7" PREMIUM, ENHANCED EFFICIENCY *ULTRATOUCH* TOUCH DISPLAY MODULE

Advanced HMI For Industrial Applications

UltraTouch[†] - TOTAL CONTROL
INCREASING EFFICIENCY AND REDUCING RISK

[†]*under license from Cambridge Touch Technologies Ltd*

Providing total control even in the toughest of environments

The UltraTouch 7-inch Touch Display Module introduces a new level of touch interactivity, enhancing user interfaces, improving operational efficiency, and unlocking new opportunities for all types of control applications.

Why UltraTouch is a game-changer

- CTT's UltraTouch technology is designed for industrial and mission-critical applications, offering precision multi-touch capabilities and various installation options.

- **Deliberate Touch Technology:** Force-sensitive touch technology ensures precision in even the most challenging environments.

- **Programmable Interaction Levels:** Customise touch thresholds for different applications, offering tailored control across a wide range of industrial processes.

- **Extreme Durability:** From high temperatures to severe vibrations, UltraTouch remains reliable in extreme heat, cold, rain, and dust.

- **Glove Compatibility:** Seamless operation with gloves up to 2mm thick, ensuring functionality in safety gear.

- **Versatile Mounting Options**: Offers vertical or horizontal mounting for easy integration across various industrial settings.

- **Robust Sealing:** Provides protection against moisture, dust, and contaminants, ensuring long-term reliability and minimises downtime.

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

Key Features:

- UltraTouch Z-force sensitivity, eliminating accidental touch *New capability*
- 7" diagonal full colour IPS LCD display
- Programmable Z-force threshold *New capability*
- HD resolution 1280 x 720
- 5 finger XY capacitive touch
- Nitrile glove up to 2mm thick
- Sunlight readable 1000 cd/m^2
- Wide viewing angle
- Chemically strengthened glass
- Dust and moisture resistant
- 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 and 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 module through touch and push

Applications

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

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 maXTouch
PCAP finger support	5
UltraTouch advanced HMI[2]	Human finger push
Force sensing range	1 – 6 N
Force uniformity over area	+/- 15 %
UltraTouch & PCAP interface	Micro USB or I2C header
Operating temperature	-20 to +70 ºC
Storage environment[3]	-30 to +80 ºC 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

MANUFACTURER AND SALES:

✉ info@reshine-display.com

📱 Reshine Display (HK) Ltd

✈ Shenzhen, China

💻 www.reshine-display.com

LICENSING INQUIRIES:

✉ salesops@camtouch3d.com

📱 Cambridge Touch Technologies Ltd

✈ Cambridge, UK

💻 www.camtouch3d.com

PART NUMBER FOR ORDERING

- RX-TM-070854A-1.0 (UltraTouch Touch Display Module kit)
- See datasheet for other part numbers

Note: All features, functionality and other product specifications are subject to change without notice or obligation. Document version 5.0

MECHANICAL DRAWING

192.15mm
0.95mm
124.45mm
VA 155.75mm
VA 88.05mm
26.4mm

Dimensions are nominal
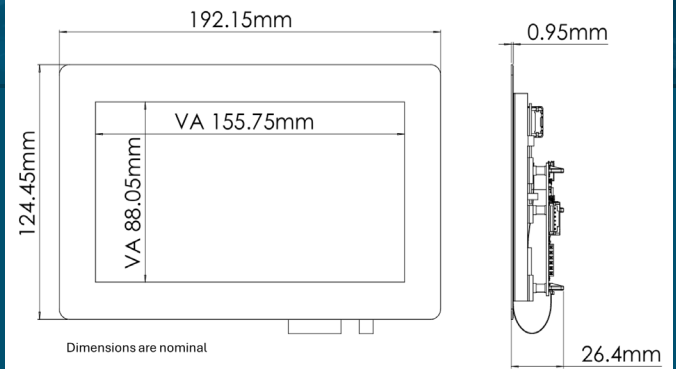
DRIVERS AND DEVELOPMENT PLATFORMS

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. UltraTouch TDMs are plug-and-play compatible with most kernels, including Windows 10 and above and many flavours of Linux. The host can access the XYZ touch data directly from the industry-standard HID Touch Screen Input Report and dynamically change the force threshold using an API.

Free examples of a force-sensitive UltraTouch-enabled GUI are available for download on request - compatible with the Raspberry Pi 5 or OKDO Rock 4C+ single board computers running Debian.

PANEL MOUNTING

Frame

Force & PCAP touch panel

Display

VHB tape

Lip

Drawing not to scale
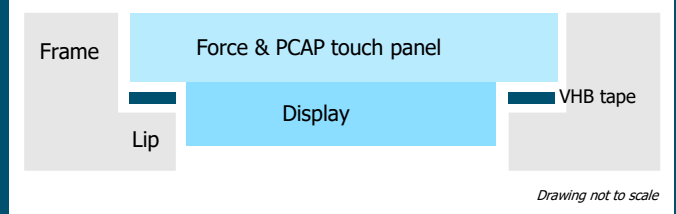
SUGGESTED MOUNTING ARRANGEMENT

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.