MULTI-INNO TECHNOLOGY CO., LTD.

http:// www.multi-inno.com

TOUCH PANEL SPECIFICATION

Model   : MI0800CDP-C

Customer :

Approved	
Commont	

Revision	1.0
Engineering	
Date	2013-07-03
Our Reference	

REVISION RECORD

REV NO.	REV DATE	CONTENTS	REMARKS
1.0	2013-07-03	First Release	

CONTENTS

■ APPLICATION

DVD player, UMPC, POS, MID

■ GENERAL SPECIFICATIONS

Composition: 8inch Capacitive Touch Panel (CTP).
Interface: I^2C for the CTP.

Item	Specification	Unit
Type	Transparent type projected capacitive touch panel	
Input mode	Human's finger	
Finger	5	
Resolution	1024x768	dots
Outline Dimension	194.8(W) x 150.4(H) x 1.4(D)	mm
Sensor Active Area	163(W)(typ.) x122.5(H)(typ.)	mm
Transparency	≧85%	%
Haze	≦5.0%	%
Hardness	7H (typ.)[by JIS K5400]	Pencil hardness
Weight	89	g
Report rate	Max：122	Points/sec
Response time	15	ms
Point hitting life time	1,000,000 times min.	Note 1

Note 1: Use 8 mm diameter silicon rubber/force 3N to knock on the same point twice per second

(no-operating), after test function check pass.
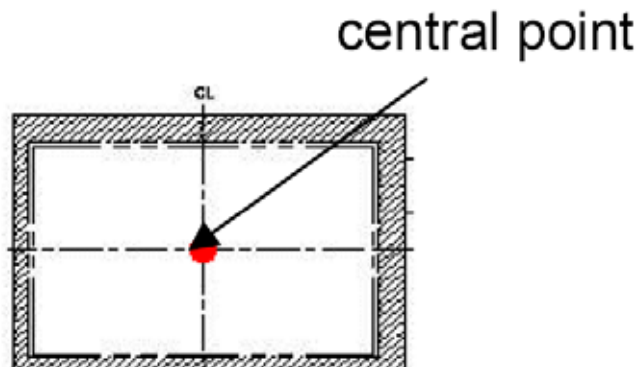
■ ABSOLUTE MAXIMUM RATINGS

Symbol	Description	Min	Typ	Max	Unit	Notes
VCC	Supply voltage	-0.3	-	3.6	V	
V_{IO}	DC input voltage	-0.3	-	VCC+0.3	V	

■ ELECTRIACL CHARACTERISTICS

| Symbol	Description	Min	Typ	Max	Unit	Notes
VCC	Supply voltage	2.6	3.3	3.6	V	
GND	Supply voltage	-	0	-	V	
I	Active Mode	-	10		mA	At VCC=3.3V
V_{IH}	Input H voltage	1.6	-	2.0	V	
V_{IL}	Input L voltage	-	-	0.7	V	
	System clock frequency	-	30	-	MHz	

■ TIMING SPECIFICATIONS

1. CTP Interface and Data Format [Slave address is 0x5D(7 bit addressing)]

Communication protocol : I2C
Clock frequency : 100Khz （400Khz Fast mode）
Below is timing of I2C hardware circuit:
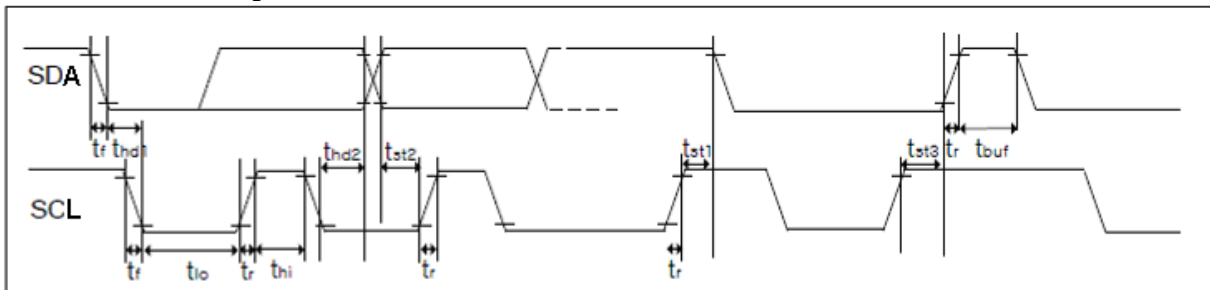
Parameter	Symbol	Min	Max	Unit
SCL frequency	f_{sck}	-	600	KHZ
SCL low period	t_{lo}	0.8	-	us
SCL high period	t_{hi}	0.5	-	us
SCL setup time for START condition	t_{st1}	0.4	-	us
SCL setup time for STOP condition	t_{st3}	0.4	-	us
SCL hold time for START condition	t_{st1}	0.4	-	us
SDA setup time	t_{st2}	0.5	-	us
SDA hold time	t_{st2}	0.2	-	us

2. Timing Characteristic

The address of GT827's slave device is 0xBA/0xBB. When master CPU addressing GT827, it will send read and write control bits simultaneously where are appended to slave device ("0"- write; "1"- read) for composing a byte with device address. i.e.: 0xBA – conduct write operation to GT827; 0xBB – conduct read operation to GT827.

2.1 Postfix Communication:

Only after receiving postfix signal (under the condition of no external signal), can GT827 update coordinate in buffer in real time. After completing communication, I2C needs to send extra postfix signal. But if a series of communication appear, the postfix signal should be sent after the last one finished (except the coordinate reading process, the postfix signal could be sent after finishing reading a frame, so as to prevent output buffer to be changed by GT827 during the read process of master device). Below is the communication format of postfix: Use write process to search register addressing (0x8000), and send stop signal.

2.2 Data Transmission:

The communication usually is launched by master CPU. When SCL keeps "1" SDA manages the change from "1" to "0". Then the address information or data stream begins to transmit after start signal.

Any slave device connected with I2C circuit needs to check 8 bits address information after circuit launches start signal and respond correctly. After receiving the matching address information, GT827 will update SDA as an output and set the value as "0" for answering signal in the ninth clock cycle. The GT827 will lay idle if matching address information is unavailable (neither 0XBA nor 0XBB).

The SDA port sends the data with 9 bits serial data according to nine clock cycles. The 8 valid data + 1 receiver send ACK (acknowledgement signal) or NACK (negative acknowledgement signal). It is valid when SCL is "1" during the data transmission.

The main CPU sends stop signal after transmission where SDA manages the change from "0" to "1" when SCL stays "1".

2.3 Write operations to I²C slave
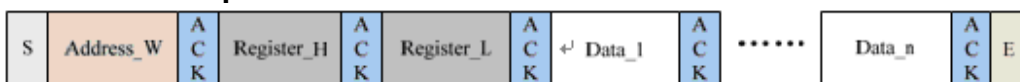
Write operations

Above is the flow chart of master CPU conducting write process for GT827. Master CPU launches a start signal and sends address, write and read information ("0" means write process -- 0XBA).

After receiving response，master CPU sends 16 bits address of register and writes 8 bits into register

The address pointer of GT827's register will automatically increase 1 in write process. So it can continuously write continuation register address at a time. If write process is done, master CPU sends stop signal.

2.4 Read operations to I²C slave

Read operation

Above is the flow chart of master CPU conducting read process for GT827. Master CPU launches a start signal and sends address, write and read information ("0" means read process -- 0XAA).

Once receives acknowledgement signal, master CPU sends 16 bits register address information and sets the read-demanding register address. Then master CPU resends a start signal for read process (0XAB). It begins to read data until receiving acknowledge.

Likewise, GT827 can conduct continuation read process. Master CPU will correspondingly send an acknowledgement signal to indicate successful byte reception. And CPU will send "NACK" once receiving the last byte to stop transmission.

3. Register information

Addr	R/W	Name	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0XF40	R	Touch Flags	Buffer Status		L_touch	P4	P3	P2	P1	P0
0XF41	R	Touch key	Reserved				Key4	Key3	Key2	Key1
0XF42	R	Point0	Point0 X H							
0XF43	R		Point0 X L							
0XF44	R		Point0 Y H							
0XF45	R		Point0 Y L							
0XF46	R	Point1	Point0 Size							
0XF47	R		Point1 X H							
0XF48	R		Point1 X L							
0XF49	R		Point1 Y H							
0XF4A	R		Point1 Y L							
0XF4B	R		Point1 Size							
0XF4C	R	Point2	Point2 X H							
0XF4D	R		Point2 X L							
0XF4E	R		Point2 Y H							
0XF4F	R		Point2 Y L							
0XF50	R		Point2 Size							
0XF51	R	Point3	Point3 X H							
0XF52	R		Point3 X L							
0XF53	R		Point3 Y H							
0XF54	R		Point3 Y L							
0XF55	R		Point3 Size							
0XF56	R	Point4	Point4 X H							
0XF57	R		Point4 X L							
0XF58	R		Point4 Y H							
0XF59	R		Point4 Y L							
0XF5A	R		Point4 Size							
0XF5B	R	Coor checksum	Coordinate checksum							
0XF5C~ 0XF7C	-	NC	Reserved							
0xF7D	R	PID	Product ID(hex)							
0xF7E	R	VID_H	Product version High byte(hex)							

0xF7F	R	VID_L	Product version low byte(hex)
0xF80	R/W	DriverCH0	Screen 1 drives corresponding IC drive line
0xF81	R/W	DriverCH1	Screen 2 drives corresponding IC drive line
0xF82	R/W	DriverCH2	Screen 3 drives corresponding IC drive line
0xF83	R/W	DriverCH3	Screen 4 drives corresponding IC drive line
0xF84	R/W	DriverCH4	Screen 5 drives corresponding IC drive line
0xF85	R/W	DriverCH5	Screen 6 drives corresponding IC drive line
0xF86	R/W	DriverCH6	Screen 7 drives corresponding IC drive line
0xF87	R/W	DriverCH7	Screen 8 drives corresponding IC drive line
0xF88	R/W	DriverCH8	Screen 9 drives corresponding IC drive line
0xF89	R/W	DriverCH9	Screen 10 drives corresponding IC drive line
0xF8A	R/W	DriverCH10	Screen 11 drives corresponding IC drive line
0xF8B	R/W	DriverCH11	Screen 12 drives corresponding IC drive line
0xF8C	R/W	DriverCH12	Screen 13 drives corresponding IC drive line
0xF8D	R/W	DriverCH13	Screen 14 drives corresponding IC drive line
0xF8E	R/W	DriverCH14	Screen 15 drives corresponding IC drive line
0xF8F	R/W	DriverCH15	Screen 16 drives corresponding IC drive line
0xF90	R/W	DriverCH16	Screen 17 drives corresponding IC drive line
0xF91	R/W	DriverCH17	Screen 18 drives corresponding IC drive line
0xF92	R/W	DriverCH18	Screen 19 drives corresponding IC drive line
0xF93	R/W	DriverCH19	Screen 20 drives corresponding IC drive line
0xF94	R/W	DriverCH20	Screen 21 drives corresponding IC drive line
0xF95	R/W	DriverCH21	Screen 22 drives corresponding IC drive line
0xF96	R/W	DriverCH22	Screen 23 drives corresponding IC drive line
0xF97	R/W	DriverCH23	Screen 24 drives corresponding IC drive line
0xF98	R/W	DriverCH24	Screen 25 drives corresponding IC drive line
0xF99	R/W	DriverCH25	Screen 26 drives corresponding IC drive line
0xF9A	R/W	DriverCH26	Screen 27 drives corresponding IC drive line
0xF9B	R/W	DriverCH27	Screen 28 drives corresponding IC drive line
0xF9C	R/W	DriverCH28	Screen 29 drives corresponding IC drive line
0xF9D	R/W	NC	Reserved
0xF9E	R/W	SensorCH0	Screen 1 induction wire corresponds to IC drive line
0xF9F	R/W	SensorCH1	Screen 2 induction wire corresponds to IC drive line
0xFA0	R/W	SensorCH2	Screen 3 induction wire corresponds to IC drive line
0xFA1	R/W	SensorCH3	Screen 4 induction wire corresponds to IC drive line
0xFA2	R/W	SensorCH4	Screen 5 induction wire corresponds to IC drive line
0xFA3	R/W	SensorCH5	Screen 6 induction wire corresponds to IC drive line
0xFA4	R/W	SensorCH6	Screen 7 induction wire corresponds to IC drive line
0xFA5	R/W	SensorCH7	Screen 8 induction wire corresponds to IC drive line
0xFA6	R/W	SensorCH8	Screen 9 induction wire corresponds to IC drive line
0xFA7	R/W	SensorCH9	Screen 10 induction wire corresponds to IC drive line
0xFA8	R/W	SensorCH10	Screen 11 induction wire corresponds to IC drive line
0xFA9	R/W	SensorCH11	Screen 12 induction wire corresponds to IC drive line
0xFAA	R/W	SensorCH12	Screen 13 induction wire corresponds to IC drive line
0xFAB	R/W	SensorCH13	Screen 14 induction wire corresponds to IC drive line
0XFAC	R/W	SensorCH13	Screen 15 induction wire corresponds to IC drive line
0XFAD	R/W	SensorCH14	Screen 16 induction wire corresponds to IC drive line
0XFAE~ 0XFB1	-	NC	Reserved
0xFB2	R/W	ADCCFG	chip scanning control parameter
0xFB3	R/W	SCAN	chip scanning control parameter
0xFB4	R/W	F1SET	drive pulse 1 frequency
0xFB5	R/W	F2SET	drive pulse 2 frequency

Addr	R/W	Name	Description							
0xFB6	R/W	F3SET	drive pulse 3 frequency							
0xFB7	R/W	F1PNUM	1 drive pulse							
0xFB8	R/W	F2PNUM	2 drive pulse							
0xFB9	R/W	F3PNUM	3 drive puilse							
0xFBA	R/W	F1DELAY	drive pulse 1 phase delay							
0xFBB	R/W	F2DELAY	drive pulse 2 phase delay							
0xFBC	R/W	F3DELAY	drive pulse 3 phase delay							
0xFBD	R/W	DC-DC	high pressure setting							
0xFBE	R/W	Sc_Touch	TP key threshold							
0xFBF	R/W	Sc_Leave	TP key up threshold							
0xFC0	R/W	Md_switch	Reserved	DD2: difference And half	Reserved	Shape_EN defamation denoise	INT pulse mode	SITO denoise switch	Reserved	Reserved
0xFC1	R/W	LPower_C	Reserved	time to low power consumption without pressing: 0-63s valid, unit: S						
0xFC2	R/W	Refresh	0-100 valid; 0: period 10ms, 100: period 20ms							
0xFC3	R/W	Touch_N	Reserved	Reserved	Output touch point, 1-5 valid					
0xFC4	R/W	Output_Th	output limit: output until coordinate transformation value is higher than this, 0-254 configurable (unit:4 coordinate),255 means first pressing coordinate and keying up							
0xFC5	R/W	X_Ou_Max_H	X direction output maximum coordinate, the higher byte placed first							
0xFC6	R/W	X_Ou_Max_L								
0xFC7	R/W	Y_Ou_Max_H	Y direction output maximum coordinate, the higher byte placed first							
0xFC8	R/W	Y_Ou_Max_L								
0xFC9	R/W	X_Co_Sm	X direction slide control parameter, 0-255 configurable, 0 means closure							
0xFCA	R/W	Y_Co_Sm	Y direction slide control parameter, 0-255 configurable, 0 means closure							
0xFCB	R/W	X_Sp_Lim	X direction maximum speed limit of slide: 0-255 configurable, 0 means closure(unit:16 coordinate)							
0xFCC	R/W	Y_Sp_Lim	Y direction maximum speed limit of slide: 0-255 configurable, 0 means closure(unit:16 coordinate)							
0xFCD	R/W	Noise_R	sampling drop-driven	while noise elimination: 0-15 valid						
0xFCE	R/W	NC	Reserved							
0xFCF	R/W	Filter	Reserved	coordinate window filtering value (in base 4)						
0xFD0	R/W	Large_Tc	representative touch points for large area: 0-255 valid							
0xFD1	R/W	Shake_Cu	Touch Shake Count	Finger Number Shake Count						
0xFD2	R/W	Pos_Ref_T	benchmark update configuration in normal condition, 0-255 valid, 0 means close benchmark update							
0xFD3	R/W	NC	benchmark update configuration in sudden change condition,0-255 valid, 0 means close benchmark update							
0xFD4	R/W	NC	Reserved							
0xFD5	R/W	NC								
0xFD6	R/W	Edge_exp	Reserved	0: weak tensile 1: strong						
0xFD7	R/W	Tc_K_F	Key_com	Key_con	Reserved	valid interval in regional keys (unilateral): 0-15 valid				
0xFD8	R/W	Key 1	Key 1 position: 0-255 valid, 0 means unavailable							
0xFD9	R/W	Key 2	Key 2 position: 0-255 valid, 0 means unavailable							
0xFDA	R/W	Key 3	Key 3 position: 0-255 valid, 0 means unavailable							
0xFDB	R/W	Key 4	Key 4 position: 0-255 valid, 0 means unavailable							
0xFDC	R/W	K_Touch	key threshold							
0xFDD	R/W	K_Leave	key up threshold							
0xFDE	R/W	K_SEC_max	upper limit of sub-maximum difference in independent key judgment							
0xFEF	R/W	K_DIS_min	lower limit of difference between maximum and sub-maximum in independent key judgment							
0xFE0	R/W	X_border_Lim_Near	discarded coordinate numbers on X proximal border							

0xFE1	R/W	X_border_Lim_Far	discarded coordinate numbers on X far end			
0xFE2	R/W	Y_border_Lim_Near	discarded coordinate numbers on Y proximal border			
0xFE3	R/W	Y_border_Lim_Far	discarded coordinate numbers on Y far end			
0xFE4	R/W	KEY_ADCCFG	FPC ADCCFG parameter (applicable to drive key common port)			
0xFE5	R/W	KEY_F1SET	FPC drive frequency setting (applicable to drive key common port)			
0xFE6	R/W	KEY_F1NUM	FPC drive pulse number setting (applicable to drive key common port)			
0xFE7	R/W	Key_Shake_Cu	touch key Shake counter (0-255)			
0xFE8	R/W	Key2_Touch	touch Level of FPC touch key2			
0xFE9	R/W	Key3_Touch	touch Level of FPC touch key3			
0xFEA	R/W	Key4_Touch	touch Level of FPC touch key4			
0xFEB~0xFEE	-	NC	Reserved			
0xFEF	R/W	Con_Frs	mark for configuration update, write 1 when master completing configuration information			
0xFF0	R/W	Cfg_Chk_H	configuration information checksum, the higher byte placed first			
0xFF1	R/W	Cfg_Chk_L				
0xFF2	R/W	System_Sta	Power_sta		Reserved	
0xFF3	R/W	LED_Con	LED_EN	LED_CM	LED_SW	time of light-on after key up (unit: S)
0xFF4	R/W	Command	Reserved			
0xFF5	R/W	Module_Type	Reserved		module supplier' ID: 0-2 valid	

■ PIN CONNECTIONS

No.	Name	I/O	Description
1	VCC	P	Power; VCC=3.3V(typ.)
2	SCL	I	Clock; 100KHz
3	SDA	I/O	Serial data access
4	INT	O	Active low when data output from touch panel
5	RESET/SHDN	I	Reset
6	GND	P	Ground

■ BLOCK DIAGRAM
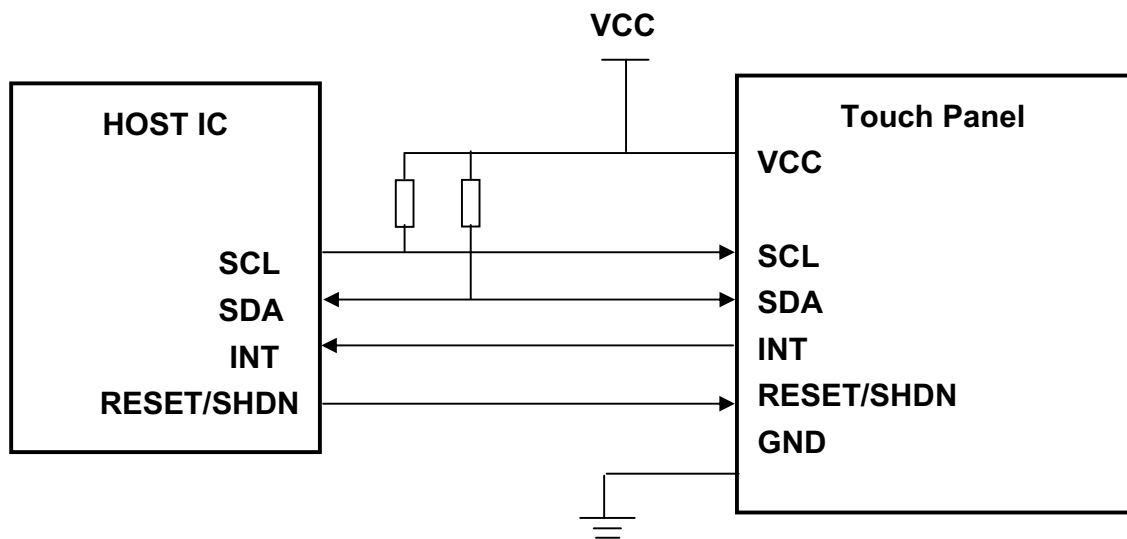
Note：1. USE APPROPRIATE RESISTOR VALUE DURING HIGH SPEED SCL CLOCK.
　　　　　SUGGESTION : RESISTOR RECOMMENDATION：1K ohm.
　　　2. To reduce the noise from the power, we suggest you use the independent power for the touch panel (VCC)
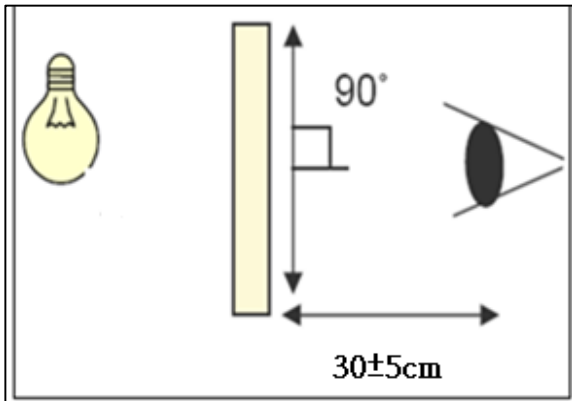
■ APPEARANCE SPECIFICATIONS

1.1 Inspection condition

    1.1.1 Inspection conditions

        1.1.1.1 Inspection Distance : 30 ± 5 cm

        1.1.1.2 View Angle :

        (1) Inspection that light pervious to the product: 90±15°

        (2) Inspection that light reflects on the product: 90±15°
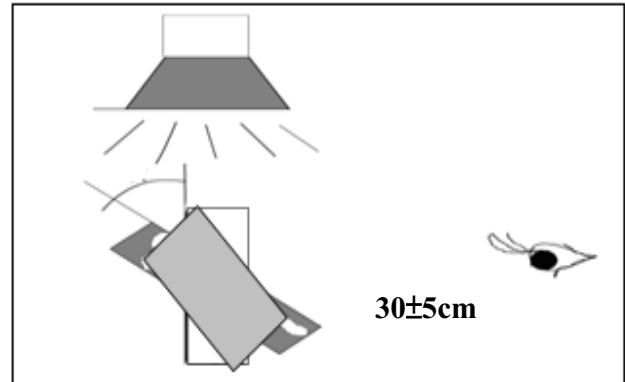
1.1.2 Environment conditions :

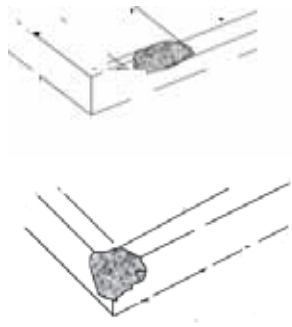|	
Ambient Temperature :	25±5℃
Ambient Humidity :	30~75%RH
Ambient Illumination	600~800 lux

1.2　Inspection Parameters

Appearance inspection standard (D: diameter, L: length; W: width, Z: height, T: glass thickness)

Inspection item	Inspection standard			Description
Foreign material in dot shape	SPEC (unit: mm)		Acceptable	D= (L + W) / 2
	D≦0.5		Ignored	
	0.5<D≦0.8, distance>5		n≦3	
	D>0.8		0	
Foreign material in line shape	SPEC		Acceptable	L : Long W : Width
	W≦0.05 and L≦7		Ignored	
	0.05<W≦0.08, L≦7, distance >5		n≦3	
	W>0.08 or　L>7		0	
Contamination	It is acceptable if the dirt can be wiped.			

Scratch	SPEC	Acceptable	
	W$\leqq$0.05 and L$\leqq$7	Ignored	
	0.05<W$\leqq$0.08, L$\leqq$7, distance >5	n$\leqq$3	
	0.08<W$\leqq$0.1, L$\leqq$7, distance >5	n$\leqq$2	
	W>0.1 or L>7	0	

Inspection item	SPEC		Description
Bubble	SPEC (unit: mm)	Acceptable	
	D$\leqq$0.2	Ignored	
	Non visible area	Ignored	
	0.2<D$\leqq$0.3, distance >5	n$\leqq$3	
	D＞0.3	0	

Cover & Sensor Crack	Prohibited		

Cover angle missing	SPEC (unit: mm)	Acceptable	
	Side/Bottom	Ignored	
	It is prohibited if the defect appears on the front.	0	

Inspection item	SPEC		Description
Cover edge break	SPEC (unit: mm)	Acceptable	
	X$\leqq$ 2.0, Y$\leqq$ 2.0, Z$\leqq$T	Ignored	
	X>2.0, Y>2.0, Z＞T	0	

Sensor angle missing/edge break	SPEC (unit: mm)	Acceptable	
	Damage circuit or function.	0	
	It can be seen from the front of cover visible area.	0	

Sensor flange	SPEC (unit: mm)	Acceptable	
	Do not affect assembly.	Ignored	

Ink	SPEC (unit: mm)	Acceptable	
	word unclear, inverted, mistake, break line	0	

Bubble under protection film	SPEC (unit: mm)	Acceptable	
	NA		

Function	Prohibited	

1.3 Sampling Condition
Unless otherwise agree in written, the sampling inspection shall be applied to the incoming inspection of customer.
Lot size: Quantity of shipment lot per model.
Sampling type: normal inspection, single sampling
Sampling table: MIL-STD-105E
Inspection level: Level II

			Definition
Class of defects	**Major**	AQL 0.65%	It is a defect that is likely to result in failure or to reduce materially the usability of the product for the intended function.
	Minor	AQL 1.5%	It is a defect that will not result in functioning problem with deviation classified.

■ QUALITY ASSURANCE

1.1 Test Condition

1.1.1 Temperature and Humidity(Ambient Temperature)
Temperature   : $25 \pm 5°C$
Humidity   : $65 \pm 5\%$

1.1.2 Operation
Unless specified otherwise, test will be conducted under function state.

1.1.3 Container
Unless specified otherwise, vibration test will be conducted to the product itself without putting it in a container.
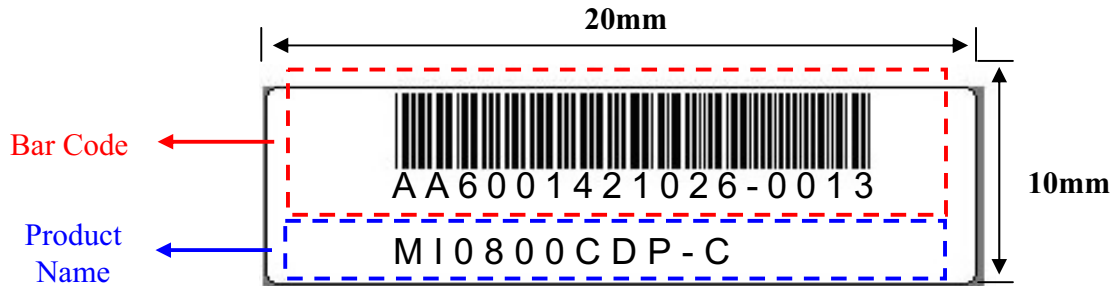
1.1.4 Test Frequency
In case of related to deterioration such as shock test.   It will be conducted only once.

1.1.5 Test Method

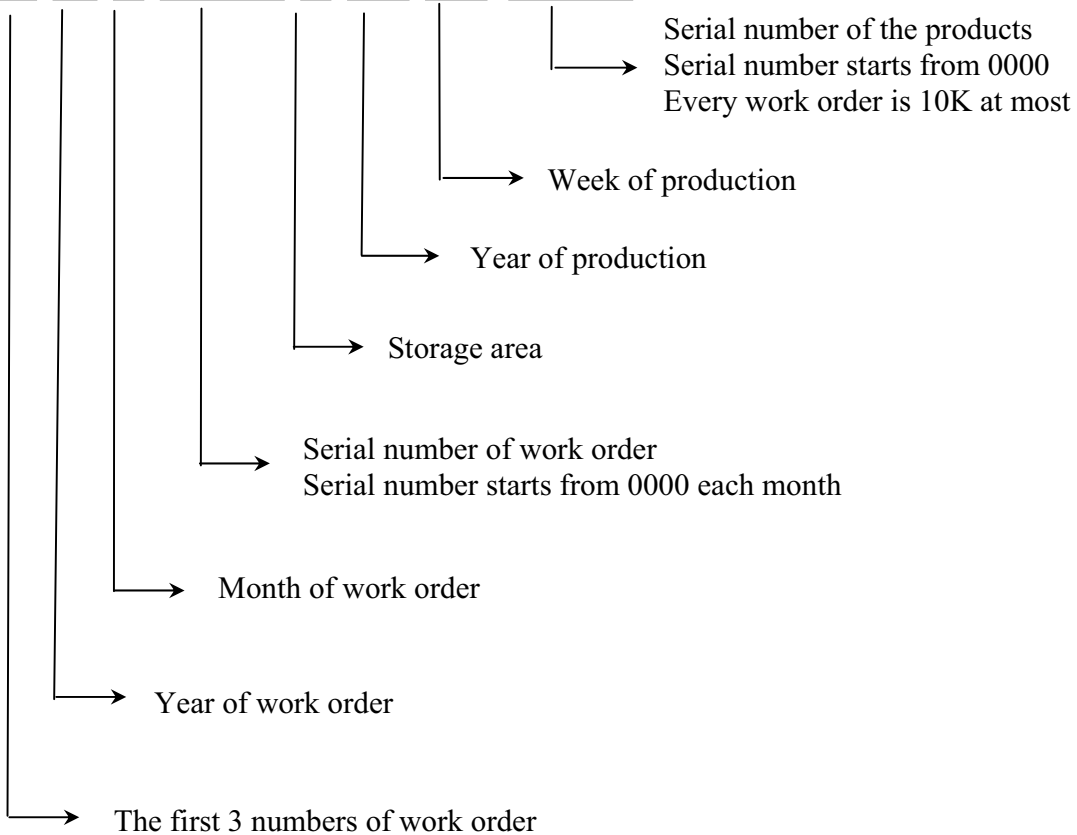| No.	Reliability Test Item & Level Test Item	Test Level
1.	High Temperature Storage Test	T= 70℃, 120hrs after 1 hrs at room temperature and test.
2.	Low Temperature Storage Test	T= -20℃, 120hrs after 1 hrs at room temperature and test.
3.	High Temperature and High Humidity Storage Test	T= 40℃, 90%RH,120hrs after 24 hrs at room temperature and test.
4.	Thermal Cycling Test (No operation)	-20 ℃ 30min ~ 70 ℃ 30 min , 100 Cycles after 24 hrs at room temperature and test.
5.	Vibration Test (No operation)	Frequency :10 ~ 55 HZ Amplitude :1.5 mm Sweep time : 11 mins Test Period: 6 Cycles for each direction of X, Y, Z
6.	ESD TEST	Air Discharge : ±15KV Indirect Contact Discharge : ±8KV

■ CTP PRODUCT LABEL DEFINE

CTP Product Label style:

BarCode Define:

A → The first 3 numbers of work order

A → Year of work order

6 → Month of work order

0014 → Serial number of work order
Serial number starts from 0000 each month

2 → Storage area

10 → Year of production

26 → Week of production

-0013 → Serial number of the products
Serial number starts from 0000
Every work order is 10K at most

Product Name Define:

MI 0800 C D P - C

P-C: Capacitive Touch Panel

CD: Series unmber

0800: 8.0inch

MI: MULTI-INNO
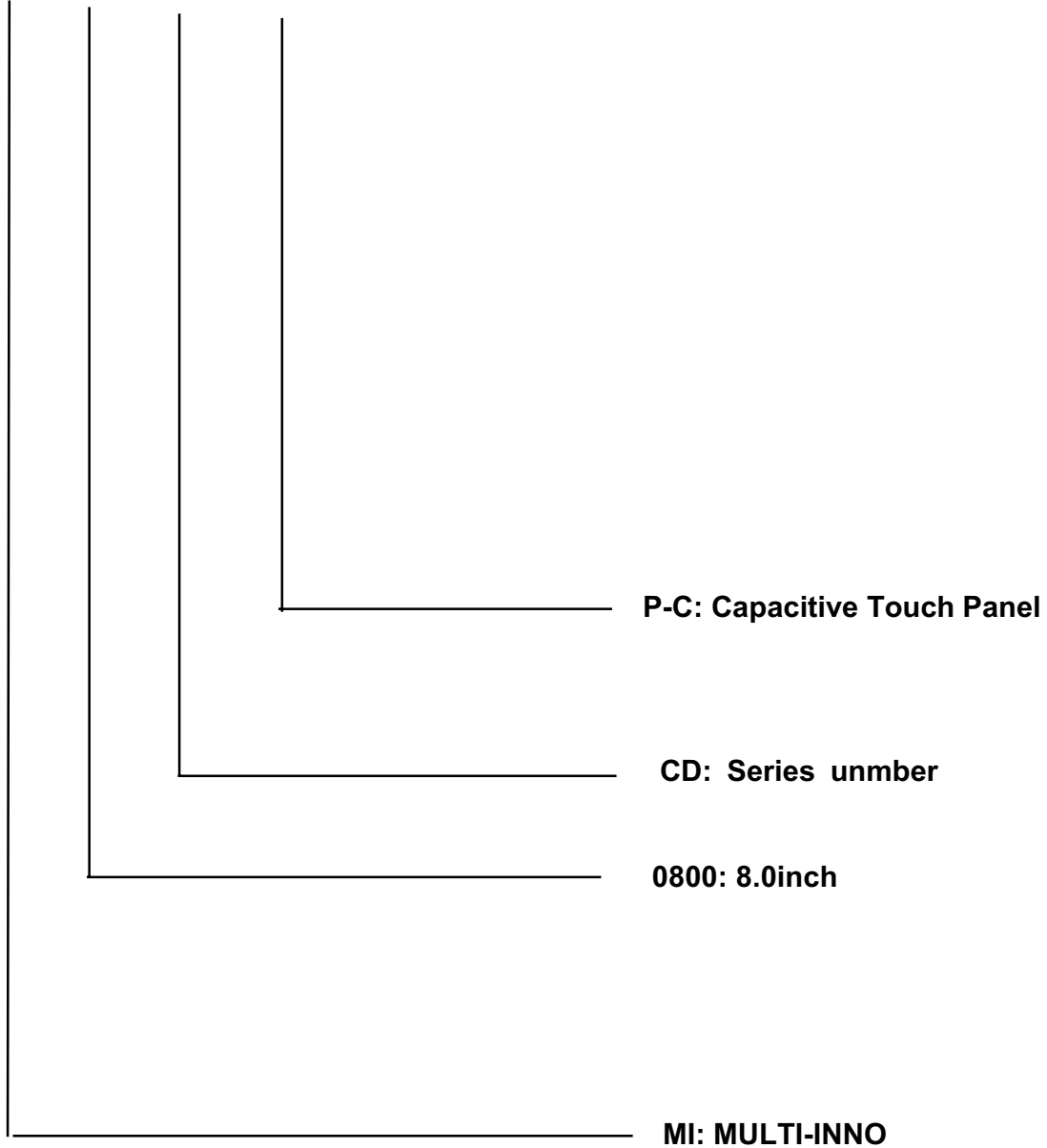
■ PRECAUTIONS IN USE CTP

4. ASSEMBLY PRECAUTIONS
   (1) Since Touch Panel is consist of glass,please be careful your hands to be injured during handing. You must wear gloves during handing.
   (2) Do not touch, push or rub the exposed touch panel, tweezers or anything harder than HB pencil lead. And please do not rub with dust clothes with chemical treatment.
   (3) Do not stack the touch panels together.Do not put heavy objects on touch panel.
   (4) Please do not take a CTP to pieces and reconstruct it. Resolving and reconstructing modules may cause them not to work well.
   (5) Please excessive force or strain to the panel or tail is prohibited, Do not lift touch panel by cable(FPC).
   (6) Use clean sacks or glove to prevent fingerprints and/or stains left on the panel. Extra attention and carefulness should be taken while handling the glass edge.
   (7) Please pay attention for the matters stated below at mounting design of touch panel enclosure.
   Enclosure support to fix touch panel must be out of active area.(do not design enclosure presses the active area to protect from miss put)

5. OPERATING PRECAUTIONS
   (1) Please be sure to turn off the power supply before connecting and disconnecting signal input cable.
   (2) Please do not change variable resistance settings in CTP. They are adjusted to the most suitable value. If they are changed, it might happen CTP does not satisfy the characteristics specification
   (3) Be careful for condensation at sudden temperature change. Condensation makes damage to snesor or electrical contacted parts.
   (4) CTP has high frequency circuits. Sufficient suppression to the electromagnetic interference shall be done by system manufacturers. Grounding and shielding methods may be important to minimize the interference.
   (5) Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited.
   (6) Operate the panel in a steady environment. Abrupt variation on temperature and humidity may cause malfunction of the panel.

6. ELECTROSTATIC DISCHARGE CONTROL
   (1) The operator should be grounded whenever he/she comes into contact with the CTP. Never touch any of the conductive parts such the copper leads on the FPC and the interface terminals with any parts of the human body.

   (2) The CTP should be kept in antistatic bags or other containers resistant to static for storage.
   (3) Only properly grounded soldering irons should be used.
   (4) If an electric screwdriver is used, it should be well grounded and shielded from commutator sparks.
   (5) The normal static prevention measures should be observed for work clothes and working benches; for the latter conductive (rubber) mat is recommended
   (6) Since dry air is inductive to statics, a relative humidity of 50-60% is recommended.

1. STORAGE PRECAUTIONS
   (1) When you store touch panel for a long time, it is recommended to keep the temperature between 0°C-40°C without the exposure of sunlight and to keep the humidity less than 90%RH.
   (2) Please do not leave touch panel in the environment of high humidity and high temperature such as 60°C 90%RH
   (3) Please do not leave touch panel in the environment of low temperature; below -20°C.

2. OTHERS
   For the packaging box, please pay attention to the followings:
   a. Please do not pile them up more than 5 boxes. (They are not designed so.) And please do not turn over.
   b. Please handle packaging box with care not to give them sudden shock and vibrations. And also please do not throw them up.
   c. Packing box and inner case for CTP are made of cardboard. So please pay attention not to get them wet. (Such like keeping them in high humidity or wet place can occur getting them wet.)

3. LIMITED WARRANTY

   Unless otherwise agreed between MULTI-INNO and customer, MULTI-INNO will replace or repair any of its CTP which is found to be defective electrically and visually when inspected in accordance with MULTI-INNO acceptance standards, for a period on one year from date of shipment. Confirmation of such date shall be based on freight documents. The warranty liability of MULTI-INNO is limited to repair and/or replacement on the terms set forth above. MULTI-INNO will not responsible for any subsequent or consequential events.

■ OUTLINE DRAWING

NOTE:
1. Tolerance is ±0.3 unless otherwise noted.
2. TP sensor matching connector :Molex 52207-0660   or equivalent
3. * is important dimension.
4. For RoHS.
5. IC:GT827
6. FPC do not bend to less than 1mm radius.
7. Need 0.5 gap between sensor to TFT.

Pin Define

1	VCC3.3
2	SCL
3	SDA
4	INT
5	RESET/SHDN
6	GND

CUSTOMER APVL	
DRAWN	
DFTG CHK	
ENGR CHK	
APPROVAL	

DATE	
SCALE	
UNIT	mm
MODEL	MI0800CDP-C
TITLE	
DWG NO	
PAGE	1/1

MULTI-INNO TECHNOLOGY CO.,LTD.