CT11068 Controller Board Specification

PCAP Microchip® mxT1664T3 USB

Sustaining Quality,
Exceeding Expectations

DawarTouch®

DAWAR
THINKING BEYOND THE TOUCH
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dawar.com

June 29, 2020
Rev A

1. General Description

The CT11068 is a controller board programmed to work with 7in Dawar sensor DW03414. The unprogrammed board is CT10404. The board uses the Microchip® MXT1664T3 maXTouch® controller. The communications interface is standard USB 2.0 full speed.

For more information on the MXT1664T3 controller refer to the following Microchip® documentation:

- ▶ MXT1664T3 Datasheet
- ▶ Interfacing with maXTouch Touchscreen Controllers

Both documents are available on Microchip's website.

2. Functional Description

The CT11068 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
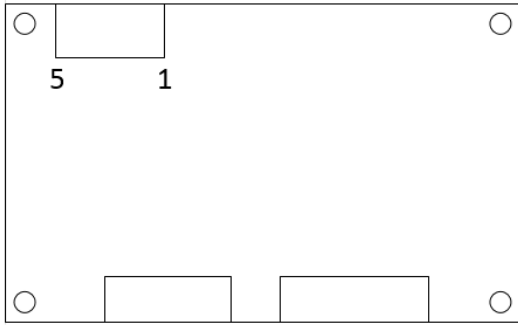- ▶ Maximum resolution of 4095 x 4095

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	-	36	-	mA	Note 1
Sleep Current	-	3.5	-	mA	
X Electrodes	-	-	21	-	
Y Electrodes	-	-	16	-	

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

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4. USB 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. Refer to https://github.com/atmel-maxtouch/linux/wiki/USB. .

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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:
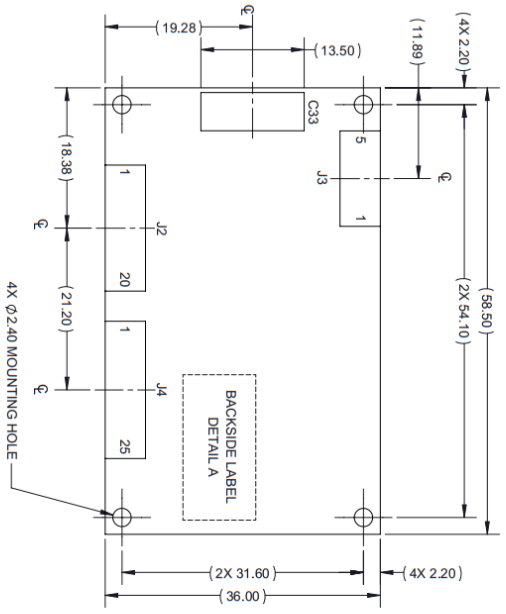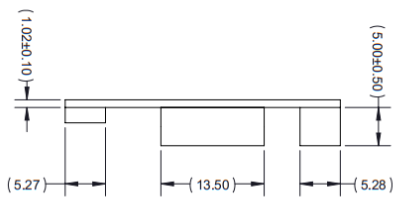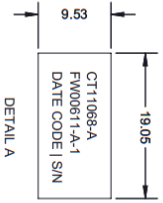
▶ 5 year minimum product lifecycle

▶ 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

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NOTES:
1. CONNECTOR J2: MOST WELL MWFPC05PSN-H20-20
2. CONNECTOR J4: MOST WELL MWFPC05PSN-H20-25
3. CONNECTOR J3: MOST WELL MWFPC05PSN-H20-25
4. MATING CONNECTOR FOR J3: MOST WELL H2000-105111

DETAIL A

9.53

19.05

CT11068-A
FW00611-A-1
DATE CODE | S/N

J3	
PIN	FUNCTION
1	GROUND
2	USB_5V
3	GROUND
4	D+
5	D-

(1.02±0.10)

(5.00±0.50)

(5.27) (13.50) (5.28)

(19.28)

(13.50)

C33

(18.38)

J2

1   20

(21.20)

J4

1   25

(4X 2.20)

(11.89)

5   J3   1

(2X 54.10)

(58.50)

4X Ø 2.40 MOUNTING HOLE

BACKSIDE LABEL
DETAIL A

(2X 31.60)

(4X 2.20)

(36.00)

BASE CONTROLLER	
CT10404-B	
FIRMWARE	ITEM/DRAWING NO.
FW00611-A-1	CT11068-A
DESCRIPTION	
ATMEL PCB - 1664T3 USB 20x25 PCAP CONTROLLER	

UNIT	TOLERANCE		
MM [INCH]	±0.25 [0.010] UNLESS SPECIFIED		
	SHEET	DRAWN BY	DATE
	1 OF 1	EMK	01/08/19
		DWG. REV.	1

REVISIONS					
ITEM REV.	DWG REV.	ECO	DESCRIPTION	DWN	DATE
A	1	-	INITIAL RELEASE	EMK	01/10/19

THIRD ANGLE PROJECTION

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Revision History

Revision	Date	Content	Author
A	6-29-2020	Initial Release	Tony Gray