

## **Electronic Paper Display Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

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### **Report description:**

The electronic paper display market is registering a CAGR of 14.32% during the forecast period of 2022-2027. The rising demand for on-the-move information, along with the growing number of electronic readers, and the development of easy-to-use display devices, are among some of the significant factors driving the demand for the electronic paper display market.

#### Key Highlights

EPDs are currently being deployed for many applications, including retail and transport, such as bus stops and rail information boards. For instance, in Japan, E Ink Holdings and Papercast have produced a solar-powered electronic paper passenger information display technology for a smart bus stop project. The Jerusalem Transportation Master Plan Team (JTMT) has advanced passenger information systems at bus stops with solar-powered e-paper displays.

E-paper displays are widely used in e-readers and the booming Electronic Shelf Label (ESL) segment. Retail stores must dedicate long hours of employee time to print, stick, and replace traditional paper labels on store shelves for every single product and SKU. Installing miniature e-paper display labels enables dynamic pricing and frees employees to focus on helping customers. In addition to e-readers and ESLs, e-paper displays have been used for indoor signage, for instance, at event venues, hospitals, and hotels. They are lightweight, battery-powered, can be mounted virtually anywhere, moved around easily, and can be integrated with calendaring systems to update automatically. Other new e-paper applications being tried include menu boards, public transit signs, and baggage tags.

The monochrome display boasts low power consumption, easy software design, small form factors, and low cost relative to full-color alternatives. Color display alternatives are generally more expensive but provide sharp, colorful images and high-performing graphics. Depending on factors such as cost and power consumption, a color graphical display is the best way to increase the perceived value and stay ahead of the competitors but providing a colorful display at an affordable cost is a challenge for the market.

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The electronics devices segment was significantly impacted by the COVID-19 pandemic outbreak, as countries such as China, which is one of the major suppliers of raw materials and finished products, witnessed multiple challenges. The industry is still facing a reduction in production, disruption in the supply chain, and price fluctuations. The sales of prominent electronic companies are also expected to be affected shortly. Further, the restriction of the movement led to decreased outdoor advertising spending, negatively impacting the demand for electronic paper displays.

## Electronic Paper Display Market Trends

### The Consumer Electronics Industry is Expected to Drive the Market Growth

EPD is an integral part of consumer electronics as well as wearable. Growing demand for consumer electronics over the forecast period majorly contributes to the market growth owing to the constant need for display technologies. Furthermore, the intense penetration of mobile phones, tablets, and smartphones fuels growth in the consumer electronics industry, which demands more effective display technologies. Additionally, E-ink technology is majorly used for most consumer electronics to provide low eye strain and enhanced battery life.

The rising availability of free e-books on the internet and a shift in preference among tech-savvy users from traditional books toward portable electronic reading devices are expected to drive the EPD market. Most American adults own a tablet, smartphone, or e-reader device, with the majority using tablets for reading eBooks. Electronic ink technology produces low-power paper, like a display used primarily in e-book readers, such as Amazon's Kindle.

Electronic paper displays are widely adopted in the wearables industry. Wearables, such as fitness trackers, have gained significant traction, owing to the boom in fitness trends across consumers. Plastic Logic's ultra-thin and flexible e-paper displays have been gaining adoption, given the enormous opportunities they open up in wearable device applications, such as watches and devices, for mobile health monitoring.

In June 2021, Plastic Logic announced that Leitner's had selected it to provide e-paper display technology for a new hybrid smartwatch from a Czech Republic-based start-up. The smartwatch incorporates an e-paper 'dial' from Plastic Logic. The display combines easy readability at any angle with ultra-low energy consumption, and the segmented rim around the dial allows for a countdown and other innovative features.

Furthermore, companies have been introducing display devices offering advanced features. For instance, CLEARink displays are suited for handheld and wearable devices and have ultralow energy consumption and readability in bright light. Moreover, Flexible e-paper displays are increasingly being adopted in wearables. It boasts of a range of benefits over traditional displays. Aside from the benefit of bending displays into various form factors, EPD is also extremely low-power, which means creative battery-powered designs can be used for extended periods without needing constant recharging. The smartwatch providers in the market use E-paper displays in their products. Devices like Pebble Time integrate e-paper displays over traditional LCD or AMOLED screens. Hence, the device becomes more lightweight and extremely low-power, meaning one does not have to recharge the wearable anywhere near as often as a classic smartwatch.

### North America Holds a Significant Market Share

Due to the increasing use of tablets, North America is one of the most significant markets for e-paper displays. The e-paper display market in North America is gaining traction due to elements such as technological developments, a favorable environmental impact from much less energy usage compared to other display technologies, and expansion of application areas. E-paper could be a valuable addition to the smartwatch market, especially for outdoor use, with the added virtue of being clearly readable in strong sunlight. The Consumer Technology Association predicted that 22.6 million smartwatch units would be sold in

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the United States by the year 2020. The country's shipments of smartwatches were predicted to increase by 8%, propelled by tech-savvy and fashion-conscious consumers.

In addition, EPD is being used by smartphones. The Consumer Technology Association (CTA) performed a study on consumer technology sales and forecasts in July 2021, which predicted that overall smartphone shipments in the US would rise by 10% to 154 million units and generate an increase in revenue of 15% to USD 73 billion. These occurrences will probably fuel market expansion in the area.

The rise of e-book readers in North America is made possible by increased knowledge of the accomplishments of distance and e-learning and significant investments in connectivity efforts. Additionally, the region's fast-paced consumer lifestyle makes carrying a smaller handheld gadget more convenient and drives the growth of the EPD market in North America.

The region is an economically developed and technologically advanced continent of the world. Additionally, the region has been focusing on establishing smart cities. Market participants are expected to benefit significantly from the expansion of smart cities. Smart city and green transportation concepts, which have significant market growth potential, can be complemented with e-paper displays because they can be useful in reducing power consumption.

## Electronic Paper Display Market Competitor Analysis

The electronic paper display remains a niche market. A few major players are entirely dedicated to developing e-paper display technologies like CLEARink Displays Inc., Pervasive Displays Inc., and E Ink Holdings Inc. (YFY Group), among others. The major players are taking strategic initiatives like mergers and acquisitions, partnerships, and new product developments to sustain their market shares.

November 2021 - E Ink, a key player in the studied market, announced its partnership with TPV Technology, a company manufacturing PC monitors and LCD TVs. The association aims to launch the 25.3-inch E Ink Spectra 3100 display to the transportation and smart retail markets. The 25.3-inch ePaper display features the four-color ePaper technology, with black, white, red, and yellow pigments.

June 2021 - Plastic Logic announced that it had been selected by Leitners to provide e-paper display technology for a new hybrid smartwatch from a Czech Republic-based start-up. The smartwatch incorporates an e-paper 'dial' from Plastic Logic. The display combines easy readability at any angle with ultra-low energy consumption, and the segmented rim around the dial allows for a countdown and other innovative features.

June 2021 - Pervasive Displays added rugged EPDs to its product portfolio to address emerging application opportunities. The company got recognized for developing and deploying electronic paper displays (EPDs) and launching the new Armor product, further expanding the range of potential use cases.

### Additional Benefits:

The market estimate (ME) sheet in Excel format  
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