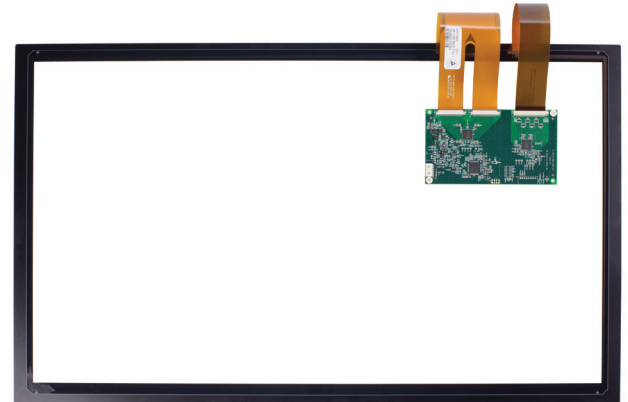




3M Touch Systems

3M™ PCAP Systems

Engineered for multi-touch commercial display applications 27-inches and smaller*



Introducing a more durable, scalable and easy-to-integrate multi-touch system that stands up to rugged industrial environments, makes retail brand experiences more robust and makes public exhibits more interactive.

The ultrafine metal mesh projected capacitive (PCAP) multi-touch systems deliver. Ideal for small 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 backed by world-class 3M science, global supply chain with localized support.

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

Recommended Applications

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

* Refers to diagonal dimensions of the display

| Feature | Benefit |
|--|--|
| Proprietary Ultrafine Metal Mesh Design | <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 • Ultrafine metal mesh based on sophisticated 3M optical modeling • Scalable from 15–65 inches |
| Proprietary 3M Electronics | <ul style="list-style-type: none"> • Reports simultaneous multi-touch events while supporting palm rejection at high speeds • 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 65 inches and facilitates seamless application development |
| 3M PCT with Chemically Strengthened Cover Glass | <ul style="list-style-type: none"> • All glass front surface provides a sleek, modern aesthetic • Durable cover glass unaffected by scratches, contaminants or items resting on the surface • 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-glare for table-top applications or strong ambient lighting environments |

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

| System Performance | | Mechanical | | | |
|--|--|------------------------------|--|------------------------|----------------------------|
| Touch Inputs | 20 touches with palm rejection | Total Thickness | 2.0mm | | |
| Input Method | Finger, thin gloves | Graphics | Black border (standard design) | | |
| Accuracy | >99% of true position | Display Size | Supports 15" to 27" (standard sizes available) | | |
| Resolution | 32K x 32K | Durability | Non-active cover glass, no wear mechanism | | |
| Linearization | Inherently Linear (only video alignment needed) | Sealing | NEMA 4X/IP66, complete water-resistant and seal compatible | | |
| Tail Connection | Solderless design | Regulatory | FCC-B, CE, IEC 609050 (Agency Approvals) | | |
| Light Transmission | >90% | RoHS Compliant | Yes | | |
| Electronics (3M Multi-Touch Controller PX5000) | | Operating Systems Supported | | | |
| Communication | USB HID Digitizer | 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 | | |
| Operating Current | <133mA Max | 3M Driver Support | MT 7 (Windows XP, Vista, 7, 8, 10, XPe, WEPOS, CE, Linux kernels 2.6 and 3.0) | | |
| Power Connection | USB Vbus | 3rd-party Driver | Mac OS (Intel) | | |
| Connectors | ZIF (touchscreen side), Molex (USB COM) | Ordering Information | | | |
| Touch Refresh Rate¹ | Greater than 100 Hz (<10ms) | Diagonal | Format | Sensor Part No. | Controller Part No. |
| Reliability | | 15" | 4:3 | 98-1100-0638-8 | 98-1100-0609-9 |
| Surface Obstruction | Withstands most surface contaminants | 15.6" | 16:9 | 98-1100-0639-6 | 98-1100-0609-9 |
| Chemical Resistance | ASTM-D-1308-2 and ASTM-F-1598-95 | 17" | 5:4 | 98-1100-0640-4 | 98-1100-0672-7 |
| Operating Temperature | -10°C to +70°C (up to 90% RH from 0°C to +35°C (above +35°C, see specification)) | 18.5" | 16:9 | 98-1100-0641-2 | 98-1100-0606-5 |
| Storage Temperature | -40°C to +70°C (up to 90% RH from 0°C to +35°C (above +35°C, see specification)) | 19" | 5:4 | 98-1100-0642-0 | 98-1100-0672-7 |
| System Warranty | | 21.5" | 16:9 | 98-1100-0643-8 | 98-1100-0606-5 |
| Three years | | 22" | 16:10 | 98-1100-0644-6 | 98-1100-0606-5 |
| | | 23" | 16:9 | 98-1100-0645-3 | 98-1100-0606-5 |
| | | 24" | 16:9 | 98-1100-0629-7 | 98-1100-0606-5 |
| | | 27" | 16:9 | 98-1100-0673-5 | 98-1100-0579-4 |

¹Time between touch position updates



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