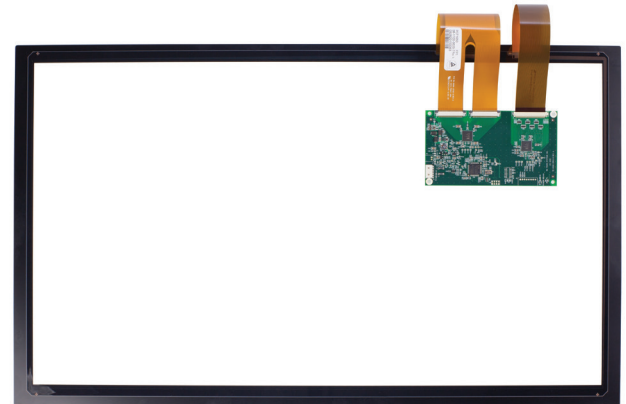




3M Touch Systems

3M™ Multi-Touch PCAP Systems M-Series Large Format



Engineered for Digital Signage Display Applications 32-inches and Larger

Specifically designed to fit the needs of most large format applications, the 3M M-Series family of sensors and electronics provide an excellent solution for those applications previously serviced by IR and Optical touch solutions. Ideal for large format display applications that require support for button and common gestures, these systems offer display integrators and equipment manufacturers a reliable, easy-to-integrate multi-touch system with no bulky bezels like those found on IR or optical touch systems. Durable, scalable, reliable and easy-to-integrate, these multi-touch systems provide the flat front surface design found in today's leading consumer devices and will make your retail brand experience more robust, public exhibits more interactive, and gaming machines more immersive. With support for up to 80 simultaneous touch points and a polished flat front surface, the 3M M-Series PCAP Touch Systems are the perfect solution for your large format touch requirements.

Proprietary Metal Mesh Design

At the core of this new multi-touch system offering is an ultrafine metal mesh conductor design. This new technology overcomes design and optical challenges found in other 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.

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

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 3M PX5000 ASIC is built on a proven and stable platform that display integrators and OEMs can rely on today and in the future, and with support for Windows, Linux, OSx and Android, it is an excellent solution for your large format touch needs. 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
- Exhibits and Museums
- Self Service
- Retail Brand Experience
- Gaming

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 89.5% light transmission • Mesh blackening process minimizes sparkle and glint • Precision manufacturing process virtually eliminates moiré • Scalable from 32–65 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 20 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 32 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

3M™ Multi-Touch M-Series PCAP Systems Specifications for Large Format

System Performance	
Touch Inputs	20 touches with palm rejection
Input Method	Finger
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 60950 (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	Sensor Catalogue No.	Controller Catalogue No.
32"	PCT1903 31.69 W C	PX521Z 16-32 MM B FW20
40"	PCT4003 39.58 W D	PX521Z 39-49 MM F FW20
43"	PCT4003 42.65 W D	PX521Z 39-49 MM F FW20
46"	PCT4003 46.17 W D	PX521Z 39-49 MM F FW20
49"	PCT4003 48.72 W D	PX521Z 39-49 MM F FW20
55"	PCT4003 54.76 W D	PX521Z 55 MM F FW20
65"	PCT4003 64.58 W	PX5516 48-65 MM F FW80



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