

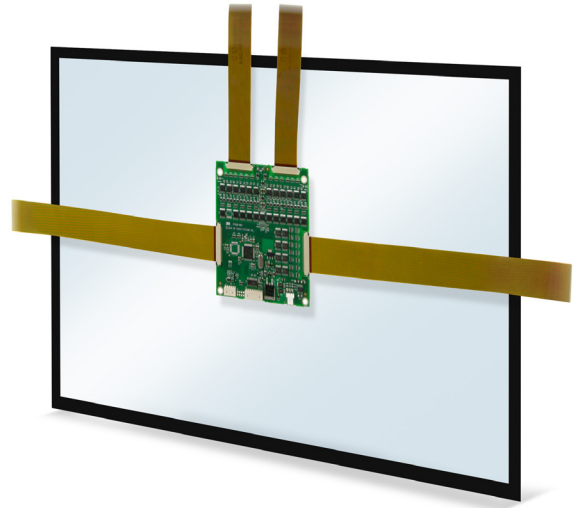
3M™ Multi-Touch System PCT2000PX

The Natural Choice for Next Generation User Interfaces

With more than 25 years of capacitive touch sensing and manufacturing expertise, 3M has developed a purpose-built multi-touch system specifically designed for applications that demand high-performance multi-touch displays ranging from 17 to 32 inches. The 3M™ Multi-Touch System PCT2000PX provides customers with a leading-edge solution that resolves simultaneous multi-touch events while supporting palm rejection at speeds 167% faster than the 60 Hz refresh rate of most industrial displays. This innovative multi-touch solution goes beyond two-touch gestures to enable intuitive, easy-to-use natural user interfaces that can create more engaging user experiences.

The PCT2000PX multi-touch system exemplifies 3M's strong system solution focus by combining 3M proprietary touchscreen manufacturing technology with the patented 3M™ Multi-Touch Controller PX400 to overcome existing design challenges in scaling projected capacitive technology (PCT) solutions beyond common portable device sizes (3.5 to 11.6 inches). This system has been designed and engineered specifically for 17 inch to 32 inch displays so OEM's and integrators can use its unique feature set without settling for scaled up versions of mobile handheld electronics and manufacturing processes. With the PCT2000PX multi-touch system, 3M now offers a highly-scalable, fully-warranted multi-touch system that uses advanced sensing techniques to address the unique needs of larger display applications.

The PCT2000PX system's non-active, chemically-strengthened cover glass offers a near wear-free surface that protects the underlying conductive elements and helps make the touchscreen functionally impervious to surface scratches. This feature enables leading-edge industrial design techniques, such as flat front surfaces, that eliminate bulky bezels required by other touch technologies to protect active



surface touch components. The flat front surface solution eliminates dust and debris build-up at the edges of the display while at the same time helps increase system reliability by not having components on the touchscreen surface that can be damaged or obstructed.

Recommended Applications

- Gaming and Amusement
- Retail POS
- Point of Information
- Self Service
- Military
- Industrial
- Medical
- Audio Visual
- Digital Signage
- Marine Navigation
- Telepresence

Feature	Benefit
3M PCT Fully-integrated System Solution	<ul style="list-style-type: none"> • Touchscreen and electronics tuned for high-fidelity, full multi-touch functionality, even at the edges and corners of the display • Integrated standard systems offered from a single source ensures full system support and warranty • Robust system solution tested to work with many display technologies provides integration and design flexibility
Patented 3M Electronics	<ul style="list-style-type: none"> • Reports simultaneous multi-touch events while supporting palm rejection at speeds 167% faster than the 60 Hz refresh rate of most industrial displays • High signal-to-noise ratio provides input flexibility including thin gloves and fingertips. • Ultra-high definition touch for smooth draw capability and ability to distinguish multiple fingers in close proximity • Custom ASIC design offers a standard protocol for any size between 17 and 32 inches and facilitates seamless application development while supporting longer life cycle applications
3M PCT with Engineered Cover Glass	<ul style="list-style-type: none"> • Enables leading edge industrial design solutions with a uniform narrow black border graphics design • No surface components or bezel requirement limits debris build up which results in increased reliability • Easy-to-clean, no wear surface provides operation unaffected by surface scratches • Smooth edge finish for improved durability and handling safety • Anti-stiction surface allows for "easy drag feel" for smooth touch performance. • Anti-glare for table-top applications or strong ambient lighting environments.



3M™ Multi-Touch System PCT2000PX Specifications

System Performance

Inputs (17" to 26")	5 inputs with palm rejection
Inputs (27" and 32")	10 inputs with palm rejection
Input Method	Finger, finger tips, thin gloves, 3M Smart Pen
Accuracy	>99% of true position
Resolution	4K x 4K
Linearization	Inherently Linear (only video alignment needed)
Tail Connection	Solder-less design
Light Transmission	88% (+/- 2%)

Electronics (3M Multi-Touch Controller PX)

Communication	USB HID Digitizer, Serial RS-232
Dimensions (17" to 23")	3.75" x 4.18" (95.25 mm x 106.17 mm) REF
Dimensions (24" to 26")	3.75" x 4.18" (95.25 mm x 106.17 mm) REF
Dimensions (27" to 32")	4.62" x 4.85" (117.35 mm x 123.19 mm) REF
Operating (17" to 23")	260 mA (typical)
Operating (24" to 26")	320 mA (typical)
Operating (27" to 32")	360 mA (typical)
Sleep Current	< 500 uA
Power Connection	Self-powered 5 V @ 2 A max
Connectors	ZIF (touchscreen side) Molex (USB/Serial COM side)
Touch Refresh Rate	Greater than 100 Hz (<10 ms)

Ordering Information

Diagonal	Format	Part Number
17" (17.15")	Standard	98-0003-3745-5
18.5" (18.61")	Wide	98-0003-3763-8
20" (20.11")	Wide	98-0003-3802-4
21.5" (21.5")	Wide	98-0003-3781-0
22" (22.10")	Wide	98-0003-3771-1
23" (23.13")	Wide	98-0003-3805-7
24" (24.00")	Wide	98-0003-3775-2
26" (26.00")	Wide	98-0003-3832-1
27" (27.00")	Wide	98-0003-3779-4
32" (31.69")	Wide	98-0003-3783-6

3M Touch Systems

Subsidiary of 3M Company
501 Griffin Brook Park Drive
Methuen, MA 01844
U.S.A.

1-888-659-1080

www.3M.com/touch

RoHS Directive compliant: In accordance with European Directive 2002/95/EC, "RoHS Directive compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M. (9/06)

IMPORTANT NOTICE TO PURCHASER: Specifications are subject to change without notice. These 3M Touch Systems' Products and software are warranted to meet their published specifications from the date of shipment and for the period stated in the specification. 3M Touch Systems makes no additional warranties, express or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. User is responsible for determining whether the 3M Touch Systems Products and software are fit for User's particular purpose and suitable for its method of production, including intellectual property liability for User's application. If the Product, software or software media is proven not to have met 3M Touch Systems' warranty, then 3M Touch Systems' sole obligation and User's and Purchaser's exclusive remedy, will be, at 3M Touch Systems' option, to repair or replace that Product quantity or software mediator to refund its purchase price. 3M Touch Systems has no obligation under 3M Touch Systems' warranty for any Product, software or software media that has been modified or damaged through misuse, accident, neglect, or subsequent manufacturing operations or assemblies by anyone other than 3M Touch Systems. 3M Touch Systems shall not be liable in any action against it in any way related to the Products or software for any loss or damages, whether non-specified direct, indirect, special, incidental or consequential (including downtime, loss of profits or goodwill) regardless of the legal theory asserted. (7/02)

Reliability

Surface Obstruction	Withstands most surface contaminants
Chemical Resistance	ASTM-D-1308 and ASTM-F-1598-95
Operating Temperature	0°C to +50°C (up to 90% RH from 0°C to +35°C (above +35°C see specification))
Storage Temperature	-10°C to +70°C (up to 90% RH from 0°C to +35°C (above +35°C see specification))
Humidity	Up to 90% RH from 0°C to +35°C, non-condensing

Mechanical

Total Thickness	17" to 27" sensors: 2.1 mm 32" sensors: 2.4 mm
Cover Glass	17" to 27" sensors: 1.6 mm 32" sensors: 1.9 mm
Graphics	Black border (standard design)
Display Size	Supported 17" to 32" (standard sizes available)
Durability	Non-active cover glass, no wear mechanism
Sealing	NEMA 4X/IP66, complete water-resistant seal compatible
Cleaning	Water, isopropyl alcohol, or similar non-abrasive cleaners
Regulatory (Agency Approvals)	FCC-B, CE, TUV
RoHS Compliant	Yes

System Warranty

One year on touch system

Unlimited touch warranty

Operating Systems Supported

Windows 7, Vista, XP (32- and 64-bit)

Windows CE 4.0, 5.0, 6.0

Linux Kernel 2.6, Kernel 2.4 (serial only)

