

**15.6in Open Frame
DW03178 Specification**

**Sustaining Quality,
Exceeding Expectations**

DawarTouch®

1. General Description

The DW03178 is an open frame 15.6" touch and LCD sub-assembly. It includes a projected capacitive (PCAP) touch sensor, a touch controller board using the Microchip® mxT1664T3 maXTouch® controller with USB interface, an optically bonded 15.6" Tianma LCD, a custom LCD driver board, a DC power supply, and cables.

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 DW03178 includes the following items:

- ▶ Dawar 15.6" touch sensor and cover lens
- ▶ Dawar 15.6" touch controller
 - Up to 16 finger touches
 - Glove touches (may require custom tuning)
 - 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
- ▶ Tianma 15.6" LCD part number NL192108AC18-02D
 - Native resolution: 1920 x 1080
 - Contrast ratio: 750
 - Backlight: 400 nits
- ▶ Dawar LCD driver board
 - HDMI input
 - VGA input
- ▶ Dawar AC/DC wall mount power supply with US style plug
 - Input: 100 to 240 VAC @ 0.5A, 50Hz or 60Hz
 - Output: 12.0V @ 2A
- ▶ Dawar custom USB cable for touch controller
- ▶ Dawar HDMI cable

Additional touch tuning support from Dawar is available for specialized applications.

3. Electrical Specifications

3.1. Display driver board

| Parameter | Min | Typ | Max | Units | Remarks |
|----------------|------|------|------|-------|---------|
| Power Supply | 11.0 | 12.0 | 13.0 | V | |
| Active Current | - | 1.25 | 2.0 | A | |

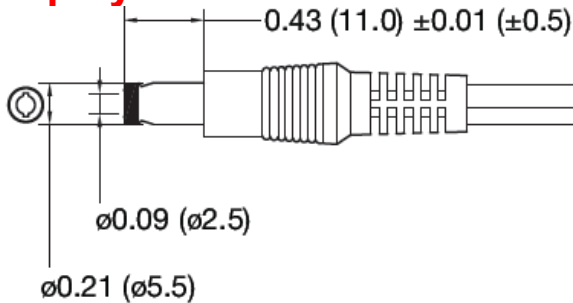
3.2. Touch Controller

| Parameter | Min | Typ | Max | Units | Remarks |
|----------------------------|-----|------|-----|-------|--------------|
| Digital Power Supply (VDD) | - | 5.0 | - | V | USB standard |
| Active Current | - | 36.0 | - | mA | Note 1 |
| Sleep Current | - | 3.5 | - | mA | |

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

4. Connector

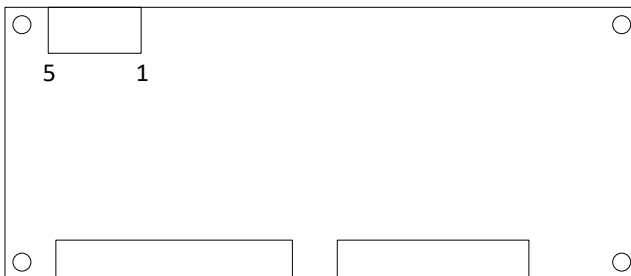
4.1. Display Driver Board



Mating female barrel plug is 5.5mm outer diameter, 2.5mm inner diameter, center positive.

4.2. Touch Controller

Connector part number is Most Well W2000-R2051221.



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

Mating connector is Most Well H2000-105111.

5. Environmental Specifications

| Parameter | Min | Typ | Max | Units | Remarks |
|-----------------------|-----|-----|-----|-------|---------|
| Operating Temperature | -10 | - | 60 | °C | |
| Storage Temperature | -20 | - | 70 | °C | |
| Relative Humidity | 0 | - | 50 | %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

Revision History

| Revision | Date | Content | Author |
|-----------------|-------------|--|---------------|
| A | 9-14-2019 | Initial Release | Tony Gray |
| B | 10-7-2020 | Updated cover page | Tony Gray |
| C | 3-23-2021 | Added mechanical drawing Updated street address | Tony Gray |