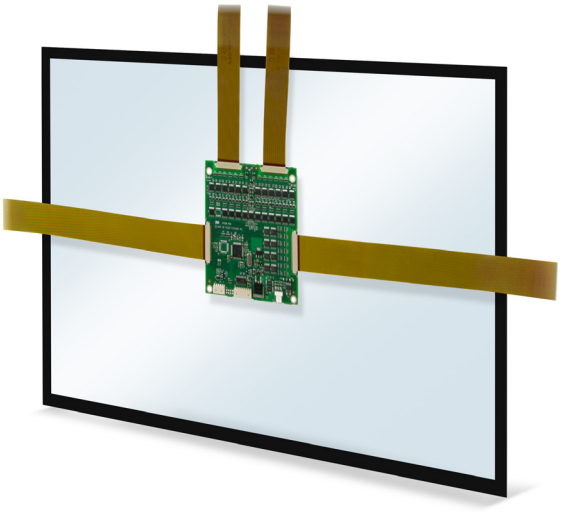
3M™ Multi-Touch System PCT2000PX

The Innovative 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 for applications that demand high-performance multi-touch functionality for displays ranging from 15 to 32 inches. The 3M™ Multi-Touch System PCT2000PX provides customers with a leading-edge solution that resolves up to 40 simultaneous multi-touch events with palm rejection at speeds 167% faster than the 60 Hz refresh rate of many 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 (PCAP) solutions beyond common portable device sizes (3.5 to 11.6 inches). This system has been designed and engineered specifically for 15 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 wide range of multi-touch system products that use advanced sensing techniques to address the unique needs of larger display applications.

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



the active surface touch components. In addition to adding sophisticated industrial design, the flat front surface solution eliminates dust and debris build-up at the edges of the display and also helps increase overall system reliability by not having critical components on the touchscreen surface that can be damaged or obstructed.

Recommended Applications

- Gaming and Amusement
- Retail POS
- Point of Information
- Self Service
- Telepresence
- Health Care
- Audio Visual
- Digital Signage
- Retail Brand Experience
- Industrial

Feature	Benefit
3M PCT Fully-integrated System Solution	• Touchscreen and electronics tuned for precise, 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	• Reports simultaneous multi-touch events while supporting palm rejection at speeds 167% faster than the 60 Hz refresh rate of many 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 15 and 32 inches and facilitates seamless application development
3M PCT with Engineered Cover Glass	• 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

Touch Inputs	15” to 26”: 20 touches with palm rejection 27” to 32”: 40 touches with palm rejection
Input Method	Finger, thin gloves
Accuracy	>99% of true position
Resolution	4K x 4K
Linearization	Inherently Linear (only video alignment needed)
Tail Connection	Solder-less design
Light Transmission	> 87%

Electronics (3M Multi-Touch Controller PX)

Communication	USB HID Digitizer, Serial RS-232
Dimensions: 15” 16” to 26” 27” to 32”	2.75" x 2.75” (69.85 mm x 69.85 mm) REF 3.25" x 2.75” (82.55 mm x 69.85 mm) REF 3.45" x 3.33” (87.63 mm x 84.46 mm) REF
Operating Current	15": 236mA 16" to 26": 360 mA 27" to 32": 380 mA
Sleep Current	15": 850 uA 16" to 26": 850 uA 27" to 32": 750 uA
Power Connection	Self-powered 5V @ 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
15" (15.08")	4:3	98-0003-3751-3
15" (15.65")	16:9	98-0003-3850-3
17" (17.15")	5:4	98-0003-3745-5
18.5" (18.61")	16:9	98-0003-3763-8
19" (19.09")	5:4	98-0003-3800-8
20" (20.11")	16:9	98-0003-3802-4
21.5" (21.5")	16:9	98-0003-3781-0
22" (22.10")	16:9	98-0003-3771-1
23" (23.13")	16:9	98-0003-3805-7
24" (24.00")	16:9	98-0003-3775-2
26" (26.00")	16:9	98-0003-3832-1
27" (27.00")	16:9	98-0003-3779-4
32" (31.69")	16:9	98-0003-3783-6

Reliability

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

Mechanical

Total Thickness	15” to 27”: 2.1 mm 32”: 2.4 mm
Cover Glass Thickness	15” to 27”: 1.6 mm 32”: 1.9 mm
Graphics	Black border (standard design)
Display Size	Supported 15” 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, IEC 60950
RoHS Compliant	Yes

System Warranty

One year on touch system

Operating Systems Supported

Windows 8, 7, Vista, XP (32- and 64-bit)

Windows CE 3.0, 3.2, 4.0, 5.0, 6.0

Linux Kernel 2.6, Kernel 2.4 (serial only)

Mac OS (Intel)**

**Third party driver

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