

3M™ MicroTouch™ System SCT7650EX

Rugged Solution for Impact Strength and User Safety

The 3M MicroTouch System SCT7650EX is a rugged version of 3M's industry-leading surface capacitive system, the 3M™ MicroTouch™ System SCT3250EX, which is created by laminating 4mm backer glass with optically-clear adhesive to a 3M™ MicroTouch™ Sensor SCT7650. This robust laminated sensor, for applications ranging from 10 to 32 inches, is specifically designed to withstand heavy abuse in vandal-prone environments while providing excellent light transmission.

This sensor's optimized design offers 86.5% light transmission for brighter, crisper display images (compared to 81% for typical rugged surface capacitive sensors), while providing superior impact resistance by exceeding the UL 60950-1 certification (500 gram steel ball dropped from 1.3 meter height). In the event of a sensor breaking by extraordinary impact, the laminated construction is designed to help protect the user from glass shards by holding the multi-layered sensor together.

The systems' sophisticated 3M™ MicroTouch™ Controller EX provides superior touch speed performance and industry-leading reliability. This controller is well known for its < 5.4 milliseconds response time and "intentional touch" capability, where false touches don't register if a user's finger hovers over the screen or from inadvertent screen contact with jewelry, clothing or other personal items.

With the widest operating- and storage-temperature range available, NEMA 4 / IP 66 sealing, and superior performance in the presence of surface contaminants and debris, the 3M MicroTouch System



Recommended Applications

- ATMs
- Unattended Kiosks
- Point-of-Information
- Retail Self-Service
- Outdoor ATMs
- Outdoor Kiosks
- Taxi Seatback Access/Payment
- Vending Machines

SCT7650EX is ideal for unattended kiosks, outdoor ATMs, and high-use, environmentally-demanding applications, and provides flexibility for system designers requiring a robust touch system solution.

Feature	Benefit
Laminated Construction Sensor Design	<ul style="list-style-type: none"> • Exceeds industry-standard steel ball drop test for impact resistance making it ideal for unattended, vandal-prone environments • Shatter-resistance construction offers user safety if the touch sensor is broken
All-Glass Solution with 3M ClearTek Hard Coat	<ul style="list-style-type: none"> • Up to 5.5% higher light transmission than typical ruggedized surface capacitive solutions for superior display performance • Superior surface durability maintains optical and functional performance over the life of the product
3M MicroTouch Controller EX Electronics	<ul style="list-style-type: none"> • Industry-leading touch response for up to 2X faster response time • Proprietary ASIC minimizes component count and achieves higher MTBF • Proven electronics with an extensive installed base assures continued high performance
Scratch-resistant Top Coat	<ul style="list-style-type: none"> • Reduces surface energy for improved resistance to surface scratches • Smooth surface allows for improved scroll performance • Durable finish provides excellent chemical resistance and an easy-to-clean surface

3M™ MicroTouch™ System SCT7650EX Specifications

System Performance

Light Transmission	86.5% ($\pm 2\%$)
Input Method	Finger input
Accuracy	>99% of true position
Resolution	16k x 16k (maximum resolution)
Linearization	Factory linearized
Tail Connection	Solder-less design

Electronics (3M MicroTouch Controller EX)

Communication	USB and Serial
Dimensions	1.3" (33.02 mm) x 2.4" (60.96 mm) REF
Operating Current	75 mA (typical)
Sleep Current	< 500 μ A
Power Connection	USB BUS (5V) or 5V/12V Serial
Connectors	5-pin AMP (Touch side) 5-pin or 7-pin Molex (COM side)
ESD	± 8 KV Contact, ± 30 KV Air
Point Speed (PPS)	200 pps (typical)
Minimum Touch Time	< 5.4 ms
MTBF	>700,000 hours

Reliability

Surface Obstructions	Withstands most surface contaminants
Chemical Resistance	ASTM-D-1308-02 and ASTM-F-1598-95
Impact Resistance	Steel ball drop test UL 60950
Liquid Resistance	Liquids on screen do not impede touch performance
Operating Temperature	-40° C to 70° C
Storage Temperature	-50° C to 85° C
Humidity	Up to 90% RH from 0° C to 35° C, non-condensing

Mechanical

Glass Thickness	0.298" (7.57 mm)
Display Size Supported	10.4" (264.16 mm) to 32" (812.8 mm) (standard and wide formats)
Surface Scratch Hardness	MoHS 7 or higher to induce a functional failure
Scratch Resistance	Proprietary top coat
Sealing	NEMA 4X / IP66
Gasketing	Complete water-resistant seal compatible
Cleaning	Water, isopropyl alcohol, or similar non-abrasive cleaners
RoHS Directive compliant	Yes

System Warranty

5 years

3M Touch Systems

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