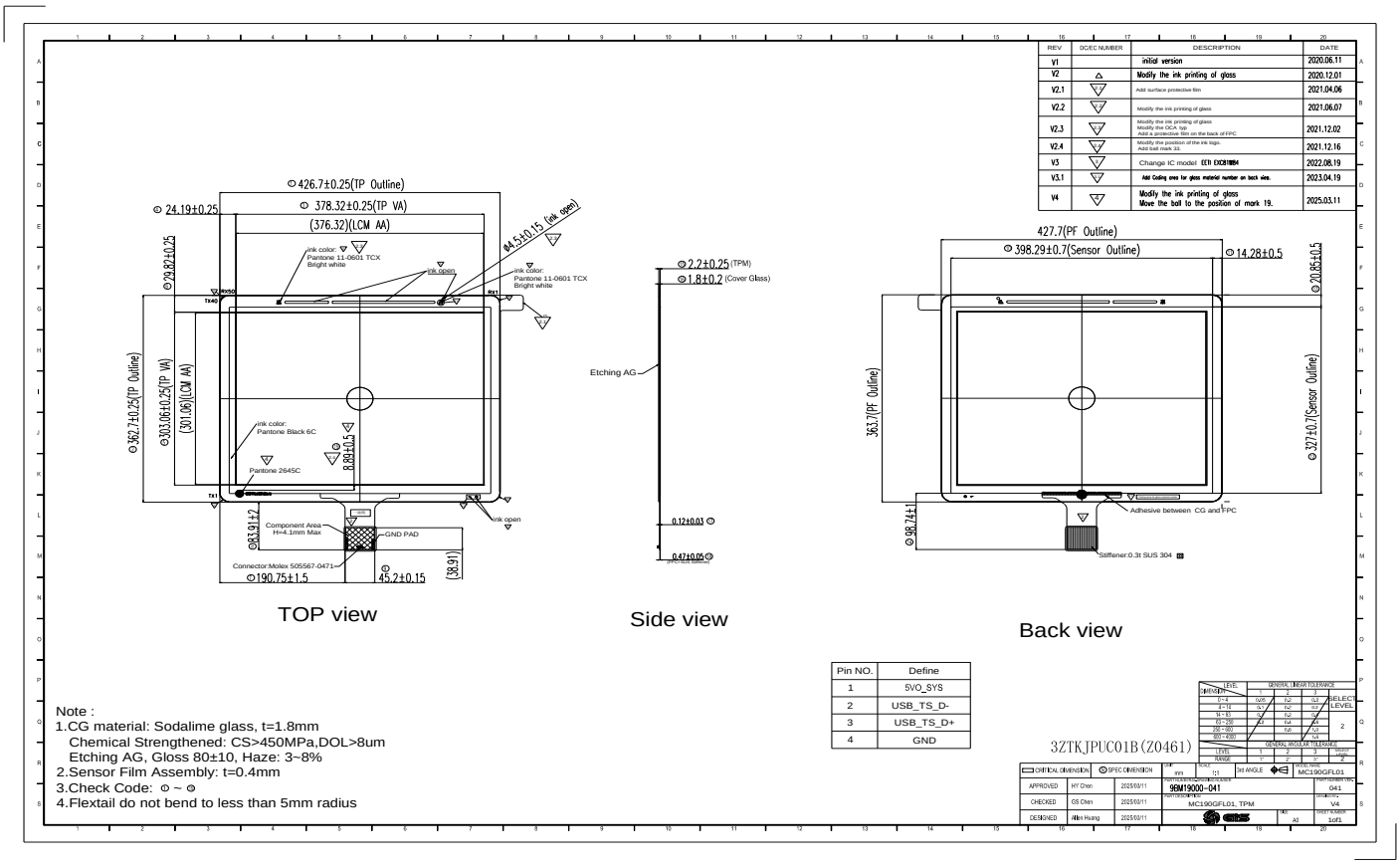
(3) PKG BOM List for Pallet

No	Item	Module (Material)	Dimensions(mm)	Quantity	Remark
1	Carton	Paper	547*315*493	1	
2	Cushion	EPE	305*160*150*50	4	
3	Anti-bag	PE	477*463*0.04	10	
4	Corner guard	Paper	900*50*50	8	
5.	Pallet	Wood	1100*1300*120	1	

Lily 19” PKG BOM List for Pallet

The copyright belongs to GIS. Any unauthorized use is prohibited.

7. TPM Drawing



設計驗證
工程課
2025 -06- 16
發行

The copyright belongs to GIS. Any unauthorized use is prohibited.