Mvix

Content Rich Digital Signage

Digital Signage Hardware Guide

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Introduction

There are three aspects to every digital signage project: hardware, software, and content. All of them are necessary for building a digital signage strategy, but that first category—hardware—is particularly important.

The hardware selected in the early stages of a project will influence what software is available and thus, what type of content can be displayed.

While we love discussing the content side of digital signage, today, we'd like to help companies get a better handle on the hardware of things.

Pre-Project Hardware Planning

Every company has goals for its digital signage build, and it's important to map these out well ahead of the hardware selection process:

- What type of digital signage strategy do you want to build?
- What kind of budget do you have for the installation?
- Is this a large installation across multiple facilities? Or a small project for a single building?
- What are your messaging goals?
- Will the signs be for display only? Or will interactive kiosks and touchscreen displays be involved?

Map these ideas out on paper, as each of these decisions will be part of the foundational roadmap that guides digital signage hardware selection.

In particular, digital signage hardware will need to integrate with a company's existing infrastructure, so mapping everything out isn't just a matter of preparation, it's a matter of making sure that the digital signage provides the results—and ROI—that it should.

Media Players

The first stop on our tour of digital signage hardware is media players.

(You might think that screen selection would be first, but in truth, the media player is the workhorse of a digital signage solution. It's more important to get this step lined out first.)

Sticks

So-called "sticks" are a great option for simple media access, offering an easy way to turn HDMI-enabled screens into mini-computers. However, users will still need a dedicated media player to get things running.

(For sticks that have these media features included, see the below section on "All-In-One" solutions.)

- **Amazon Fire Stick** – Affordable and simple. The Fire Stick turns any screen into a Smart TV and enables content presentation on the device, perfect for smaller digital signage applications that may not require dedicated screens.

- **Google Chromebit** – Slightly pricier but arguably more powerful, Chromebit allows users to deploy the Chrome OS on any screen—ideal for companies that want more control over content presentation than the Fire Stick allows.

Standalone Media Players

When companies need something more advanced than sticks, standalone media players are the answer. These cloud-based tools act as a central hub for digital signage content, bringing everything together under one convenient system.

- **Brightsign** – Enterprise-grade player offering 4k displays, network control, multi-media management, and a whole suite of features and integrations that give users complete control over their signage messaging.

  Though pricey, it's a deluxe option for digital signage control across numerous screens and high volumes of data.

- **Chromebox** – Another part of the Google Chrome suite, Chromebox offers a great middle-ground for users who need more data processing power than a Chromebit but may not be ready for an enterprise-level tool like Brightsign.

  However, it's limited to the Chrome OS, so it may not be suitable for everyone.

All-In-One Solutions

All-in-one, or system on chip (SoC) tools, is one of the easiest ways to get content up and running. SoCs can be thought of as a combination of the above two options; a fusion of stick and standalone that users can plug directly into an HDMI port.

The software is included right there on the stick, so it's plug-and-play in the truest sense. Some of the bigger brands offering these stick include the following:

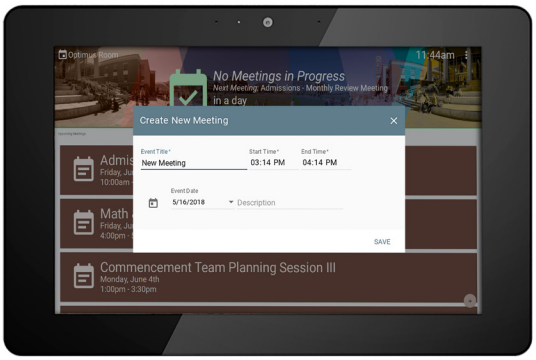
- LG
- Samsung
- Philips

However, the simplicity of SoCs cuts both ways. They're easy to deploy, but they're quite limited in their processing power and overall capacity for content management.

Screen Displays

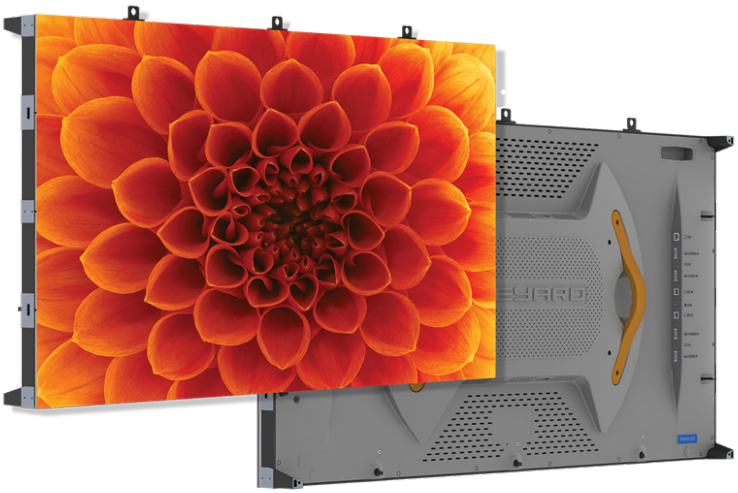
Next, we come to the screens themselves. The smallest digital signage projects may be able to get by with in-house screens and one of the aforementioned media players, but most projects will require a few new, dedicated screens.

Here are the most common options to consider:



- **Tablets** – Ideal for signage projects where the viewer will be up close, tablets are small, affordable, and easy to implement across a large enterprise.

- **LCD** – LCD displays are great for many signage applications, featuring clear images and a low minimum viewing distance that makes them ideal for indoor use. They're also low cost compared to other options, though they're not suitable for every application.



- **LED** – Newer than LCD, LED signage offers several advantages, including size flexibility and brightness capability. They tend to be more expensive than LCDs, but for some applications (such as outdoor signage) they offer clear advantages to visibility and clarity.

- **Interactive** – When companies need audience engagement, interactive displays are the way to go. These can include basic touchscreen displays (great for kiosks) but can also encompass more advanced applications.

  For example, companies are leveraging interactive screens alongside facial recognition technology to create incredible, cinema-like viewing experiences.

Mounts

Those screens have to go somewhere! Mounts help users customize their digital signage strategy by letting them place screens anywhere and everywhere they need.

Mount selection will largely depend on what space is available and what the company's signage goals are, but these are the basic options to consider:

- **Flush** – Standard mount for flat panel screens, placing signage tightly against the wall.

- **Tilt** – Tilt mounts allow screens to swivel on a single axis, usually vertically or horizontally.

- **Articulating** – Tilt taken to 11. Articulating mounts offer full mobility for screens across panning, tilting, and swiveling.

- **Ceiling** – Ceiling mounts allow screens to securely hang, usually done for large screens in conference areas or for digital signage projects with limited wall space.

- **Pedestal** – Standing mounts designed to create a stable platform for large digital screens, ideal for touch screens and other interactive displays.

Screen Enclosures

Digital signage hardware enclosures help protect screens from damage all of kinds. In other words, they're a way to safeguard a digital signage investment, particularly important for outdoor signage.

- **Indoor enclosures** – Indoor screen enclosure help protect signs from damage, debris, vandalism, or theft.

  They may also feature temperature control to prevent signs from overheating or anti-glare coatings to help improve screen visibility.

  Most, though not all, indoor digital signage projects use some type of indoor enclosure.

- **Outdoor enclosures** – Screen enclosures are essential for outdoor signage applications.

  The intricate circuitry of digital screens can be damaged by inclement weather, debris, sun exposure, or extreme temperatures.

  As such, most outdoor enclosures feature durable casings and heating/cooling ventilation to regulate screen temperature.

Choosing the Right Digital Signage Hardware for Your Project

The above is just an overview of the digital signage hardware available, but it's by no means an exhaustive list.

While it's possible to bootstrap solutions on your own, we always recommend that companies work with experienced digital signage integrators to ensure their projects are handled correctly.

There are a lot of details to consider across hardware, software, and content—and those details will make or break your signage strategy.

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