OnGlass Controls

Products & Solutions

OnGlass Controls enable a true tactile user interface to enhance the functionality and experience of touch screens and glass surfaces. Touch screen systems lack the tangible buttons, encoders, and sliders needed for many applications. OnGlass Controls applied to a touch surface provides real tactile feedback and precise "blind touch" operation to interact without looking at the controls. OnGlass Controls enable novel solutions in terms of dynamic button legends and reconfigurable interface layouts. and are **impervious to liquids, debris, and cleaning**.

Using the touch sensor as the electrical switch architecture, passive OnGlass Controls require **no electronics, no batteries, and no expensive milled holes in the glass**. Traditional button backlighting can be enhanced using the display's capabilities, which is protected under a layer of sealed glass that makes the HMX solution robust to environmental factors and harsh environments. OnGlass Controls can be permanently adhered or free-floating to enable limitless flexibility.

Contact AIS today to learn how our expertise and experience can unleash the potential of your product's **H**uman **M**achine e**X**perience (HMX).

Technology Description

OnGlass Control specifications vary based on touch sensor and controller capabilities. Typical system variables include touch sensor pitch design and controller algorithms. The OnGlass Control size, shape, and proximity to each other must all be considered during system architecture. OnGlass Controls provide a completely new suite of input methods for interaction designers to enrich the touchscreen application user experience.

Product Definition

Rotary Encoder & Dial: OnGlass Rotary Encoders enable tangible encoders to be used to support precise input control on a surface without the need for holes in glass.

Tactile Push Button: OnGlass Push Buttons provide the physical sensation of using a real button on a touch screen, while enabling the flexibility and limitless configuration options of dynamic graphics behind your button.

Slider & Linear Encoder: OnGlass Sliders employ a linear motion travel to yield a correlating signal change. Mechanical Sliders (Slide Potentiometers) are notoriously difficult to seal and clean, but capacitive sensing sliders can address these challenges and provide precise input control with zero failures due to ingress.

Joystick: OnGlass Joysticks provide the multi-axis precision control needed for certain applications. Ergonomics and industrial design contribute to the overall solution based on the user experience goals.

Applications

- Medical Control Panels
- Industrial User Interfaces
- Blind Touch Operation
- Harsh Environments
- Infection Control Products
- High Density Interfaces
- Theatre Controls
- Broadcast Production

Features and Benefits

- No Holes or Milled Glass
- Blind Touch Operation to Interact without Looking at the Controls
- Flexible Layouts
- Enhanced Touch Screen Experience
- Permanent or Free-Floating Controls
- Backlight displays Enable Limitless Options for Dynamic buttons
- Cleanable & Removable
- Chemical Resistance
- Precision Input

SPECIFICATIONS

		Standard (AIS touch controller w/ 5mm pitch touch sensor)	Advanced (AIS touch controller w/ 2mm pitch touch sensor)[1]
Encoder/Dial (polar axis motion)	Size	30-60mm diameter typ	30-60mm diameter typ
	Resolution	15° @ 35mm	5° @ 35mm
	Spacing	design dependent[3]	design dependent[3]
	Quantity	1 – 4 simultaneous	1 – 4 simultaneous
Tactile Push Button (discrete input)	Size	10-60mm typ	<10mm minimum[1]
	Spacing	design dependent[3]	design dependent[3]
	Quantity	10 multi-touch typ	multi-touch dependent[1]
Sliders & Linear Encoders (single-axis motion)	Size	10mm minimum	<10mm minimum[1]
	Resolution	screen size dependent[2]	screen size dependent[2]
	Spacing	20mm min (i.e.1x8 matrix)[3]	<20mm minimum[3]
	Quantity	10 multi-touch typ	multi-touch dependent[1]
Joystick (multi-axis motion)	Size	10mm minimum	<10mm minimum[1]
	Resolution	screen size dependent[2]	screen size dependent[2]
	Spacing	design dependent[3]	design dependent[3]
	Quantity	10 multi-touch typ	multi-touch dependent[1]

1. Contact AIS for support per your product/market needs
2. Resolution is dependent on system architecture. For example, at 12-bit (4096) touch sensor digitization, a 7” screen of fixed x-y aspect ratio would equal 1205 x 910 cnts/inch, whereas a 12” screen would equal 561 x 423 cnts/inch.
3. The physical spacing between OnGlass Controls is dependent on system architecture and physical size of the Control itself.

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