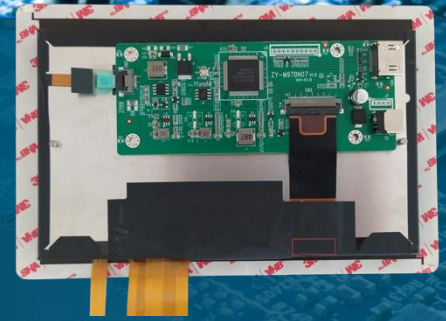


7" PREMIUM, SAFETY-ENHANCED "ULTRATOUCH" TOUCH DISPLAY MODULE

Advanced HMI For Mission-Critical Applications



UltraTouch⁺ - Next Generation Capacitive touch with force detection!

[†] under license from Cambridge Touch Technologies Ltd

All-new technology for safety-first applications and fault-prevention use-cases

Robust and reliable, UltraTouch technology adds error-free control and user intent to capacitive touchscreens. Combining premium display features with best-in-class touch and force-detection enhancement, UltraTouch raises the bar for your products and brand.

Product Code:

RX-TM-070854A-1.0

- UltraTouch is a category-defining, force-sensitive, capacitive touch Human Machine Interface (HMI).
- It combines a premium display and other features with an industry-leading and exceptionally rugged, whole-area, solid-state touch-and-force sensor. It is designed for applications that demand a high-level of confidence in the user intent.
- UltraTouch Touch-Display-Modules (TDMs) incorporate advanced sensor fusion, embodying the best features of capacitive touch (sensitivity, durability) with the best features of resistive touch (pressure) into an all-in-one, thin and lower power system.
- It is ideal for designers and customers who have long-desired to migrate from using older resistive touch technology in their products, to a modern, high performance capacitive touch system, but have been prevented from doing so by the risks associated with the overly-sensitive nature of capacitive systems.

Key Features:

- 7" diagonal full color IPS LCD display
- HD resolution 1280 x 720
- 10 finger XY capacitive touch
- UltraTouch Z-force sensitivity ***New capability***
- Programmable Z-force threshold ***New capability***
- Nitrile glove up to 2mm thick
- Sunlight readable 1000 cd/m2
- Wide viewing angle
- Chemically strengthened cover glass
- Anti-glare, Anti-reflective surface
- Landscape or portrait orientation
- LVDS (HDMI optional) interface
- Fully symmetric geometry and black print
- Flush mount to panel
- Simple installation
- USB/I2C HID plug-and-play
- Industrial reliability & temperature range
- IP & IK rating with suitable mounting and enclosure
- RoHS/REACH compliant

Typical Use Cases

- Process Start/Pause/Stop control buttons
- On/Off switches
- Process variation sliders
- User confirmation screen
- Security keypad
- Anywhere it is essential to confirm a human operator has deliberately interacted with the TDM through touch and push

Applications

- Industrial equipment control
- Industrial appliances
- Medical equipment
- Smart kitchen equipment
- Scientific instruments
- Portable diagnostic and data entry consoles
- Agriculture equipment consoles
- Kiosks
- Hazard warning systems

Designed for new products
or to easily retrofit/upgrade
existing ones!



GENERAL SPECIFICATIONS

Parameter:	Specification (units):
Size (diagonal)	7 inch
Aspect ratio	16 : 9
Pixel resolution	1280 x 720
LCD type	IPS, Normally black, Transmissive
LCD Interface (/ via AD board)	LVDS (/ mini HDMI)
White luminance ¹	1000 cd/m ²
Contrast ratio ¹	> 800
Supported colors ¹	16.7 million
NTSC ¹	> 70 %
Exterior surface	Glass 7H
Touch location	Projected capacitance (PCAP)
PCAP IC	Microchip
PCAP finger support	10
UltraTouch advanced HMI ²	Human finger push
Force sensing range	1-6N
Force uniformity over area	+/- 15%
UltraTouch & PCAP interface	Micro USB or I2C header
Operating temperature	-20 to +70 °C
Storage environment ³	-30 to +80 °C at 10-90% RH
Lifetime LED backlight	50,000 hrs
Overall Dimensions	192.15(L) x 124.45(W) x 18.20(D) mm
Active Area	155.75(L) x 87.05(W) mm
Operating System Compatibility	Windows 10 (and later) Linux

¹ Display parameter

² UltraTouch will not respond to static weights, inanimate objects or accidental touches

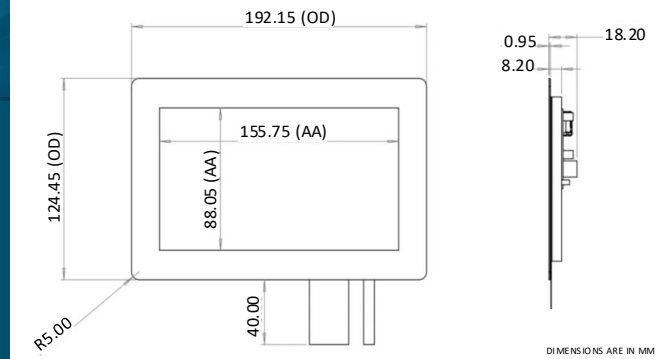
³ In original packaging

HOW TO ORDER

Contact your UltraTouch Channel Partner:

Editable by Channel Partner

MECHANICAL DRAWING

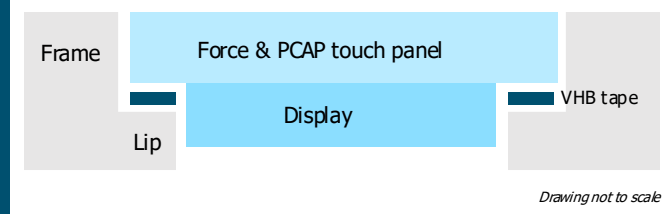


DRIVERS AND DEVELOPMENT PLATFORMS

This 7" UltraTouch TDM features embedded software allowing the designer to quickly access all touch XYZ signals that can then be used to create User Interfaces using your preferred design tools. For Windows 10 (and later) users, UltraTouch TDMs are plug-and-play compatible. The host can access the XYZ touch data directly from the Microsoft HID Touch Screen Input Report and dynamically change the force threshold using an API. Libraries for Linux and other Operating Systems are available on request.

A free example of an UltraTouch-enabled GUI compatible with the Raspberry Pi 5 hardware platform and running under Raspberry Pi OS is available for download on request.

PANEL MOUNTING



SUGGESTED MOUNTING ARRANGEMENT

RX-TM-070854A-1.0 is designed for flush mounting to an opening in a panel using Very High Bond (VHB) tape or equivalent. The panel, which can be metal or polymer of comparable stiffness, requires a flat (+/- 0.2 mm) recessed lip of similar width to the black print. Mounting orientation can be either portrait or landscape.



ULTRATOUCH – HOW IT WORKS

UltraTouch uses a robust and highly-reliable piezoelectric film sensor, working in tandem with the capacitive touch, and coupled with custom electronics and advanced algorithms to detect human finger push events. The force threshold is adjustable over a wide range to suit the use case and user preference. The detection of push-events is declared using the Microsoft HID Touch Screen Report protocol / Linux USB HID kernel modules.