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Control Board Product Specification	
Product Description	Capacitive Touch Panel Control Board
Product Content	SiS9596 x 4 + SiS9202 x 2
Part Number	56042FAAA
Revision	1.4

Approved by	Reviewed by	Prepared by



Revision History

Date	Revision	Description
2020.4.30	1.0	Initial Release
2020.7.30	1.1	1. Update Control Board Physical Appearance content 2. Update USB/UART Connector Pin Define content 3. Update FPC Connector Pin Assignment content
2021.3.8	1.2	1. Update FPC Connector Pin Assignment content
2023.9.12	1.3	1. Update Support Operation System content
2024.3.26	1.4	1. Update General Information & Specifications content 2. Update FPC Connector Pin Assignment content



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1. General Information & Specifications

Items	Description
Interface(Note1)	Standard USB 1.1 Full Speed Compliant / UART
Power Supply	5V(+/- 5% DC)
Power Consumption(Note2)	TBD mA(Typ. @25°C) / TBD mA(Max. @25°C)
Channel Number	TX : 80(Max.) / RX : 156(Max.)
Support Size(Note3)	65"(Max.)
Operating Temperature	- 40°C ~ +85°C
Storage Temperature	- 40°C ~ +90°C
Relative Humidity	95% at 60°C, RH Non-Condensing
Compliance	RoHS / REACH
Control Board Dimension	176mm(L) x 53mm(W) x 6.95mm(H)(Typ.)
Control Board Weight	≅ 39g
Resolution	4096 x 4096
Report Rate(Note4)	> 100Hz
Response Time(Note5)	Average ≤ 35ms
Linearity(Note6)	≤ +/- 2.0mm(Center) / ≤ +/- 2.5mm(Edge)
Accuracy(Note6)	≤ +/- 2.0mm(Center) / ≤ +/- 2.5mm(Edge)

Note :

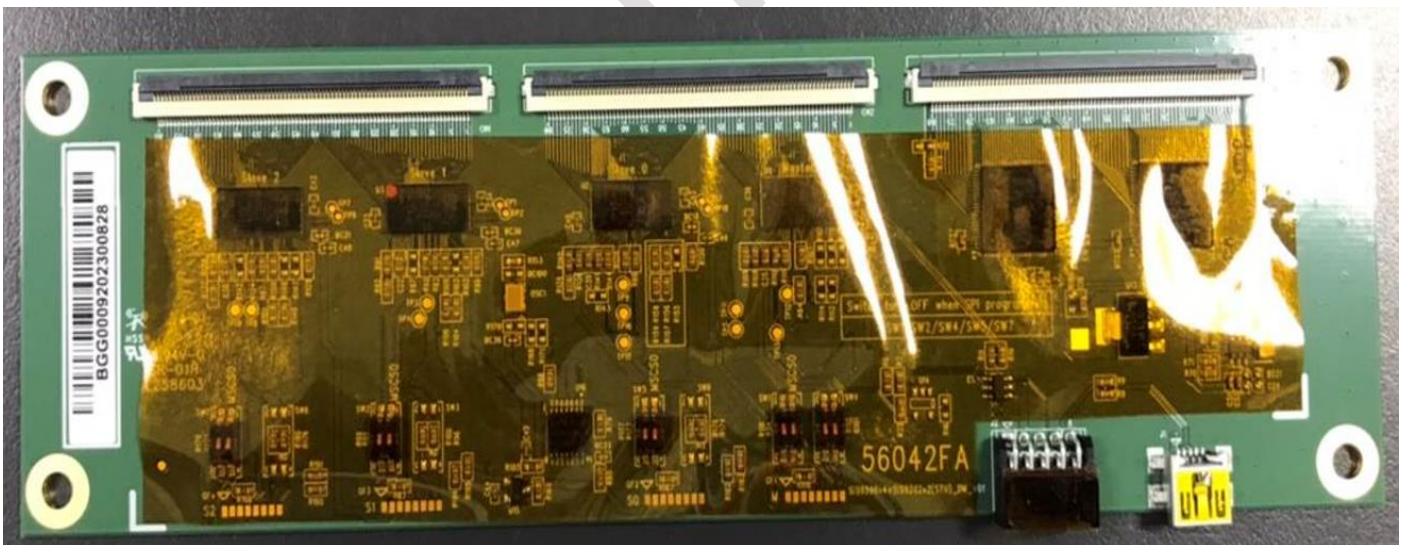
1. UART_TX and UART_RX signal level are 3.3V, and it only supports to report coordinate function.
2. For USB interface, based on maximum channel number and F/W parameters.
3. Depending on channel number and touch performance requirements.
4. 10 touch points, depending on channel number and F/W parameters.
5. It's defined as the period between contact with the digitizer and input report being received by the host. It's also related to F/W parameters.
6. Depending on sensor pitch size and F/W parameters.



2. Support Operation System

OS	Version	Touch Point	Interface
Windows	Win10	Multi - Touch	USB
	Win8		
	Win7		
	WinXP	1 Finger - Touch	USB
	WinCE 6	1 Finger - Touch	USB/I2C
	WinCE 7	Multi - Touch	USB/I2C
Linux	Android 4.0~7.0	Multi - Touch	USB/I2C
	Ubuntu 12.04~16.04	Multi - Touch (kernel 3.0 and later)	USB
	Fedora 17~27		
	Debian 7~9	1 Finger - Touch	
	CentOS 6~7		
	RHEL 6~7		
	SUSE 11/12/13/42		
Mac	10.14~13.x	Multi - Touch	

3. Control Board Physical Appearance

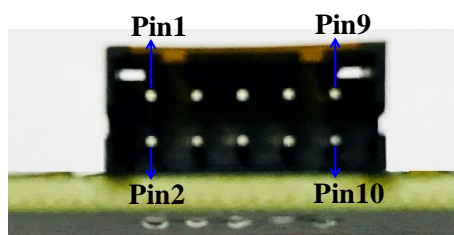




4. USB/UART Connector Pin Define

J1 : Mini – USB(MSB-SWE37S30CR-5AB-LF)			
Pin	Symbol	Type	Description
1	VBUS	Power	5V Input Power Pin
2	D-	Signal	5V level USB Signal
3	D+	Signal	5V level USB Signal
4	ID	Power	Ground Connection
5	GND	Power	Ground Connection

J2 : Aces-10P-P2.0(59012-0100N-003)			
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Pin	Symbol	Type	Description
1	GND	Power	Ground Connection
2	GND	Power	Ground Connection
3	5V	Power	5V Input Power Pin
4	5V	Power	5V Input Power Pin
5	GND	Power	Ground Connection
6	GND	Power	Ground Connection
7	D+	Signal	5V level USB Signal
8	UART_TX	Signal	3.3V level UART Signal
9	D-	Signal	5V level USB Signal
10	UART_RX	Signal	3.3V level UART Signal

5. FPC Connector Pin Assignment

CON1(Hirose_TF06L-80S-0.5SH)															
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	RX78	RX77	RX76	RX75	RX74	RX73	RX72	RX71	RX70	RX69	RX68	RX67	RX66	RX65	RX64
Pin	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	RX63	RX62	RX61	RX60	RX59	RX58	RX57	RX56	RX55	RX54	RX53	RX52	RX51	RX50	RX49
Pin	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	RX48	RX47	RX46	RX45	RX44	RX43	RX42	RX41	RX40	RX39	RX38	RX37	RX36	RX35	RX34



Pin	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	RX33	RX32	RX31	RX30	RX29	RX28	RX27	RX26	RX25	RX24	RX23	RX22	RX21	RX20	RX19
Pin	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	RX18	RX17	RX16	RX15	RX14	RX13	RX12	RX11	RX10	RX9	RX8	RX7	RX6	RX5	RX4
Pin	76	77	78	79	80										
	RX3	RX2	RX1	GND	GND										

CON2(Hirose_TF06L-80S-0.5SH)															
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GND	GND	RX156	RX155	RX154	RX153	RX152	RX151	RX150	RX149	RX148	RX147	RX146	RX145	RX144
Pin	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	RX143	RX142	RX141	RX140	RX139	RX138	RX137	RX136	RX135	RX134	RX133	RX132	RX131	RX130	RX129
Pin	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	RX128	RX127	RX126	RX125	RX124	RX123	RX122	RX121	RX120	RX119	RX118	RX117	RX116	RX115	RX114
Pin	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	RX113	RX112	RX111	RX110	RX109	RX108	RX107	RX106	RX105	RX104	RX103	RX102	RX101	RX100	RX99
Pin	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	RX98	RX97	RX96	RX95	RX94	RX93	RX92	RX91	RX90	RX89	RX88	RX87	RX86	RX85	RX84
Pin	76	77	78	79	80										
	RX83	RX82	RX81	RX80	RX79										

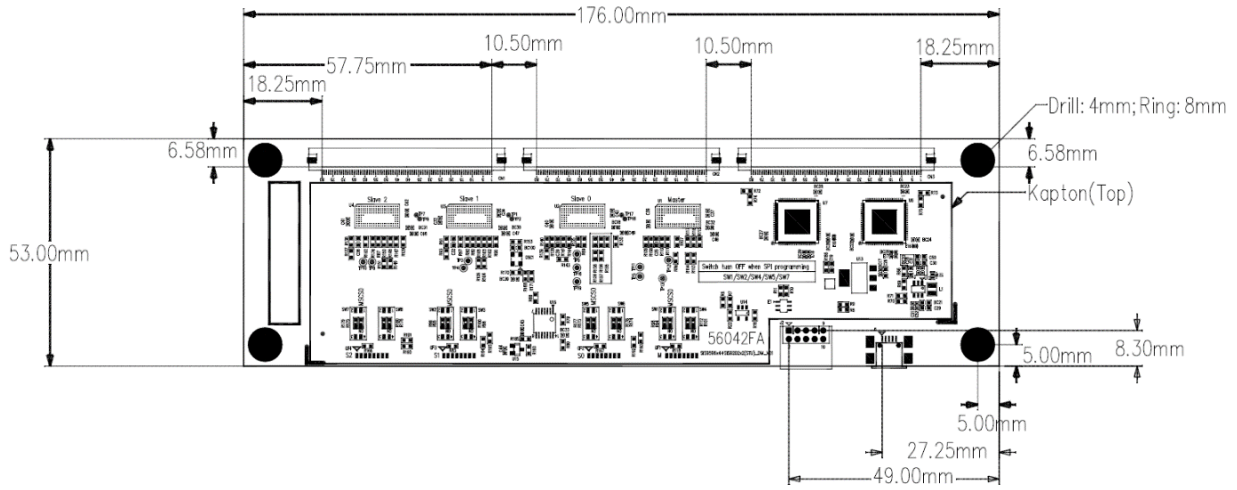
CON3(Hirose_TF06L-80S-0.5SH)															
Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	TX1	TX2	TX3	TX4	TX5	TX6	TX7	TX8	TX9	TX10	TX11	TX12	TX13	TX14	TX15
Pin	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	TX16	TX17	TX18	TX19	TX20	TX21	TX22	TX23	TX24	TX25	TX26	TX27	TX28	TX29	TX30
Pin	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	TX31	TX32	TX33	TX34	TX35	TX36	TX37	TX38	TX39	TX40	TX41	TX42	TX43	TX44	TX45
Pin	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	TX46	TX47	TX48	TX49	TX50	TX51	TX52	TX53	TX54	TX55	TX56	TX57	TX58	TX59	TX60
Pin	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	TX61	TX62	TX63	TX64	TX65	TX66	TX67	TX68	TX69	TX70	TX71	TX72	TX73	TX74	TX75
Pin	76	77	78	79	80										
	TX76	TX77	TX78	TX79	TX80										

Note :

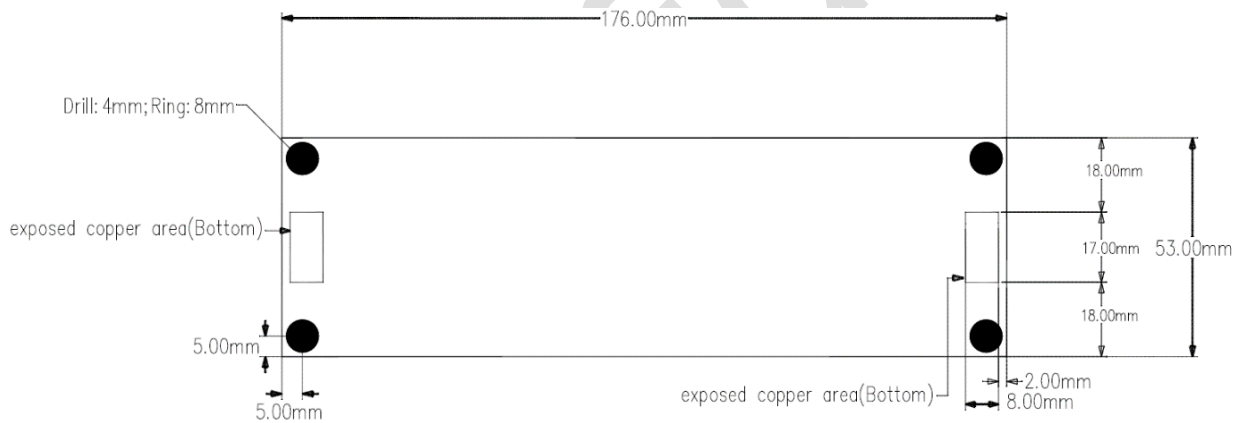
1. All TX channel could be defined as sensor pin or dummy pin by F/W setting, Max. TX supports 80ch.
2. All RX channel could be defined as sensor pin or dummy pin by F/W setting, Max. RX supports 156ch.
3. Applicable 80-pin FPC thickness spec. : 0.3 +/- 0.03 mm.
4. Applicable 80-pin FPC length spec. : 40.5 +/- 0.05 mm.

6. Control Board Drawing & Stacking

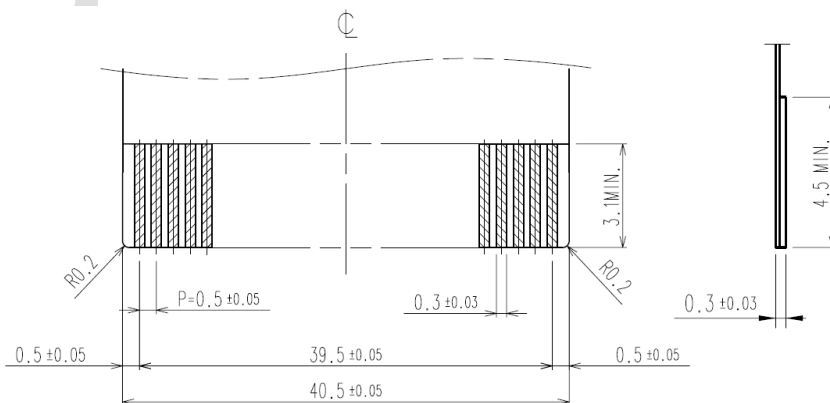
Component Side(Top View)



Bottom Side(Top View)

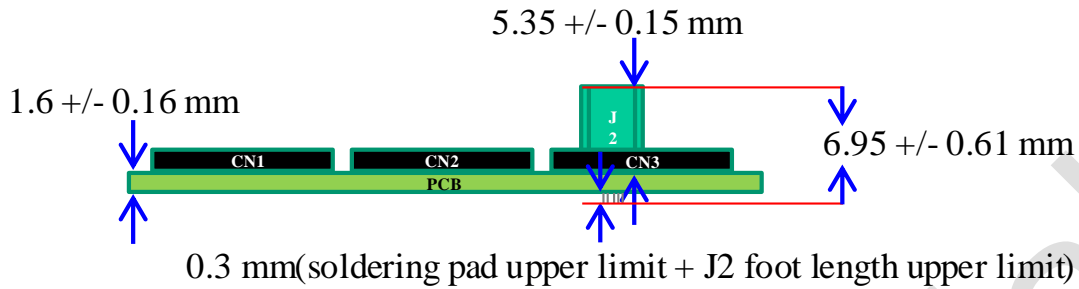


80-Pin FPC Recommend Size & Thickness





COB Stacking Diagram



Dimension	(176mm+/-0.45mm) x (53mm+/-0.35mm) x (6.95mm+/-0.61mm)	
Stacking	PCB : 1.6mm	J2 Connector : 5.35mm
Drill Hole Tolerance	+/- 0.1mm	

Note :

0.61mm = 0.15mm(J2 height upper limit) + 0.16mm(PCB thickness upper limit) + 0.3mm(soldering pad upper limit + J2 foot length upper limit)

7. Ordering Information

Standard Parts

Type : 56042FAAA-1

SiS



Description	56042FAAA -1
(1)	(1) SiS control board part number
(2)	(2) SiS internal control code

Special Parts

Type : 56042XXXXXXXXXXFAAA-1

SiS



Description	56042 XX XX XX XX FAAA -1
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	(1a)	(2)	(3)	(4)	(5)	(1b)	(6)
(1a)+(1b)	SiS control board part number						
(2)	Customer code or TP vendor code						
(3)	F/W version						
(4)	Brand name / Project name / LCD resolution						
(5)	TP size						
(6)	SiS internal control code						

Note :

Please contact SiS sales for details if you need special parts.