

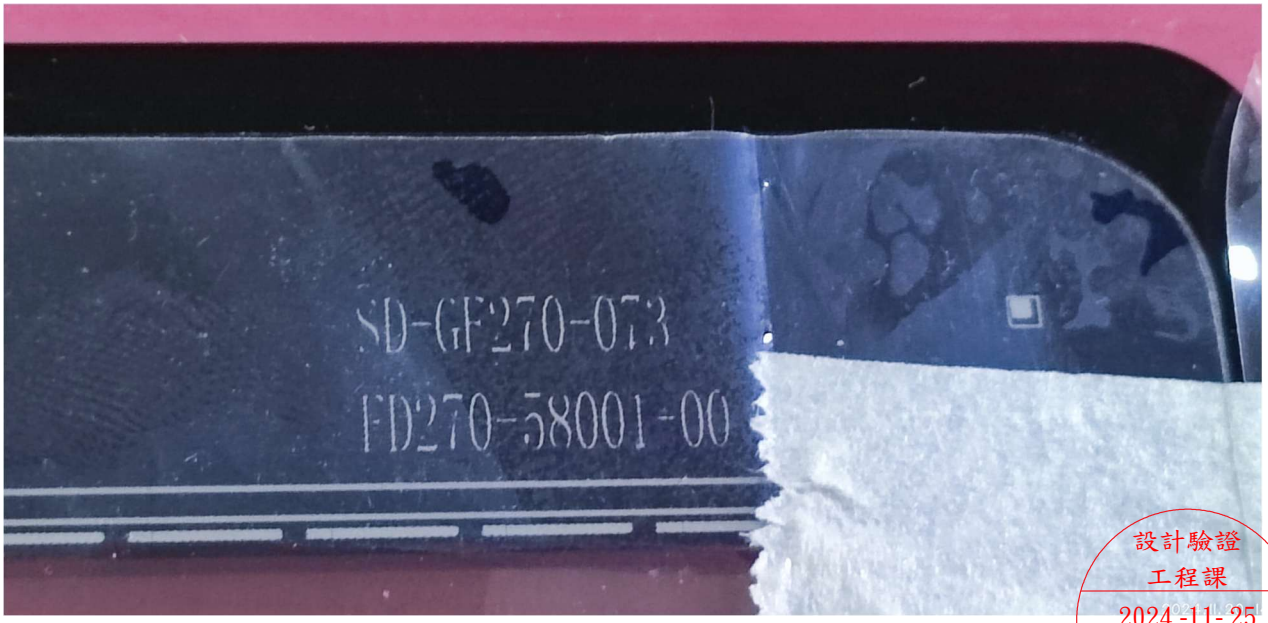

設計驗證
工程課
2024-11-25
發行
鈺緯科技開發股份有限公司



Doc. Number:

□ Tentative Specification

▩ Preliminary Specification

□ Approval Specification

MODEL NO:QC270GFT03

PN: 9AQ27009-001 3ZTSPQP0M13(Z0538)

Date: 2023/12/28

Version: 2.0

Customer:

APPROVED BY **SIGNATURE**

Name / Title

Note

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Approved By	Checked By	Prepared By
HS	HY	Sam

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Record of Revision

Version	Revise Date	Page	Content
1.0	2022/12/15	All	Initial release
2.0	2023/12/28	3	Add drawing PN

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1. General Specifications

1.1. Touch Window General Parameters

General					
Touch Module Type	CTP				
Touch Module Material	GFF				
Touch Module Outline	652.08 x 404.7x 2.425(mm)				
Touch Active Area (Width x Height)	602.6 x 341.15 (mm)				
Touch Window Visible Area	599.6 x 338.15 (mm)				
Weight (g)	1500g				
Surface Hardness	≥ 7H				
AG Gloss	80+/-10 Spray				
Electrical					
IC Supply Voltage	5 V				
Interface	USB				
Touch fingers	10				
Optical					
ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Transmission	T_w	86	88	--	%
Reflection	R_w	--	--	10	%
Haze	H	--	--	15	%

Table 1: General parameters of touch module

Note

Operation temperature: Module performance is according to specifications.

Storage temperature: Temperature area limits for module storage and transportation.

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2. Mechanical Specifications

2.1. Mechanical Outline Dimension

Stack-up Structure:

Mass	TBD (approx.)
TP module outline dimension (typ)	652.08 x 404.7x 2.425(mm)
Viewing area	599.6 x 338.15 (mm)
Active touch area	602.6 x 341.15 (mm)
Weight	1500(g)

Table 2: Mechanical outline dimensions

Item	Part Name	Thickness	Remark
1	Cover Glass	2.0mm	
2	OCA 1	0.125mm	
3	Sensor Film-1	0.125mm	
4	OCA2	0.05mm	
5	Sensor Film-2	0.125mm	
	Total Thickness	2.425 mm	

Table 3: Stacking Structure

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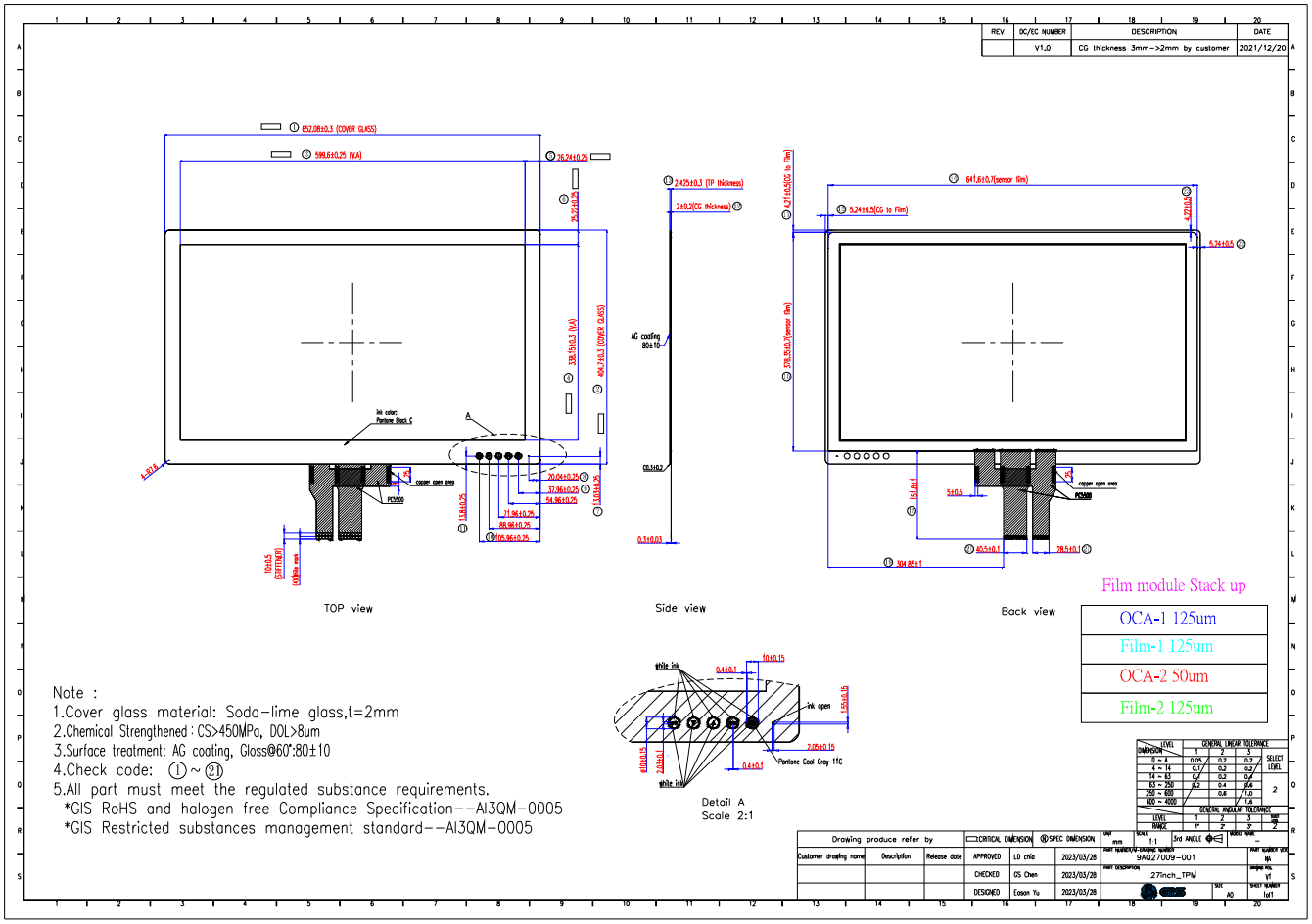

Figure 1: Mechanical outline drawing

3ZTSPQP0M13(Z0538)

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2.2. Product Label Definition

Note
S/N label, product ID and 2D bar-code stick on FPC.
2D bar-code + S/N label+ product ID code

Example： YCT E1 01 14129 00001 1

Character	Definition	Comment	Remark
1~3	Vender Code	YCT	
4	Size code	D: 27”	
5	Plant code	1: E4	
6~7	Phase code	0A: Proto	
8~9	Year	2014:14 2015:15 …etc	
10~11	Month	Month：01,02,…,10,11,12	Generated by system
12	Day	Day:1,2,3,…9,A,…V,W,X	Generated by system
13~17	Serial number	5 digit (00001~99999)	Generated by system

Table 4: Label definition

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3. Electrical Characteristics

3.1. Touch Panel Power Specification

Item	Symbol	Specification			Unit	Remark
		Min.	Typ.	Max.		
Supply voltage	VDD3	3.5	5	5.5	V	
Power Supply Current (Active mode)	I_{act}	-	TBD	-	mA	Note

Note: Base on FW: TBD

Table 5: Touch panel power specification

3.2. Touch Panel General Specification

No	Item	Spec.	Remark
1	Structure type	GFF	
2	Sensing method	Capacitance	
3	Multi-touch support	10 points	
5	Channel numbers	TX: 44 ch, Rx: 78 ch	
6	Sensor Pitch	7.7mm x 7.7mm	
7	Interface	USB	
8	Linearity	<+/- 1.5 mm	
9	Accuracy	<+/- 1.5 mm	
10	Jitter	<+/- 1.5 mm	
11	Report rate	>100 Hz	

Note: Base on EETI EXC84H5680STAG control board with 9mm brass stylus, FW:TBD

Table 6: Touch general specification

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4. Touch Panel Pin Assignment

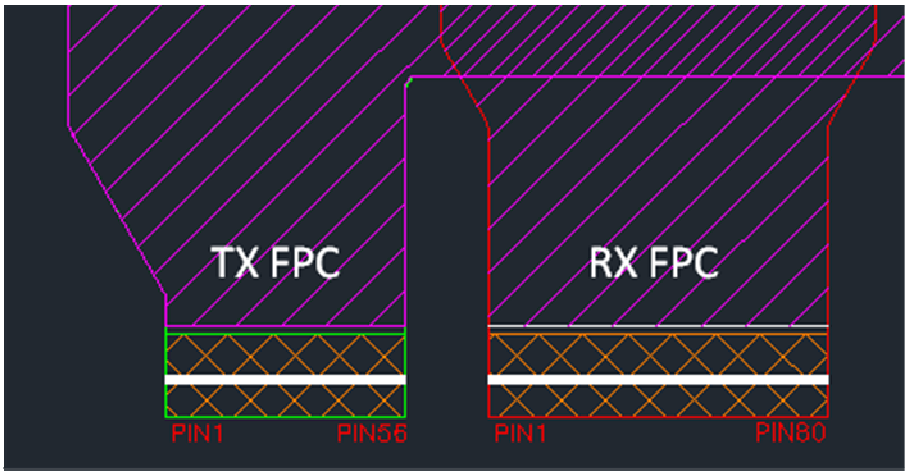

Figure 3: Touch module FPC

TX FPC (Pin1~pin56)

1	NC	21	TX34	41	TX14
2	NC	22	TX33	42	TX13
3	NC	23	TX32	43	TX12
4	NC	24	TX31	44	TX11
5	NC	25	TX30	45	TX10
6	NC	26	TX29	46	TX9
7	NC	27	TX28	47	TX8
8	NC	28	TX27	48	TX7
9	NC	29	TX26	49	TX6
10	TX_shielding 1	30	TX25	50	TX5
11	TX44	31	TX24	51	TX4
12	TX43	32	TX23	52	TX3
13	TX42	33	TX22	53	TX2
14	TX41	34	TX21	54	TX1
15	TX40	35	TX20	55	TX_shielding 0
16	TX39	36	TX19	56	NC
17	TX38	37	TX18		
18	TX37	38	TX17		
19	TX36	39	TX16		
20	TX35	40	TX15		

Table 7: TX FPC Pin assignment

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RX FPC (Pin1~pin80)

1	RX_shielding 1	21	RX59	41	RX39	61	RX19
2	RX78	22	RX58	42	RX38	62	RX18
3	RX77	23	RX57	43	RX37	63	RX17
4	RX76	24	RX56	44	RX36	64	RX16
5	RX75	25	RX55	45	RX35	65	RX15
6	RX74	26	RX54	46	RX34	66	RX14
7	RX73	27	RX53	47	RX33	67	RX13
8	RX72	28	RX52	48	RX32	68	RX12
9	RX71	29	RX51	49	RX31	69	RX11
10	RX70	30	RX50	50	RX30	70	RX10
11	RX69	31	RX49	51	RX29	71	RX9
12	RX68	32	RX48	52	RX28	72	RX8
13	RX67	33	RX47	53	RX27	73	RX7
14	RX66	34	RX46	54	RX26	74	RX6
15	RX65	35	RX45	55	RX25	75	RX5
16	RX64	36	RX44	56	RX24	76	RX4
17	RX63	37	RX43	57	RX23	77	RX3
18	RX62	38	RX42	58	RX22	78	RX2
19	RX61	39	RX41	59	RX21	79	RX1
20	RX60	40	RX40	60	RX20	80	RX_shielding 0

Table 8: RX FPC Pin assignment

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5. Reliability test specification

REL test spec. is temporarily defined for sample verification. Will revise if the pre-defined spec. is not committable.

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	Ta = 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(No operation)	60℃, 90%RH 240h	- No permanent cosmetic damage after test - No functional failure after test
Thermal Cycle Test (No operation)	-20℃, 30min => 60℃, 30min, 50 cycles	- No permanent cosmetic damage after test - No functional failure after test
FPC Peeling Test (TP module only)	50mm/min, Inspect visual and electrical at 5N peeling until mechanical failure occur, record the failure force, 90° data need 	After 5N peeling, the touch panels should not have any visual, mechanical or electrical damage.

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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(with carton)	2 hours for each direction of X. Y. Z. (6 hours for total) 1.Settings : Acceleration : 2.0 G Frequency range : 10 ~ 100 Hz or 2.Random Vibration : 0.015G*G/Hz from 5 ~ 200 Hz, -6 dB/Octave from 200 ~ 500 Hz	- No permanent cosmetic damage after test - No functional failure after test
Drop(with carton)	Drop height condition , basis on the product weight and , 1corner , 3 edges , 6 surfaces Drop Height 61cm	- 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 Display 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

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6. Safety and Attention

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

6.2. Don't lift Touch Panel by FPC (Cable).

6.3. 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

6.4. Don't use any organic solvent acid or alkali solution

6.5. Don't pile Touch Panel. Don't put heavy goods on Touch Panel.

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

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

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

6.9. 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.

6.10. When test or assembly sample, must first connect the FPC cable to PCBa, and then connect the USB cable; When remove the sample, must first disconnect the USB cable, and then remove the FPC cable from PCBa.

6.11. When sample is power on (or under test), the hand of an operator should avoid direct contact with the electronic components on the PCBa.

6.12 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	℃	

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Storage humidity	H_{stg}	10	90	%	Below 39℃ wet bulb temperature
Operating humidity	H_{op}	10	90	%	

Table 9: TPM Absolute maximum ratings

Note: The environment is of normal atmosphere pressure.

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7. Packaging

7.1. Packaging Material

(1) GIS-Shipping label definitions:

Delivery address	Receive address
Date bar-code	Date
Product PN bar-code	Product PN
Quantity bar-code	Quantity
Box ID bar-code	Box ID
QC	QC seal

Table 13: Shipping label definition

(2) Customer-Shipping label definitions:

廠商名稱	GIS
原廠料號	9AQ27009-001
訂單編號	
鈺緯料號	3ZTSPQPOM13 (Z0538)
品名規格	D2-27” P-cap
數量	以pcs為單位
生產日期	
交貨日期	

Table 14: Shipping label definition

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7.2. Shipping using pallet

(1) Plane dimension:

1200X800X120mm

(2) 包裝數量規格表(Packaging Specification and Quantity)

NO	Module/EPE cushion (pcs)	Module/carton (pcs)	Carton/ floor(pcs)	Module/ floor(pcs)	Floor/ pallet	Module/pallet (pcs)
數量	10	10	4	4*10=40	2	40*2=80

Table 15: Packaging Specification and Quantity

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