Compared to Resistive and Capacitive technologies, SAW technology provides superior image clarity, resolution, and higher light transmission. The panel is composed of durable glass and this augments the durability and clarity of the technology. SAW technology uses ultrasonic waves that pass over the surface of touchscreen panel. When the panel is touched, a portion of the wave is absorbed. This change in the ultrasonic waves registers the position of the touch event and sends this information to the controller for processing.

In a controlled environment, SAW offers a very attractive, simple to implement, and cost effective solution.

Surface Acoustic Wave technology is recommended for any indoor or controlled environment such as ATMs, public information or ticketing kiosks, banking and financial applications, gaming machines, computer based training, or other high-traffic indoor environments.

There are factors to take into consideration when considering Surface Acoustic Wave technology. The touch screen must be touched by finger, gloved hand, or soft-tip stylus (something with a hard surface such as pen will not work). Another factor to keep in mind is the touchscreen is not completely sealable, therefore it can be affected by large amounts of dirt, dust, and/or water in the environment.
Controller Specifications

Each SAW kit includes a sensor and a matching combination controller board for use with either a RS232 or USB cable. This controller board provides the optimal performance for your sensor. It offers superior touch sensitivity, accuracy, and user-friendly operation. A D Metro surface acoustic wave touchscreens are best used with the inbox plug and play driver for Windows 7 or 8. For other OS, the use of Touch Kit software utilities and driver are recommended to maximize the potential of the sensor’s capability. The software allows you to perform a calibration, test your touch device’s functionality in Draw Test, modify options for edge compensation, and more.

Sensor Technical Specifications

Mechanical Specifications

Construction...........................................................................5.7” to 24”
Substrate..............................................................................3.0mm or 6.0mm
Input method............................................................................Finger, stylus, light glove
Activation force........................................................................Typically less than 80g
Surface hardness (glass)......................................................> 6 Mohs
Sensor lifespan......................................................................>50 million touches
Fire/burn resistance.........................................................Open flame, sparks, cigarette burns
Chemical resistance.............................................................Any that do not attack glass

Industrial chemicals: acetone, methylene chloride, methyl ethyl ketone, isopropyl alcohol, hexane, turpentine, gasoline, diesel fuel, motor oil, transmission fluid, antifreeze, etc.

Food service chemicals: ammonia based glass cleaner, cleaners (Fantastic, Formula 409, etc.), coffee, grease, salt, etc.

Environmental Specifications

Operating temperature.........................................................-20°C to +50°C
Storage temperature.........................................................-40°C to +70°C
Relative humidity...............................................................90% at 40°C, 120hrs

Electrical Specifications

Linearity .............................................................................within ±1% on most displays
Touchpoint Density................................................................Nominal configuration is 5000 points/cm² with controller in 4096 x 4096 mode.
Can support 15,500 points/cm² with controller in 2048 x 2048 mode.
Operating voltage.............................................................4.75V – 5.25V DC
Electrostatic protection (air)................................................15kV discharges
Electrostatic protection (contact)........................................8kV discharges

Disclaimer: Technical specifications are provided for guidance and subject to change without notice. Specifications and performance may depend on sensor dimensions, selected options, installation and mounting. Please contact A D Metro for confirmation of the applicable specifications, individual sensor drawings, as well as installation and mounting best practices.

ABOUT US:
Established in 1988, A D Metro designs, manufactures and supplies innovative touch screen technology solutions for original equipment manufacturers (OEMs), system integrators and value added resellers. Everyday A D Metro’s products are touched by millions of people around the world. Our ULTRA product line is the most durable resistive touch screen sensor available on the market and our projected capacitive (PCAP) touch screen solutions simplify design and accelerate time to market.

Contact us, for more information on our innovative touch screen products, enhancements and custom manufacturing solutions.

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