

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

# 3M™ MicroTouch™ System SCT7650EX Specifications

## System Performance

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|                    |                                |
|--------------------|--------------------------------|
| Light Transmission | 86.5% (±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)

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|                    |   |
|--------------------|---|
| 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 uA  |
| Power Connection   | USB BUS (5V) or 5V/12V Serial                             |
| Connectors         | 5-pin AMP (Touch side)<br>5-pin or 7-pin Molex (COM side) |
| ESD                | ±8KV Contact, ±30KV Air                                   |
| Point Speed (PPS)  | 200 pps (typical)   |
| Minimum Touch Time | < 5.4 ms  |
| MTBF               | >700,000 hours  |

## Reliability

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|                       |   |
|-----------------------|---|
| 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

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|                          |   |
|--------------------------|---|
| 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

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5 years

### 3M Touch Systems

Subsidiary of 3M Company  
501 Griffin Brook Park Drive  
Methuen, MA 01844  
U.S.A.

1-888-659-1080

[www.3M.com/touch](http://www.3M.com/touch)

**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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