TPP-55A126

- 6 inch
- Capacitive touch
- Glass overlay

6" PANEL MOUNT TOUCHPAD WITH 8 SHORTCUT KEYS

Using years of knowledge/experience gained from developing industrial trackball technology, Cursor Controls Ltd have developed a range of advanced touchpad solutions. The touchpads provide smooth and precise cursor control using the latest and most advanced touch sensing technology and are designed for use in the most extreme environments.
This panel mount touchpad provides both conventional X and Y-axis cursor movement with plug-and-play, multi-finger gesture support for enhanced user interaction. The mutual-capacitance based tracking engine combines the benefits of solid state sensing (no moving parts) with the precision, functionality and performance associated with the Cursor Controls product range. The design allows for easy cleaning and decontamination, ensuring continued optimum performance and operation under the harshest of conditions. The unit has been designed to be front of panel mounted as part of OEM keyboards and consoles.

FEATURES

- Solid state sensing technology – capacitive touch sensing tracking engine
- USB output, 1,6 m cable
- IP65 sealing
- Haptic and audible feedback (function specific)
- Multi-finger gesture support
- 8 shortcut keys - capacitive touch
- Smooth operation in rugged environments
- Tolerant to moisture, water and liquid contaminants
- Custom feature button configurations / overlays available

APPLICATIONS

- Industrial consoles
- Medical systems
- Marine systems
- Sound and lighting desks
- Custom keyboard applications
- OEM custom solutions available

MECHANICAL SPECIFICATIONS

Module Dimensions	148.4 mm x 114.4mm x 6.2 mm
Weight	~350grams
Touch Surface Overlay Material	Glass, anti-fingerprint & anti-glare
Touch Surface Overlay Colour	Metallic grey - Pantone PMS 10392
Bracket Material	Aluminium
Bracket Colour	Black Anodised

OPERATIONAL SPECIFICATIONS

Motion Detection Method	Mutual capacitance sensing
X/Y Position Reporting	Relative
Sample Rate	Up to 100 samples/sec.
Touchpad Active Area Size	130mm x 80mm

ELECTRICAL SPECIFICATIONS

Protocol	USB
Supply Voltage	4.40 – 5.25V
Supply Current	60mA typical - default resolution setting, feedback idle 300mA peak - max resolution setting, feedback effects playing
Resolution (X, Y)	960 x 720 counts (default setting)
Output Connector (CN1)	12-way connector, Molex PicoBlade Series PN: 53261-1271

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0° to 70°C
Operating Humidity	5 to 95% relative humidity
Storage Temperature	-40° to +85°C
Vibration	2g, 10-500Hz, 1 octave/min, 10 sweep cycles (IEC 60068-2-6)
Operating Shock	15g/11ms, ½ sine, 3 shocks in +ve and –ve direction, all 3 axes (IEC 60068-2-27)
Sealing Level	IP65
ESD	15kV air-discharge and 8kV contact discharge (IEC 61000-4-2)
EMC	Radiated immunity - limits according to level 3 of IEC 61000-4-3 Radiated emissions to EN55022 class B

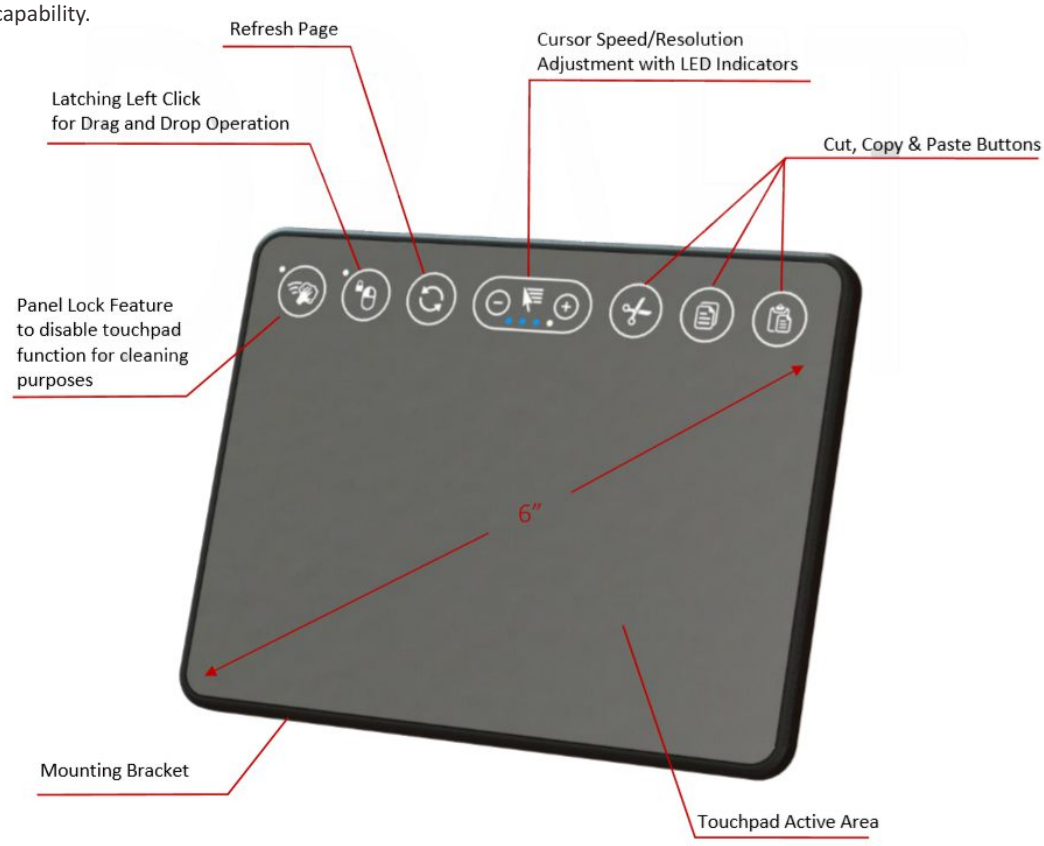
OPERATING SYSTEM COMPATIBILITY

USB	Windows, Linux, Mac OS, and Android Fully compliant with USB 2.0 framework (chapter 9) & HID Specifications

TOUCHPAD FEATURES

The TPP-55A126 touchpad includes the following features/technologies.

- **Touchpad Technology**: The 6-inch touchpad active area provides both conventional X and Y-axis cursor movement with plug-and-play, multi-finger gesture support for enhanced user interaction.
- **Shortcut keys**: 8 x shortcut keys are located at the top of the touchpad module. These utilise capacitive touch sensing technology and incorporate frequently used functions such as Cut, Copy & Paste, cursor resolution adjustment etc., as well as a panel lock feature to facilitate cleaning/decontamination of the device.
- **Mounting Bracket**: The metal mounting bracket provides the system integrator with the ability to mount the module into the front of a user interface panel, keyboard or console using four threaded fixing studs. The bracket includes a rim around the glass edge for added protection and IP65 sealing capability.



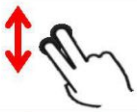
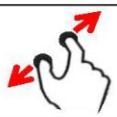
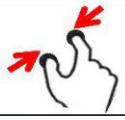
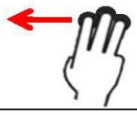
Cursor Tracking Mode

The touchpad includes an intuitive **Ballistic Tracking** algorithm to provide increased cursor resolution when tracking fast, whilst retaining the native resolution (960 x 720 counts) for tracking accurately at slow speeds.

The touchpad also includes an **Inertia Tracking** algorithm which applies inertia to the X and Y axis, allowing cursor movement or scroll to continue in the intended direction after the finger(s) is lifted from the touchpad surface, after which the cursor will naturally slow to a stop

GESTURE OPERATIONS

The touchpad incorporates an in-built gesture recognition engine designed to enhance user experience and increase the overall efficiency of user interaction with a host system. Use of gesture control enables the user to access frequented functions such as button clicks, scrolling and zooming by means of highly intuitive multi-finger operations. See table below for details on the available gesture actions.

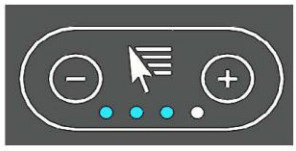
GESTURE ACTION	FUNCTION
Single-Finger Tap	Left mouse button click Double/triple tap supported
Two-Finger Tap	Right mouse button click Double/triple tap supported
Three-Finger Tap	Middle mouse button click Double/triple tap supported
 **Two-Finger Vertical Drag**	Scroll Up/Down
Two-Finger Horizontal Drag	Scroll Left/Right [1]
 **Two-Finger Splay**	Zoom In [1]
 **Two-Finger Pinch**	Zoom Out [1]
 **Three-Finger Swipe Left**	Back [1]
Three-Finger Swipe Right	Forward [1]

1. Horizontal scroll and zoom functions are dependent on application support.

CURSOR SPEED / RESOLUTION SETTINGS

The touchpad allows the user to increase or decrease the cursor resolution as required across 8 levels, indicated by the LED indicators underneath the + and - buttons. The table here below provides details of the resolution provided by each level.

Level	Cursor Resolution	
	X	Y
0	360	240
1	480	360
2	720	540
3 (Default factory setting)	960	720
4	1200	900
5	1440	1080
6	1680	1260
7	1920	1440



TOUCHPAD FEEDBACK

The touchpad features haptic and audible feedback to provide a perceptible response to user interaction events. The table here below details the default event mapping for user feedback;

Event	Haptic Feedback	Audio Feedback
Finger Taps (e.g. Left Mouse Click)	No	Yes
Gesture Operations (e.g. Two finger Vertical Drag)	Yes	Yes
Feature Buttons	Yes	Yes
Active Area Edge Detection	Yes	No

PANEL LOCK FEATURE

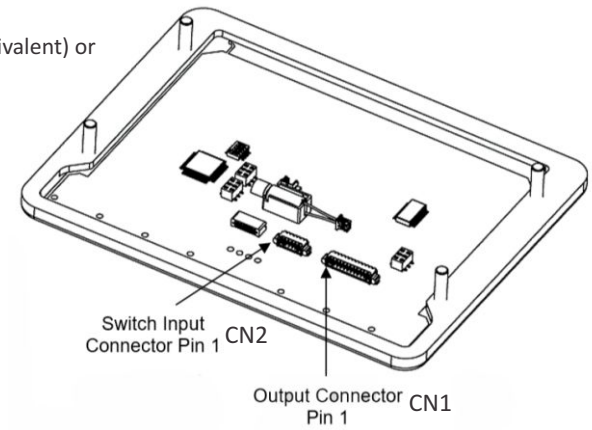
The panel lock feature allows the touchpad to be locked / disabled for cleaning purposes. This can be achieved by tapping and holding the panel lock button for 3 seconds to toggle ON or OFF. The panel lock LED will remain illuminated whilst the touchpad is locked.

CONNECTION DETAILS

PIN No.	USB
1	NC [1]
2	NC [1]
3	NC [1]
4	NC [1]
5	EARTH [2]
6	NC [1]
7	VBUS (+5V)
8	D –
9	D +
10	GND (0V)
11	NC [1]
12	NC [1]

Output Connector: CN1

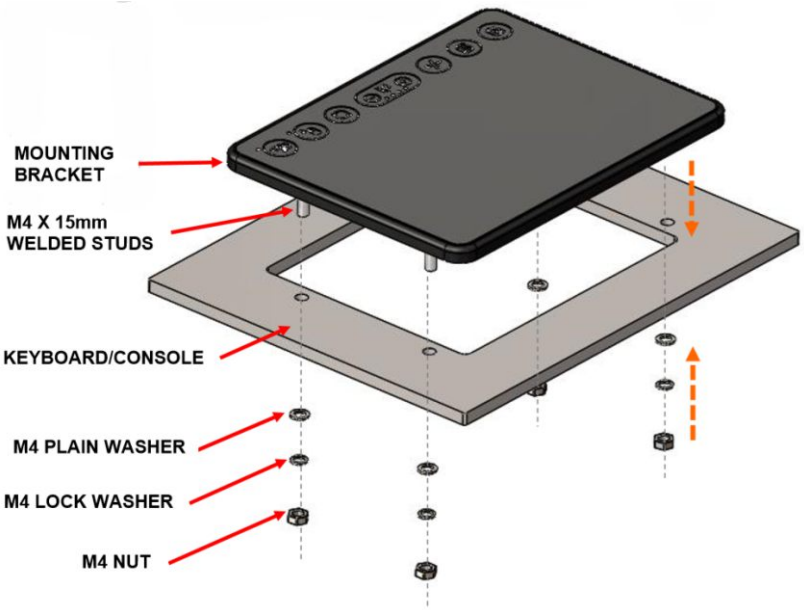
Description : 12-way, 1.25mm pitch, right-angled connector
Manufacturer : Molex (or equivalent) – Pico Blade Series
Part number : 53261-1271 (or equivalent)
Mating Connector : 51021-1200 Crimp Housing (or equivalent) or mating cable A033-80001



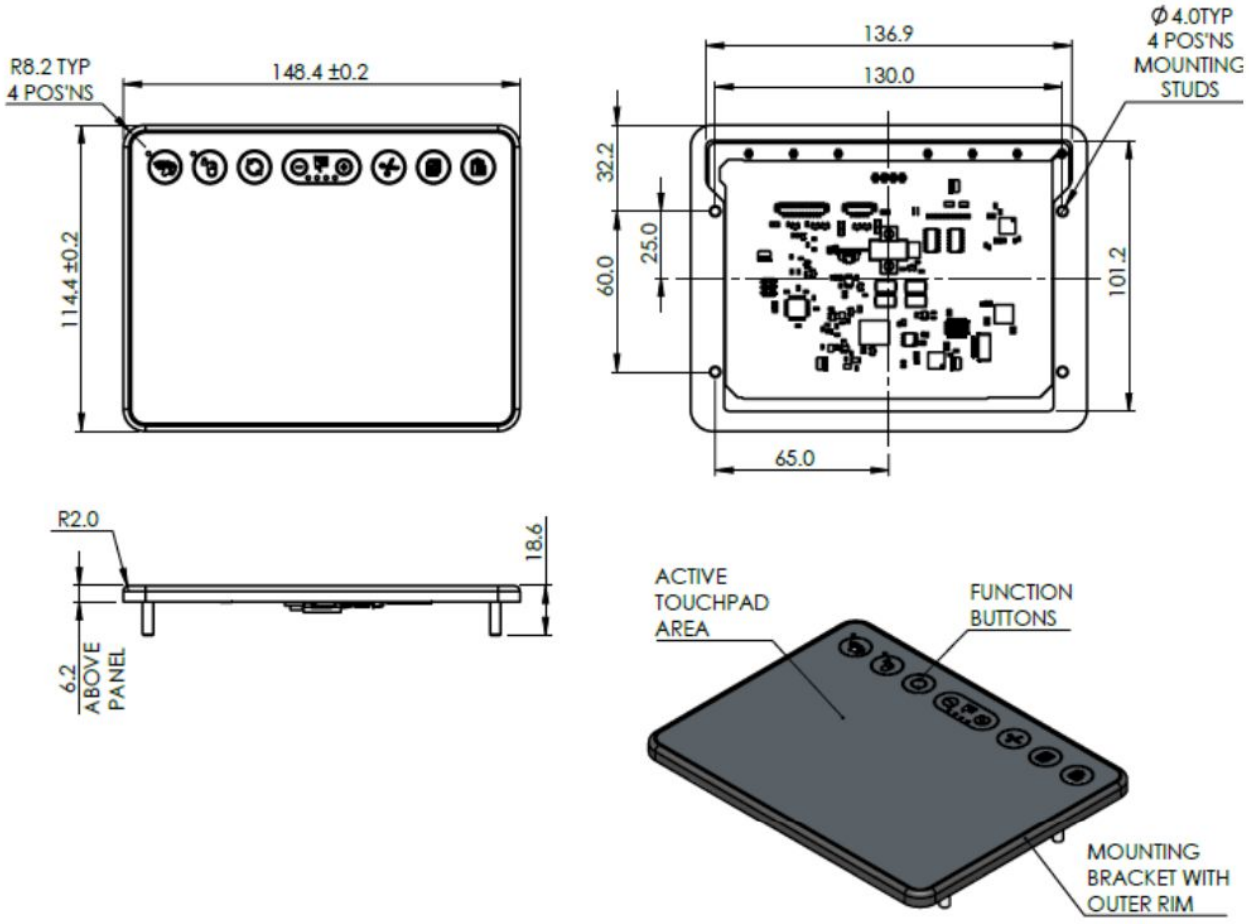
Notes:
1. Pin to be left unconnected (floating).
2. Earth connection required for ESD management.

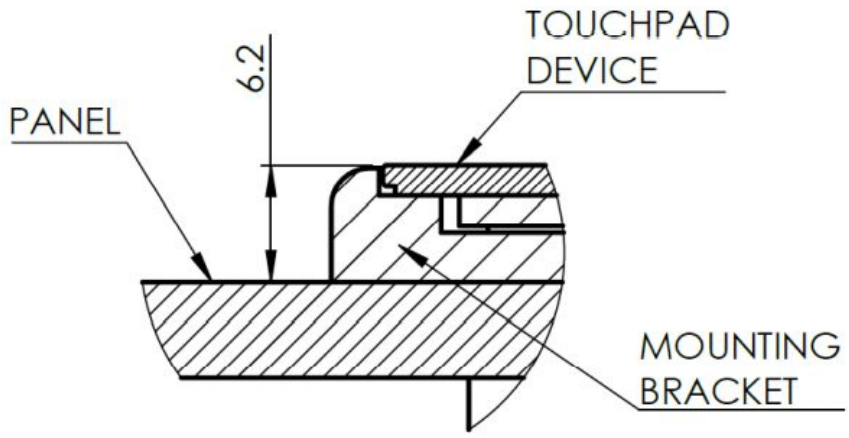
RECOMMENDED INSTALLATION

The TPP-55A126 panel mount touchpad has been designed to be installed into the front of a user interface panel, keyboard or console.
The interface panel shall have 4 x Ø4.5mm holes to accommodate the studs on the mounting bracket of the touchpad device.
Custom mounting brackets are available on request - please contact your local sales office for more information.



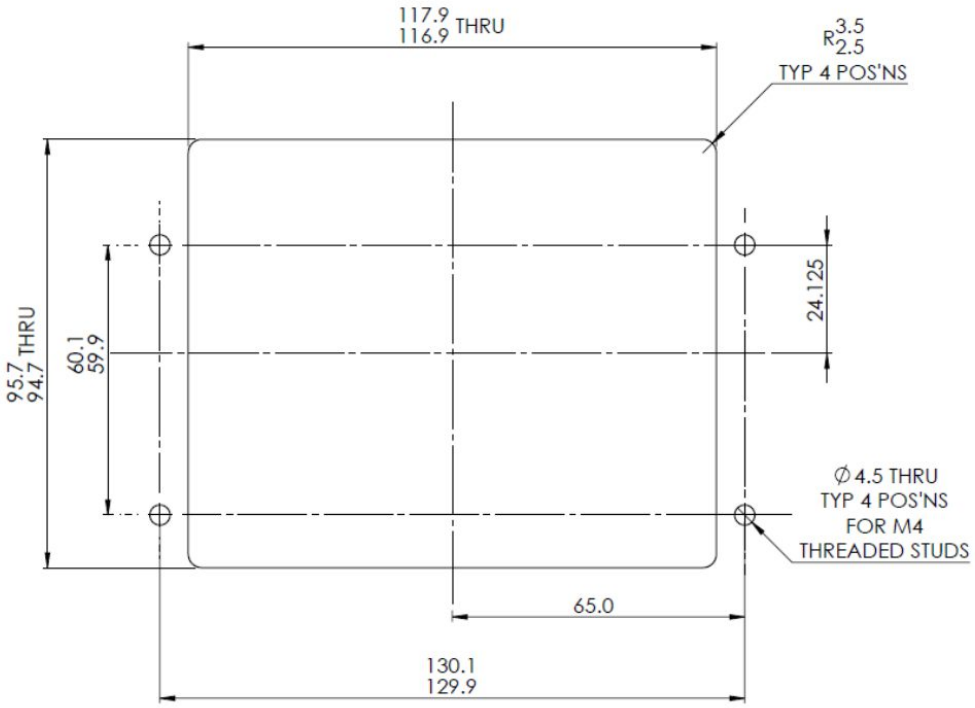
TOUCHPAD DIMENSION DRAWING





Dimensional drawing specifies factory default orientation. All dimensions are in mm unless otherwise stated. Tolerances +/- 0.2mm unless otherwise stated.

RECOMMENDED PANEL CUT-OUT



All dimensions are in mm unless otherwise stated. Tolerances +/- 0.2mm unless otherwise stated Please note that a STEP model is available on request. Please contact your local sales office for more information.

ORDER INFO

6 inch panel mount touchpad Glass overlay, USB output, excl. cable	**TPP-55A126**
Optional accessories Output cable Interconnection cable switches M4 mounting kit	 **A033-80-01** **A032-80-03** **M4 MOUNTINGKIT**

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