POWERTIP TECH. CORP.

SPECIFICATIONS

CUSTOMER	:	
SAMPLE CODE	:	S09N00023-00
MASS PRODUCTION CODE	:	P09N00023-00
SAMPLE VERSION	:	01
SPECIFICATIONS EDITION	:	001
DRAWING NO. (Ver.)	:	LMD- P09N00023-00 (Ver.001)
PACKAGING NO. (Ver.)	:	

Customer Approved

Date:

Approved	Checked	Designer
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POWERTIP
2019.03.22
TW RD APR

■ Preliminary specification for design input

□ Specification for sample approval

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History of Version

Date (mm / dd / yyyy)	Ver.	Edi.	Description	Page	Design by
03/20/2019	01	001	New Drawing	-	Terry

Total: 8 Page

Contents

1. SPECIFICATIONS

1.1 General Description

The Printed circuit board (P09N00023-00) is a converter board for interface signals which convert touch panel IIC into standard USB interface. All necessary timings and voltages to support the connected touch panel are generated on the Printed circuit board.

1.2 Mechanical Specifications

Item	Standard Value	Unit
Outline Dimension	19.99 (W) * 31.99(L)	mm

1.3 Features

Item	Standard Value	Remarks
MCU Controller	ATSAMD21E17A-MUT	
Input signal	IIC	
Output signal	USB	

1.4 Electrical Characteristics

Item	Symbol	Min.	Typ.	Max.	Unit	Description
Supply Voltage	VDD	-	5	-	V	
CTP Supply Voltage	CTP VDD	-	3.3	-	V	-

1.5 Operation and Storage

Item	Value(Conditions)	Description
Operating Temperature	-20˚C~+70˚C	Non-condition
Storage Temperature	-30˚C ~+80˚C	Non-condition

Product overview

(PCB for reference only)

2. MODULE STRUCTURE

2.1 Counter Drawing

* See Appendix

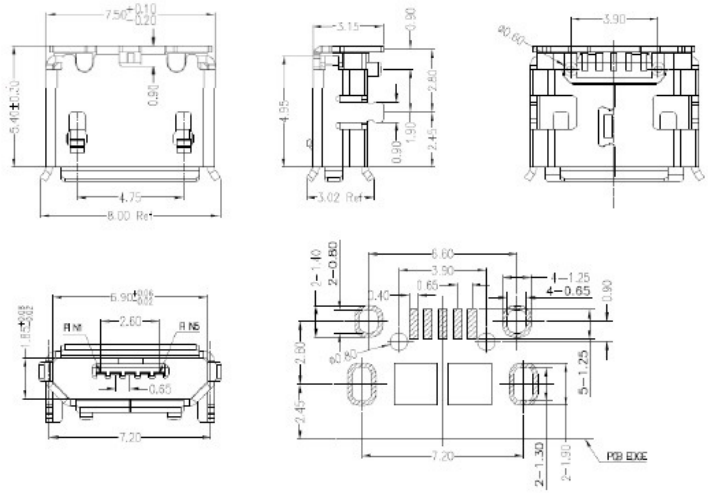
2.2 Interface Pin Description

USB Interface

Pin No.	Symbol	Description
1	VBUS	Supply Power Pin
2	DM	DM for USB
3	DP	DP for USB
4	NC	NC
5	GND	Ground

USB Connector recommend :

a.ETC-MUSR231F205-XT17266S-X or compatibility

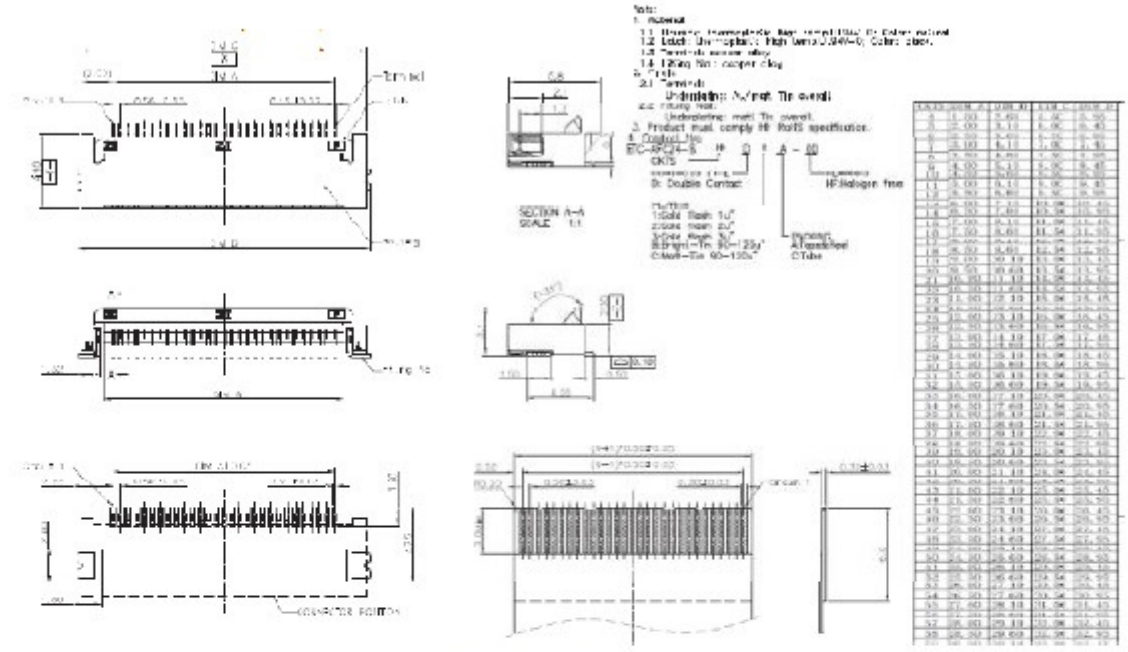


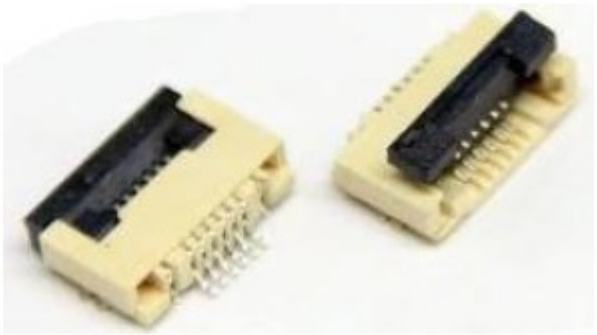
CTP Interface

Pin No.	Symbol	Description
1	GND	Ground
2	VDD	Supply Power Pin
3	SCL	SCL Clock Input Pin
4	SDA	IIC Data Pin
5	INT	Interrupt Request Pin
6	RST	Reset input pin IIC

IIC Connector recommend :

a.ETC-AFC24-S06D1A-00 or compatibility





3. RELIABILITY TEST

3.1 Reliability Test Condition (Ver.B01)

NO.	TEST ITEM	TEST CONDITION
1	High Temperature Storage Test	Keep in 80 ±5℃ 240 hrs
2	Low Temperature Storage Test	Keep in -30 ±5℃ 240 hrs
3	High Temperature / High Humidity Storage Test	Keep in 60 ℃ / 20~85% R.H duration for 240 hrs (Excluding the polarizer)
4	Temperature Cycling Storage Test	-30℃ → +25℃ → 80℃ → +25℃ (30mins) (5mins) (30mins) (5mins) 10 Cycle

4. PRECAUTION RELATING PRODUCT HANDLING

4.1 ATTENTION OF MOUNTING CONDITION

4.1.1 The gasket support of touch panel must be designed on the outside of Viewable area, as well as to avoid pressing on touch panel accidentally, the enclosure must be designed with enough clearance to panel surface. To avoid pressing error on touch panel accidentally, please remain space between the surface of panel and the Bezel.

4.1.2 Bezel opening must be designed between Viewable area and Active area. Bezel opening must not touch Viewable area.

4.1.3 We recommend elastic material made support.

4.1.4 When this product was built into the set, if there is vulcanization material such as vulcanized rubber which has a possibility of generating the salutation gas near the set, this phenomenon will be caused of functional degradation or abnormalities.

5.2 STORAGE

4.2.1 Storage shall be under the temperature and humidity that mentioned in the specification.

4.2.2 Direct sunlight exposure or piling should be avoided.

4.2.3 Do not put a heavy, hard or sharp object on the product.

4.2.4 Do not put one product on the other. Otherwise, it may cause the product to be scratched or changes on cosmetic occur

4.2.5 Do not place the module near organics solvents or corrosive gases.

4.3 UNPACK

4.3.1 Check for the correct vertical direction of the package before unpacking.

4.4 HANDLING

4.4.1 Use clean sacks or glove to prevent fingerprints and/or stains left on the panel. Extra attention and carefulness should be taken while handling.

4.4.2 Avoid touching the viewing area before installation/integration the panel edge.

4.4.3 Holding the panel instead of the tail at all time.

4.5 CLEANING

4.5.1 Use neutral detergent or isopropyl alcohol on a clean soft cloth to clean the panel surface.

4.5.2 Prevent using any kind of chemical solvent, acidic or alkali solution.

4.6 OPERATING

4.6.1 Touch the panel with your finger or stylus only to assure normal operation. Any sharp edged or hard objects are prohibited.

4.6.2 Operate the panel in a steady environment. Abrupt variation on temperature and humidity may cause malfunction of the panel.

4.6.3 Do not handle the product by holding the FPC pattern portion in order to assure the reliability.

4.7 OTHERS

4.7.1 Keep the panel surface clean. Prevent any kind of adhesive applied on the surface.

4.7.2 Avoid high voltage and / or static charge.

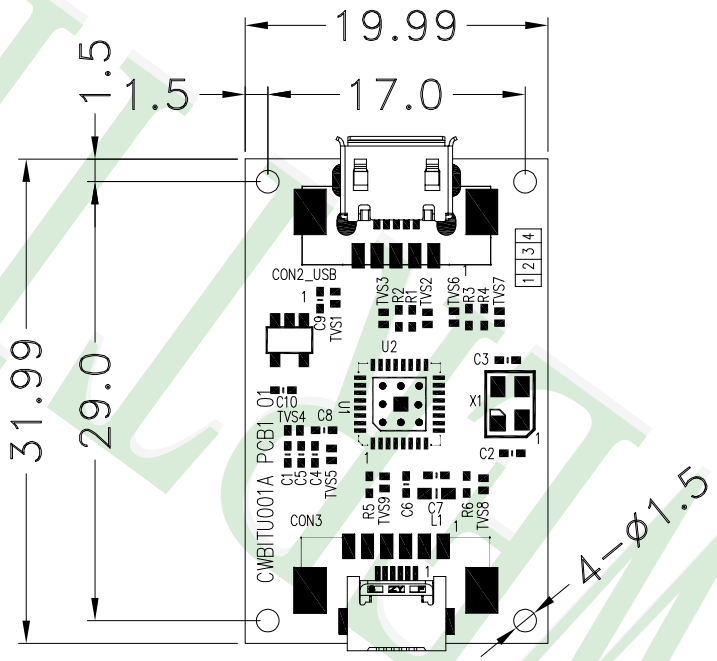
4.8 TERMS OF WARRANTY

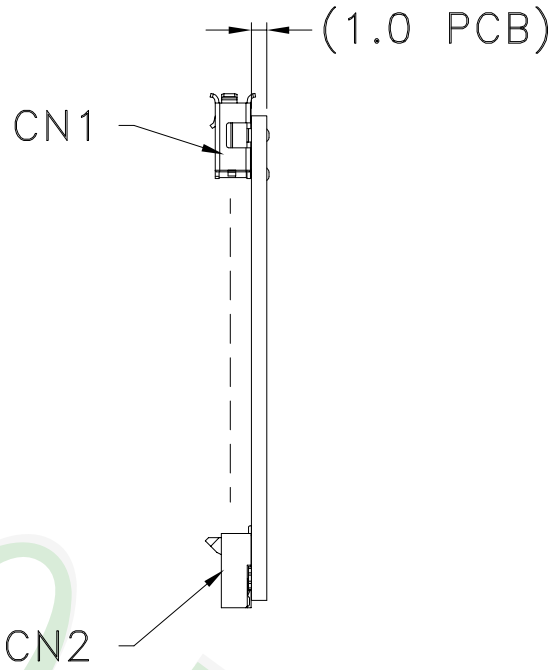
4.8.1 Applicable warrant period

The period is within thirteen months since the date of shipping out under normal using and storage conditions.

4.8.2 Unaccepted responsibility

This product has been manufactured to your company's specification as a part for use in your company's general electronic products. It is guaranteed to perform according to delivery specifications. For any other use apart from general electronic equipment, we cannot take responsibility if the product is used in nuclear power control equipment, aerospace equipment , fire and security systems or any other applications in which there is a direct risk to human life and where extremely high levels of reliability are require ired.





NOTES:

1. USB CN1: ETC-MUSR231F205-XT17266S-X or compatibility
2. I2C CN2: ETC-AFC24-S06D1A-00 or compatibility
3. The tolerance unless classified ±0.2mm

REV	REV BY	REVISER	DATE
007			
006			
005			
004			
003			
002			
001	NEW DRAWING	Stone	2019/03/21

PART NO: P09N00023-00

DRAWING NAME : LMD-P09N00023-00

TITLE: LCD MODULE DRAWING

久正光電股份有限公司
POWERTIP TECHNOLOGY CORPORATION

Design	Stone	(3)	Surface		
Check	Oliver	Unit	MM	Material	
Approve	Oliver	Scale	1:1	Thickness	
		Page	1/1	Quantity	

Length(Min) (mm) \ Tolerance \ Precision	Precision Level
1 ~ 4	-
4 ~ 16	-
16 ~ 63	-
63 ~ 250	-
250 ~ 1000	-