

ADVANTECH

Enabling an Intelligent Planet

Sustainable Solutions: Advantech's NFC ePaper Revolution



Addressing a Corporate Pain Point

Integrating Environmental, Social, and Governance (ESG) considerations into business strategy and operations can create long-term value, manage risks, and maintain a competitive advantage in a rapidly changing global marketplace. Companies are encouraged to adopt "zero paper" or "net zero" initiatives to actively reduce waste and carbon footprints. The initial steps toward minimizing carbon emissions, energy consumption, and paper usage are often the most challenging.

Advantech offers a simple yet innovative solution with its ultra-slim, batteryless NFC 3.7" ePaper, suitable for a variety of applications such as office name cards, warehouse management, production run cards, and logistics tracking boxes. Detailed examples are provided below.

Advantech Foundation's Activity with ePaper ID Badges

Advantech Foundation's main project for sustainable education ACT dreamer (ACT 夢想家計畫) emphasizes the inefficiency of using disposable paper badges for events, which generate unnecessary waste. By switching to reusable ePaper badges, Advantech addresses this issue effectively. Their NFC ePaper can instantly refresh images, accommodating last-minute changes. This ePaper solution is eco-friendly, easier on the eyes, and provides wide-angle visibility.



Advantech's In-House Production Flow Run Card

At the Advantech factory, numerous manufacturing processes require precise identification and integration into the production system. Traditionally, this involved frequent changes of paper labels at each step, with operators spending considerable time printing and manually verifying items. This paper-intensive approach resulted in substantial annual waste.

To illustrate the impact, consider the Advantech warehouse, which houses 3,000 Anti-ESD transfer boxes. Each box requires label changes ten times daily based on production orders.

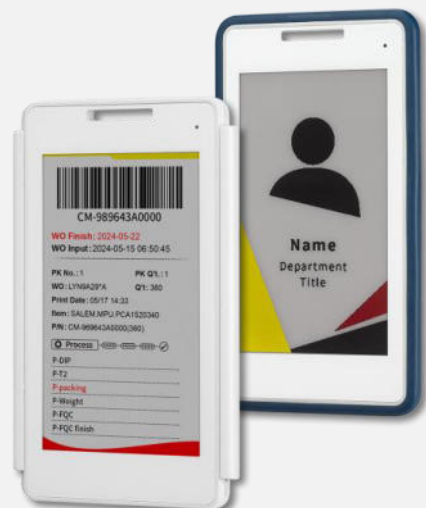
By switching to 3.7" NFC ePaper, Advantech can save 27,540 kg of CO2 emissions over five years. To put this into perspective, one tree can absorb 25 kg of CO2, so this switch equates to saving 1,101.6 trees over the same period.

The batteryless design of the NFC ePaper makes it a 100% Net Zero product, reusable for several years, significantly reducing environmental impact. Switching to ePaper not only lowers the carbon footprint but also streamlines the production process, enhancing overall efficiency.

In summary, Advantech's innovative ePaper solutions provide a sustainable alternative to traditional paper use, reducing waste and carbon emissions while improving operational efficiency across various sectors.

Product Specifications

- Processor: ARM Cortex M0+ RISC, 128 KB flash
- Display: 3.7" black/white/red ePaper panel
- Power: Passive NFC-powered ePaper (no battery required)
- Features: Fast transmission with 3-color interactive LED
- Usage: Refresh using a smartphone with the Advantech NFC App or NFC Reader
- Operating Temperature Range:
0~50(black/white) 0 ~ 40°C
(black/white/red),
0~40(black/white/red/yellow)
- Communication: NFC Agent for seamless communication with the EPD server, streamlining automation



Related Products

Advantech EPD-302



The EPD-302 is for black, white 3.7" NFC ePaper.

- ARM Cortex M0+ RISC 128kB Flash
- 3.7" ePaper Panel Display
- Passive NFC-Powered e-Paper, No Battery
- Fast Transmission with 3-Colors Interactive LED
- Enable smartphone to refresh by using the Advantech NFC App or NFC Reader
- Supported Operating Temperature Range: B/W: 0 ~ 50 °C
- Prepared NFC DLL sample code and agent with OTA

Advantech EPD-303



The ultra-thin 3.7" NFC ePaper display, available in black, white, and red colors, is suitable for application in warehouse and logistics environments

- ARM Cortex M0+ RISC 128kB Flash
- 3.7" Black, White, and Red ePaper Panel Display
- Passive NFC-Powered e-Paper, No Battery
- Fast Transmission with 3-Colors Interactive LED
- Enable smartphone to refresh by using the Advantech NFC App or NFC Reader
- Supported Operating Temperature Range: B/W/R: 0 ~ 40 °C
- Prepared NFC Agent for seamless communication with the EPD server to streamline automation processes

Advantech EPD-304



The EPD-304 is for 4-colors, black, white, red, and yellow 3.7" NFC ePaper.

- ARM Cortex M0+ RISC 128kB Flash
- 3.7" ePaper Panel Display
- Passive NFC-Powered e-Paper, No Battery
- Fast Transmission with 3-Colors Interactive LED
- Enable smartphone to refresh by using the Advantech NFC App or NFC Reader
- Supported Operating Temperature Range: B/W/R/Y: 0 ~ 40 °C
- Prepared NFC DLL sample code and agent with OTA

Advantech EPD-210



2.9" ePaper solution suite in NFC and Batteryless for warehouse ,logistic box and name card

- 2.9" ePaper with black and white colors
- Sunlight-readable display with 180-degree viewing angle
- Supports data transmissions via NFC
- Batteryless design, powered by reader
- Flexible fastener that can be easily customized for various applications
- Ready NFC Agent to communicate with EPD server for automation process