

AMT PCI Touch Solution Capabilities



AMT PCI Solution Features Sweep the Competition like a Sword & Shield

Noise Immunity

AMT PCI touch panels paired with PenMount PM1210/ PM1310/ PM1410/ PM1710/ PM1711 control boards and PM2203B/ PM2300 COF (Chip On Flex PCB) controllers meet IEC 61000-4-3 RS (Radiated Susceptibility) Level III 10V/m and IEC 61000-4-6 CS (Conducted Susceptibility) Level III 10Vrms EMC test standards. In addition, PenMount PCI touch controllers and firmware have passed the 2004 version of medical safety IEC 60601-1-2 certification.

Advanced Water Handling

AMT PCI touch solutions provide "no false touch when wet" reliability in two modes. In Water Detection mode, touch operation is automatically suspended when there is liquid on the touch surface and resumes when the surface is dried. In Water Performance mode, touch operation is suspended in wet areas when there is liquid on the touch surface, no false touches are generated in wet areas, and single point touch operation remains available in dry areas.

Gloved Operation

AMT PCI touch panels paired with PenMount PCI touch controllers support most glove types such as common rubber gloves, standard cold weather cotton or leather gloves, silicone or latex gloves prevalent in medical environments, etc.

Thick Cover Lens

AMT PCI touch solutions support cover glass thicknesses up to 2.8mm including 1.1mm and 1.8mm. If your touch application requires thicker top glass, we can also provide an appropriate solution.

Adjust Parameters Easily

AMT provides a series of supporting PenMount utilities to make controller parameter adjustment and firmware update smooth and easy. We emphasize simplicity and efficiency in firmware parameter settings to reduce the burden on customers during integration.

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AMT



THE CLEAR LEADER

Projected Capacitive Touch Solutions

Touch Panels, PenMount Control Boards and Drivers

AMT

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Apex Material Technology Corporation (AMT) has been a solid pillar of the touch screen industry since its establishment in 1998. From its inception, AMT has focused on the highly demanding industrial and medical markets where custom components, safety, and reliability are paramount. Inherently exacting specifications, and high complexity have tempered AMT's production capabilities into a skill set unmatched by any industry peer.

Our scrupulous management and exacting dedication to quality allows us to offer exceptional projected capacitive input (PCI) total touch solutions that incorporate AMT PCI touch panels and PenMount PCI control boards, firmware, drivers, and utilities. AMT and PenMount PCI touch solutions are designed to meet the needs of different applications. The superior performance of PenMount PCI controllers is demonstrated by their noise immunity, advanced water handling, gloved operation, thick cover lens and easily adjusted parameters.

AMT PCI touch solutions support standard features that both protect against noise interference and allow customers to operate touch systems while wearing gloves. We use the metaphor of "carrying a sword in one hand" to describe the advanced features of operation while gloved or with a thick PCI top glass surface and "holding a shield in the other" as the protection offered by noise-handling and the ability to withstand the effects of water. AMT's reliable and durable PCI touch panels allow your products to deploy the most powerful diverse functions in various application environments.

With comprehensive support and services, AMT strives to provide customers the benefits of total solutions and the ease of a smoothly integrated user experience. Through our dedication to quality and customer support, AMT has developed the product lines and flexibility to meet any customer request. AMT is also happy to work with customers to design customized components for specific applications or environments.



AMT Projected Capacitive Input Specifications

- Sensor Size : 3.5"~24"
- Surface Hardness : Mohs 5 for clear surface glass
- Cover Lens : Glass
- Cover Lens Thickness : 1.1/ 1.8/ 2.8mm (contact AMT for details)
- Light Transmission : 87% ± 3% for GFFF structure
90% ± 3% for GFF structure
- Tail Design : FPC or COF tail
- Input Media : Finger, and gloved hand (contact AMT for details)
- Activation Force : Forceless
- ADC Resolution : 10 bits
- Haze : < 3% based on clear surface for GFFF structure
< 3% or 7 ± 3% based on clear surface for GFF structure

PenMount Control Board Specifications

- Storage Temperature : -40°C ~ +85°C
- Operating Temperature : -20°C ~ +70°C or -30°C ~ +70°C
- Operating Voltage : +5V
- Drivers : Windows 7, 8, 10, Vista, XP, CE
Linux : Android, others by request
- Firmware : Develop by PenMount team

Surface Chemical Resistance : cover glass

- Industrial Chemicals : Acetone, Alcohol, 5% Ammonia, Antifreeze, Coal Oil, Diesel Fuel, Hexane, 6% Hydrochloric Acid, 3% Hydrogen Peroxide, Isopropanol, Methylene Chloride, Methyl Ethyl Ketone (MEK), Mineral Spirit, Motor Oil, 70% Nitric Acid, 10% Sodium Hydroxide, 40% Sulfuric Acid, Toluene, Transmission Fluid, Turpentine, Unleaded Gasoline.
- Household Products : Ammonia-based Glass Cleaner, Cleaner, Coffee, Cola, Cooking Oil, Grease, Laundry Detergents, Salt, Vinegar.

	5" ~ 7.9"	8" ~ 10.9"
PCI COF		
Touch Panel Part No.	P3012-C2D (7"w)	P3021-C2A (10.1"w) P3021-CGA (10.1"w) P3024-C20 (10.4")
COF	PM2203B	PM2300
Touch Controller	PenMount P2-06	PenMount P2-06
COF Tail Size (L x W, mm)	72.6 x 51.5	70.5 x 82.6
Tail Terminator	one, 10-pins	one, 10-pins
Interface	USB, UART, I ² C	USB, UART, I ² C
Maximum Touch Lines	15 sensing lines 24 driving lines	24 sensing lines 35 driving lines
Power Consumption	Working : 46.2 mA Sleep : 2.7 mA	Working : 41.7 mA Sleep : 2.5 mA
Sample Rate (Single)	> 150 sps	> 150 sps

	5" ~ 7.9"	8" ~ 10.9"	12.1" ~ 15.6"	17" ~ 24"
Panel + Control Board				
Touch Panel Part No.	P3004-A2B (5.7") P3012-A2B (7"w)	P3007-A2A (8.4") P3021-A2A (10.1"w)	P3008-A2A (10.4") P3008-AGA (10.4") P3026-A20 (12.1") P3030-A20 (12.1"w)	P3029-A20 (15") P3029-AG0 (15") P3023-A2A (15.6"w)
Control Board	PM1210	PM1310	PM1410	A : PM1710 B : PM1711
Touch Controller	PenMount P2-06	PenMount P2-08	PenMount P2-08 x 2	PenMount P2-08 x 2
Board Size (L x W x H, mm)	40 x 60 x 3	30 x 70 x 3	30 x 90 x 3	30 x 125 x 3
Tail Terminator	one, 50-pins	two, 40-pins+40-pins	two, 60-pins+40-pins	two, 80-pins+50-pins
Interface Connectors	USB, I ² C, UART, RS-232	USB, UART, I ² C	USB, I ² C, UART, RS-232	PM1710 : USB, RS-232 PM1711 : USB, I ² C, UART
Maximum Touch Lines	15 sensing lines 24 driving lines	23 sensing lines 35 driving lines	38 sensing lines 57 driving lines	44 sensing lines 76 driving lines
Power Consumption	Working : 41.0 mA Sleep : 2.9 mA	Working : 33.2 mA Sleep : 1.0 mA	Working : 60.3 mA Sleep : 3.0 mA	Working : 60.7 mA Sleep : 1.6 mA
Sample Rate (Single)	> 160 sps	> 160 sps	> 160 sps	> 160 sps

Above PenMount PCI touch controllers meet IEC 61000-4-3 RS Level III 10V/m and IEC 61000-4-6 CS Level III 10Vrms EMC test standards. In addition, these controllers supports Water Performance & Water Detection water handling functions.

■ Above features subject to change without prior notice.
■ Sample rate/second varies based on different firmware versions and touch panels.