

# CT10970 Chip-On-Flex Specification

PCAP Microchip® mxT1664T3 USB

**Sustaining Quality,  
Exceeding Expectations**

**DawarTouch®**

## 1. General Description

The CT10970 is a chip-on-flex (COF) circuit programmed to work with 15.6in Dawar sensor DW03050. The unprogrammed COF circuit is CT10460. The COF circuit 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 CT10970 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	-	-	32	-	
Y Electrodes	-	-	50	-	

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

## 4. Connector



Pin	Description
1	5V
2	GND
3	NC
4	NC
5	NC
6	NC
7	D-
8	D+

Mating connector is Molex 504380-0400 or equivalent.

## 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.

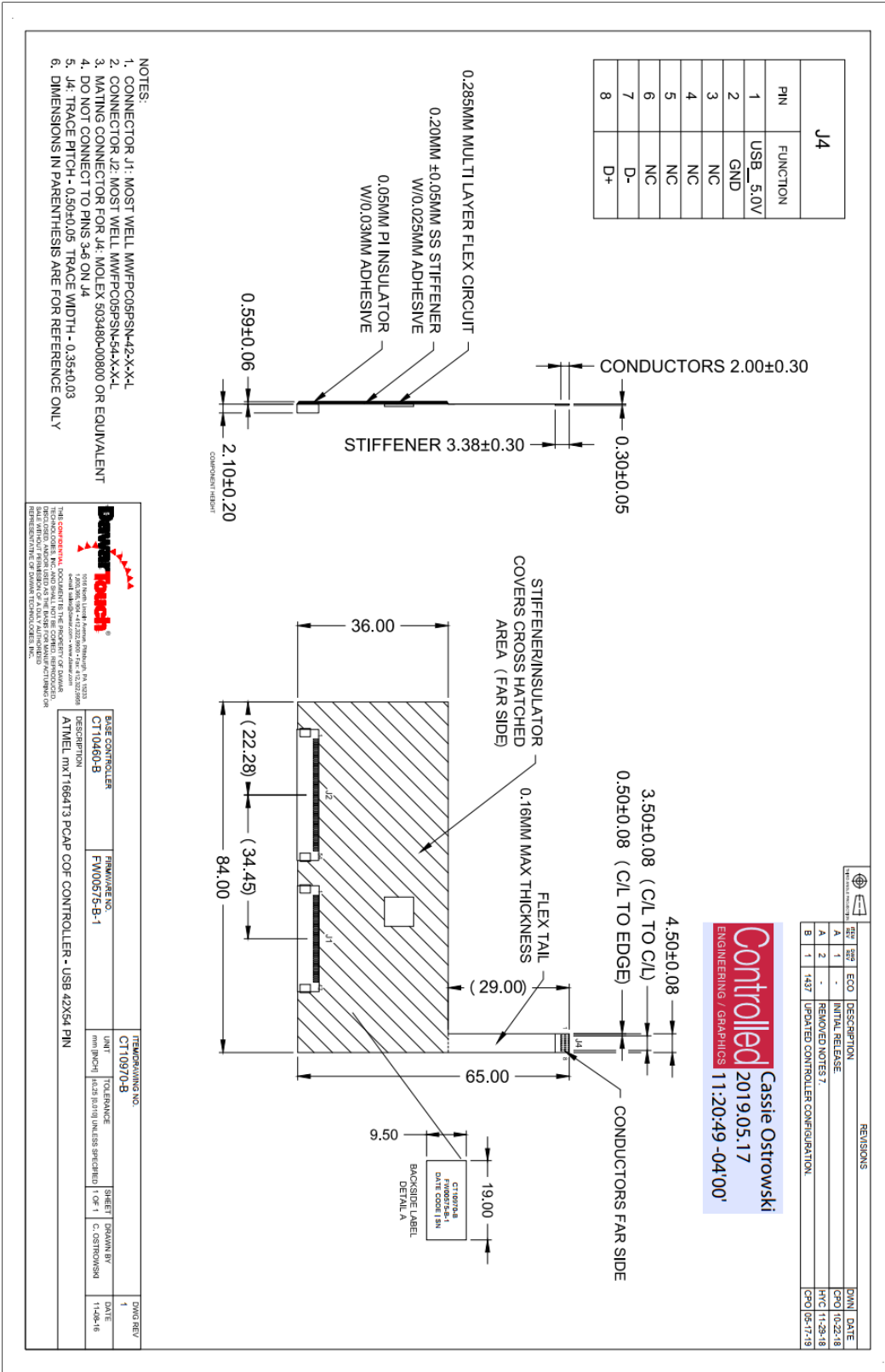
Note 2: Compatible with Microsoft HID. No driver required.

Note 3: Kernel version 2.6.38 or later. Refer to <https://github.com/atmel-maxtouch/linux/wiki/USB>.

## 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



J4	
PIN	FUNCTION
1	USB_5.0V
2	GND
3	NC
4	NC
5	NC
6	NC
7	D-
8	D+

- NOTES:
- CONNECTOR J1: MOST WELL MWFP00SPSN-42-KX-XL
  - CONNECTOR J2: MOST WELL MWFP00SPSN-54-KX-XL
  - MATING CONNECTOR FOR J4: MOLEX 503480-00800 OR EQUIVALENT
  - DO NOT CONNECT TO PINS 3-6 ON J4
  - J4 TRACE PITCH - 0.50±0.05 TRACE WIDTH - 0.35±0.03
  - DIMENSIONS IN PARENTHESES ARE FOR REFERENCE ONLY

REVISIONS			DWG. NO.	DATE
A	1	ECO	CT10460-B	10-22-18
A	2	INITIAL RELEASE		11-29-18
B	1	REMOVED NOTES 7.		05-17-19
B	1	UPDATED CONTROLLER CONFIGURATION.		

**Controlled**  
2019.05.17  
ENGINEERING / GRAPHICS 11:20:49 -04'00'

Cassie Ostrowski



DESCRIPTION	REVISION NO.	DATE	BY
CT10460-B	1	10-22-18	CT10970-B
ATMEL MAX1664T3 PCAP COF CONTROLLER - USB 42X64 PIN			

**Revision History**

Revision	Date	Content	Author
A	9-6-2019	Initial Release	Tony Gray
B	1-29-2020	Updated drawing	Tony Gray