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DOC. NO.

RD- TM121D6XUA -H-001

REV.

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TM121D6XUA

01

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2009,09,08

TM121D6XUA

**12.1 inch Infrared Touch Module
With USB Interface Touch Controller**

IVIEWKOREA

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02. 2038. 8570

Our Signature	Design	checked	Approved

For Customer Approval			

Please return one of these to us immediately with your Signature for Approval

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Important Information

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Regardless of the foregoing statement, Hwayoung Systems Co., Ltd. assumes no responsibility for any errors that may appear in this document or for results obtained by the user as a result of using this product.

Safety precautions

The safety recommendations outlined in this section are to be read, understood and followed before operating the product.

Keep this information in a safe place for future reference.

Failure to comply with any of the following safety procedures could result in serious hazard.

- Do not operate product for any purposes other than its intended use.
- This product is intended for indoor use only.
- Do not operate product if power supply is damaged in anyway.
- Do not insert objects into openings.
- Do not immerse product in water or permit liquids to spill inside.



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Revision History

Rev	Date	Description	Remark
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Main Components

No	Module	Part Name
1	Matrix- IR	TP121M6XXE
2	Touch Controller	MPTC2000IR (USB)
3	FFC Cable	HSBH505007A- 0150
4	Touch Interface Cable	HSDI041001A- 1800



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1. Generals

1.1 Overview

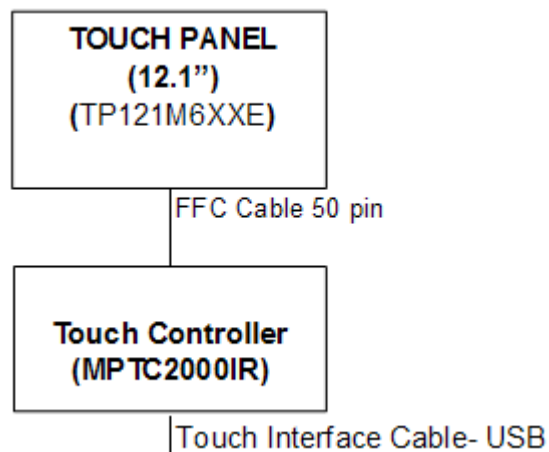
This manual is written to describe the model TM121D6XUA – 12.1 inch Infrared touch screen. It refers to the general specification, connector functions and dimension. Please contact us for more information on this product.


1.2 Features

- Infrared interruption detecting system with infrared sensors
- Input Mode: Finger, gloved hand or other stylus activation

2. System Block Diagram

The operating signal follows the diagram below.



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3. Specifications

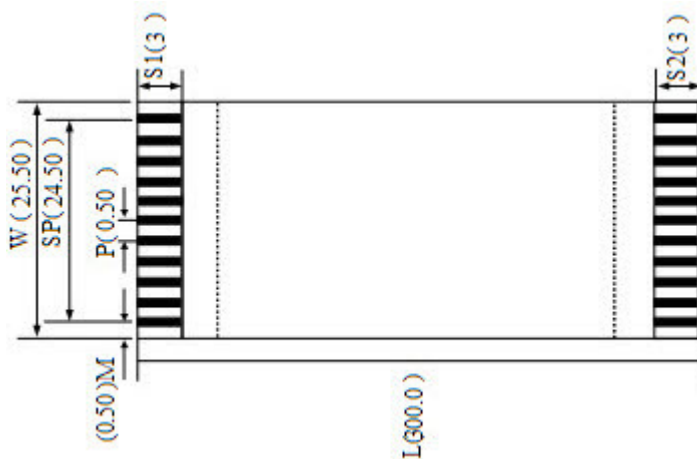
3.1 Touch Matrix Panel (TP121M6XXE+ Mechanic) - Standard (Tempered glass (4T))


Item	Description
Detection	Infrared interruption detecting system with infrared sensors
Detection Area	243.8(H) x 182.9(V) mm
An optical element Space	6.0(H) x 6.0(V) mm
The number of optical elements	40(H) x 30(V) pcs
Touch plate	Standard) Tempered glass (4T) Option 1) Hard Coating Acryl (4T) Option 2) Anti Glare Acryl (4T)
Scanning Rate	Normal Mode : 20msec (Typ) Sleep Mode : 50msec (Typ)
Dimension	281.8 (H) x 219.8 (V) x 9.8 (D)

3.2 Touch Controller Board (MPTC2000IR) - Standard (USB)

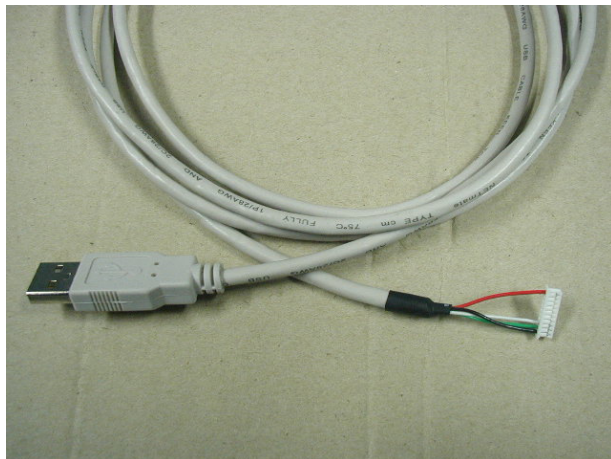
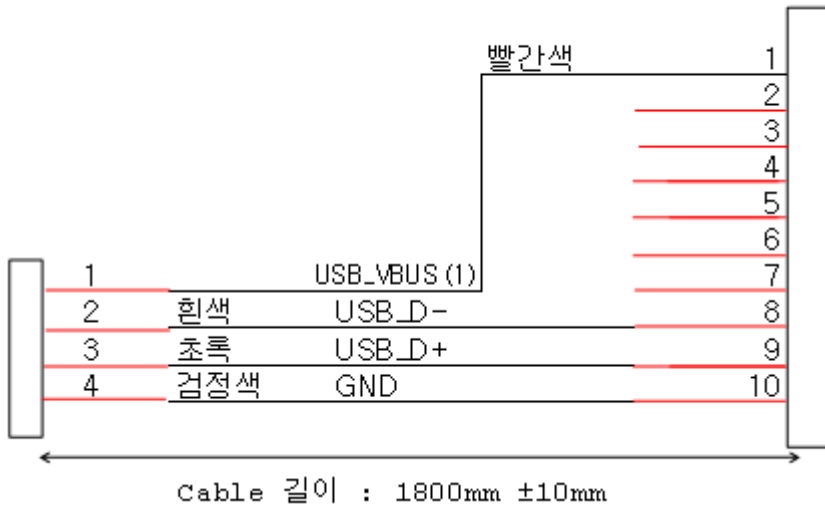
Item	Description
Interface	USB
Signal	D+ , D- , VBUS, GND
Speed	12MBps (Full Speed)
Transfer Mode	Interrupt Mode

3.3 FFC Cable (HSBH505007A-0150)



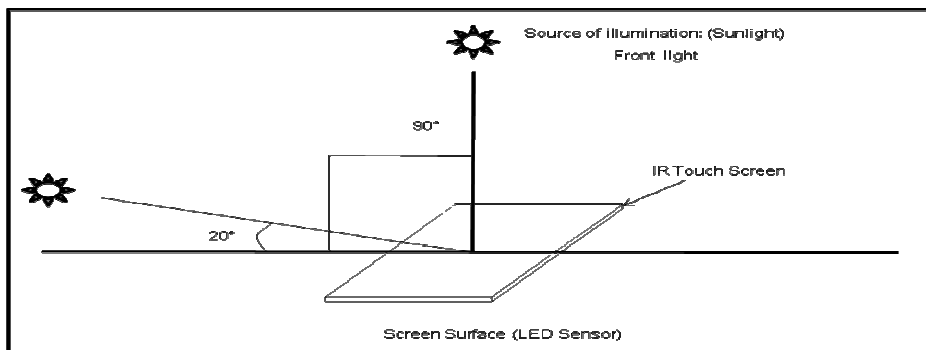
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3.4 Touch Interface Cable (HSDI041001A-1800)



4. Electrical & Environmental

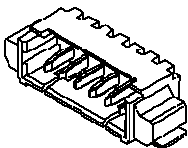
Item	Description
Supply voltage	5 Vdc \pm 10%
Power consumption	2 [Watt] = Controller + Touch Panel (Typically)
Temperature	Operation : 0 ~ 50 °C Storage : 0 ~ 50 °C
Humidity	Operation : 0 ~ 90% Storage : 0 ~ 95%
Resistance of ambient light	Side light 5,000 Lx (incident angle 20°) Front light 60,000 Lx (incident angle 90°)



5. Interface (Connector)

5.1 CN3 – External PWR & RS-232 & USB Type (Molex : 53261-10)

; Touch Controller Board (MPTC2000IR) - Standard (USB)



Pin No	Description	Refer
1	Vpp (5Vdc) - Input USB_VBUS (1)	Option 1) - RS232C Standard) - VBUS Line Available (@ USB) - (#1 : ON, #7 : OFF)
2	RS-232_TxD	Option 1) - RS232C
3	RS-232_RxD	Option 1) - RS232C
4	NC	
5	GND	Common
6	NC	
7	USB_VBUS (2)	Option 2) - VBUS Line Available (@ USB) - (#1 : ON, #7 : ON) - Alternative
8	USB_D-	Standard) - USB
9	USB_D+	Standard) - USB
10	GND	Common

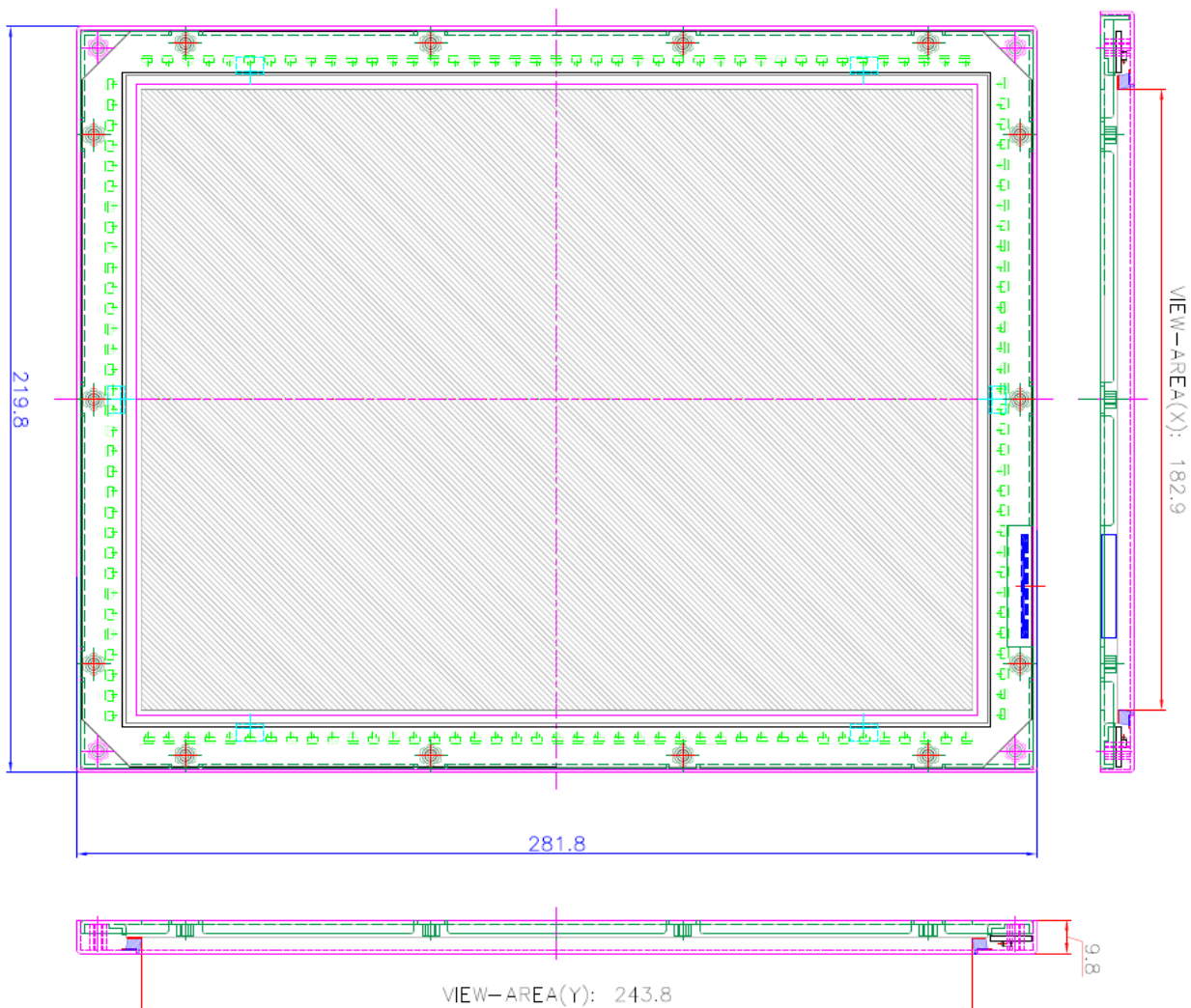
6. Dimension & View

Total View

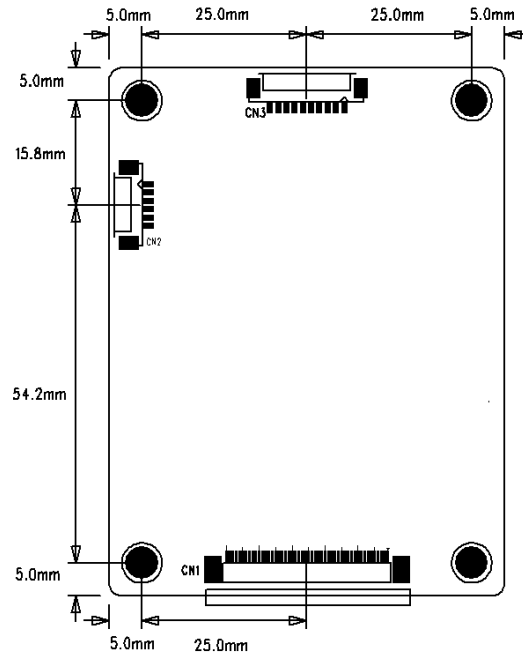
- 1) Touch Panel (TP121M6XXE + Mechanic)
- 2) Touch Controller (MPTC2000IR)
- 3) FFC Cable (HSBH505007A-0150)
- 4) Touch Interface Cable (HSDI041001A-1800)



6.1 Touch Panel (TP121M6XXE + Mechanic)



6.2 Touch Controller Board (MPTC2000IR) - Standard (USB)



7. Serial Number Identification

1) Touch Panel (TP121M6XXE + Mechanic)

The serial number shall be indicated on the back of the unit.

yymm-ppp-vv-nnnn

yy : year

mm : month

ppp : part number (153)

vv : version

nnnn : number of products produced

2) Touch Controller B/D (MPTC2000IR)

yymm-ppp-b-nnnn


yy : year

mm : month

ppp : part number (153)

b : Inner Construction Code (B)

nnnn : number of products produced

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8. Caution

In order to maintain superior performance for the life of this product, customers are advised to maintain the following guidelines:

8.1 Storage

- Do not store the product in humidity or temperature ranges exceeding those listed above.
- Do not store products out of original packaging.
- Do not expose product to direct sunlight.

8.2 Unpacking

- Do not attempt to dismantle or repair.

8.3 Handling

- Do not use product for any purpose outside its intended use.*
- Do not operate product if power supply is damaged in anyway.
- Do not insert objects into openings.
- Do not immerse product in water or spill liquids inside.
- Turn off power when unattended or not in use.
- Do not by the sharp edge on the screen.
- Do not stock product outside of packaging.
- Clean the screen with alcohol and a soft lint-free cloth**.

* This product is not intended for outdoor use.

** Do not allow alcohol to spill inside the product.

8.4 Assembling

- Avoid extreme pressure on the product.
- Avoid unnecessary strain to cables & connectors

9. Warranty

This product manufactured to this specification should be capable of meeting all characteristics for 12 Months from the delivery date of Hwayoung Systems Co., Ltd. when stored and used as specified in this document.

Use of this product outside the specified criteria herein will negate the 12 Months warranty

The damages (defaults) described below are NOT covered under the warranty.

- User fault through lack of care.
- User fault through intentional dismantle or attempted repair.
- Damage caused by natural disaster. (Fire, Flood, Earthquake, Lightening, etc.)
- Replacement of any parts.