

Touch Technology

Touch Technology Brings Interactive Kiosks to Life

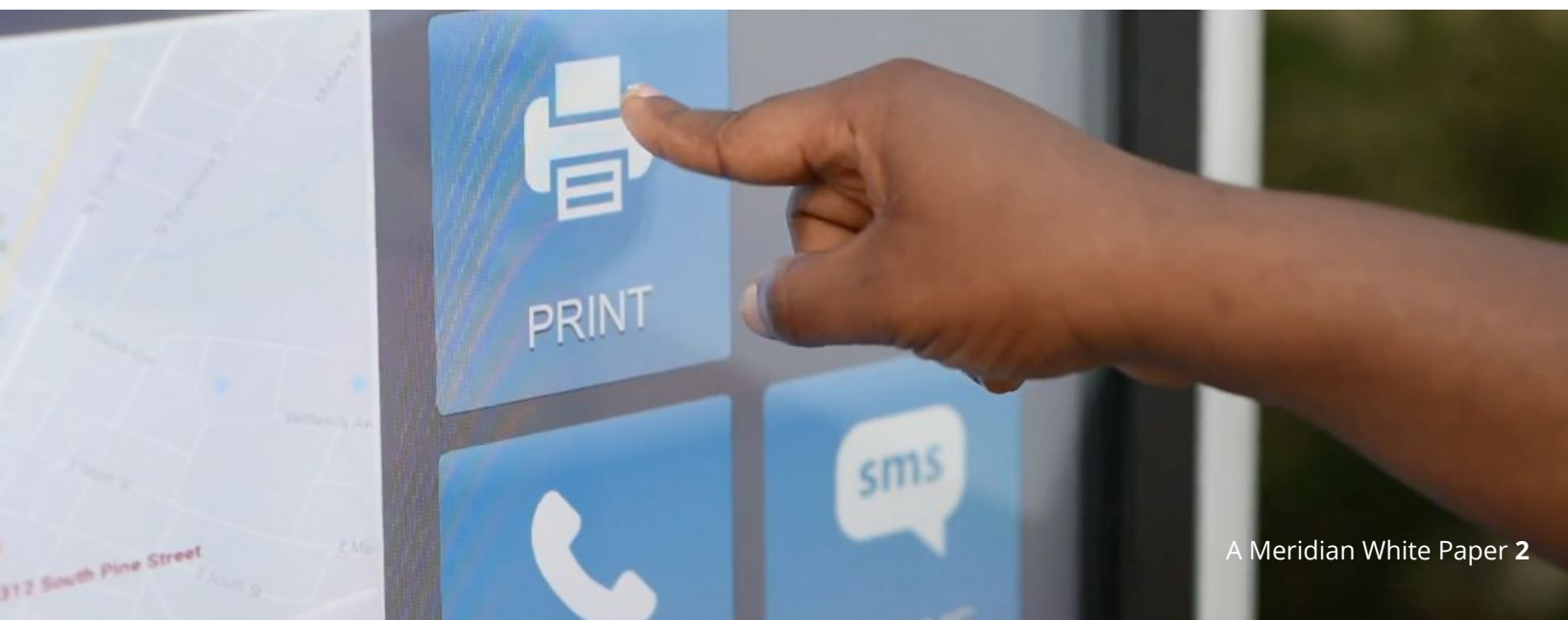


Touch Technology

Touch Technology Brings Interactive Kiosks to Life

From smartphones to tablets, laptops, grocery store checkouts, sign-in kiosks, and more, the modern consumer interacts with touchscreens every day—most of them numerous times per day, on multiple different platforms.

While modern day touch technology is associated with some of the most high-tech and cutting edge innovations, it's roots began just as humbly as those of the internet and other great technological innovations. The growth and transformation of touch technology has been a slow progression, but over time it has continued—and shows no signs of plateauing anytime soon. In fact, the 2019 Kiosk Marketplace Census cited touchscreens as the most promising technology among self-service solution hardware. Here's a look at how touch technology has transformed over the years and how it continues to shape the self-service solutions industry today.



A BRIEF HISTORY

1965

E.A. Johnson invents the first finger-driven capacitive touchscreen tablet. In its initial state, the technology was used for air traffic control and could only recognize one touch at a time.

1970

Dr. G. Samuel Hurst develops the first resistive touchscreen. Hurst's technology responds to pressure, which allows users to touch with either their finger or a stylus.

1982

The University of Toronto introduces the first multi-touch screen tablet with the ability to read multiple points of contact.

1983

HP introduces the first home computer with touchscreen technology.

1990

Touchscreen smartphones and handhelds first make their appearance in the market. Key players include Apple, IBM, and Palm.

2007

Apple introduces the first entirely touch screen modern day smartphone, the iPhone.

Late 2000s

Tech competitors race to introduce the best and most innovative touch screen technology to the market.



KEY TERMS TO KNOW

Touch Screens

Touch screens allow a user to interact with a computer by touching the different areas on a screen.

Multi-Touch Screen

A multi-touch screen allows two or more fingers to be used, and recognized, on the screen at one time. This includes pinching and stretching gestures to control on-screen zooming in and out.

Resistive Touch

Resistive touch screens are made of multiple layers that are separated by thin spaces. When pressure is applied to the surface of the screen, it causes the layers to touch, which tells the device where and what the user is touching.

Capacitive Touch

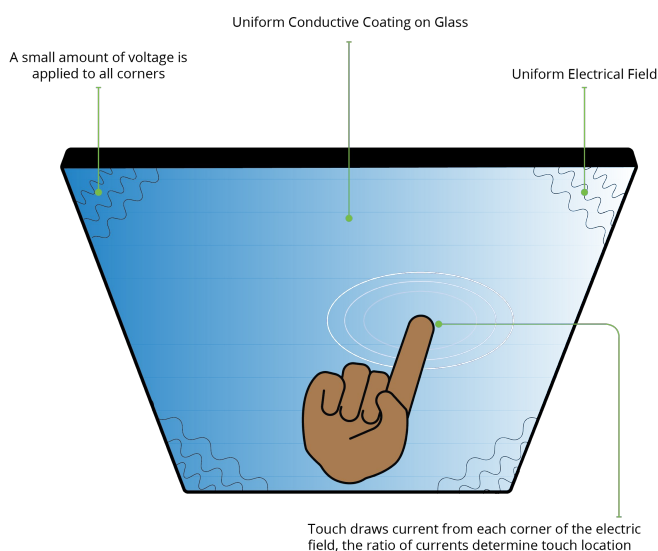
Capacitive touch screens are driven by human touch and are highly sensitive, even to a light touch. The technology creates an electrostatic field where users touch and the screen is signaled by the change in capacitance in that location.

CAPACITIVE TOUCHSCREENS

Designed to accommodate a high volume of kiosk users while still reacting to even the lightest human touch, capacitive touchscreens are the most commonly used type of touchscreen in kiosk applications. While the two different types—surface and projected capacitive—have some notable differences, the technology is similar as they are both powered by the electrical currents from a human finger or electrically-charged stylus to detect where they're touching on the screen.

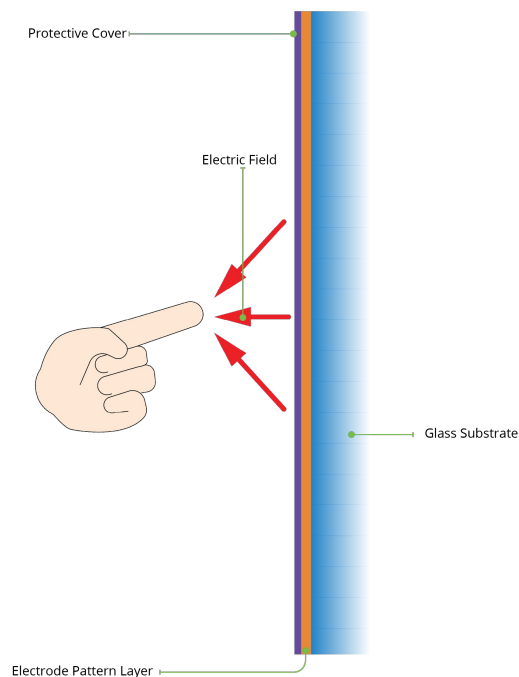
Surface Capacitive

Designed to allow users to interact with the on-screen content with their finger or an electrically-charged stylus, surface capacitive touchscreens have wires with a small voltage attached to each of the four corners. Touch is sensed through the electrical currents from a which allows the sensors to identify where a user is touching. Built to last, surface capacitive touchscreens are highly resistant to surface contaminants like dust, grease, water, and other liquid residue.



Projected Capacitive (PCAP)

While projected and surface capacitive touch both fall into the capacitive touch family, projected capacitive touchscreens have 10-point multi-touch activation which allows for up to 10 fingers to be used on the screen at once. Additionally, projected capacitive touchscreens are able to detect touch through a gloved hand—making them well suited for healthcare applications and other sterile environments where users would likely be gloved. Projected capacitive screens also boast highly durable, scratch-resistant screens with excellent image clarity.



SELF-SERVICE KIOSK APPLICATIONS

Available in multiple sizes, and formats—including indoor, outdoor, and thru-glass— touch technology is flexible enough to suit a variety of self-service kiosk applications.



INDOOR

As the original touch screen application, indoor touch screen kiosk deployments are by far the most common. While indoor touch screen kiosks typically aren't exposed to the elements, users interact with indoor touch screen directly, which means that they must be highly durable.



OUTDOOR

Specifically engineered for use in extreme conditions, including direct sunlight, outdoor touch screens utilize high-bright technology to help users better see what they're interacting with on-screen. Also, as an added layer of durability, outdoor touch screens are often placed behind a layer of glass, allowing the touch interaction to take place via touch film and thru-glass technology.



THRU-GLASS

Designed to be installed behind an exterior window thru-glass solutions offer 24/7 access to interactive content. The digital display communicates with a CPU, which then communicates with a window-mounted touch foil and display monitor, all of which are housed on the interior side of the window, to allow users to interact with on-screen content by touching the glass.

On a scale of 1 to 4, with 4 being the most promising, the 2019 Kiosk Marketplace annual census ranked touch screen technology a 3.8—making it the most promising form among all other kiosk technologies by far.

While a keyboard and mouse or trackball combination are certainly viable options to consider when deciding how users will interact with a new self-service kiosk deployment, a touchscreen interface is typically the obvious answer. Available in a variety of different options, touchscreens are sleek, durable, and easy to use. After all, the act of reaching out to touch and interact with a screen for both navigational and data entry purposes comes naturally to most kiosk users as most are accustomed to doing just that when they use their smartphone or tablet every day.

There's no denying the massive transformation that touchscreens have endured over the past 50 years, however, as is the case with most technology, new developments and innovations are constantly in the works to allow for continuous improvements for those used in self-service kiosk applications and beyond.



Corporate Headquarters

312 S Pine Street
Aberdeen, NC 28315
+1 866 454 6757
sales@meridiankiosks.com

meridiankiosks.com

