



ultraleap

Touchless Input

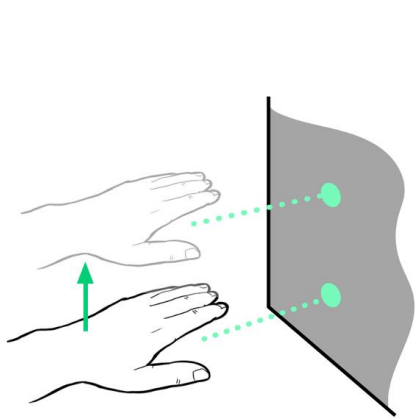
Physical setup guide

How Does It Work?

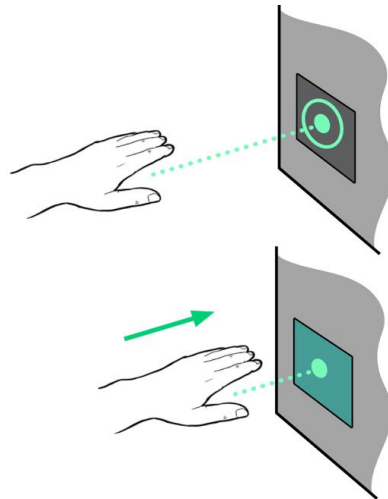
1. Install the [Leap V4 Service](#) on your kiosk PC.
2. Connect and mount an Ultraleap camera to the kiosk PC via USB.
3. Open The application and Configure it to work with your target screen

Provides familiar touchscreen-style interactions:

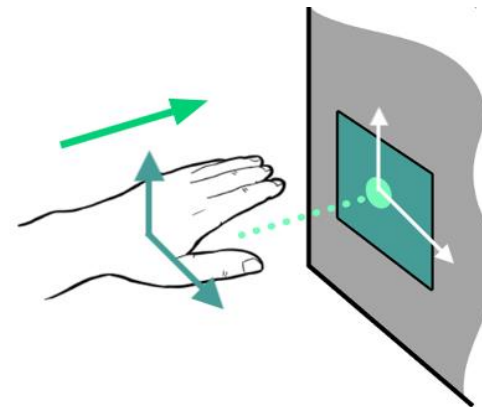
- A user's hand is detected, and shown as a **cursor** displayed on the screen
- Items are selected by a simple 'Poke to Select' - like tapping the screen
- To drag or scroll, 'Poke, then move'



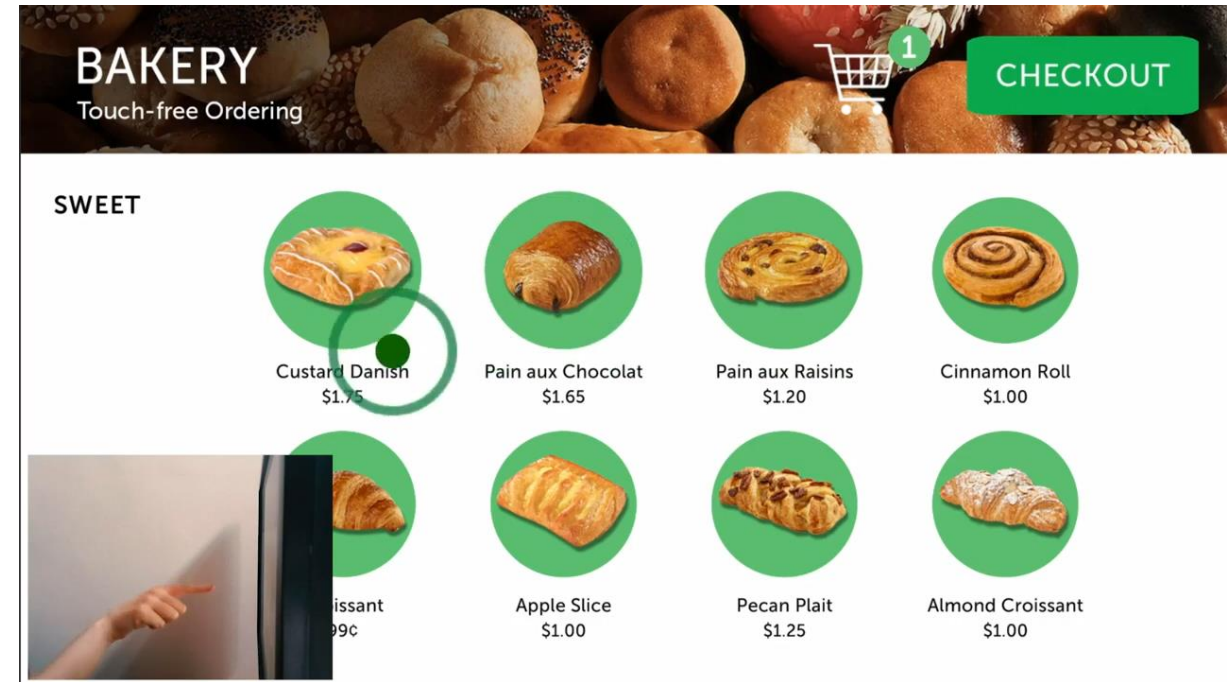
Touchscreen-style cursor



'Poke' forward to select



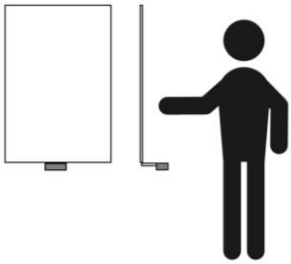
'Poke' forward and move to drag



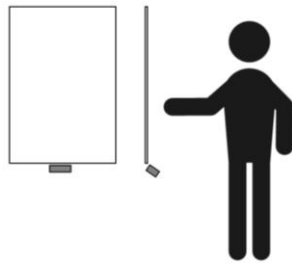
System Requirements & Camera Positioning

These Ultraleap camera positions are supported in this release:

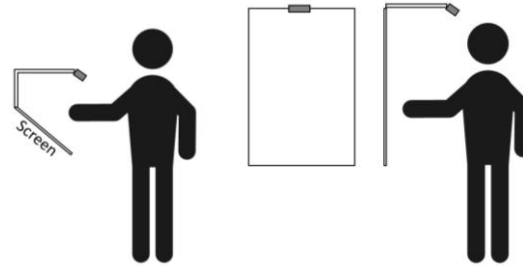
'Bottom-up'



'Below-toward user'

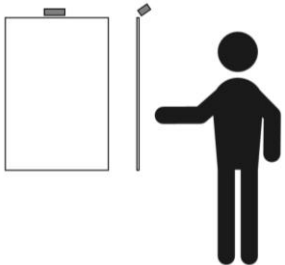


'Above-toward screen'



Ultraleap intend to support these additional camera positions in forthcoming releases:

'Above-toward user'



System requirements

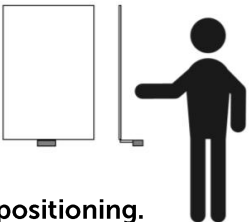
To run this application you will need the following minimum system specifications:

- Ultraleap Leap Motion Controller or Rigel Camera (see notes on camera placement)
- Windows® 10
- Intel® Core i5/i7 processor;
- 4 GB RAM;
- USB 2.0 port

Calibration Setup



'Bottom-up'



AUTOMATIC SETUP assumes 'Bottom-up' positioning. Screen & Ultraleap camera orthogonal to each other, camera placed underneath the screen, facing upwards.

WELCOME
Chose a setup option

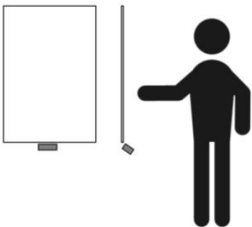
AUTOMATIC SETUP
(Click here or press A)

MANUAL SETUP
(Click here or press M)

Press F to open configuration file Press D to open documentation file

Press C to close the configuration setup

'Below-toward user'



Step 1: Place your index finger on the green circle and press 'Enter'

Automatic Setup

Press C to cancel the configuration setup

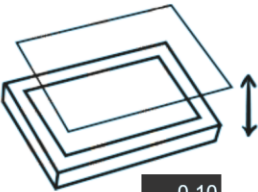
Automatic Setup Complete

Use the markers to confirm the setup is suitable


Press A to re-run the automatic setup
Press M to perform manual adjustments to the setup
Press C to close the configuration setup

MANUAL SETUP


Select input boxes to enter quantities
Press C to close advance setup




0.10
Virtual screen distance (m)




0.298
Screen size height (m)



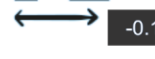
-0.183
Tracking origin height (m)
Up is positive, down is negative



0.00
Tracking origin left to right (m)
Right is positive, left is negative



-45
Tracking Rotation (degrees)
Counter-Clockwise is positive, clockwise is negative



-0.153
Tracking origin distance from screen (m)

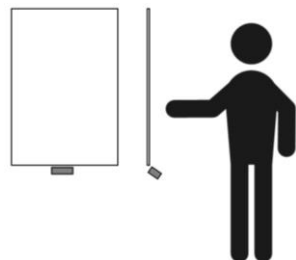
For other scenarios, (e.g. **Below-toward user**'), you will need to use MANUAL SETUP and enter distances and angles manually.



Calibration – Manual Config Examples

Calibration can also be done by editing a config file found here on your PC: [%userprofile%/AppData/LocalLow/Ultraleap/*APP NAME*/TouchlessConfig.json](#). Examples of the values to set for two scenarios are shown below. (see the included README.txt for more details)

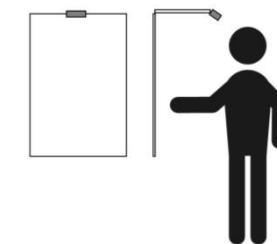
'Below-toward user'



Ultraleap camera, 10cm below the bottom of the screen, 15cm from the front, tilted away from the screen by 40 degrees:

```
"LeapPositionRelativeToScreenBottomM": {  
  "x": 0.00,  
  "y": -0.10,  
  "z": -0.15  
},  
"LeapRotationD": {  
  "x": -40.0,  
  "y": 0.0,  
  "z": 0.0  
},
```

'Above-toward screen'



Ultraleap camera positioned 35cm above the bottom of the screen, 20cm from the front, rotated downwards with a 10 degree tilt inwards towards the screen:

```
"LeapPositionRelativeToScreenBottomM": {  
  "x": 0.00,  
  "y": 0.35,  
  "z": -0.20  
},  
"LeapRotationD": {  
  "x": -10.0,  
  "y": 0.0,  
  "z": 180.0  
},
```

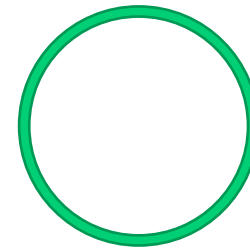


Cursor Customization

- Cursor appearance can be changed by editing the: **TouchlessConfig.json** (see the **README.txt** for more details)
- The first six digits of these color codes use standard [Hex Color Code](#).
- The last two digits relate to the opacity, with 'ff' = 100% opacity in this case. (for more detail on Hex opacity [see here](#)).

```
"CursorDefaultColor": "#00cf75ff",  
"CursorTapColor": "#e47400ff",  
"CursorDragColor": "#7535deff" }
```

CursorDefaultColor



CursorTapColor



CursorDragColor



Note: Ultraleap intends to support additional customization in future builds. E.g. Cursor size, Interaction style.

Thank you



ultraleap.com



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