

Tanvas[®]

AUTOMOTIVE SOLUTIONS

Fully Programmable Haptics for Automotive Touchscreens and Surfaces

Surface haptic technology offers the automotive industry a unique opportunity to embrace a touch-based HMI, to create compelling new experiences, and to help minimize driver distraction by reinforcing the safe practice of keeping one's eyes on the road. With the swipe of a finger, TanvasTouch[®] technology allows drivers and passengers to feel on-screen textures, the edges of buttons, clicks, and contours.

> Comprehensive Automotive Solution

TanvasTouch for Automotive is a comprehensive solution that includes a touch panel design guide, controller board, firmware and software, as well as developer tools, training and support. Getting started is easy and the possibilities for creative design are endless.

> Safety Reinforced

Surface haptics uniquely support the driver's ability to find controls by touch, and to make graded adjustments (e.g., turn a knob while feeling clicks). Research performed in a full vehicle driving simulator demonstrated 20 to 30% improvements in eyes-on road time with the addition of surface haptics.

> Software-Defined Haptics

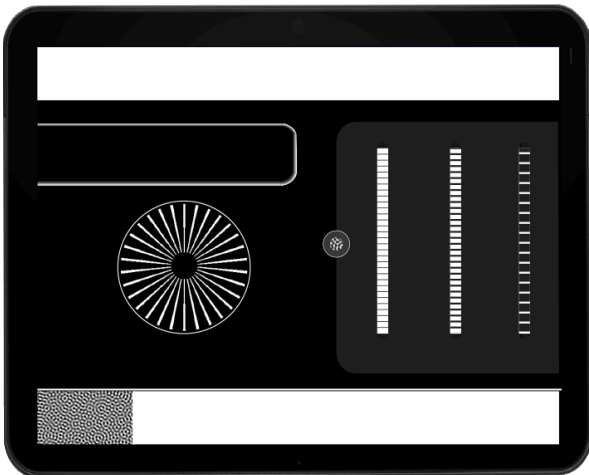
With TanvasTouch[®], haptics are infinitely programmable, limited only by the imagination. The TanvasTouch SDK provides everything developers need to build their vision. Haptics are designed using a simple image-based metaphor and integrated using intuitive APIs, then rendered in real time by the TanvasTouch Engine.



Contact Tanvas at info@tanvas.co for more information about our Automotive solutions and how TanvasTouch technology can differentiate your brand. Ask about purchasing a dev kit, pre-production or production license.



GRAPHIC



HAPTICS

Unique Benefits of Software-Defined Haptics

Programming Haptics is as simple – and versatile – as creating an image

- Haptic experience independent of form factor (e.g. same on CID, steering wheel, door, rear seat entertainment, etc.)
- Fully functional integrated multi touch and haptics controller
- Solid state technology enabling easy integration on small and large screens
- Haptic harmony; haptics feels the same on any touch surface
- Low latency (< 2msec touch to haptics)
- 10 finger multitouch
- Software-defined multi-zone haptics
- Consumer customization
- Differentiated user experience
- Ongoing software updates



No Moving Parts

TanvasTouch uses electroadhesion where an electric field modulates the friction between the fingertip and the touch surface. This solid state solution is ideal for automobiles.



Silent, Localized Operation

Surface haptics produce no global vibrations, are felt only at the target fingertip and can be designed to be silent. Haptics may be “zoned” so fingers in different areas can feel different effects.



Transparent, Opaque, Flat or Curved Operation

TanvasTouch is deployable on surfaces of any shape. Suitable substrates include glass, plastic, ceramics, metals and natural surfaces. It is only necessary to produce patterned electrodes on the surface, and insulate those electrodes with an automotive-quality hard coat.