

Flexible, scalable mid-air haptics development kit

Built for research and development, the STRATOS Explore development kit is ideal for exploring how mid-air haptics can enhance innovative products and experiences. Particularly suitable for automotive, appliances/smart home, kiosks, gaming and computing applications.

STRATOS Explore tracks users' hands using the world-leading Leap Motion Controller, and projects tactile effects onto them using ultrasound.

The simplest type of effect is a single pressure point measuring as little as 8.6mm in diameter. With a 40kHz refresh rate, pressure points are then moved very rapidly in 3D space to create a variety of tactile effects in mid-air including:

- Virtual buttons and sliders, as well as haptic pulses and alerts
- Immersive sensations such as textures, and presence for virtual objects, surfaces and shapes
- Magical sensations such as lightning, fireballs, ghosts, clouds, bubbles and force fields



Real-world benefits

Adding mid-air haptics offers clear, real-world advantages across a range of sectors, including:

- Marketing/Advertising: 4.8x average increase in advertisement recall of digital signage when hand tracking and mid-air haptic effects were added.
- **Automotive:** >25% reduction in "eyes off the road" time for gesture control + mid-air haptics infotainment controls, compared to a touchscreen
- VR: 90% of VR arcade guests would replay an experience with hand tracking and mid-air haptics.¹

Development tools for different workflows

- Software development kit for C# and C++
- Unity® plugin
- Plug-and-play demos, including UI controls demos, interactive marketing posters and VR magic spells demo
- Sensation Editor: tool enabling visualisation of haptic sensations



Specifications

| | Length | Width | Depth | Weight |
|----------|--------|--------|-------|-----------|
| Metric | 242 mm | 207 mm | 34 mm | 0.7 kg |
| Imperial | 9.5" | 8.1" | 1.3" | 1 lb 8 oz |

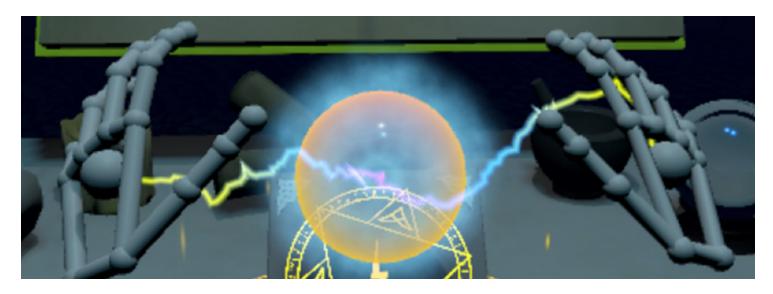
| imperial 9.5 | 6.1 | | | |
|----------------------------------|--|--|--|--|
| Product category: | Evaluation kits | | | |
| Description: | STRATOS Explore development kit | | | |
| Power supply: | 24V DC +/- 10%, 3.75A max. | | | |
| Data connection: | USB Type C connector | | | |
| Cover materials: | 5 frame-mounted cover materials included (2 metal, 3 acoustic fabric) | | | |
| Haptic interaction zone: | For 16x16 transducer array approx. 50-700mm maximum, 50-630mm preferred | | | |
| Hand positioning device: | Leap Motion® camera module. | | | |
| Ultrasound transducers: | 256 | | | |
| Construction: | 16x16 transducer array (Murata transducers), control board and frame structure | | | |
| Ambient operating temperature: | 0°C to +40°C / 32°F to 104°F | | | |
| Software | Software development kit for C# and C++, Unity® plugin | | | |
| Compatible operating systems: | Microsoft Windows (7, 8, 8.1 and 10), Apple MacOS (10.13 onwards), Ubuntu Linux 16.04 LTS. NOTE: Most mid-air haptics demos support only Microsoft Windows. Please check with Ultraleap if unsure. | | | |
| Minimum system requirements: | Intel Core i3; AMD Phenom II with 2GB RAM and USB 2.0 port | | | |
| Recommended system requirements: | Intel Core i5/i7 or AMD Ryzen with 4GB RAM, USB 2.0 and dedicated graphics processor | | | |

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To catalyse innovation, deliver great products fast and get it right first time, partner with us. We have a world-leading team of haptic and 3D interaction design experts who can support your team in everything from development and testing of use-cases to bespoke training, UX design and and hardware/software integration. Ultraleap partners also get priority access to new hardware and software and design guidelines.

About Ultraleap

Ultraleap was formed when Leap Motion and Ultrahaptics came together in May 2019. Our spatial interaction toolkit includes the world's most powerful 3D hand tracking and the only haptic technology able to create the sensation of touch in mid-air. We provide these solutions both separately and together, and expertly support our customers to deliver immersive, intuitive, innovative and often magical experiences.



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