Datasheet

DMC Co., Ltd.

Projected Capacitive Touch Screen Controller Board

EXC7200 series User's Guide

Version 1.2

DMC Co., Ltd.
Interface with Touch
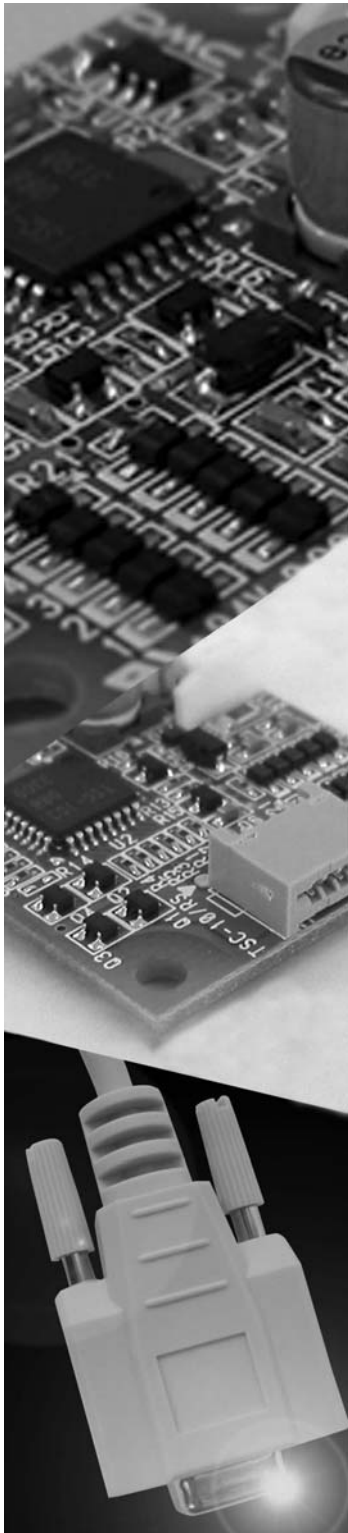
**Projected Capacitive Touch Screen Controller Board
EXC7200 series User's Guide**

Table of Contents

1. Product Overview
1-1. Products Applicable
This specification is applicable to EXC7200 series.

1-2. Overview
EXC7200 series is a controller board that works as a coordinates-generator for projected capacitive touch screen. This controller board supports both USB and RS232C.

EXC7200 series is lead-free and compliant with RoHS.

2. Specifications

Item		Rating	Remarks
Operating Temp.		-20°C to +80°C	No dew condensation
Storage Temp.		-20°C to +85°C	No dew condensation
Supply Voltage		DC 5.0V +/-5%	50mV peak to peak maximum ripple and noise
Consumption Current		50mA (typ)	
Interface /RS232C	Format	Asynchronous Serial	
	Transfer Rate	57,600bps	
	Data Format	8bit	
	Stop Bit	1bit	
	Parity	None	
Interface /USB	Spec	USB Specification 1.1 Full Speed	
	Device class	HID Digitizer Device	Communicating to Windows®7
		Vendor definition	Communicating to other computers
Coordinate Output Rate (point/sec)		200p/s　Single touch 50set/s　2 point touch (2point/set)	Dual touch is supported
Coordinate Resolution		11bit (2048 x 2048)	
The origin of theoretical coordinate		Left side of the top	"X=0,Y=0 "
Max height of components		5.5 mm	Top side of the board
EXC7236	Matrix	30 x 23	Channels of wire
	Dimension	80 x 28 mm	
EXC7237	Matrix	52 x 40	Channels of wire
	Dimension	125 x 28 mm	
EXC7238	Matrix	78 x 51	
	Dimension	140 x 28 mm	
Supported Operating System		Windows®7	HID Digitizer device / USB
		Windows® 2000,Xp,Vista,7 CE,Embedded	USB/RS232C
		Linux	USB/RS232C
		Mac	USB
		QNX	RS232C

3. Drawings

3-1. Interface / Connection to the Host Computer

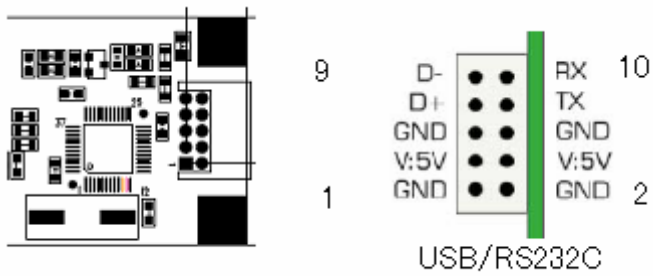| 9 | D- | RX | 10 |
	D+	TX	
	GND	GND	
	V:5V	V:5V	
1	GND	GND	2

USB/RS232C

Fig.1

3-2. EXC7236
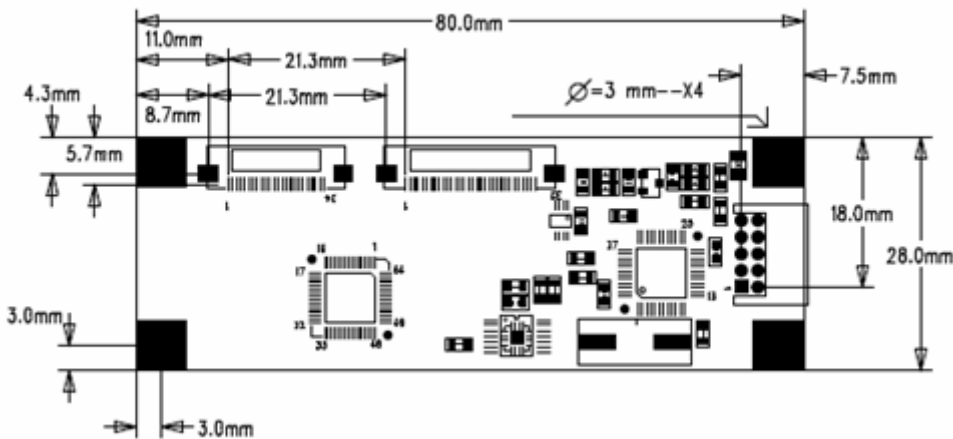
Fig.2

3-3. EXC7237
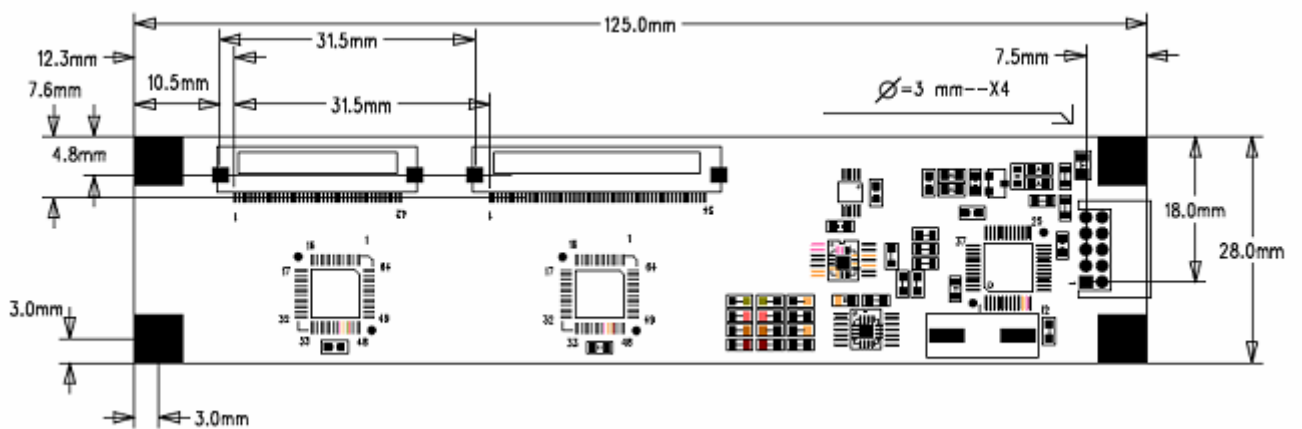
Fig.3

3-3. EXC7238
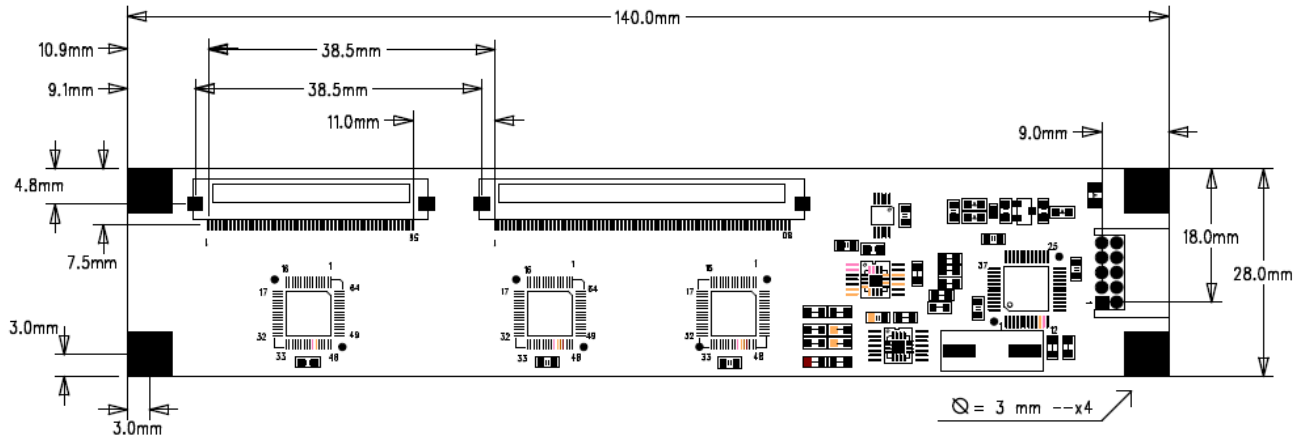
4. Connector

4-1. Explanation of connectors

CN	Terminal	Name	Function	Remarks
Connection to the Host Computer PN : Compatible with JST S10B-PHDSS	1	GND	Ground	For USB
	3	V:5v	+5v Power or USB Vbus	
	5	GND	Ground	
	7	D+	USB D+	
	9	D-	USB D-	
	2	GND	Ground	For RS232C
	4	V:5v	+5v Power	
	6	GND	Ground	
	8	TX	RS232C TXD (EXC72** > Computer)	
	10	RX	RS232C RXD (EXC72** < Computer)	
J1			Connection to the Touch Screen	
J2			Connection to the Touch Screen	

EXC7200 series has both serial and USB interfaces and can support either communication port. USB and serial interfaces cannot be used simultaneously.
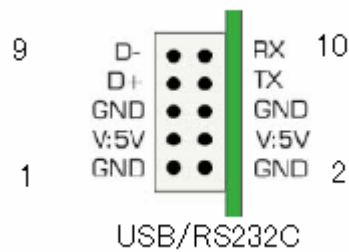

Fig.4 Connection to the Host computer

5. Warranty

5-1. Warranty Period

§ The warranty period is limited to 1 year from the date of shipping. The warranty for the initial defection such as appearance defection is limited to 1 month.

§ Any defected parts under proper use will be examined by the supplier and replaced by the new parts if the defection is considered to be caused by the supplier.

§ The replacement is subject to be included in the next lot.

5-2. Warranty Target

§ The warranty only covers the product itself and does not cover any damage to others caused by using this product. Onsite repair or replacement is not supported.

§ We will do our best for delivery problem and product defections, but the warranty for the production line is not covered.

5-3. Warranty Exceptions

Following conditions are not covered with the warranty and subject to charge.

§ Any malfunctions and damages during transportation and transfer by the user.

§ Any malfunctions and damages caused by a natural disaster or a fire.

§ Any malfunctions and damages caused by static electricity

§ Any malfunctions and damages caused by the failure of the associated equipment.

§ If the product is remodeled, disassembled or repaired by the user.

§ If the product is glued onto the equipment and uninstalled.

§ Any malfunctions and damages caused by an improper usage and handling against the specifications and notes.

6. Precautions for Use

6-1. General Handling

§ Keep the product away from any conductive objects while in use.

§ Do not touch the conductive part of the product to avoid being damaged by the electrostatic discharge. Follow the proper procedure for handling.

§ Keep the product in the proper storing environment and avoid any load to the product.

§ Do not use or store the product in the severe condition like following:

Wet environment or a condition where the product is likely to get wet.

Where dew condensation is likely to occur.

Near solvent or acid.

§ Do not take apart or alter the product.

6-2. Others

§ The contents of this document are subject to change without notice.

§ The manufacturer or sales representatives will not be liable for any damages or loss arising from use of this product.

§ This product is intended for use in standard applications (computers, office automation, and other office equipment, industrial, communications, and measurement equipment, personal and household devices, etc.) Please avoid using this product for special applications where failure or abnormal operation may directly affect human lives, or cause physical injury or property damage, or where extremely high levels of reliability are required (such as aerospace systems, vehicle operating control, atomic energy controls, medical devices for life support, etc.).

§ Any semiconductor devices have inherently a certain rate of failure. The user must protect against injury, damage, or loss from such failures by incorporating safety design measures into the user's facility and equipment.

7. Changes & Improvements

7-1. Version History

§ EXC7200 series

Ver 1.0 (June 1, 2010)
First release

Ver 1.1(July 29,2010)
a."The origin of theoretical coordinate" is added.
b. The pin assignment numbering of the communication port on the connector was changed.
(Position of the pin assignment signals is left unchanged)

Ver 1.2(April 28,2011)
a. EXC7236　Number of electrodes (Matrix) changed: 31 x 23　→　30 x 23
b. New model EXC7238 was added
c. Explanations on the signal TxD and RxD were added.
RS232C TXD (EXC72** > Computer)
RS232C RXD (EXC72** < Computer)

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Rev. 1.2, Aprl 28, 2011

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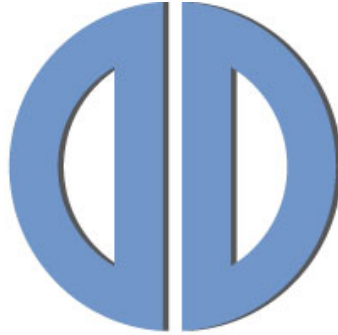
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