CUBBISON HSS™ INTELLIGENT TOUCH SENSING by AISentis®

CUBBISON

ABOUT CUBBISON

Cubbison is a manufacturer of industrial and commercial product identification products and flexible electronic devices. We serve a diverse group of commercial and industrial customers and end-markets across the Americas, Europe and Asia. Our flexible and printed electronic products and rigid, flexible product identification products are engineered to order and customized to meet precise requirements. For over 60 years, world class manufacturing companies have trusted us for our high quality standards, reliable delivery, and superior product knowledge. Learn more at www.cubbison.com.

HSS™ INTELLIGENT TOUCH SENSING by AISentis®

ABOUT HSS

Heuristic Signature Sensing better known as HSS™ Touch Recognition Technology uses touch signatures, instead of predetermined capacitive set-points, to sense exactly when a touch happens. This patented (and patents pending) approach to sensing touch overcomes variance like no other electric field touch technology.

Cubbison HSS by AISentis is a signature-based Touch Recognition Technology that eliminates false or unreliable actuations due to variance. The technology helps deliver engineered, reliable HMI solutions that allow for more reliability in even the most challenging environments.

Rather than using predetermined capacitive set-points, Cubbison HSS uses Touch Recognition Technology to sense exactly when a surface touch occurs. Removing the set-points opens the door for a more consistent user experience by eliminating the issues of variance and other elements that result in capacitive system failure.

WHAT IS VARIANCE?

Capacitive variance. It's what causes seemingly endless frustration among design engineers. While a prototype may function properly in the lab, real world elements can lead to accidental actuations or prevent a touch event from triggering.

It seems that just about anything can cause variance, from rain water activating a car door's keyless entry system, to a work glove making it nearly impossible to use a touchpad. For manufacturers, these issues can lead to a halt in production, time-consuming redesigns, and even costly recalls.

WHAT DOES CUBBISON HSS MEAN FOR YOUR DESIGNS?

Instead of relying on predetermined capacitive thresholds, Cubbison HSS recognizes adjustable touch signatures and omits anything that doesn't match. That allows touch systems to account for any type of variance and sense true touch events every time.

THIS PROVIDES A NUMBER OF DESIGN BENEFITS, INCLUDING:

- Full functionality when sprayed with water without allowing false triggers
- No loss of functionality or false triggers while wearing gloves
- Noise-tolerant; system passes 10V of injected line noise
- Exact touch functionality even when protected by glass or plastic
- Allows for multiple touch signatures to account for different inputs
- Touch feel is not affected by temperature change
- Capable of low-power operation without performance loss
- Doesn't require constant base-lining and counter-measuring

It also enables new construction methods and customized user experiences for improved human machine interface (HMI).

Conventional electronic assemblies, like circuit boards, require touch surfaces to be flat, hard, and transparent, which limits design possibilities. Cubbison is exploring a future development for its HSS technology that uses a flex circuit and In-Mold Electronic (IME) technology, which can be manipulated to meet the contours of a device's shape. This would give designers complete creative freedom with the perfect union of form and function, enhancing simplicity, performance, and aesthetics.

COMMON TYPES OF VARIANCE INCLUDE:

WATER
Water sprays and splashes, including rain, have been an issue for capacitive systems because they can create false actuations.

GLOVES
While some gloves are specially made to trigger a touch, work gloves usually require additional calibration of the device for consistent operation.

NOISE
Any type of interference, such as radio frequency or injected line noise can drastically alter capacitance, creating false triggers.

HUMIDITY AND TEMPERATURE CHANGES
Humidity and temperature changes can alter the capacitance of a system during the manufacturing process from part to part and degrade while in the field.

CLEANSERS
Fluids like glass cleaner are ionized. A splash can either cause a false trigger, or leave behind a film that limits or prevents positive triggers.

CUBBISON HSS™ INTELLIGENT TOUCH SENSING by AISentis®

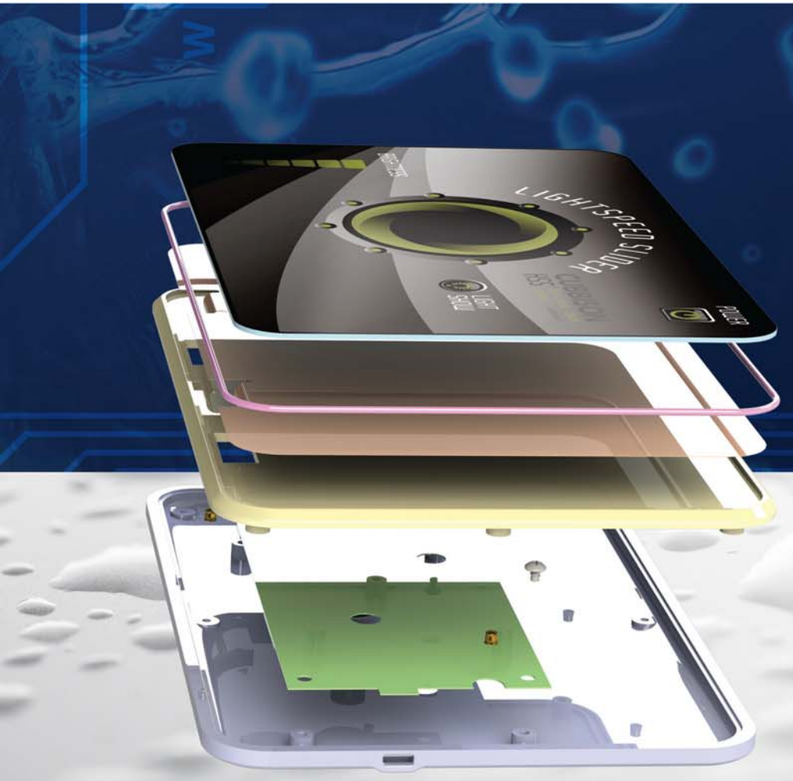
Cubbison HSS by AISentis alleviates variance issues with its innovative Touch Recognition Technology.

WHAT DOES CUBBISON HSS MEAN FOR THE END USER?

The same design that allows Cubbison HSS to ignore variance also allows it to overcome changes in tolerance and ignore manufacturing variance. To the manufacturers, this makes for a more reliable product, even if components are slightly off from part to part or batch to batch.

End users benefit from higher yields and reduced downtime because they don't have to worry about in-field equipment failures due to the Cubbison HSS touchpad. Workers can expect reliable and consistent touch feel and actuation:

- Regardless of harsh environments with extreme temperatures and humidity
- Whether or not they are wearing gloves
- If the equipment is exposed to excessive water, dirt or other substances
- Without constant base-lining or applying counter-measures



Cubbison HSS touch panels also last longer than the competition. With no mechanical or moving parts, our technology isn't prone to the same issues that other solutions develop. This leads to downtime as the end-user waits for the equipment to be repaired or replaced.

WHAT DOES CUBBISON HSS MEAN FOR YOUR BUSINESS?

Cubbison HSS technology is very customizable and quickly implemented into most designs and with most materials, including fabric. With no base-lining or counter-measures to worry about, programming the system takes less time. This helps to offer a cost model that is comparable to or better than traditional capacitive systems with membrane switches.

This makes Cubbison HSS an ideal solution for just about any application in any industry that requires reliable, consistent touch responsiveness. Whether your customers work in the coldest parts of the north to the most humid parts of the south, on land or on water, indoors or in the elements, Cubbison HSS technology is ideal for just about any industry, including (but not limited to):

Cubbison HSS Diagnostic Mode alerts manufacturers to any potential inconsistencies that could hinder a touch system's performance. In Diagnostic Mode, the chipset provides a Design Variance Index for multiple touch system configurations that can be used during end-of-the-line testing to ensure the product was made with the right tolerances. This helps to eliminate end-of-the-line repairs, getting your solutions out the door faster and into your customers' hands.

CUBBISON

PRINTED ELECTRONICS
PRODUCT IDENTIFICATION

FOR PRODUCT SAMPLES OR TO REQUEST A QUOTE

Visit us at CUBBISON.COM | salesengineer@cubbison.com

ISO 9001:2015 Certified

CUBBISON HSS™

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