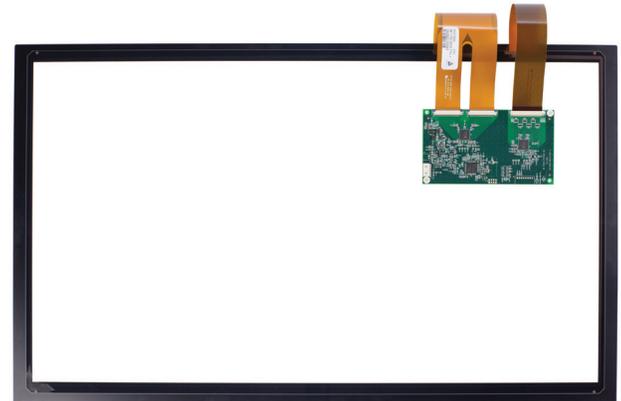




## 3M Touch Systems

# 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
<b>Proprietary Ultrafine Metal Mesh Design</b>	<ul style="list-style-type: none"> <li>• The design overcomes challenges of large format displays</li> <li>• Ultrafine metal mesh is just 3 microns wide which allows for 89.5% light transmission</li> <li>• Mesh blackening process minimizes sparkle and glint</li> <li>• Precision manufacturing process virtually eliminates moiré</li> <li>• Scalable from 32–65 inches without reduced performance</li> <li>• Ability to project through cover glass up to 5mm thick</li> </ul>
<b>Proprietary 3M Electronics</b>	<ul style="list-style-type: none"> <li>• Resolves up to 20 simultaneous touch points while supporting palm rejection at speeds of less than 10 milliseconds</li> <li>• High signal-to-noise ratio provides input flexibility including thin gloves and fingertips</li> <li>• Custom ASIC chip design offers a standard protocol for sizes ranging between 32 and 65 inches and facilitates seamless application development</li> </ul>
<b>3M PCT with Heat Tempered Cover Glass</b>	<ul style="list-style-type: none"> <li>• No surface components or bezel requirements limit debris build up resulting in increased reliability</li> <li>• All glass front surface provides a sleek, modern aesthetic</li> <li>• Easy-to-clean, virtually “no wear” surface provides operation unaffected by surface scratches or contaminants</li> <li>• Smooth edge finish for improved durability and handling safety</li> <li>• Anti-stiction surface allows for smooth finger glide across the surface</li> <li>• Anti-glare for table-top applications or strong ambient light environments</li> </ul>

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

### System Performance

<b>Touch Inputs</b>	20 touches with palm rejection
<b>Input Method</b>	Finger
<b>Accuracy</b>	>99% of true position
<b>Resolution</b>	32K x 32K
<b>Linearization</b>	Inherently Linear (only video alignment needed)
<b>Tail Connection</b>	Solderless design
<b>Light Transmission</b>	>89.5%   65": >86.5%

### Electronics (3M Multi-Touch Controller PX5000)

<b>Communication</b>	USB HID Digitizer
<b>Operating Current</b>	<206mA max
<b>Power Connection</b>	USB Vbus
<b>Connectors</b>	ZIF (touchscreen), Molex (USB COM)
<b>Touch Refresh Rate<sup>1</sup></b>	Greater than 100 Hz (<10ms)

### Reliability

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

<sup>1</sup>Time between touch position updates

### Mechanical

<b>Total Thickness</b>	4.4mm
<b>Graphics</b>	Black border (standard design)
<b>Display Size</b>	Supports 32" to 65" (standard sizes available)
<b>Durability</b>	Non-active cover glass, no wear mechanism
<b>Sealing</b>	NEMA 4X/IP66, complete water-resistant and seal compatible
<b>Regulatory</b>	FCC-B, CE, IEC 60950 (Agency Approvals)
<b>RoHS Compliant</b>	Yes

### System Warranty

Three years

### Operating Systems Supported

<b>Native Driver Support</b>	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
<b>3M Driver Support</b>	MT 7 (Windows XP, Vista, 7, 8, 10, XPe, WEPOS, CE, Linux kernels 2.6 and 3.0)
<b>3rd-party Driver</b>	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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**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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