

MicroTouch™

3M

ClearTek™ Capacitive Touch Screens

CAPACITIVE TOUCH SCREENS



Product Highlights

- Transparent coating significantly increases durability by resisting scratches and abrasions
- Performance unaffected by everyday contaminants in the environment
- Accurate and fast touch response
- Narrow border for easy integration
- Connects to the new EX II electronics platform
- ClearTek capacitive touch screens available in both flat and curved

Extended Durability for High-use Applications

MicroTouch ClearTek capacitive touch screens, manufactured by 3M Touch Systems, are the preferred touch solution for applications that require fast and accurate touch performance. The flat capacitive Profile sensor incorporates advanced construction and production techniques that result in a thin, sleek design which provides easy installation into flat panel displays and flat CRTs. The robust touch characteristics of ClearTek are attributed to its transparent overcoat, which significantly increases the physical durability of the surface by allowing it to resist scratches and abrasions. Popular applications include kiosks, ATM installations, point-of-sale, industrial equipment, gaming machines, and vending.

Making the Difference

ClearTek capacitive touch technology provides accurate and sensitive response to the user's touch while offering outstanding durability. A ClearTek capacitive touch screen provides scratch-resistance and contaminant-resistance to dirt, liquids, and harsh chemicals. A ClearTek sensor with Industrial Etch has been tested in a laboratory environment to withstand over 225 million mechanical touches without noticeable degradation to the surface.*

* Mechanical touch activation in a single x,y location using a finger-like stylus of 45 durometer, shore "A" hardness, 12.7 mm diameter with a load of 200 grams, +/- 4.5 grams.

ClearTek Options for Greater Design Flexibility

ToughTouch – For industrial, unattended, or high-threat environments — such as ATMs, vending machines, and vandal-resistant kiosks — ToughTouch’s durability is an ideal solution. A layer of tempered glass is laminated to a ClearTek capacitive touch screen to provide dramatic impact resistance.

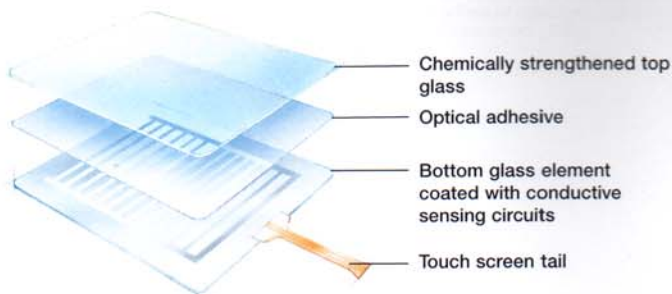
TouchPen – This capacitive digitizing stylus adds tethered-pen input for signature capture (with intelligent palm rejection), annotation, and touch input for gloved hands. It’s an ideal option for dense menus, handwriting recognition, videoconferencing, and more.

PrivacyTouch – Sometimes your users need privacy — especially at public kiosks. With PrivacyTouch, a 3M light control film allows for controlled viewing, so that only the person(s) directly in front of the screen is able to view its contents; observers standing to the side have their line of sight blocked. PrivacyTouch is ideal for confidential viewing of CRTs, ATMs, and anywhere else privacy is desired.

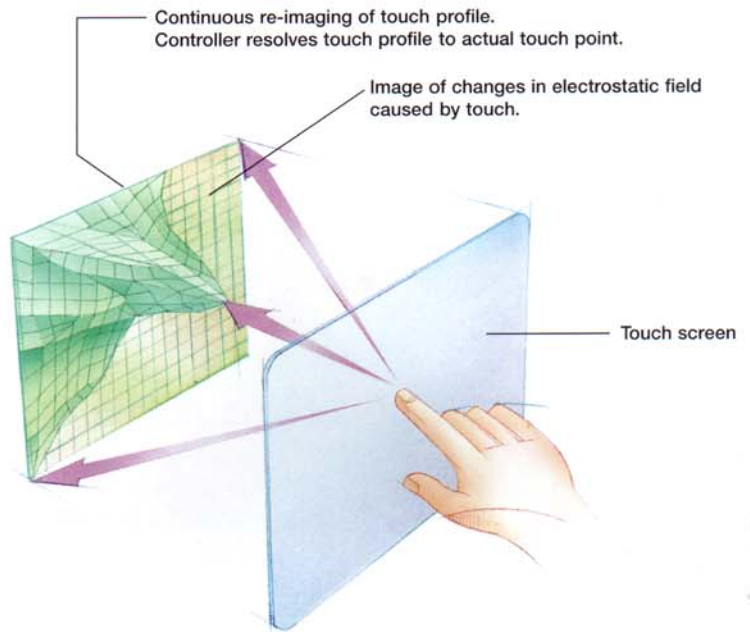
State-of-the-Art Electronics Platform

ClearTek solutions leverage the new, feature-rich EX II electronics platform — a unique, single-chip touch solution with embedded USB support. The EX II chip is a flexible, innovative ASIC chip that increases design versatility while ensuring support for future touch technologies. Take advantage of the EX II chip’s enhanced electronic platform with wider temperature ranges, improved ESD/EMI resistance, 16k x 16k touch resolution, and the ability to field-upgrade your firmware with new touch features.

Near Field Imaging – Layer construction



Near Field Imaging – How it works



Near Field Imaging (NFI)

Projected Capacitive Technology

This patented solution uses sophisticated sensing circuits that detect a conductive object — a finger or conductive stylus — through a layer of glass, gloves, moisture, gels, paints, or other barriers. Sophisticated data acquisition and image processing ensure that NFI is accurate enough to control your applications consistently and precisely, yet sensitive enough to detect gloved-finger touches through moisture or other contaminants.

The touch screen’s all-glass construction provides superior optical performance and continues to operate despite most scratching, pitting, and other surface damage from abrasives, chemicals, or vandals. The result — an exceptionally rugged, sensitive, and accurate touch screen for the most demanding applications.

Near Field Imaging touch screens consist of two laminated glass sheets with a patterned coating of transparent metal oxide between them. An AC signal is applied to the patterned conductive coating, creating an electrostatic field on the surface of the screen. When a finger — gloved or ungloved — or other conductive stylus comes in contact with the touch screen surface, the electrostatic field is disturbed and a touch is registered.



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MICROTOUCH

Capacitive Touch Screens

DURABLE • ACCURATE • RESPONSIVE

3M Touch Systems is a premier supplier of high-endurance, fast, accurate, and responsive capacitive touch screens. With superior materials, integrated electronics, and high-quality manufacturing processes, 3M Touch Systems delivers durability, accuracy, and responsiveness.

Benefits and Differentiators

Durable – Our capacitive touch screens withstand on-screen contaminants — such as grease, dirt, water, running liquid, and harsh chemicals — and can also be NEMA sealed.

Endurance – A ClearTek touch screen has been tested in a laboratory environment to withstand over 225 million mechanical touches without noticeable degradation to the surface.*

Accurate – Accuracy is of the utmost importance — no matter what the application may be. Finger-on-glass operation ensures less chance of false touches from jewelry, clothing, or other contaminants.

Responsive – Our superior touch screens are tough, yet sensitive to the touch, responding to the lightest of touches.

* Mechanical touches tested in a single x/y location using a finger-like stylus of 45 durometer, "A" shore hardness, 0.5" diameter with a load of 0.46 pounds, +/- .01 pounds of force.