Why Digital Paper Is Superior to Traditional LED and LCD Screens

Explaining treatments and prognoses to patients, gaining their authorization, and signing off on forms and paperwork – these are all regular occurrences in hospitals and clinics across the world. Traditionally, all would have involved paper charts and signatures in ink, but this has changed in recent years. LED and LCD digital signage solutions have made it easier for medical professionals to support patients while reducing waste and maintaining efficiency.

But these LED and LCD solutions are limited. Recent advances in technology have given us a better option – digital paper, or ePaper signage. Digital paper devices build upon the successes and advantages of LED and LCD digital signage solutions but remove some of their limitations.

The Main Advantages of Digital Paper Over LED and LCD

What are the benefits of ePaper signage over traditional digital signage solutions? Why does digital paper offer such an advantage to medical teams and clinicians? Let's take a look.

Reduced Power Usage

One of the primary benefits of digital paper signage solutions over LED and LCD screens is the reduced level of power consumption. While LED and LCD screens can be run with reasonable efficiency, digital paper requires less energy to operate. The Public Display Solution from Avalue is a good example of how hardware with lower power requirements can still achieve effective information delivery.

Even small savings can make a big difference, especially when many devices are deployed across a large-scale healthcare facility. This is important for two main reasons:

• Healthcare facilities can manage their budgets better. Energy usage is a major concern for healthcare facilities as they seek to balance their budgets. By achieving energy savings through deployed devices, healthcare facilities can operate with better cost-efficiency.

• Operations become more ecologically sustainable. Environmental sustainability is a key priority right across the world. In the healthcare industry, however, facilities must reduce their carbon footprint without compromising on patient care. Highly effective and efficient technology like digital paper is helping to make this happen.

Simplified Writing and Recording

Writing on an LCD or LED tablet can be difficult. The interaction between the stylus and the screen does not mimic that of a pen and paper, so the experience is unnatural. This is a problem because it leads to fatigue over longer periods of time and may also make it hard to record data in a legible and easily accessible way.

Digital paper signage solutions are designed to avoid this issue. Writing on a digital paper device, like the eNote, is intended to imitate the feel of using a simple pen and paper. This means medical professionals are able to remain focused on their work without experiencing premature fatigue, and datasets become more accurate and less vulnerable to corruption.

Easier Consumption of Data and Information

Tablets and screens are multi-functional devices. Professionals can record information on them, while patients and other users can read and receive information from the screen when required. Problems begin to arise when we consider the patient's condition – not all patients find it easy to view and consume information from a traditional LED or LCD screen. It is possible to zoom in and make information larger, but this can lead to issues with formatting and may distort important images, charts, and graphs.

Digital paper solutions are specifically designed for this purpose, making zooming and enlargement easy and straightforward. At the same time, the images and datasets retain their original format, position, and resolution. As a result, patients can have more confidence in their treatment, as they find it easier to understand the information they receive. This reduces patient anxiety and confusion, which can be significant issues for patients with psychological, emotional, or age-related conditions.

Contrast and lighting adjustments also make it possible to view information in less-than-ideal environments. Our Outdoor Display Solution ensures patients can quickly receive and respond to information and then provide their signature via more traditional digital signage solutions.
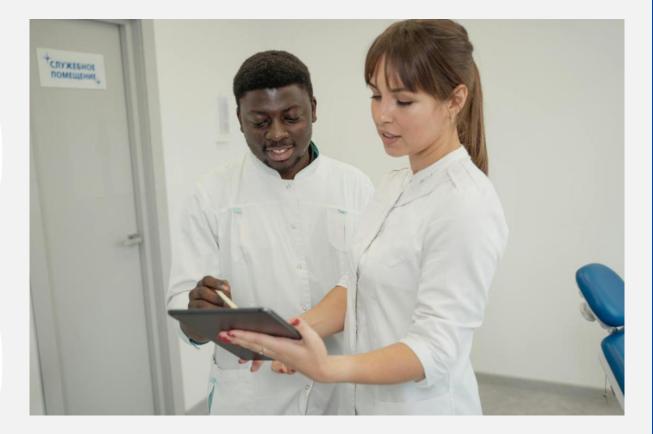
Improved Portability

Anyone who has ever used a smartphone or a personal tablet is well aware of how much these devices have evolved over the last few years. Even powerful computing devices are now highly lightweight and so are easy to carry in the user's pocket or in a small bag. This is certainly true for LCD and LED screen devices like the ENT-13T1 – they are highly portable and user-friendly.

However, in a busy healthcare environment, the need for portability becomes even more acute. Medical professionals may need to move quickly from one location to another, often many times over the course of a working day. Just a few grams can make all the difference, which is why the healthcare industry needs access to the most lightweight solutions available on the market. The nature of digital paper means hardware like the ENT-13T1 is even lighter and more portable than LED and LCD devices. This is only a small weight saving, but it has a big impact on the experience of the user.

More Efficient Integration with IoT and Smart Networks

Digital signage solutions are not designed to be standalone devices. They must integrate with a broader network, including receiving data directly from Internet of Things (IoT) devices. To achieve this, devices must be able to reflect data changes on the network in real time while simultaneously updating the network when new inputs are received – this requires significant processing power.

High processing power LED and LCD solutions certainly exist, but digital paper signage solutions are better equipped for this purpose. Because of their lower power consumption, highly efficient display, and simplified interface, digital paper signage solutions can support high-performance computing components without compromising on portability or ease of use.

Explore Digital Signage Solutions from Avalue

Avalue provides a variety of ePaper digital signage solutions designed for deployment in busy healthcare environments.

Related Products

Avalue EPD-42T

- 42" E Ink Monochrome ePaper Display
- Built-in Touch Screen
- High Performance i.MX 7Dual Processor
- Ultra-Low Power Consumption
- Ultra-Wide Viewing Angle
- No Power Needed to Maintain Display Image
- Sunlight Readable and Doesn't Require a Backlight

Avalue EPD-4200

- 42"ePaper monochrome display
- 2 input types: wire mode (USB), wireless mode (WiFi)
- Operating temp: -15~65 degree
- 2.8mm cover glass

Avalue EPD-3133

- 31.2" E Ink Public Display (Monochrome)
- Onboard Intel® Celeron® SoC BGA Processor N3350 (with CPU Bottom Mounted)
- Single DRAM Socket, Max. Up to 8GB DDR3L 1866MHz
- 1 x SATA III / 1 x HDMI 1.4 / 1 x COM / 2 x LAN / 4 x USB3.0
- +19 DC Voltage Input
- Operating temp. 0~50 degrees
- Dual mPCIe Expansion Slot
- Open frame design(full flat)
- Option for Wi-Fi & BT function
- P-cap touch(optional)
- Front light module(optional)

Avalue EPD-2501

- 25.3" E Ink Spectra 3100 Plus Black/White/Red/Yellow
- 25.3" E Ink Gallery Plus Full color 55K(optional)
- Onboard Intel® Celeron® SoC BGA Processor N3350
- DDR3L 1866MTs SO-DIMM up to 8GB,
- 2.5" SATA3 SSD 64GB
- 1 x HDMI, 1 x COM, 2 x LAN, 4 x USB 3.1(Gen1)
- Front Cover Glass, Optional PMMA, support IP54
- Super Slim Bezel Design
- Optional WiFi Module
- Operating Temp 15~35C

Avalue EPD-4200-B1

- Outdoor ePaper Display Kit
- 1 USB / 1 12V DC-in as an Extended USB Display
- Front IP65, back IP64, designed for outdoor.