



Projected Capacitive USB/RS232 1+2+2 Touch Sensor Controller Board

Supports sizes 18.5W – 24”

Size range supported may vary depending on custom requirements



DawarTouch®

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Document Revision History

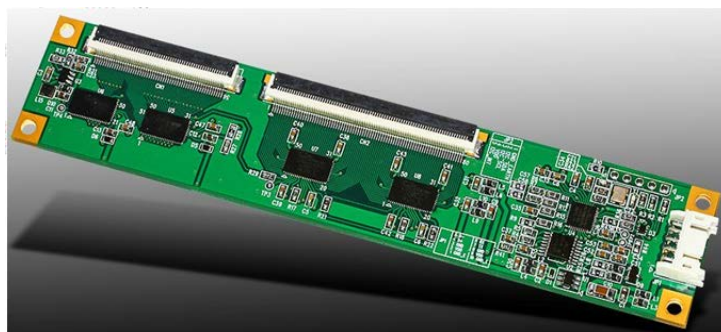
Revision	Date	Content	Author
A	12-1-14	Released Spec	Lizzy Stoltz

Introduction:

USB/RS232 Touch Panel Controller Board

- 136 channels of interface capability
- Supports USB/RS232 Interface
- Meets the latest Restriction of Hazardous Substances (RoHS) directive
- Offers superior sensitivity, accuracy and overall excellent operation
- Provides 10 point touch capability
- Gloved hand operation
- Supports through glass touch
- Excellent accuracy with no linearity calibration required
- Emulates mouse left and right button function and supports the following operating systems:

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

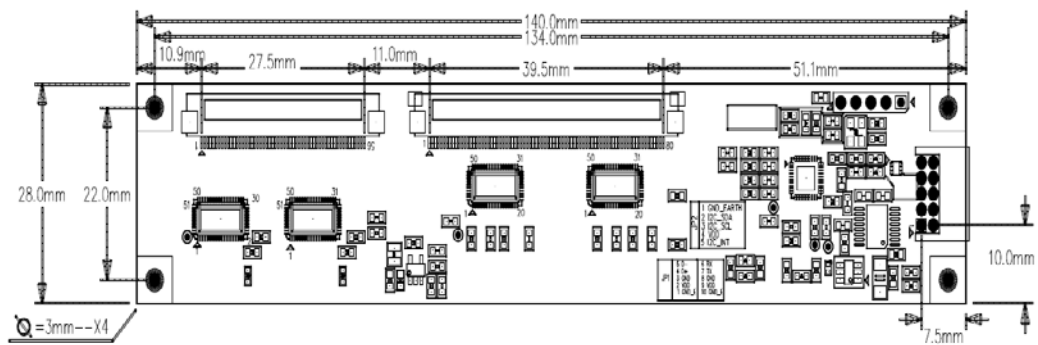
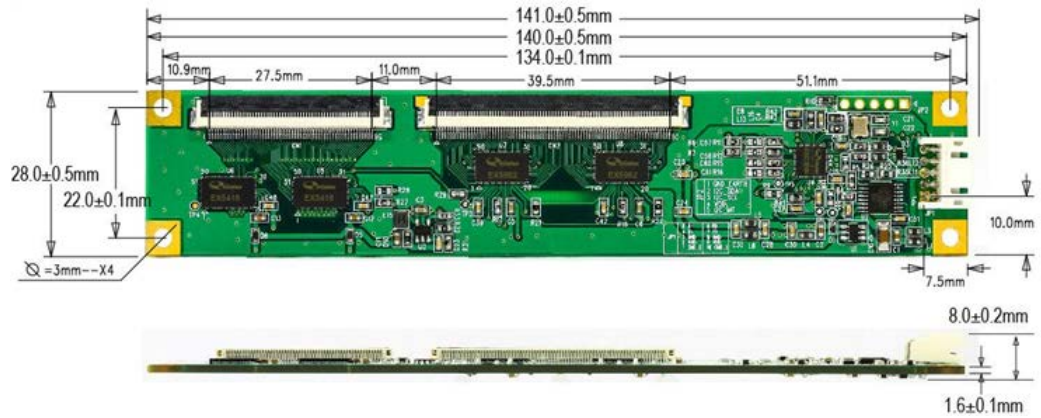


Specification:

USB/RS232 Type Controller	
Circuit Board Dimension	28mm x 141mm
Channels of Panel	Max. Rx:78 Tx:54 channels (excludes shielding) (2 shield pins used each for Rx and Tx circuits)
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	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 19200bps
Resolution	4096x4096 resolution
Power Consumption(mA)	Active Mode: <90mA Idle Mode : <40mA Sleep Mode : < 5mA (Operation Mode: Active Mode only)
Report Rate (points/sec) (See Note 1 below)	> 100 Hz
Response time	Average < 25 ms

Note 1: Report rate will vary by channel number, cover lens thickness and other parameters.

Controller Board Dimensions:



Thickness:

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

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

Label Format:

Label 1 – Prototype

Label 1 product labeling is provided with low volume orders less than 50 pieces. The first line is the Dawar item number and revision. The second line is the firmware ID and Job number that was used to load the FW. The firmware ID is the controller tuning firmware. The third line is the date code and serial number. Item numbers are assigned from Dawar by product and are customer specific in some cases.

CTXXXXX-X FWXXXXX-X Job# XXXXXX YYMMDDhhmmss S/N
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Label 2 – Production

Label 2 product labeling is provided with production orders greater than 50 pieces. There are two labels on the back side of the controller, one that includes the part number and firmware ID information and a second that includes a serialized barcode.

EXC325680CKG 0268 CTXXXXX-X

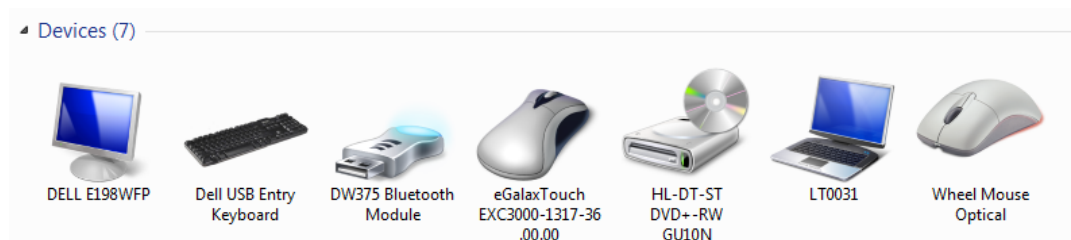
On the label that includes the part number information, the first line EXC325680CKG is the marketing part number. The second line is the firmware ID of the controller, i.e., 0272). The firmware ID is a 4 digit/character identifying the tuning of the controller. In some cases the firmware ID will be standard. The firmware ID will be provided as standard until the customer's specific tuning requirements have been completed.

Once the controller is tuned to the customer specific requirements, the firmware ID number will change to a discrete customer specific 4 digit/character. The third line is the Dawar item number and revision. This is the ordering part number for the product and customer specific in some cases.



The serial number label format is shown above. This includes a 10-digit number which allows Dawar to track the shipping record.

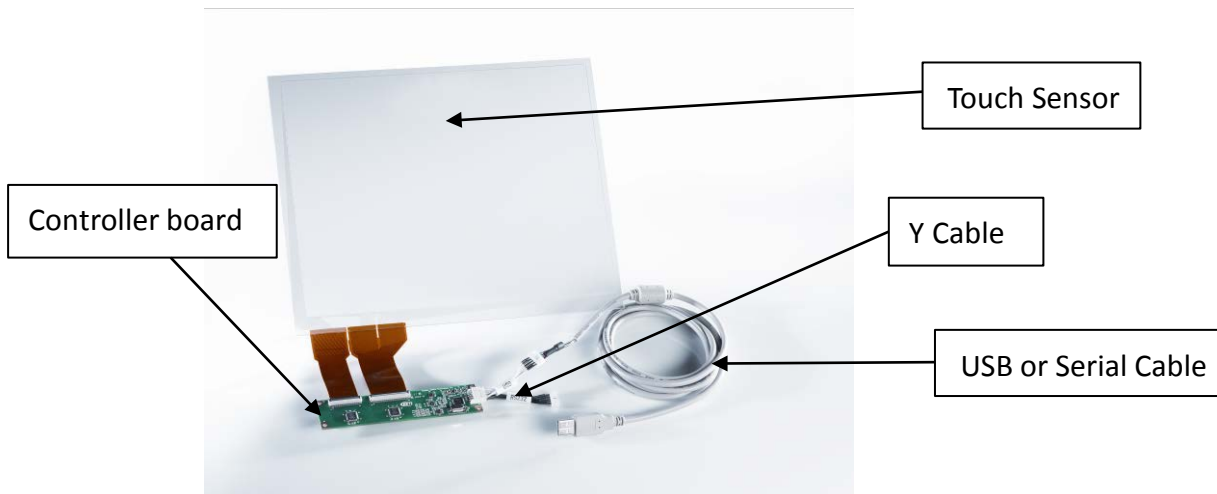
To check the version of FID in windows go to the Devices and Printers menu and the image below will appear:



Find device named started with eGalaxTouch EXC3000. For this example, 1317 is the firmware ID.

Complete Product Package:

- (1) PCAP Touch Sensor
- (2) PCAP Controller Board
- (3) Y-Cable (CT10050)
- (4) USB cable (CT10051) or RS232 cable (CT10052)



Cables:

Optional USB and Serial (RS-232) interface cable

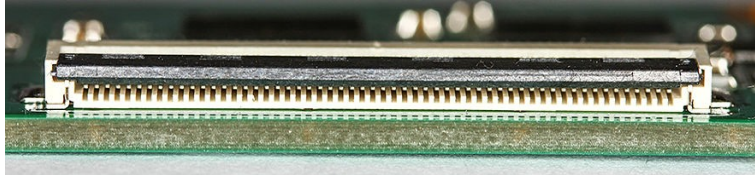
TYPE	Tail Length	Connector	P/N	Picture
USB	183cm	Pitch 2.0mm 5pin housing to USB A Male	CT10051	
Serial (RS-232)	183cm	Pitch 2.0mm housing to DB9 Female. PS/2 interface for 5V power input provided	CT10052	
Serial (RS-232)	50cm	Pitch 2.0mm housing to DB9 Female. Black and red wire for 5V power input provided	CT10085	
Y Cable	6.5cm	Pitch 2.0mm 10pin housing to 2 individual 5 pin 2.0mm housing for USB and serial	CT10050	

Note: The external power from mainboard or PS/2 interface is necessary when using Serial interface only.

Touch Panel Connections:

FPC Connector Pin Assignment:

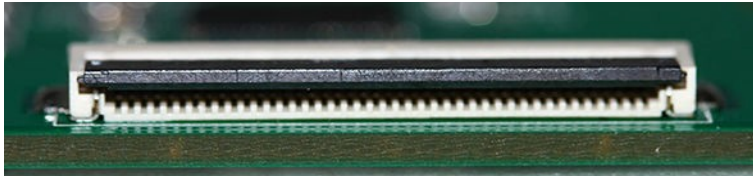
CN1 Connector:



CN1																				
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	SHIELDING_TX1	TX53	TX52	TX51	TX50	TX49	TX48	TX47	TX46	TX45	TX44	TX43	TX42	TX41	TC40	TX39	TX38	TX37	TX36	TX35
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	TX34	TX33	TX32	TX31	TX30	TX29	TX28	TX27	TX26	TX25	TX24	TX23	TX22	TX21	TX20	TX19	TX18	TX17	TX16	TX15
PIN	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
	TX14	TX13	TX12	TX11	TX10	TX9	TX8	TX7	TX6	TX5	TX4	TX3	TX2	TX1	TX0	SHIELDING_TX0				

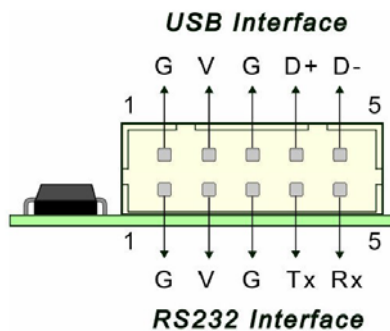


CN2 Connector



CN2																				
PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	SHIELDING_RX0	RX0	RX1	RX2	RX3	RX4	RX5	RX6	RX7	RX8	RX9	RX10	RX11	RX12	RX13	RX14	RX15	RX16	RX17	RX18
PIN	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	RX19	RX20	RX21	RX22	RX23	RX24	RX25	RX26	RX27	RX28	RX29	RX30	RX31	RX32	RX33	RX34	RX35	RX36	RX37	RX38
PIN	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	RX39	RX40	RX41	RX42	RX43	RX44	RX45	RX46	RX47	RX48	RX49	RX50	RX51	RX52	RX53	RX54	RX55	RX56	RX57	RX58
PIN	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	RX59	RX60	RX61	RX62	RX63	RX64	RX65	RX66	RX67	RX68	RX69	RX70	RX71	RX72	RX73	RX74	RX75	RX76	RX77	SHIELDING_RX1

USB/RS232 Combo Connector Pin Assignment:

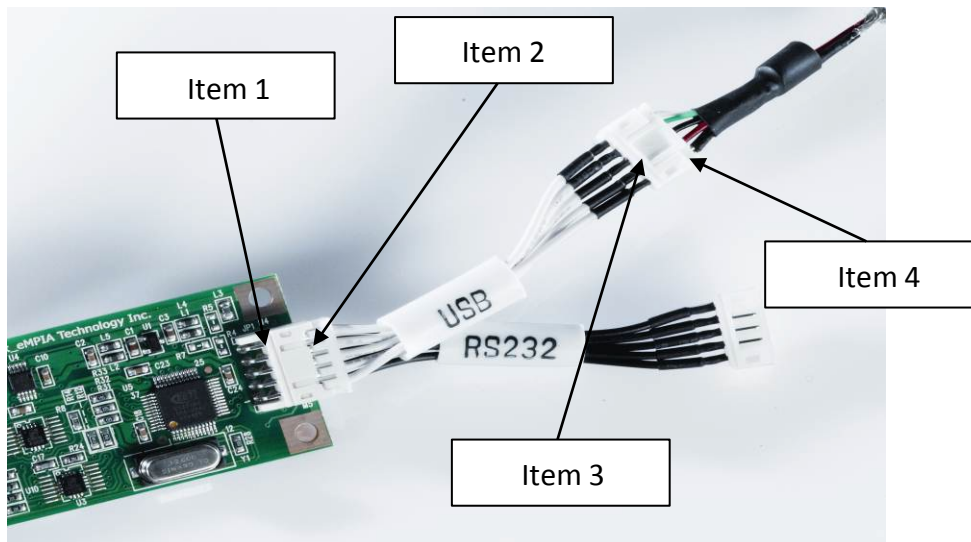


Y-Cable Pin Assignment:



This cable has a total of 3 connectors: one connection to the controller board and two connections to either USB or Serial cable.

Cable Connectors:



Item	Description	Part Number	Manufacturer
1	Main Board, Male	CP-HD20R-2x5	Cherng Weei
2	YY Cable, Female	A2004H-2x5P (used for SXC00)	CJT or selected manufacture
2a Alternate	Y Cable, Female	JST-PHDR-10VS	JST
3	Y Cable, Male	A2001WV-XP-5P (used for SXC00)	CJT or selected manufacture
4	USB or Serial Cable, Female	A2001H-5P (used with SXU00 or SXR00)	CJT or selected manufacture
4a Alternate	USB or Serial Cable, Female	JST-PHR-5	JST



Product Life:

- 5 year product lifecycle
 - o 2-3 years “active promotion”
 - o 2-3 years “continued availability”
- 12 month end-of-life (EOL) Notification
 - o Last time buy option available with EOL notification
- 60 day change notification on anything that affects fit, form or function of the part.

Warranty:

Dawar warrants the products produced to this specification from date of shipment for (1) year.

Please reference Dawar’s standard terms and conditions for more information.