PXM0057- DATASHEET

USB Precision Touchpad Module. Win 11 WHQL certification. Multiple overlay options available.

TABLE OF CONTENTS

1 Main Features

- Qualified** Windows 11 Precision Touchpad.
- 5V supply voltage (USB).
- HID-over-USB interface.
- Temperature range: -10°C to 50°C.
- Storage Temperature: 20°C @ <50%RH.
- Mechanical click on bottom half of touchpad.
- 6pin FPC/FFC connector included.
- Assembled to IPC600/ 610 Class 2 build standards.
- Base Material: FR4 Glass Epoxy.
- Cu finish: ENIG or OSP, Solder mask: green, Silkscreen: white.
- PCB Dimensions = 107.30mm (W) *67.30mm (H) (Tol: +/-0.2mm).
- PCB Thickness = 1.6mm (Tol+/-0.15mm).
- RoHS3 & REACH compliant.
- Excluding CE/UL/TUV/Prop65 qualification.
- Sold with/without glass overlay.
- Customised and "click-anywhere" versions also available.

** Achieved with PXM0057-401/501

2 Applications

- *Precision Touchpad* module for laptops.
- Stand-alone *Precision Touchpad* module.

3 Certification report

The certification report is available online from the *Microsoft Windows Compatible Products List*: https://partner.microsoft.com/en-us/dashboard/hardware/driver/downloadCertificationReport/75869250/14164797913963732/11529215056942655 25

4 Power

The power consumption of the touchpad is managed using four power modes. The device automatically switches between modes depending on the user interaction. The various power modes, together with their associated capacitive sensor measurement frequencies, and current usages, are depicted in Figure 4-1.

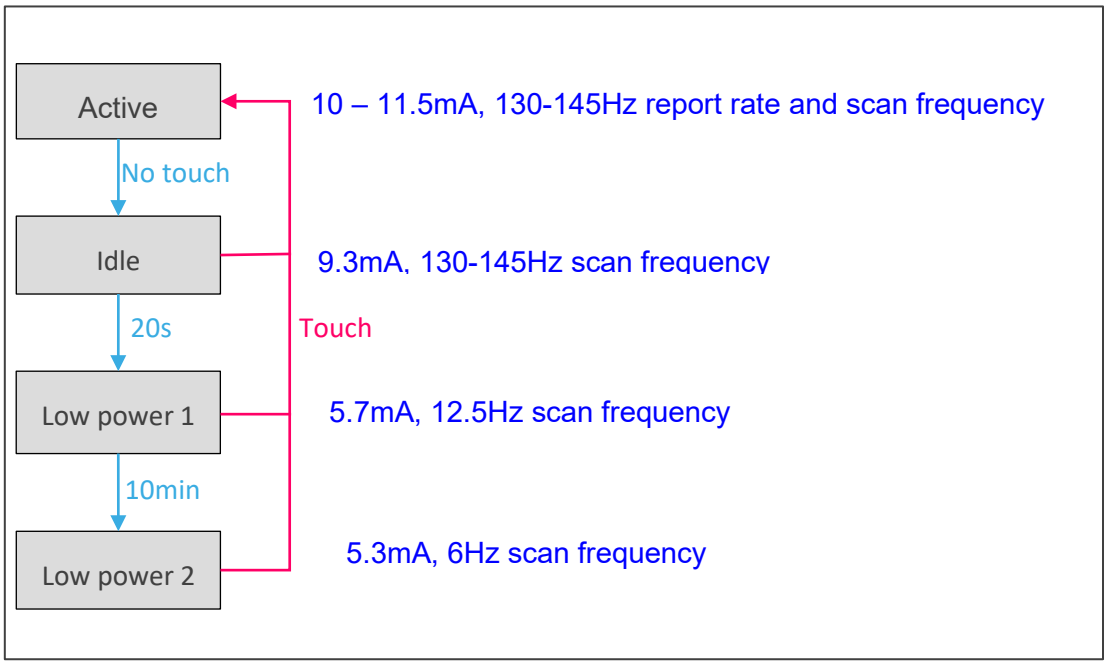


Figure 4-1: Power consumption per power mode.

5 Hardware

The user can connect to the touchpad using an FFC/FPC cable, or by soldering individual wires to the exposed pads. The connection options are illustrated in Figure 5-1. The recommended dimensions of compatible FFC/FPC cables are provided in Figure 5-2.

The touchpad has a tactile switch located at the bottom part of the PCB, as shown in Figure 5-1. It is recommended to mount the touchpad in such a way that a user can actuate the switch when pressing down on the touchpad (click).

Dimensions of the entire module, including the switch and connector locations are provided in section 5.2.

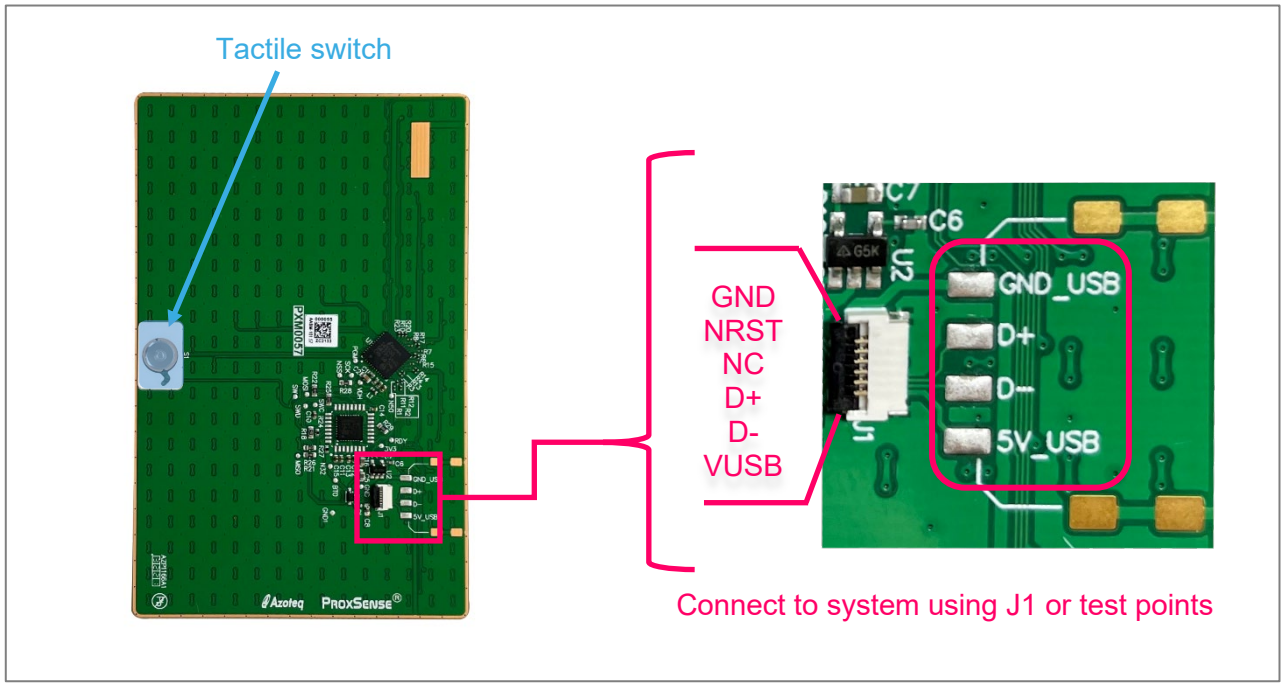


Figure 5-1: Definition of electrical connections on touchpad.

5.1 FPC/FFC connector

6-pin, FPC/FFC connector, 0.5mm pitch, top and bottom connection.

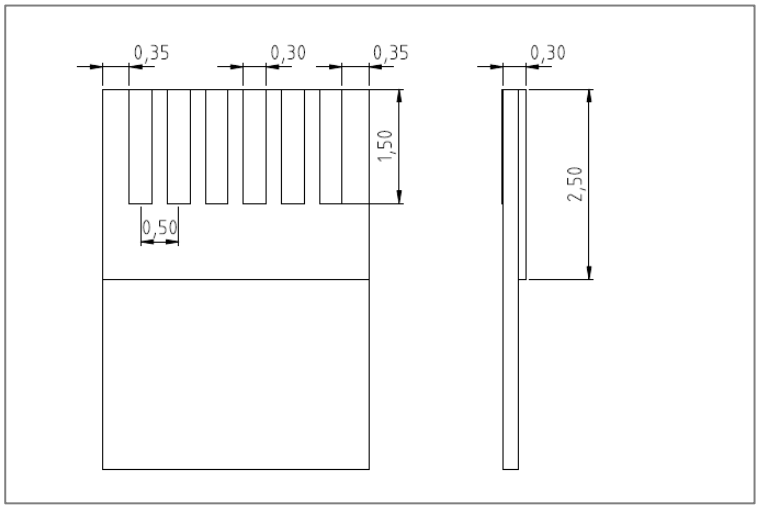


Figure 5-2: Recommended FPC/FFC dimensions (mm).

5.2 Dimensions

3D CAD files are available online:

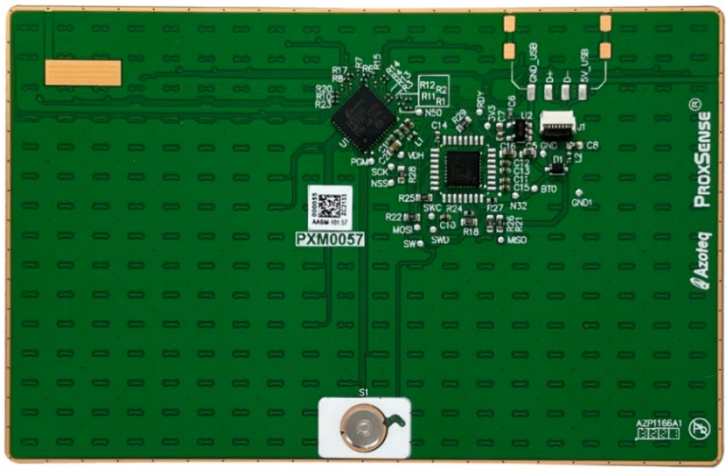
Orderable Part Number	CAD files	Comments
PXM0057-101 / PXM0057-201	https://www.azoteq.com/wp-content/uploads/2022/07/PXM0057_CAD.zip	Contact Sales
PXM0057-401		MOQ 1pcs
PXM0057-501		MOQ 1pcs

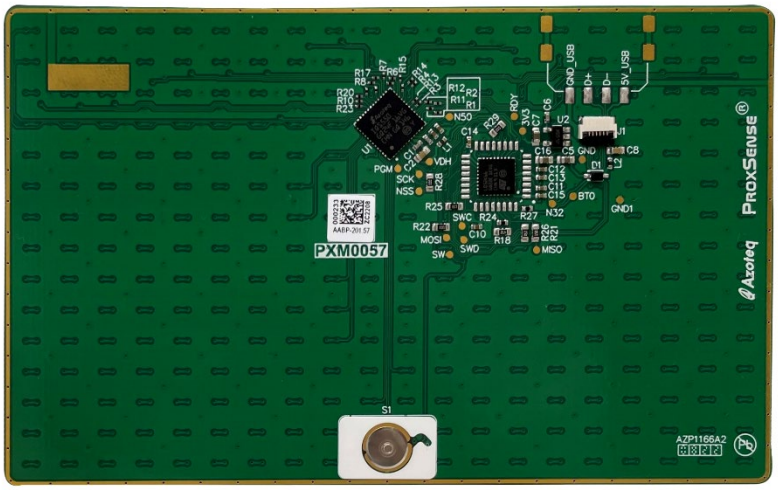
6 ESD

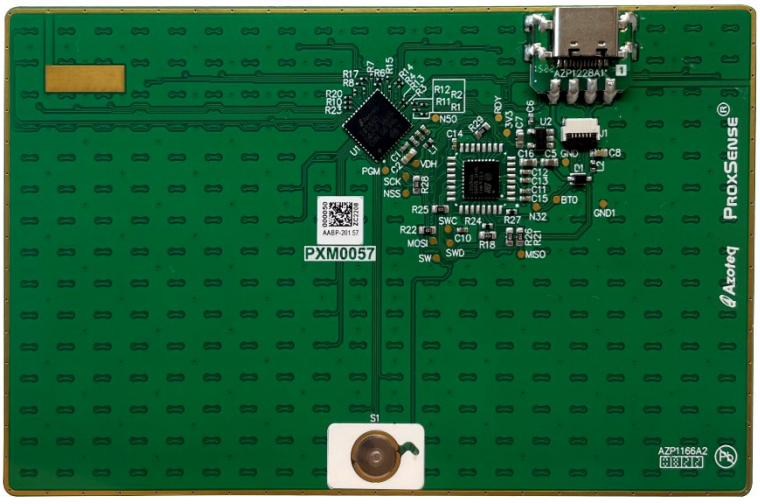
Typical ESD performance (Product assembly dependent)

- +/-15kV Air discharge on overlay above touchpad area
- +/-8kV Contact discharge on exposed metal

7 Ordering Information

Part number:	MOQ 3k	**PXM0057-101**
Description	Overlay	None. Customers can attach their own overlays to the PCB using the supplied double-sided adhesive tape. Supported thicknesses 1.0mm - 2.0mm. Possibly requires firmware update to support overlay.
	Housing	None
	Connection	FPC connector
	Cu finish	**OSP**
	 	

Part number:	MOQ 3k	**PXM0057-201**
Description	Overlay	None. Customers can attach their own overlays to the PCB using the supplied double-sided adhesive tape. Supported thicknesses 1.0mm - 2.0mm. Possibly requires firmware update to support overlay.
	Housing	None
	Connection	FPC connector
	Cu finish	**ENIG**
	 	

Part number:	MOQ 1	**PXM0057-401**
	Comment	PXM0057-401 (sales demo - contact sales)
Description	Overlay	1.1mm glass
	Housing	None
	Connection	USB Type-C & FFC connector
	Cu finish	**ENIG**
	 	

Part number:	MOQ 1	**PXM0057-501**
	Comment	PXM0057-501 (sales demo - contact sales)
Description	Overlay	1.1mm glass
	Housing	3D-printed
	Connection	USB Type-C
	Cu finish	**ENIG**
	 	

8 Contact Details

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Visit www.azoteq.com for a list of distributors and worldwide representation.

The following patents relate to the device or usage of the device: US 8,395,395; US 8,659,306; US 9,209,803; US 9,360,510; US 9,496,793; US 9,709,614; US 9,948,297; US 10,275,055; US 10,321,532; US 10,527,457; EP 2,351,220; EP 2,559,164; EP 2,748,927; EP 2,846,465; EP 3,262,380; HK 1,157,080; SA 2001/2151; SA 2006/05363; SA 2014/01541; SA 2017/02224;