

## PenMount 1400 USB/RS-232/I<sup>2</sup>C/SPI/UART Interface Control Board

PenMount 1400 control board is one of the cutting-edge innovations from PenMount. A collectively integrated feature with USB / RS232 / I<sup>2</sup>C / SPI / URT interface supporting 11" to 15" projected capacitive touch screens; complemented by the superbly developed PenMount drivers which can be used directly in Windows 7.

PenMount 1400 Control Board uses P2-05 Series controller, which is a capacitive sensing IC designed for AMT Projected Capacitive Input (PCI) touch panel and other projected capacitive touch panel. It is designed for PCI touch screen size up to 15". PenMount 1400 Control Board has the programmable filter, gain amplifier; with the functions of single, dual touch; and the gestures of one and two fingers. There are six connectors on this board: two 30 Pins and one 40 Pins ZIF connectors for PCI touch screen FPC tail; one USB, one RS232 and one I<sup>2</sup>C/SPI/UART connector interface designed on board.

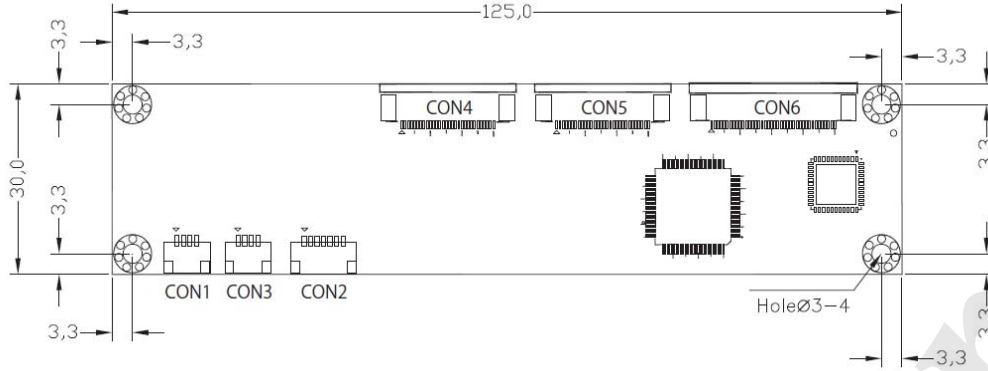


### Specifications

<b>Touch Screen:</b>	Projected capacitive type, size is 11" to 15"
<b>Host interface:</b>	USB : Full-speed, 12Mbps RS232 : 38400 baud rate 8Data-bit · No-parity · 1Stop-bit/non-PnP
<b>Touch Screen Controller:</b>	PenMount P2-02 and P2-03 series
<b>Size:</b>	30X125 mm , four 3φscrew holes
<b>ADC resolution:</b>	10 bits
<b>Operating Voltage:</b>	+5V DC for USB &RS232 &SPI &I2C &UART
<b>Storage Temperature Range:</b>	-40°C ~ +85°C
<b>Operating Temperature:</b>	-20°C ~ +70°C
<b>Power Consumption:</b>	Typical 35mA
<b>Max. touch line:</b>	35 sensing lines 46 driving lines
<b>Sample rate:</b>	> 100 sps (sample per second)

## Mechanical size:

unit : mm



## Connector Definition:

CON1 USB		CON2 I <sup>2</sup> C/SPI/UART		CON3 RS-232		CON4 30Pin ZIF , PH : 0.5mm							
Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description
1	+5V	1	+5V	1	+5V	1	Shield	11	CapDriveX5	21	CapDriveX15		
2	D-	2	Ground	2	RXD	2	Ground	12	CapDriveX6	22	CapDriveX16		
3	D+	3	SCL/RXD/SDI	3	TXD	3	Shield	13	CapDriveX7	23	CapDriveX17		
4	Ground	4	SDA/TXD/SDO	4	Ground	4	NC	14	CapDriveX8	24	CapDriveX18		
		5	SCK			5	NC	15	CapDriveX9	25	CapDriveX19		
		6	CS			6	CapDriveX0	16	CapDriveX10	26	CapDriveX20		
		7	INT			7	CapDriveX1	17	CapDriveX11	27	CapDriveX21		
						8	CapDriveX2	18	CapDriveX12	28	CapDriveX22		
						9	CapDriveX3	19	CapDriveX13	29	NC		
						10	CapDriveX4	20	CapDriveX14	30	Ground		
CON5 30Pin ZIF , PH : 0.5mm						CON6 40Pin ZIF , PH : 0.5mm							
Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description	Pin	Description
31	Ground	41	CapDriveX30	51	CapDriveX40	1	Ground	11	CapSensorY8	21	CapSensorY18	31	CapSensorY28
32	NC	42	CapDriveX31	52	CapDriveX41	2	NC	12	CapSensorY9	22	CapSensorY19	32	CapSensorY29
33	NC	43	CapDriveX32	53	CapDriveX42	3	CapSensorY0	13	CapSensorY10	23	CapSensorY20	33	CapSensorY30
34	CapDriveX23	44	CapDriveX33	54	CapDriveX43	4	CapSensorY1	14	CapSensorY11	24	CapSensorY21	34	CapSensorY31
35	CapDriveX24	45	CapDriveX34	55	CapDriveX44	5	CapSensorY2	15	CapSensorY12	25	CapSensorY22	35	CapSensorY32
36	CapDriveX25	46	CapDriveX35	56	CapDriveX45	6	CapSensorY3	16	CapSensorY13	26	CapSensorY23	36	CapSensorY33
37	CapDriveX26	47	CapDriveX36	57	NC	7	CapSensorY4	17	CapSensorY14	27	CapSensorY24	37	CapSensorY34
38	CapDriveX27	48	CapDriveX37	58	NC	8	CapSensorY5	18	CapSensorY15	28	CapSensorY25	38	NC
39	CapDriveX28	49	CapDriveX38	59	Ground	9	CapSensorY6	19	CapSensorY16	29	CapSensorY26	39	Ground
40	CapDriveX29	50	CapDriveX39	60	Ground	10	CapSensorY7	20	CapSensorY17	30	CapSensorY27	40	Ground

## Driver Software:

Windows XP & Vista: single touch, mouse driver for USB Interface.

Windows 7 : dual touch, Inbox driver for USB interface.

Linux: Linux distributions drivers by request.

## Utility:

Firmware adjustment utility is ready for user to fine tune the touch panel sensitivity.

Remark: Specification is subject to change without notice

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Page 1 of 2

Version 1.00

Release Date:2011.04.19