

ultrahaptics 

TOUCH THE FUTURE OF 4D

Making magic real with mid-air haptics



The power of touch

Immersive storytelling experiences are the business of location-based entertainment (LBE). The richer the world of a story, the more visitors feel they are a part of it and identify themselves within it. Experiences are more memorable and emotional connections are more profound.

In the real world, touch is one of the most important ways we have of intuitively connecting with our surroundings. Touch provides us with a continual rich stream of information that also has deep and intimate connections with emotional experience.

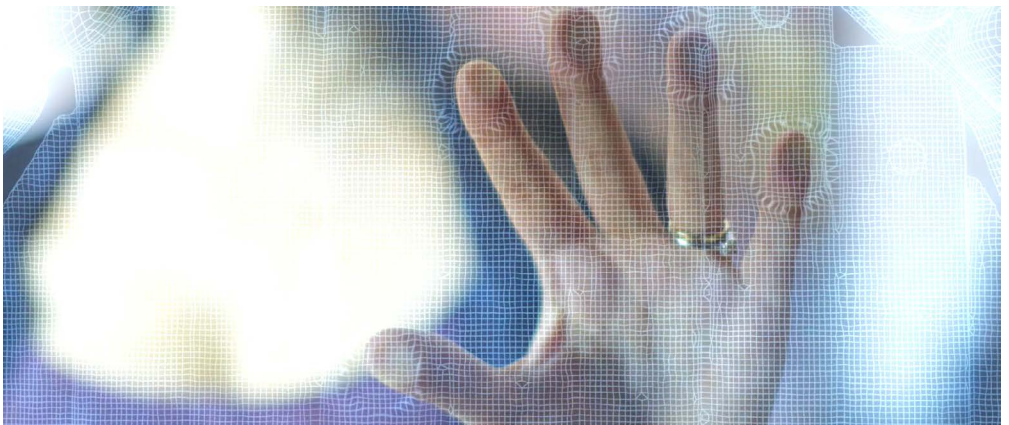
Adding innovative haptic technology into LBE experiences enriches the world of a story, both physically and mentally. The results are stronger and more memorable connections between visitors and storytelling experiences.

Mid-air haptics: a unique and magical technology

Ultrahaptics' immersive and innovative haptic technology uses ultrasound to create a wide variety of tactile effects in mid-air that can be felt, but not seen. Enabling a contactless and hygienic user experience that is truly irresistible. No hand-held devices, no gloves, and no wearables are needed.

Visitors can feel a growing list of mid-air haptic effects including:

- Immersive sensations such as feeling and exploring 3D virtual objects, surfaces, shapes, and textures
- Magical sensations such as lightning, fireballs, ghosts, clouds, bubbles, and force fields
- Classic interface controls such as buttons and sliders, as well as haptic pulses and alerts



Mid-air haptics applications and benefits

Themed environments, exhibits, and events

Amplify themes with unique and irresistible haptic feedback and tactile sensations to captivate visitors.

- Excite with touchable 3D holograms, images, animated characters, and interactions
- Surprise with spooky effects such as brushing up against the hand of a ghost and coming in contact with otherworldly energy in dark or dimly-lit settings
- Reduce perceived waiting time with haptified interactive queueing experiences and mini-games
- Delight with intuitive wayfinding and information displays featuring contactless mid-air haptic feedback
- Minimize downtime and stay novel with software-controlled haptic modules that are dynamically reconfigurable

"Critical Mass"

10'x10'/100 sq. ft, multi-user, co-operative VR experience featuring two software-controlled haptic modules.

Each module configured to deliver the haptic sensations of biometric hand scanning, and classic interface controls such as buttons, sliders, and trackballs.

Setup is ideal for applications such as head-to-head VR arcade gaming, interactive exhibits, and themed events.

Location-based AR/VR/XR experiences

Increase immersiveness, prolong novelty, and simplify setup to encourage new and repeat visits. From single-user/pod-based to multi-user/free-roaming.

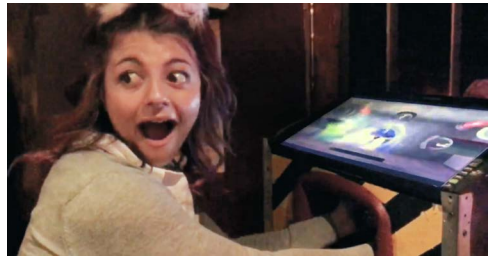
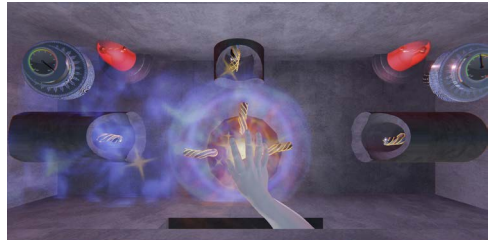
- Amaze by allowing users to touch and feel objects such waterfalls, plants, and mystical creatures in the virtual surroundings, individually or as a group
- Wow with magical sensations such as tingling electricity and swirling wind that cannot be produced otherwise
- Enhance replay value leveraging easily and dynamically reconfigurable haptic modules, all controlled by software
- Reduce time users spend donning gear and increase throughput, no wearables needed



Dark rides and 4D theatres

Bring storytelling and magic to seated experiences with enthralling sensations and feedback to promote visitor satisfaction and advocacy.

- Spice up on-ride experiences by allowing visitors to feel actions such as throwing fireballs, shooting lightning bolts, and casting magic spells with their hands
- Boost social engagements by enabling visitors to collectively experience events and interact with objects in the surroundings using haptic modules installed in the consoles or the seat backs in front of them
- Remove infrastructure reinvestment using software-controlled haptic modules that can be simply reprogrammed to deliver new sensations and feedback at any point in time



"Energy Chamber"

Single-user, walk-up interactive experience from Magic Castle's "Invasion" Halloween Week featuring one software-controlled haptic module.

Configured to deliver the sensation of invisible radioactive energy which the user collects with his/her hand.

Setup is ideal for queue line experiences, special attractions for seasonal celebrations such as Halloween, and standalone promotional kiosks.



"Crystal Cave"

10'x20'/200 sq. ft, multi-user, walkabout VR experience featuring eight software-controlled haptic modules. Each module configured either to work independently or in conjunction with other modules to deliver haptic sensations associated with touching objects such as waterfall, fire, and wind.

All based on context and users' progress in the experience. Setup is ideal for applications such as LBE AR/VR/XR experiences and themed environments, exhibits, and events.

About the STRATOS™ mid-air haptics platform

Latest-generation platform offering straightforward production-ready integration and low host processor load. STRATOS™ can accommodate expansion, split or larger arrays and multiple types of transducers, operating systems and tracking cameras. Control protocol options include DMX, ethernet, and USB.

STRATOS™ Inspire haptic module

- Suitable for public installations
- Bolt-on haptic module
- Rugged, splash-proof enclosure
- Safety and electrical certification (CE, FCC, NRTL, PSE)
- Installed using off-the-shelf VESA mounts
- Advanced demos included



STRATOS™ Explore development kit

- Flexible and scalable development kit
- Advanced demos included



Software tools available

- Ultrahaptics Core Asset (UCA) for Unity® (currently in beta release)
- Sensation Editor: easy-to-use interface enabling quick and easy development of mid-air haptic sensations
- Sensation Core Library: library of haptic sensation templates that can be picked up or adapted



Working with Ultrahaptics

STRATOS™ Inspire and STRATOS™ Explore are available from our distributor:

Distributor (worldwide): ARROW | www.arrow.com

Distributor (Japan): CORNES | ctl-comm@cornes.jp

To access the full range of Ultrahaptics' expertise in haptic development, join our Acceleration, Evaluation or Agency Programs. These include hardware, software, and in-depth support tailored to your business needs. They are designed to accelerate prototyping and reduce time to market.

Please contact Ultrahaptics for more information about pricing and options available for customized development of sensations and experiences, public exhibition and demonstration, and commercial use.

<https://www.ultrahaptics.com> | info@ultrahaptics.com

UK: +44 117 3259002 | US: +1 650 600 9916

