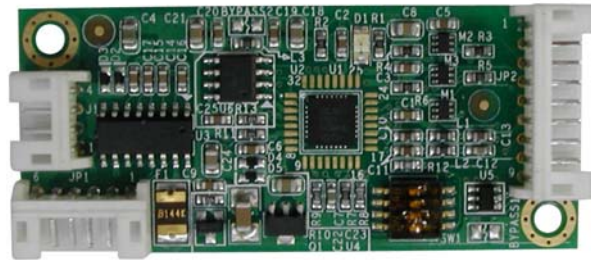


PenMount 6500 combo board, USB and RS232 Interface

PenMount 6500, one of PenMount's newest innovation, the ultimate combo board. A collectively integrated features and functions of auto detecting USB and RS232 serial interfaces supporting 4, 5 & 8 wire resistive touch screens; complemented by the superbly developed PenMount drivers with auto installation driver capability.


PenMount 6500 control board using PenMount 6000 controller that has been designed for those who may like and all-in-one solution with 10-bit A/D converter built-in to make the total printed circuit board denser, circuit diagram also designed for 12-bit ADC for optional. There are two connectors on this board, one connector is for 4, 5, 8-wire touch screen cable (optional), and another is for 4-pin USB A type cable.



Electrical Specifications

| | |
|---------------------------|---|
| Touch Screen: | For 4-, 5-, 8-wire analog resistive type |
| Communications: | USB, full speed, 12MHz RS232, 19200 / 9600 baud rate |
| Touch Screen Controller: | PenMount 6000 microcontroller |
| Resolution: | 2048x2048 (optional up to 4096 x 4096) |
| Size: | 60x26 mm, two 3mm Ø screw holes |
| Portrait: | Support 90° 180° and 270° screen rotation |
| Calibration data: | data saved into Chip and also into register file |
| Diagnostic: | LED on board |
| Operating Voltage | +5V DC for USB / +5V~12V DC for RS232 (4/8-wire touch panel use for 5V to 12V DC 5-wire touch panel only use for 5V DC) |
| Storage Temperature Range | -40°C ~ 85°C |
| Operating Temperature | -20°C ~ 70°C |

Changes that contribute to technical improvement are subject to alternations

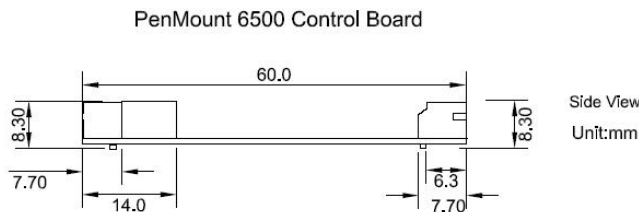
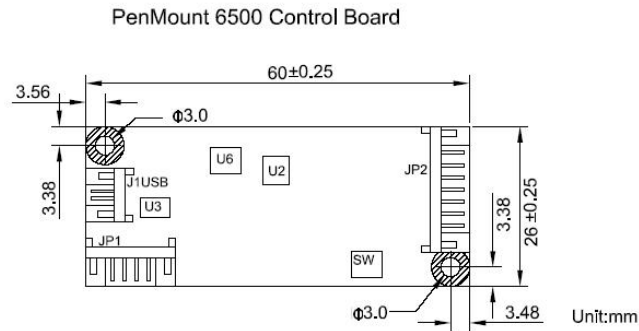
| | | | | | | | |
|----|------|-------|------|--|--------|--------|--|
| | | | | 2007 | Datum | Name | Touch Controller Board USB & RS232 4-, 5-, 8-wire SPEZIFICATIONS PenMount 6500 combo Manufactured by Apex Material Technology Corp. |
| | | | | Bearb. | 05.04. | Maurer | |
| | | | | Gepr. | 05.04. | Maurer | |
| | | | | Vert. | | | |
| | | | | EDV-Datasheet | | | |
| | | | | don't change manually | | | |
| | | | |  | | | H 1070,0048.01-.04 page 1 of 3 Index: |
| Zu | Änd. | Datum | Name | D 79346 Endingen | | | |

Driver Software

Windows 2000/XPE/2003 and newest released version, Windows XP (WHQL), WinCE 4.2/5.0 (for X86, Armv4, Armv4i, MIPS, SH3, SH4 Platform), Linux OS (supported X-Windows mode and up to kernel 2.6)

Actual driver overview and download: <http://www.amtouch.com.tw/downloads/drivers.htm>
http://www.penmount.com.tw/down_2_1.php

Mechanical Size



DIP Switch & Connector Definition

DIP Switch and Pin definitions for the two connectors on the PenMount 6500 control board:

DIP Switch Setting

| Switch | Definition | ON | OFF |
|--------|-----------------------|----------------|---------------|
| S1 | Touch screen type | 4-, 8-wire | 5-wire |
| S2 | PnP enable or disable | Enable* | Disable |
| S3 | Baud Rate Adjustment | 9600 | 19200* |
| S4 | Reserved | Reserved | Reserved |

***Default**

Changes that contribute to technical improvement are subject to alternations

| | | | | | | | |
|----|------|-------|------|-----------------------|--------|--------|---|
| | | | | 2007 | Datum | Name | <p>Touch Controller Board USB & RS232 4-, 5-, 8-wire SPEZIFICATIONS PenMount 6500 combo Manufactured by Apex Material Technology Corp.</p> |
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| | | | | EDV-Datasheet | | | |
| | | | | don't change manually | | | |
| | | | | | | | H 1070,0048.01-.04 page 2 of 3 Index: |
| Zu | Änd. | Datum | Name | | | | |

Connector Pin Definitions for Touch Screen

| Pin Definition / wires | 4-wire touch screen | 5-wire touch screen | 8-wire touch screen |
|------------------------|---------------------|---------------------|---------------------|
| PIN 1 | Ground | Ground | Ground |
| PIN 2 | Top | UL | Top |
| PIN 3 | Bottom | UR | Bottom |
| PIN 4 | Left | LL | Left |
| PIN 5 | Right | LR | Right |
| PIN 6 | --- | Sense | Top Sense |
| PIN 7 | --- | --- | Bottom Sense |
| PIN 8 | --- | --- | Left Sense |
| PIN 9 | --- | --- | Right Sense |

Connector Pin Definitions for USB

| USB Interface | | | | |
|---------------|--------|-------|-------|-------|
| Pin # | PIN 1 | PIN 2 | PIN 3 | PIN 4 |
| Definition | Ground | D+ | D- | Vcc |


Connector Pin Definitions for Power and RS-232

| Pin # | Power Lines | | RS-232 Interface | | | |
|------------|-------------|--------------|------------------|-------|-------|--------|
| | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 | PIN 6 |
| Definition | Ground | 5V~12V power | RTS | TXD | RXD | Ground |

Item Number

| | | |
|---------------|-----------------------|-------------------|
| 1070. 0048.01 | cable set 4-wire ZIF | USB cable 1500mm |
| 1070. 0048.02 | cable set 4-wire AMPC | USB cable 1500mm |
| 1070. 0048.03 | cable set 8-wire AMPC | USB cable 1500mm |
| 1070. 0048.04 | cable set 5-wire AMPC | USB cable 1500mm |
| 1070. 0048.11 | cable set 4-wire ZIF | RS232 cable 450mm |
| 1070. 0048.12 | cable set 4-wire AMPC | RS232 cable 450mm |
| 1070. 0048.13 | cable set 8-wire AMPC | RS232 cable 450mm |
| 1070. 0048.14 | cable set 5-wire AMPC | RS232 cable 450mm |

Changes that contribute to technical improvement are subject to alternations

| | | | | | | | |
|----|------|-------|------|--|--------|--------|--|
| | | | | 2007 | Datum | Name | <p align="center">Touch Controller Board USB & RS232 4-, 5-, 8-wire SPEZIFIKATIONS PenMount 6500 combo Manufactured by Apex Material Technology Corp.</p> |
| | | | | Bearb. | 05.04. | Maurer | |
| | | | | Gepr. | 05.04. | Maurer | |
| | | | | Vert. | | | |
| | | | | EDV-Datasheet | | | |
| | | | | don't change manually | | | |
| | | | |  | | | H 1070,0048.01-.04 |
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| Zu | Änd. | Datum | Name | D 79346 Eendingen | | | page 3 of 3 Index: |