



# Datasheet

## **EETI**

### **ETP-MB-EXC328056CDG-XXXX**

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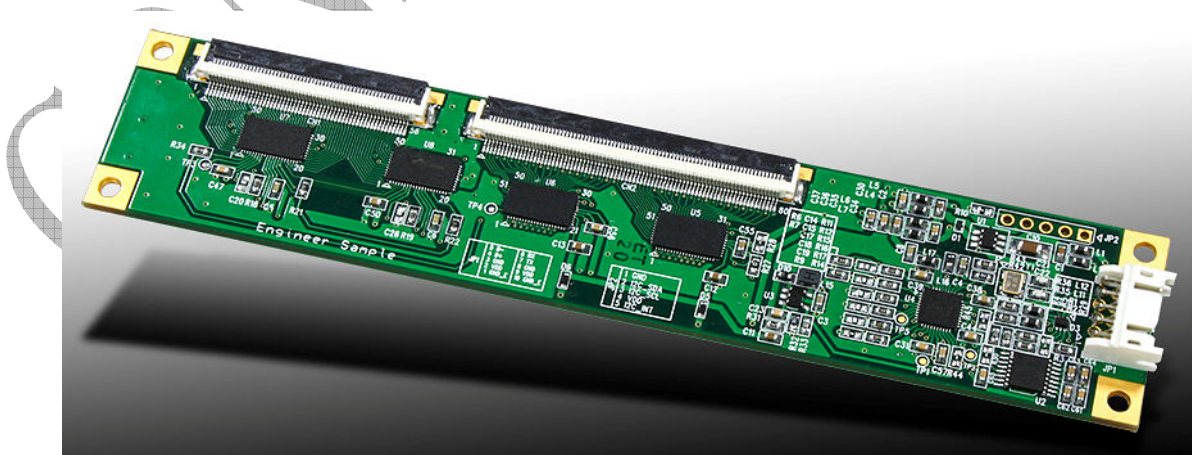
禾瑞亞科技股份有限公司  
eGalax\_eMPIA Technology Inc.

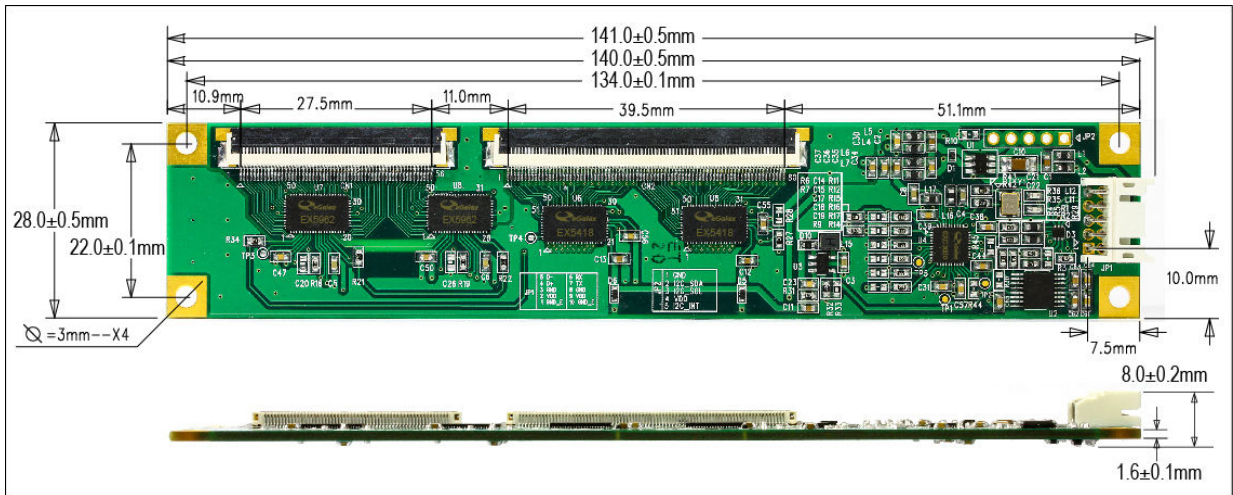
## Projected Capacitive USB/RS232 Touch Panel Controller

eGalax\_eMPIA launched touch control board to meet latest Restriction of Hazardous Substances (RoHS) Directive. This touch panel controller provides the optimistic performance of your projected capacitive touch panels. It communicates with PC system directly through USB/UART connector. You can see how superior the design is in sensitivity · accuracy and friendly operation. The touch panel driver emulates mouse left and right button function and supports operation systems as following.

| OS             | Version   | Interfaces       |
|----------------|---|------------------|
| <b>Windows</b> | Windows 8(Need logo submission)   | USB/RS232 (Win8) |
|                | Windows 7   |                  |
|                | Windows Vista, XP/2000  |                  |
|                | Windows CE.net/5.0/6.0/7.0  |                  |
|                | Windows Embedded  |                  |
| <b>Linux</b>   | Windows XP Tablet PC edition  | USB/RS232        |
|                | Distribution based on Kernel 2.6.24 and later.<br>(Ubuntu/Linux Mint<br>Debian<br>Fedora<br>Red Hat/CentOS<br>Magaie/Mandriva/Mandrake<br>SUSE/openSUSE |                  |
|                | Android 2.3 ~ 4.4   |                  |
| <b>Mac</b>     | Mac OS, Mac OS X (PowerPC, Intel CPU)   | USB              |
| <b>QNX</b>     | QNX RTOS v6.3   | USB/RS232        |

### Controller:





**Thickness:**

Total thickness:  $8.0 \text{ mm} \pm 0.2 \text{ mm}$

(Including PCB:  $1.6 \text{ mm} \pm 0.1 \text{ mm}$ . USB/RS232 connector:  $5.1 \text{ mm}$ .

Soldering pin:  $1.3 \text{ mm}$ )

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## Specifications:

| <b>USB/RS232 Type Controller</b>    |   |
|-------------------------------------|---|
| Circuit Board Dimension             | 28mm x 140mm  |
| Channels of Panel                   | Max. Tx:78 Rx:54 channels (exclude shielding pin)   |
| Input Voltage                       | 3.5V~5.5V. Typical 5V.  |
| Operating Temperature               | -40 to 85 °C  |
| Storage Temperature                 | -40 to 90 °C  |
| Relative Humidity                   | 95% at 60 °C, RH Non-condensing   |
| Linearity(Note 1)                   | Line drawing accuracy :<br>1pt +/- 1mm offset /10mm<br>Touch (point) accuracy : 1pt +/- 1mm<br>Refer to Windows 8 Logo regulation |
| Interface                           | USB: 1.1 Full Speed<br>RS232: No parity,8 data bits,1 stop bit, baud rate 19200bps  |
| Resolution                          | 4096×4096 resolution  |
| Power consumption(mA)               | Active Mode: < 100mA<br>Idle Mode : < 50mA<br>Sleep Mode :< 5mA<br>(Operation Mode :Active Mode only)                             |
| Report rate(points/sec)<br>(Note 2) | > 100 Hz  |
| Response time                       | Average < 25 ms   |

**Note 1: Channel pitch should be design 4.8mm (Win8) or < 6mm (Non-Win8).**

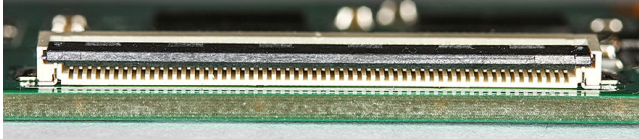
**Note 2: Report rate will vary by channel number, cover thickness and other parameters.**

## Product Package:

- (1) PCAP Controller Board(ETP-MB-EXC328056CDG-XXXX)
- (2) Y-Cable (ETP-CB-SXC00)
- (3) USB or RS232 cable

## FPC Connector Pin Assignment:

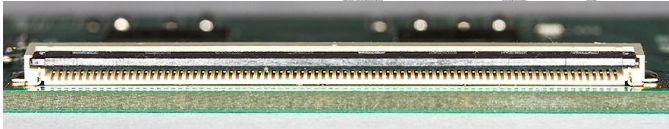
### CN1 Connector



CN1

|      |      |      |      |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |            |     |
|------|------|------|------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|-----|
| 20   | 19   | 18   | 17   | 16         | 15   | 14   | 13   | 12   | 11   | 10   | 9    | 8    | 7    | 6    | 5    | 4    | 3    | 2    | 1          | PIN |
| RX19 | RX18 | RX17 | RX16 | RX15       | RX14 | RX13 | RX12 | RX11 | RX10 | RX9  | RX8  | RX7  | RX6  | RX5  | RX4  | RX3  | RX2  | RX1  | Shield_RX1 |     |
| 40   | 39   | 38   | 37   | 36         | 35   | 34   | 33   | 32   | 31   | 30   | 29   | 28   | 27   | 26   | 25   | 24   | 23   | 22   | 21         | PIN |
| RX39 | RX38 | RX37 | RX36 | RX35       | RX34 | RX33 | RX32 | RX31 | RX30 | RX29 | RX28 | RX27 | RX26 | RX25 | RX24 | RX23 | RX22 | RX21 | RX20       |     |
|      |      |      |      | 56         | 55   | 54   | 53   | 52   | 51   | 50   | 49   | 48   | 47   | 46   | 45   | 44   | 43   | 42   | 41         | PIN |
|      |      |      |      | Shield_RX2 | RX54 | RX53 | RX52 | RX51 | RX50 | RX49 | RX48 | RX47 | RX46 | RX45 | RX44 | RX43 | RX42 | RX41 | RX40       |     |
|      |      |      |      |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |            | PIN |

### CN2 Connector

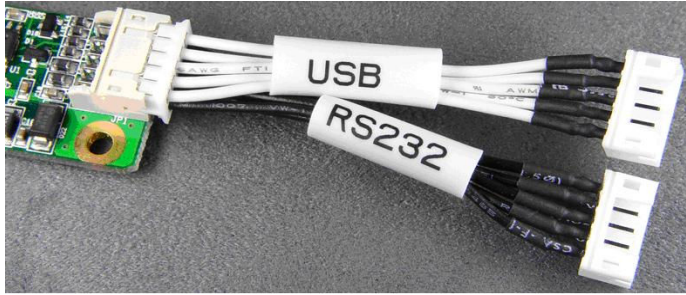


CN2

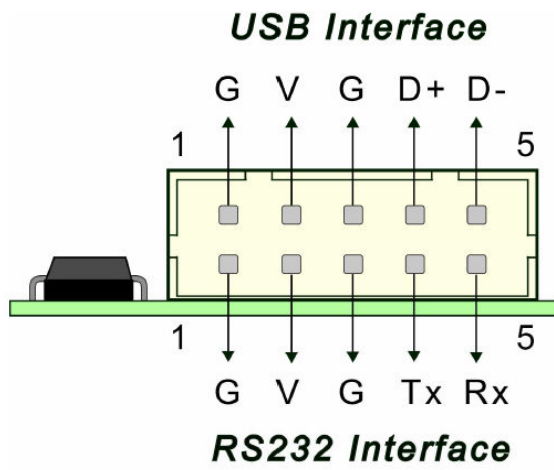
|            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |            |     |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|-----|
| 20         | 19   | 18   | 17   | 16   | 15   | 14   | 13   | 12   | 11   | 10   | 9    | 8    | 7    | 6    | 5    | 4    | 3    | 2    | 1          | PIN |
| TX19       | TX18 | TX17 | TX16 | TX15 | TX14 | TX13 | TX12 | TX11 | TX10 | TX9  | TX8  | TX7  | TX6  | TX5  | TX4  | TX3  | TX2  | TX1  | Shield_TX1 |     |
| 40         | 39   | 38   | 37   | 36   | 35   | 34   | 33   | 32   | 31   | 30   | 29   | 28   | 27   | 26   | 25   | 24   | 23   | 22   | 21         | PIN |
| TX39       | TX38 | TX37 | TX36 | TX35 | TX34 | TX33 | TX32 | TX31 | TX30 | TX29 | TX28 | TX27 | TX26 | TX25 | TX24 | TX23 | TX22 | TX21 | TX20       |     |
| 60         | 59   | 58   | 57   | 56   | 55   | 54   | 53   | 52   | 51   | 50   | 49   | 48   | 47   | 46   | 45   | 44   | 43   | 42   | 41         | PIN |
| TX59       | TX58 | TX57 | TX56 | TX55 | TX54 | TX53 | TX52 | TX51 | TX50 | TX49 | TX48 | TX47 | TX46 | TX45 | TX44 | TX43 | TX42 | TX41 | TX40       |     |
| 80         | 79   | 78   | 77   | 76   | 75   | 74   | 73   | 72   | 71   | 70   | 69   | 68   | 67   | 66   | 65   | 64   | 63   | 62   | 61         | PIN |
| Shield_TX2 | TX78 | TX77 | TX76 | TX75 | TX74 | TX73 | TX72 | TX71 | TX70 | TX69 | TX68 | TX67 | TX66 | TX65 | TX64 | TX63 | TX62 | TX61 | TX60       |     |

**Interface Connector JP1:**

**USB/RS232 Combo Connector**



**USB&RS232 interface:**



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