

CT10457 Controller Board Specification

PCAP Microchip® mxT2952T2 USB

**Sustaining Quality,
Exceeding Expectations**

DawarTouch®

1. General Description

The CT10457 is a base controller board custom designed for Dawar's line of standard projected capacitive (PCAP) touch sensors. The board uses the Microchip® mxT2952T2 maXTouch® controller. The communications interface is standard USB 2.0 full speed. The CT10457 is an unprogrammed board. Programmed versions of this board are assigned custom CT part numbers.

For more information on the mxT2952T2 controller refer to the following Microchip® documentation:

- ▶ mxT2952T2 Datasheet
- ▶ Interfacing with maXTouch Touchscreen Controllers

Both documents are available on [Microchip's website](#).

2. Functional Description

The CT10457 controller supports the following features:

- ▶ Up to 16 finger touches
- ▶ Stylus touches (stylus diameter depends on sensor design)
- ▶ Glove touches
- ▶ Thick cover lenses (up to 4mm glass, 2mm plastic)
- ▶ Greater than 100Hz report rate
- ▶ Low latency (<10ms for first touch report from idle mode)
- ▶ Automatic self-calibration
- ▶ Aggressive noise avoidance and noise cancellation features
- ▶ Maximum resolution of 4095 x 4095

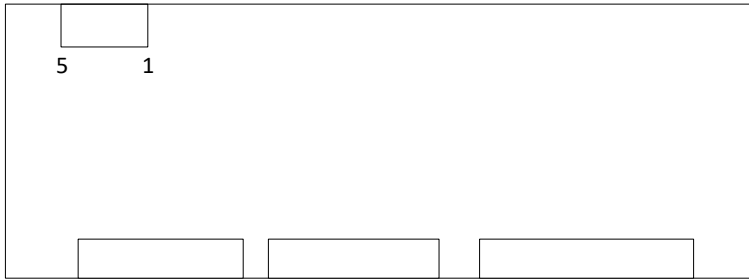
Additional tuning support from Dawar is available for specialized applications.

3. Electrical Specifications

Parameter	Min	Typ	Max	Units	Remarks
Digital Power Supply (VDD)	-	5	-	V	USB standard
Active Current	-	40	-	mA	Note 1
Sleep Current	-	720	-	µA	
X Electrodes	-	41	-	-	
Y Electrodes	-	71	-	-	

Note 1: Active power depends on configuration settings and number of touches.

4. Connector



Pin	Description
1	GND
2	5V
3	GND
4	D+
5	D-

USB board connector part number is Most Well 2WF2HD-201505T121A01 (compatible with JST S5B-PH-K-S).

Mating cable connector is Most Well 2HG2CT-201105NPA1A01 with crimp contact 2F2CA-PT1701 (compatible with JST PHR-5 and SPH-002T-P0.5L).

5. Environmental Specifications

Parameter	Min	Typ	Max	Units	Remarks
Operating Temperature	-40	-	85	°C	
Storage Temperature	-40	-	90	°C	
Relative Humidity	0	-	95	%RH	Note 1

Note 1: RH is defined at 60°C, non-condensing.

6. Operating System Support

Operating System	Supported	Remarks
Microsoft Windows XP	Yes	Note 1
Microsoft Windows 7	Yes	Note 2
Microsoft Windows 8	Yes	Note 2
Microsoft Windows 10	Yes	Note 2
Linux	Yes	Note 3

Note 1: Requires custom mouse emulation program. Contact Dawar for support.

Note 2: Compatible with Microsoft HID. No driver required.

Note 3: Kernel version 2.6.38 or later. Contact Dawar for support.

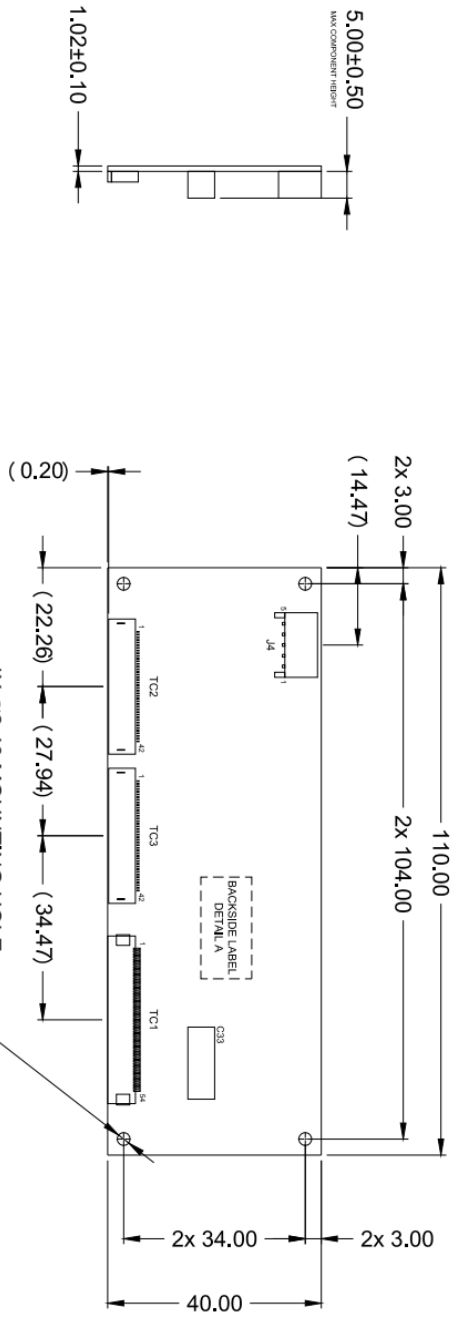
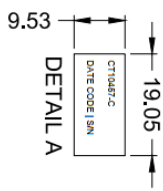
7. Product Life

Dawar Technologies is committed to providing products stability and support to our valued customers throughout the life of the product. All Dawar Touch products meet the following minimum requirements:

- ▶ 5 year minimum product lifecycle
- ▶ 12 month end of life (EOL) notification
- ▶ Last time buy option with EOL notification
- ▶ 60 day change notification for any change that affects form, fit, or function

- NOTES:
- CONNECTOR FOR TC1: MOST WELL MW/FPC05PSN-54-X-X-L
 - CONNECTOR FOR TC2: MOST WELL MW/FPC05PSN-42-X-X-L
 - CONNECTOR FOR TC3: MOST WELL MW/FPC05PSN-42-X-X-L
 - CONNECTOR FOR J4: MOST WELL 2WF2HD-201505T121A01 (COMPATIBLE WITH JST S5B-PH-K-S)
 - MATING CONNECTOR FOR J4: MOST WELL HOUSING 2HG2CT-201105NPA1A01 AND CRIMP CONTACT 2F2CA-PT1701 (COMPATIBLE WITH JST HOUSING PHR-5)
 - DIMENSIONS IN PARENTHESIS ARE FOR REFERENCE ONLY

J4	
PIN	FUNCTION
1	GROUND
2	USB_5V
3	GROUND
4	D+
5	D-



REVISIONS			
REV	DATE	DESCRIPTION	DRAWN DATE
A	1	ECO	AWH 12-5-16
B	1	INITIAL RELEASE	TAF 6-28-16
B	2	UPDATE 2962T BOARD TO LATEST VOLTAGE BOOST DESIGN	TAF 6-28-17
C	1	UPDATED CONNECTOR INFO	CPD 10-18-17
C	2	FIXED LAYOUT	EMK 07/22/19
C	3	UPDATED LABEL	HYC 10/22/19

Controlled Cassie Ostrowski
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DESCRIPTION: PCB - ATINEL 2962TZ USB 5A/84 STD

ITERATION NO.	DATE	BY	DATE
CT10457-C	1/21/20	AWH	1/21/20
1	1/21/20	TAF	1/21/20
2	1/21/20	CPD	1/21/20
3	1/21/20	EMK	1/21/20

Revision History

Revision	Date	Content	Author
A	9-13-2019	Initial Release	Tony Gray
B	1-27-2020	Added JST part numbers for USB connector	Tony Gray