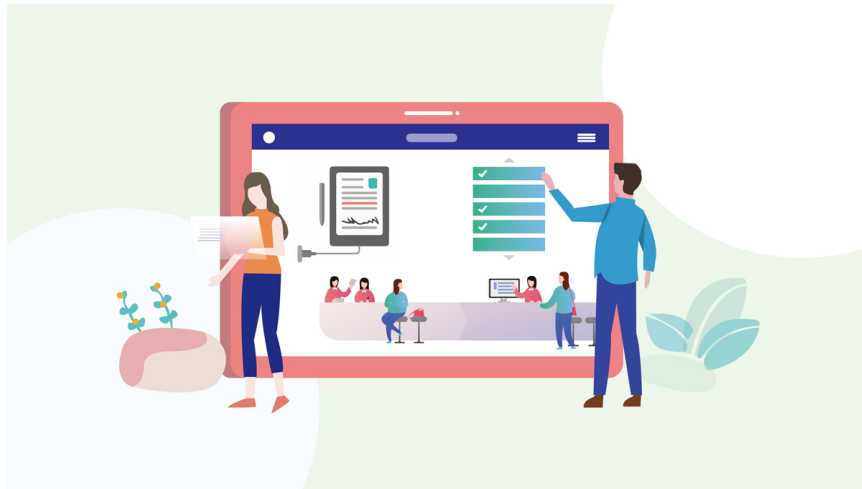


# 4 TOUCH PANEL TYPES - EXPLAINED



Gouldian Finch | February 18, 2019

Business



Did you know that touch panel technology was invented in the 60s?

That's right. Long before your precious smartphone entered in the late 00s, touch panels had already been an established technology for nearly 4 decades.

Despite the panels' simplicity of use, the underlying technology is more complex than it appears, with 4 different touch panel types in existence.

Before we get that, let's back up.

It's quite possible that you're not clear on exactly what a touch panel is, what the touch panel types are, or how

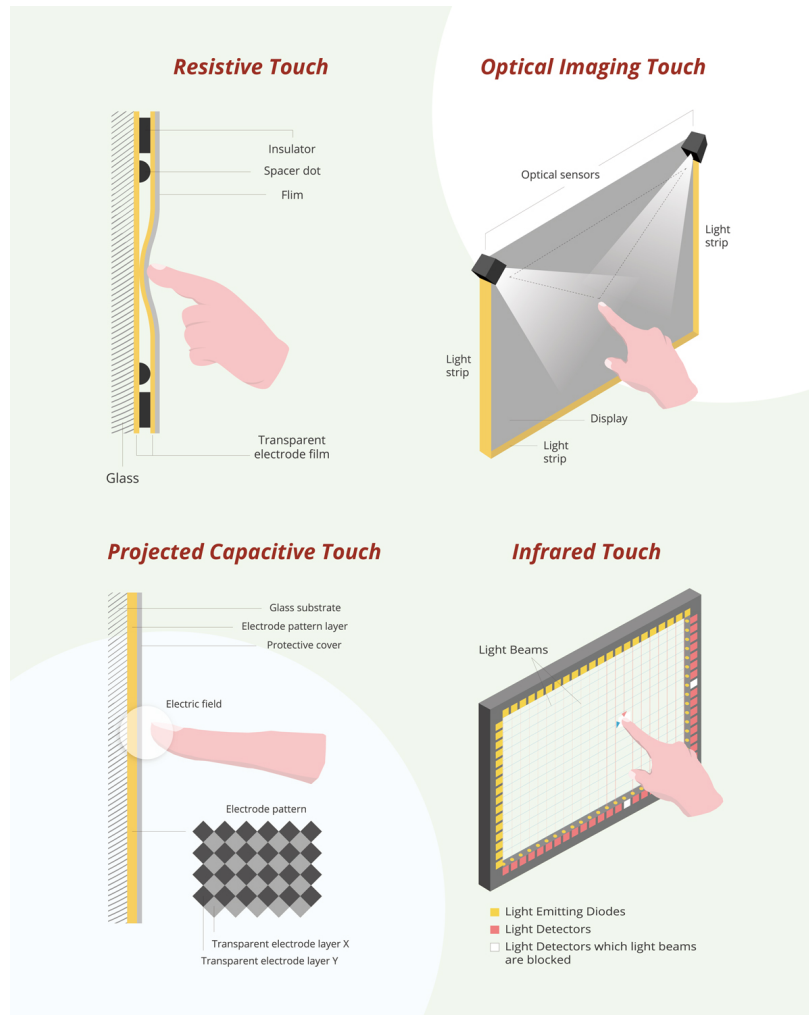
they're applied in your daily life, beyond that of your smartphone. For that and more, we're here to help.

# What are touch panels?

Quite simply, touch panels, which are also known as touchscreens or touch monitors, are tools that allow people to operate computers through direct touch. More specifically, via the use of internal sensors, a user's touch is detected, then translated, into an instructional command that parlays into visible function.

## The different touch panel types

Delving deeper into the technical side of things, touch panels are not as cut-and-dry as they may seem. In fact, the way they sense and react to touch can widely differ based on their inherent designs. As such, there are 4 touch panel types in regular use - Resistive, Optical Imaging, Projected Capacitive, and Infrared. Below, we'll dig into their specifics, which include their advantages, disadvantages, and real-life product applications.



## 1. Resistive Touch

Those suffering from haphophobia might be able to identify with this one. Resistive touch panels are cost-effective variants that detect commands by way of pressure placed on the screen. This pressure sensitivity is generally limited to single-point touch, with a 20-inch maximum screen, which is fine for many usage tools. These range from styluses to fingertips. As a result, if used correctly, resistive touch panels will remain functional even if a water drop has landed on the screen.

As a result of this versatility, however, many will find that resistive touch panels are less durable than their competitors. Moreover, with its reliance on single-point touch, this touch panel type is not actually capable of multi-touch functionality. Regardless, resistive touch panels are

often found in grocery stores, where stylus-based signatures are typically required after credit card purchases.

## **2. Infrared Touch**

Some like it hot and some don't. Infrared touch panels definitely fall into the latter category. By setting up a grid of infrared beams across the panel, which may be up to 150-inches, touch is detected by way of this panel's disruption.

Although infrared touch panels are durable and support multi-touch functionality, it does possess one potential drawback. Depending on where you sit, literally, you may find that this is not much of an issue, however.

Despite infrared implying heat, infrared touch panels actually perform rather poorly in it, particularly in direct sunlight. In those circumstances, the infrared light beams can be disrupted by the sun's rays, as opposed to your fingers. As such, be sure to place your infrared touch panel device in an appropriately dark location.

## **3. Optical Imaging Touch**

Light, and the disruption thereof, is not just a great way to produce a shadow, but also to design a touch panel type. To take advantage of this principle, optical imaging touch panels are designed to sense touch through infrared cameras and the disruption of light strips. This can be achieved through any input you want, across its 100-inch maximum size, from gloves to bare hands, and beyond.

All in all, optical imaging touch panels are just about the most versatile option the touch-based world can offer. From durability to multi-touch, and universal input prospects, the possibilities may truly be endless. Although its only disadvantage may be its non-compact design, common applications of optical imaging touch panels include certain varieties of interactive whiteboards.

## **4. Projected Capacitive Touch**

If you identify with the phrase, “go with what you know”, then projected capacitive touch panels are the touch panel type for you. For now, you can guess where you know it from.

By way of their electrical-based touch detection, Projected Capacitive touch panels are known for their high precision and high-speed response times. What’s more is that they possess multi-touch functionality and can be used within small, compact, yet expensive, devices. Due to their underlying technology, it has proven challenging to scale up to larger sizes. Figured it out yet?

Assuming you haven’t, or would like to enjoy the gratified feeling associated with being right, allow us to reveal where you interact with projected capacitive touch panels on a daily basis - Smart Phones! What’s more is that they’re not alone, with tablet computers and GPS devices also utilizing projected capacitive touch screens.

## Touch Panel Types in the Professional World

It would be a mistake to assume that the applications of all these touch panel types are limited to that of consumer-level devices, or even those that have been previously mentioned. Really, these touch panel types can be found throughout everyday life and in a variety of industries.

What’s more is that in many of these industries, these touch panel types are used less to market products to consumers, and more to sell solutions to businesses. Whether it be in regards to finance, manufacturing, [retail](#), medicine, or education, there is always a need for touch-based solutions. In conjunction with the so-called ‘internet-of-things’, these

touch-based solutions play a key role in practices related to [industry 4.0](#).

In practice, these solutions largely offer a form of personnel management. In hospitals, stores, or banks, for instance, these touch panel types can be used to answer basic questions, provide product information, or offer directions, based on the user's needs. When it comes to manufacturing, on the other hand, these solutions enable employee management in the possible form of workplace allocation or attendance tracking.



At the end of the day, touch panels are here to stay. In the four decades since their inception, the level of adoption this technology has experienced is remarkable. Although you may not have been clear on the specific details of each touch panel type, we hope that you are now. This knowledge will absolutely serve you well, particularly if you're interested in [ViewSonic's selection](#) of touch-based solutions.

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