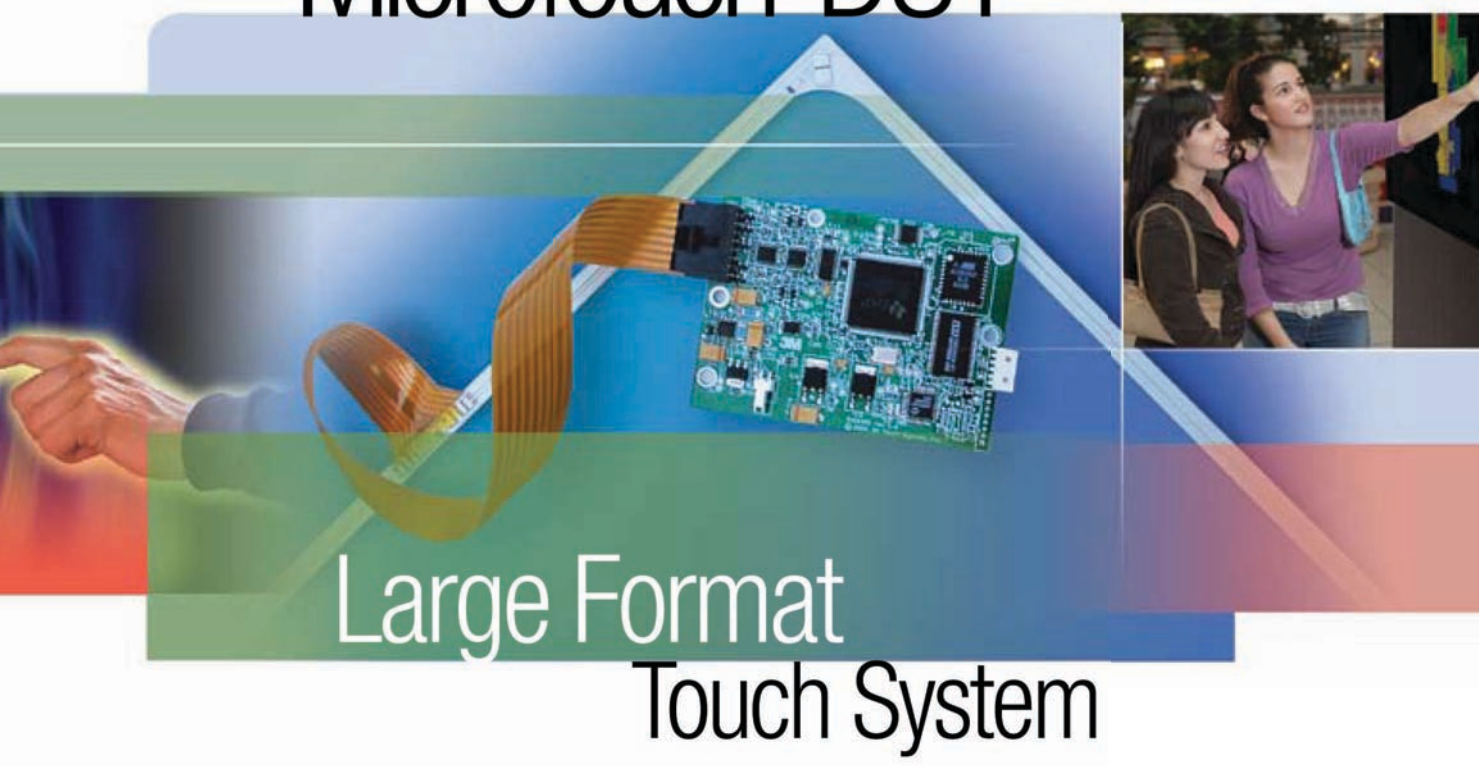
MicroTouch™ DST



Large Format Touch System

Product Highlights

- Fast, accurate repeatable touch
- Touch operates with static objects or other touches on the screen
- Touch unaffected by surface contaminants, such as liquids, dirt, dust and grime
- Excellent light transmission provides vibrant optical characteristics with anti-glare properties
- Operation unaffected by surface damage
- Input flexibility from finger or stylus, such as pencil, credit card, fingernail, or almost any pointing stylus
- Available for display sizes 32" or greater

Fundamentally Different Touch for Interactive Signage

For most popular large-format touch technologies "touch position" is calculated when a finger interrupts an optical field, infrared light beams or acoustic waves on or above the surface of the touch screen substrate. Relying on these "active" surface properties makes these technologies susceptible to different types of interference or environmental limitations, which makes 3M's Dispersive Signal Technology (DST) a fundamentally different touch solution for large-format display applications.

The **MicroTouch™ DST Touch System**, based on 3M Dispersive Signal Technology, consists of a chemically-strengthened glass substrate with piezos mounted on each corner, mated to a sophisticated, dedicated controller. The DST Touch System determines the touch position by pinpointing the source of "bending waves" created by finger or stylus contact within the glass substrate. This process of interpreting bending waves within the glass substrate helps eliminate traditional performance issues related to on-screen contaminants and surface damage, and provides fast, accurate touch attributes.

3M Innovation

MicroTouch™ DST touch screens are another example of the innovative products expected from 3M Touch Systems. Our world-class support and service organization provides expert technical consulting wherever your products are designed, integrated or delivered. It is this total, global approach that helps ensure exceptional service and support, backed by 3M.

MicroTouch™ DST Large Format Touch System

TOUCH SYSTEM (Touch Screen and Electronics)

Performance

Input Method	Finger and stylus input
Accuracy	Reported coordinates are within 1.0% of true position (based on viewing area dimensions)
Touch System Resolution	16k x 16k
Response Time	20 ms for tap input
Minimum Touch Impact*	20 mN·s (milli-newton seconds), the equivalent of a very light touch

Optics

Light Transmission**	92% light transmission (±2%)
Surface Finish	Anti-glare etch (standard)

Mechanical

Glass Thickness	2.2 mm (± 0.2 mm), glass only
Overall Thickness	4.4 mm (± 0.5 mm) Includes glass thickness, tail, electronics components, and mounting material.
Substrate Material	Chemically-strengthened glass substrate.
Surface Hardness	Mohs pick with a hardness rating of 7 or higher is required to induce a scratch. Scratches will not result in a functional failure.
Cleaning	Standard, non-abrasive glass cleaners acceptable.

Functional Reliability

Surface Obstructions	Touch screen operation withstands surface contaminants such as dirt, dust and grime.
Operating Temperature	-15° C to +70° C for the touch screen Relative Humidity: Up to 90% non-condensing
Storage Temperature	-50° C to +85° C Relative Humidity: Up to 90% non-condensing
System Warranty	1 year limited warranty

ELECTRONICS

Controller

Communications Protocol	Serial Plug and Play or USB HID
Nominal Uncased Dimensions	2.54" x 3.88" x 0.6" (without connectors) 64.3 mm x 98.6 mm x 15.2 mm
MTBF	USB: >141k hours per MIL Handbook-217-F1, ground benign Serial: >145k hours per MIL Handbook-217-F1, ground benign
Regulatory	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548
Drivers	MicroTouch MT7 for MicroTouch DST driver for Microsoft® Windows® 2000 and XP

* Tested at 73 dBA under pink noise, ambient condition
** Test uses BYK Gardner Haze Gard Plus.

See **MicroTouch DST Delivery Specifications** for storage and operating tempertures at varying humitity levels.

RoHS Directive compliant: In accordance with European Directive 2002/95/EC, "RoHS Directive compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M. (9/06)

NOTICE: Given the variety of factors that can affect the use and performance of a 3M Touch Systems Product (the "Product"), including that solid state equipment has operation characteristics different from electro mechanical equipment, some of which factors are uniquely within User's knowledge and control, it is essential that User evaluate the 3M Touch Systems Product and software to determine whether it is suitable for User's particular purpose and suitable for User's method of application. 3M Touch Systems' statements, engineering/technical information, and recommendations are provided for User's convenience, but their accuracy or completeness is not warranted. 3M Touch Systems products and software are not specifically designed for use in medical devices as defined by United States federal law. 3M Touch Systems products and software should not be used in such applications without 3M Touch Systems' express written consent. User should contact its sales representative if User's opportunity involves a medical device application.

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