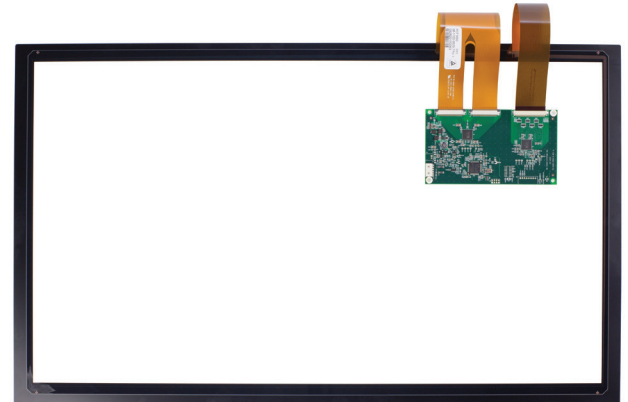




3M Touch Systems

3M™ Large Format PCAP Systems

Engineered for multi-touch commercial display applications 32-inches and up*



Introducing a more durable, scalable and easy-to-integrate multi-touch system that makes the retail brand experience more robust, public exhibits more interactive and gaming more immersive.

The ultrafine metal mesh projected capacitive (PCAP) multi-touch systems deliver. Ideal for large format multi-touch display applications, this system offers display integrators and equipment manufacturers a reliable, easy-to-integrate multi-touch system with no bulky bezels. The system's glass-to-edge design delivers the same modern design aesthetic users have come to expect from today's personal smart phones and tablets.

Proprietary Ultrafine Metal Mesh Design

At the core of this new multi-touch system offering is an ultrafine metal mesh conductor — a sensor unlike other known metal mesh technologies available in the marketplace today. This new technology overcomes design and optical challenges found in other projected capacitive touch (PCT) solutions by utilizing advanced optical modelling techniques developed by 30 years of 3M science and service to the display industry. The result is a sensor designed to work universally on 2K and 4K applications across a range of sizes, including planar (curved) screens, while maintaining high image quality and touch responsiveness. Additionally, this unique technology minimizes moiré and sparkle, which are known problems in other PCAP systems.

Integrated 3M™ Multi-Touch Controller PX5000 for Ultimate Speed and Responsiveness

The 3M PX5000 controller allows for multi-user, multi-touch points without sacrificing speed or accuracy. Whether you're designing for multi-touch, multi-users, gestures or all of the above, the 3M PX5000 controller has the speed and responsiveness to make your applications shine. The advanced controller design has a built-in palm-rejection feature, which helps ignore unintended screen touches that can occur through natural user interaction. Additionally, this ASIC chip is built on a proven and stable platform that display integrators and OEMs can rely on today and in the future. The 3M PX5000 controller uses just one standard protocol for all sizes from 15–65 inches, making it easy to interface with operating systems — Windows, Linux, OSx, and Android — regardless of system size.

All this is backed by world-class 3M science, global supply chain capabilities and support.

- ✓ Robust
- ✓ Scalable
- ✓ Durable and Dependable
- ✓ Customizable
- ✓ Modern Design
- ✓ Long Life-Cycle

Recommended Applications

- Point of Information Displays
- Assisted Selling Assisted Selling
- Exhibits and Museums
- Self Service
- Retail Brand Experience
- Gaming

* Refers to diagonal dimensions of the display

Feature	Benefit
Proprietary Ultrafine Metal Mesh Design	<ul style="list-style-type: none"> • The design overcomes challenges of large format displays • Ultrafine metal mesh is just 3 microns wide which allows for 88% light transmission • Mesh blackening process minimizes sparkle and glint • Precision manufacturing process virtually eliminates moiré • Scalable from 15–65 inches without reduced performance • Ability to project through cover glass up to 5mm thick
Proprietary 3M Electronics	<ul style="list-style-type: none"> • Resolves up to 80 simultaneous touch points while supporting palm rejection at speeds of less than 10 milliseconds • High signal-to-noise ratio provides input flexibility including thin gloves and fingertips • Custom ASIC chip design offers a standard protocol for sizes ranging between 15 and 65 inches and facilitates seamless application development
3M PCT with Heat Tempered Cover Glass*	<ul style="list-style-type: none"> • No surface components or bezel requirements limit debris build up resulting in increased reliability • All glass front surface provides a sleek, modern aesthetic • Easy-to-clean, virtually “no wear” surface provides operation unaffected by surface scratches or contaminants • Smooth edge finish for improved durability and handling safety • Anti-stiction surface allows for smooth finger glide across the surface • Anti-glare for table-top applications or strong ambient light environments

* Except in 32-inch models

3M™ Multi-Touch Display Systems Specifications for Large Format

System Performance

Touch Inputs	80 touches with palm rejection
Input Method	Finger, thin gloves
Accuracy	>99% of true position
Resolution	32K x 32K
Linearization	Inherently Linear (only video alignment needed)
Tail Connection	Solderless design
Light Transmission	>89.5% 65": >86.5%

Electronics (3M Multi-Touch Controller PX5000)

Communication	USB HID Digitizer
Operating Current	<206mA max
Power Connection	USB Vbus
Connectors	ZIF (touchscreen), Molex (USB COM)
Touch Refresh Rate¹	Greater than 100 Hz (<10ms)

Reliability

Surface Obstruction	Withstands most surface contaminants
Chemical Resistance	ASTM-D-1308-2 and ASTM-F-1598-95
Operating Temperature	-10°C to +70°C (up to 90% RH from 0°C to +35°C (above +35°C, see specification))
Storage Temperature	-40°C to +70°C (up to 90% RH from 0°C to +35°C (above +35°C, see specification))

¹Time between touch position updates

Mechanical

Total Thickness	4.4mm
Graphics	Black border (standard design)
Display Size	Supports 32" to 65" (standard sizes available)
Durability	Non-active cover glass, no wear mechanism
Sealing	NEMA 4X/IP66, complete water-resistant and seal compatible
Regulatory	FCC-B, CE, IEC 609050 (Agency Approvals)
RoHS Compliant	Yes

System Warranty

Three years

Operating Systems Supported

Native Driver Support	Windows XP, Vista, 7, 8, 10; 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, 10, XPe, WEPOS, CE, Linux kernels 2.6 and 3.0)
3rd-party Driver	Mac OS (Intel)

Ordering Information

Diagonal	Format	Sensor Part No.	Controller Part No.
32"	16:9	98-1100-0671-9	98-1100-0579-4
42"	16:9	98-1100-0665-1	98-1100-0714-7
43"	16:9	98-1100-0753-5	98-1100-0714-7
46"	16:9	98-1100-0664-4	98-1100-0713-9
49"	16:9	98-1100-0743-6	98-1100-0659-4
55"	16:9	98-1100-0747-7	98-1100-0659-4
65"	16:9	98-1100-0757-6	98-1100-0659-4



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RoHS Directive compliant: RoHS 2011/65/EU means that the product or part does not contain any of the substances in excess of the maximum concentration values ("MCVs") in EU RoHS Directive 2011/65/EU, unless the substance is in an application that is exempt under EU RoHS. The MCVs are by weight in homogeneous materials. This information represents 3M's knowledge and belief, which may be based in whole or in part on information provided by third party suppliers to 3M. (3/13)

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