



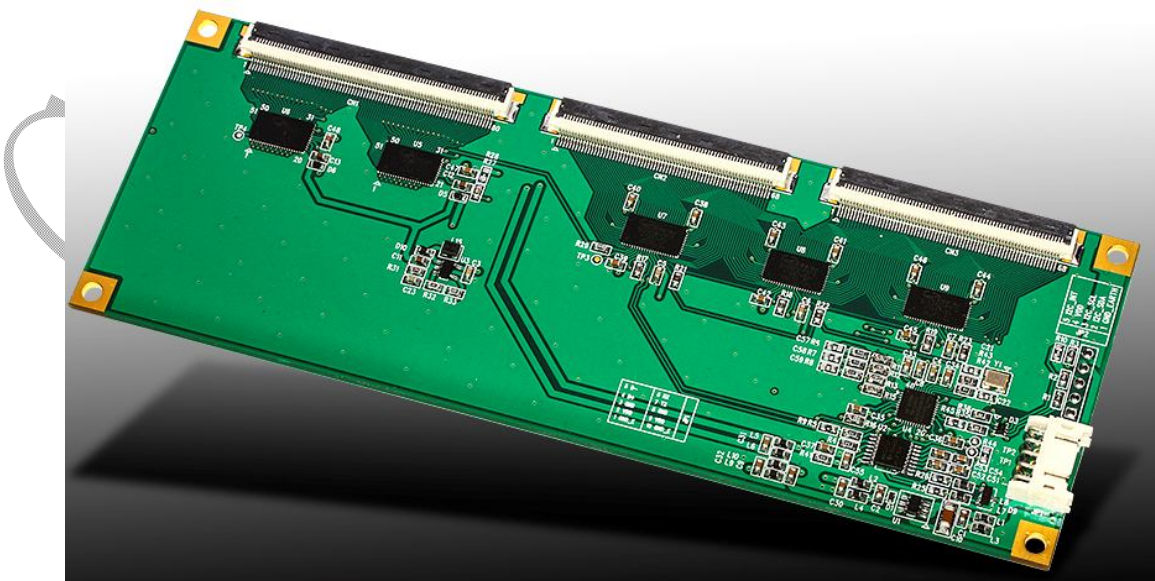
禾瑞亞科技股份有限公司  
eGalax\_eMPIA Technology Inc.

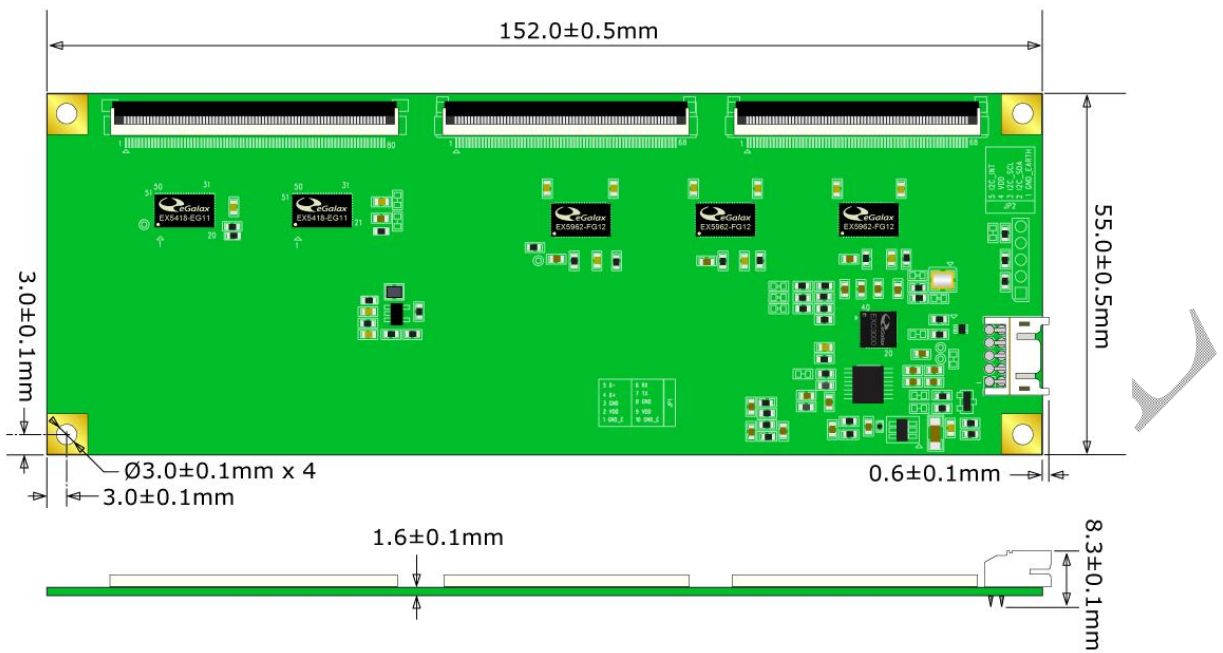
## Projected Capacitive USB/RS232/I2C Touch Panel Controller

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/I2C 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) Windows 7 Windows Vista, XP/2000 Windows CE.net/5.0/6.0/7.0 Windows Embedded Windows XP Tablet PC edition	USB/RS232 I2C (Win8)
	Distribution based on Kernel 2.6.24 and later. (Ubuntu/Linux Mint Debian Fedora Red Hat/CentOS Magaie/Mandriva/Mandrake SUSE/openSUSE Android 2.3 ~ 4.4	USB/RS232/I2C
<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:  $8.3 \text{ mm} \pm 0.1 \text{ mm}$

(Including PCB:  $1.6 \text{ mm} \pm 0.1 \text{ mm}$  USB/RS232 connector: 5.1mm. Soldering pin: 1.3 mm)

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## Specifications:

<b>USB/RS232/I2C Type Controller</b>	
Circuit Board Dimension	55mm x 152mm
Channels of Panel	Max. Tx:72 Rx:126 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 : 1pt +/- 1mm offset /10mm Touch (point) accuracy : 1pt +/- 1mm Refer to Windows 8 Logo regulation
Interface	USB: 1.1 Full Speed RS232: No parity,8 data bits,1 stop bit, baud rate 115200bps I2C:100K/400K Hz
Resolution	4096×4096 resolution
Power consumption(mA)	Active Mode: < 125 mA Idle Mode : < 50mA Sleep Mode :< 5mA (Operation Mode :Active Mode only)
Report rate(points/sec) (Note 2)	> 100 Hz
Response time	Average < 25 ms

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

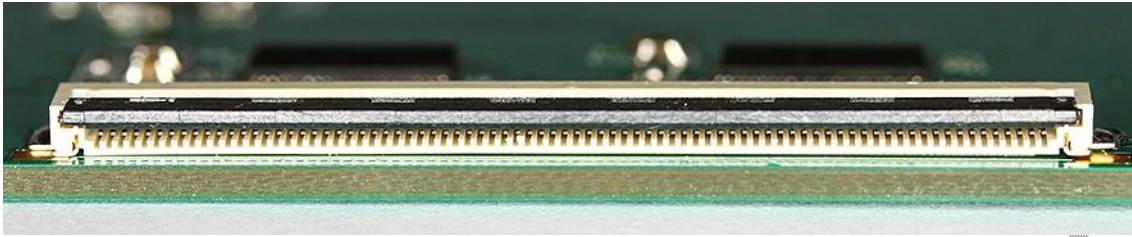
**Note 2: Report rate will vary by channel number, cover thickness and other parameters.**

## Product Package:

- (1) PCAP Controller Board(ETP-MB-EXC3280136TBG-XXXX)
- (2) Y-Cable (ETP-CB-SXC00)
- (3) USB or RS232 cable

## FPC Connector Pin Assignment:

### CN1 Connector



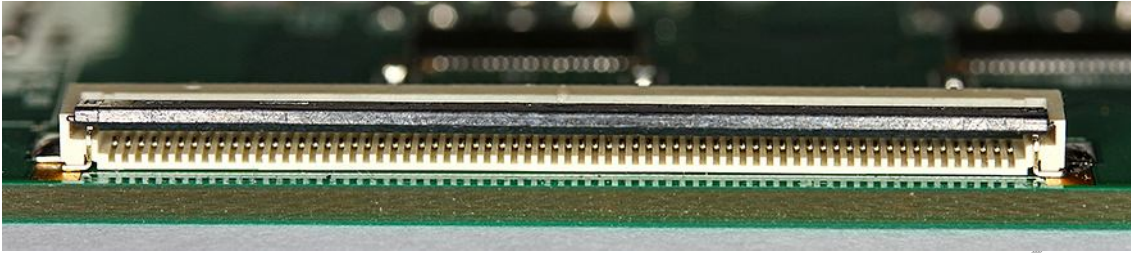
CN1																					
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	SHIELDING_TX1		TX77	TX76	TX75	TX74	TX73	TX72	TX71	TX70	TX69	TX68	TX67	TX66	TX65	TX64	TX63	TX62	TX61	TX60	TX59
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	TX58	TX57	TX56	TX55	TX54	TX53	TX52	TX51	TX50	TX49	TX48	TX47	TX46	TX45	TX44	TX43	TX42	TX41	TC40	TX39	
PIN	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
	TX38	TX37	TX36	TX35	TX34	TX33	TX32	TX31	TX30	TX29	TX28	TX27	TX26	TX25	TX24	TX23	TX22	TX21	TX20	TX19	
PIN	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
	TX18	TX17	TX16	TX15	TX14	TX13	TX12	TX11	TX10	TX9	TX8	TX7	TX6	TX5	TX4	TX3	TX2	TX1	TX0	SHIELDING_TX0	

## CN2 Connector



CN2																				
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	NC	NC	NC	NC	NC	SHIELDING_RX0	RX0	RX1	RX2	RX3	RX4	RX5	RX6	RX7	RX8	RX9	RX10	RX11	RX12	RX13
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	RX14	RX15	RX16	RX17	RX18	RX19	RX20	RX21	RX22	RX23	RX24	RX25	RX26	RX27	RX28	RX29	RX30	RX31	RX32	RX33
PIN	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	RX34	RX35	RX36	RX37	RX38	RX39	RX40	RX41	RX42	RX43	RX44	RX45	RX46	RX47	RX48	RX49	RX50	RX51	RX52	RX53
PIN	61	62	63	64	65	66	67	68												
	RX54	RX55	RX56	RX57	RX58	RX59	RX60	SHIELDING_RX1												

## CN3 Connector

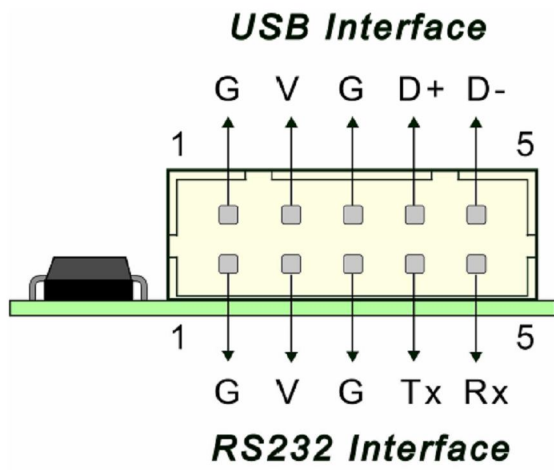


CN3																				
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	SHIELDING_RX2	RX61	RX62	RX63	RX64	RX65	RX66	RX67	RX68	RX69	RX70	RX71	RX72	RX73	RX74	RX75	RX76	RX77	RX78	RX79
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	RX80	RX81	RX82	RX83	RX84	RX85	RX86	RX87	RX88	RX89	RX90	RX91	RX92	RX93	RX94	RX95	RX96	RX97	RX98	RX99
PIN	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	RX100	RX101	RX102	RX103	RX104	RX105	RX106	RX107	RX108	RX109	RX110	RX111	RX112	RX113	RX114	RX115	RX116	RX117	RX118	RX119
PIN	61	62	63	64	65	66	67	68												
	RX120	RX121	RX122	RX123	RX124	RX125	RX126	SHIELDING_RX3												

## USB/RS232 Combo Connector



**USB&RS232 interface:**



**I2C interface:**

- 1 GND\_EARTH
- 2 I2C\_SDA
- 3 I2C\_SCL
- 4 VDD
- 5 I2C\_INT

