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## Overview

This document describes LocusLabs recommended hardware and software for operating LocusMaps On Kiosk, a software application for providing visitors to your venue with maps, directions, search, and more in an on-premise kiosk environment.

## Best Practices

There is a wide selection of interactive touchscreen hardware available in the market. Here is a list of some best practices from LocusLabs.

1. Personal sized multi-touch screens (ranging from 22 inches to 30 inches) provide a more personal, private, experience versus larger 55 inch and larger touch screens.
2. Smaller screens make it easier to provide multi-screens in the same physical space with the ability to provide information to multiple visitors at once.
3. LocusMaps product utilizes WebGL for map rendering and we highly recommend using an Intel i7 or faster processor for the LocusMaps On Kiosk application. A dedicated GPU (graphics card) is not required but it is **highly recommended**. The addition of GPU hardware will significantly increase performance and provide a more “iPad like experience”
4. Most commercial-grade large form factor touchscreen hardware displays have a resolution of 1920 x 1080 pixels (standard HD resolution). In the event that you are utilizing a 4k touchscreen display (3840 x 2160 pixels), a computer with a dedicated GPU is required.
5. LocusMaps On Kiosk application is designed as a full-screen application in **landscape mode** running at 16:9 resolution at 1920 x 1080 pixels (standard HD) or 3840 x 2160 pixels (4k resolution).

## Hardware

### Touchscreen Displays

There are a number of vendors such as ELO, Samsung, LG, and others that provide commercial-grade touchscreen displays. We recommend the following interactive touchscreen display features:

1. 24” to 30” inch interactive touchscreen display for a more personal application/map experience
2. If you are using larger displays, we recommend interactive displays that have integrated multi-touch as part of display manufacturing. Some vendors put external touch hardware overlays on traditional non-interactive displays to make them multi-touch. This solution tends to be inferior to an integrated touch display due to a slight lag in the overlay’s recognition of touch events.
3. 16:9 aspect ratio
4. 1920 x 1080 pixels (standard HD) or 3840 x 2160 pixels. Note: if you use a 4k resolution touchscreen it will require a computer with a dedicated GPU.
5. Capacitive multi-touch
6. HDMI video input interface / USB interface for touchscreen interface

## Computer

We recommend running a dedicated computer at each kiosk location with the following specifications. For best map performance we suggest the following:

### 1. Recommended Computer Specifications

- a. Intel computer with Core i5 or Core i7 processor
- b. 16 GB of RAM / 128 GB storage (hard drive or SSD)
- c. Dedicated graphics card (GPU) - not “onboard” video
  - i. Radeon RX Vega M GH or faster - <https://gpu.userbenchmark.com/SpeedTest/422266/Radeon-RX-Vega-M-GH-Graphics>
- d. LocusLabs has tested this computer with great success - Intel NUC Extreme
  - i. <https://simplynuc.com/8i7hvk-full/>

### 2. Minimum Computer Specifications

- a. Intel computer with Core i7 processor
- b. 16 GB of RAM / 128 GB storage (hard drive or SSD)
- c. Intel Integrated HD Graphics 630
- d. Example configuration
  - i. <https://www.amazon.com/gp/product/B07JJPF8MV>

**Important Note:** Many touchscreen vendors offer integrated computers into their larger touchscreen displays. These make for a nice, integrated solution but LocusLabs has not seen a vendor that offers an integrated computer that is powerful enough to drive a rich, graphics application like LocusMaps.

## Software

### Application

LocusMaps Online runs as a full-screen Windows 10 executable application. We recommend using a 3rd party kiosk software to provide more options for locking down the operating system on the kiosk and prevent malicious use of the kiosk computer.

1. SiteKiosk software - <https://www.provisio.com/>

Alternatively, it is possible to run a Google Chrome browser instance in “kiosk mode” but it is fairly easy for a user to circumvent Chrome and gain access to Windows.

In 2019, we will be releasing LocusMaps On Kiosk as a Windows application file (.exe) to make it easier for application deployment and monitoring.

### Operating System

We currently support the latest version of Microsoft Windows 10 for the kiosk computer operating system. The Maps On Kiosk kiosk application admin preferences feature does utilize the web browsers “local storage” to set the default “you are here pin” preference along with the default map viewport. We have seen some issues with local storage resets in Chrome OS that is currently unsupported.

### Web Browser

If you are running LocusMaps On Kiosk in a web browser in “kiosk mode” or as a full-screen web application, we recommend utilizing the latest version of Google Chrome web browser.

## Internet Connection

LocusMaps On Kiosk requires a persistent, stable Internet connection. Internet connections over Ethernet are preferred but a stable high-speed Wi-Fi connection will work as well.

## Appendix A - Additional Hardware Reference Links

The following contains some reference links to hardware that we can recommend and can serve as a technical specifications reference point

1. Elo Touch - 24-inch Touchscreen Display (E351806)  
<https://www.elotouch.com/catalog/product/view/id/1181/category/18/>
2. Elo Touch - 27-inch Touchscreen Display (E351997)  
<https://www.elotouch.com/touchscreen-monitors/2702l-27-touchscreen-monitor.html>
3. Elo Touch - 32-inch Touchscreen Display (E222371)  
<https://www.elotouch.com/touchscreen-signage/3202l.html>
4. Elo Touch - 42-inch Touchscreen Display (E222372)  
<https://www.elotouch.com/touchscreen-signage/4202l.html>
5. Elo Touch - 46-inch Touchscreen Display (E222373)  
<https://www.elotouch.com/touchscreen-signage/4602l.html>
6. Elo Touch - 55 inch 4k Touchscreen Display (E268447)  
<https://www.elotouch.com/touchscreen-signage/5551l.html>

Visit <http://www.locuslabs.com/specs> for updated LocusLabs product specifications.

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