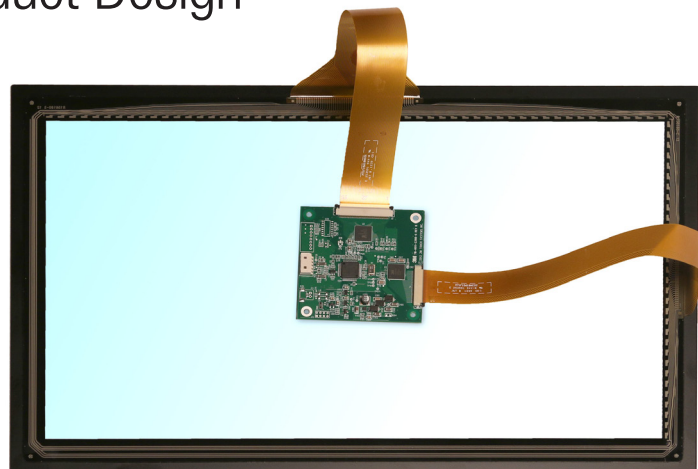


Technology for Breakthrough Product Design

With more than 30 years of capacitive touch sensing and manufacturing expertise, 3M has developed a purpose-built multi-touch system for commercial applications that demand high-performance multi-touch functionality with bezel-free designs that deliver a sleek and sophisticated tablet-like industrial design for displays ranging from 15 to 24 inches. The **3M™ Multi-Touch System PCT2455PX**, supported by the proprietary 3M™ Multi-Touch Controller PX5000, is based on projected capacitive touch technology (PCAP) and supports up to 20 simultaneous touch events with an ultra-fast response time of less than 10 milliseconds. This industry-leading touch performance combined with modern design elements, makes the PCT2455PX system an ideal solution for OEM's, ODM's, and integrators looking to design and build breakthrough new products that exceed their customer's expectations.

Designed with commercial applications in mind, the PCT2455PX system's non-active, chemically-strengthened cover glass offers a durable surface that protects the underlying conductive elements while allowing the touchscreen to remain functional with even the most severe surface scratches. This same cover glass is also given an anti-stiction and an anti-glare treatment that helps provide an enhanced user experience by limiting the effects of touch friction and ambient light pollution. In addition to these functional benefits, the PCT2455PX system's bezel-less design helps OEM's bring the sleek, tablet-like industrial design elements to their own devices by eliminating the need for bulky bezels required by other touch technologies. These modern design techniques are an ideal element for commercial display applications that require a fresh, next-generation look and feel.



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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Reports simultaneous multi-touch events while supporting palm rejection at speeds faster than the 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 24 inches and facilitates seamless application development
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, virtually "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 PCT2455PX Specifications

System Performance

Touch Inputs	20 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 PX5000)

Communication	USB HID Digitizer
Dimensions	15.1" and 15.6": 2.75" x 2.75" x 0.37" REF 17" to 24": 3.25" x 2.75" x 0.37" REF
Operating Current	15.1" and 15.6": 5 VDC (95mA max) 17" to 24": 5 VDC (150mA max)
Power Connection	USB Vbus
Connectors	ZIF (touchscreen) Molex (USB COM)
Touch Refresh Rate	Greater than 100 Hz (<10 ms)

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 (above +35°C, see specification)

Mechanical

Total Thickness	2.4 mm
Graphics	Black border (standard design)
Display Size	Supported 15" to 24" (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

Native Driver Support:

Windows XP, Vista, 7, 8; Linux Kernels 3.5 or later for Windows 7 compatible FW; Linux Kernels 3.12 or later for Windows 8 compatible FW.

3M Driver Support:

MT 7 (Windows XP, Vista, 7, 8, XPe, WEPOS, CE, Linux kernels 2.6 and 3.0)

3rd-party Driver:

Mac OS (Intel)

Ordering Information

Diagonal	Format	Part Number
15.08"	4:3	98-1100-0324-5
15.65"	16:9	98-1100-0282-5
17.15"	5:4	98-1100-0284-1
18.61"	16:9	98-1100-0322-9
19.09"	5:4	98-1100-0321-1
20.11"	16:9	98-1100-0320-3
21.62"	16:9	98-1100-0271-8
22.10"	16:9	98-1100-0325-2
23.13"	16:9	98-1100-0274-2
24.11"	16:9	98-1100-0323-7

3M Touch Systems

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U.S.A.

1-888-659-1080

www.3M.com/touch

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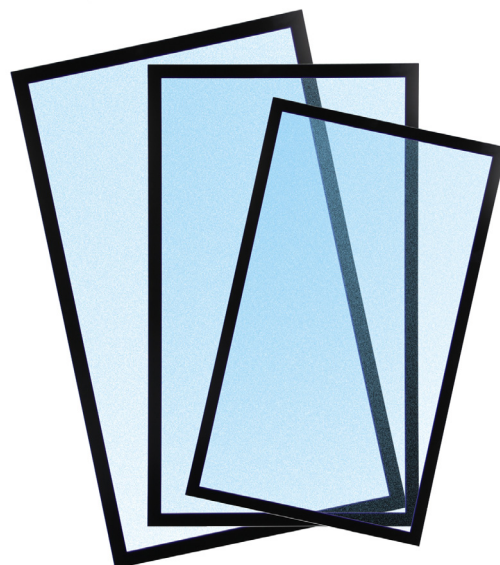
3M™ Multi-Touch System PCT2420PX

Uncompromised Performance for Interactive Digital Signage

With more than 30 years of capacitive touch sensing expertise, 3M has developed a scalable multi-touch system for digital signage applications that demand high-performance multi-touch functionality with sophisticated bezel-free designs delivering a truly unique touch experience. The **3M™ Multi-Touch System PCT2420PX** portfolio provides customers with a leading-edge solution that resolves up to 60 simultaneous touches (with palm rejection) at an ultra-fast 12ms response time for digital signage from 37 to 47 inches. This multi-touch solution enables display designers to develop cutting-edge interactive signage solutions that create collaborative spaces for multiple users or an engaging experiences for single users.

The PCT2420PX 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 37- to 47-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 PCT2420PX 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 digital signage applications.

The PCT2420PX system's non-active, chemically-strengthened cover glass offers a durable surface that protects the underlying conductive elements while allowing the touchscreen to remain functional with even the most severe surface scratches. This same cover glass goes through an anti-glare treatment process that helps provide an enhanced user experience by limiting the effects of both touch friction and ambient light pollution on the sensor. The PCT construction also enables modern industrial design techniques, such as flat front surfaces, that



eliminate the need for bulky bezels required by other touch technologies to protect any 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 | • Health Care |
| • Exhibits | • Retail Product Selectors |
| • Point of Information | • Digital Signage |
| • Self Service | • Retail Brand Experience |
| • Interactive Tabletops | • Industrial |

Feature	Benefit
Patented 3M Electronics	<ul style="list-style-type: none">• Reports up to 60 simultaneous multi-touch events while supporting palm rejection at speeds of <12ms• 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 47 inches and facilitates seamless application development
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.
High Performance up to 47" Diagonal	<ul style="list-style-type: none">• Maintains high performance multi-touch scalable up to 47" displays• Large format multi-touch enables innovative collaborative multi-user interactions



3M™ Multi-Touch System PCT2420PX Specifications

System Performance

Touch Inputs	60 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
Dimensions:	PX4611 Controller: 9.90" x 2.50" PRX4401 Satellite Controller: 4.33" x 2.17"
Power Connection	Self-powered 5V @ 2 A max
Connectors	ZIF (touchscreen side) Molex (USB/Serial COM side)
Touch Refresh Rate	<12ms for up to 20 simultaneous finger inputs

Ordering Information

Diagonal	Format	Part Number
37"	16:9	98-0003-4205-9
39"	16:9	98-1100-0258-5
40"	16:9	98-0003-4164-8
42"	16:9	98-0003-4161-4
46"	16:9	98-0003-4159-8
47"	16:9	98-0003-4203-4

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 (above +35°C, see specification)

Mechanical

Total Thickness	2.4mm
Cover Glass Thickness	1.9mm
Graphics	Black border (standard design)
Display Size	Supported 37" to 47" (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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