



# Smart OPS Signage Solutions Streamline Digital Signage Applications



## Introduction

The rise of the Internet of Things (IoT) is creating a whole new digital signage market. Consumers and users seek increasingly advanced and mind-blowing visual experiences and enriched interactive designs to achieve superior marketing effects. Ultra high-definition (4k) video, interactive touchscreens, and hyper-connected management are among the most pursued features in the development of next-generation digital signage solutions. According to market analysis and forecasting by IHS, the digital signage market is expected to reach USD 17.1 billion by 2017.

## Challenge

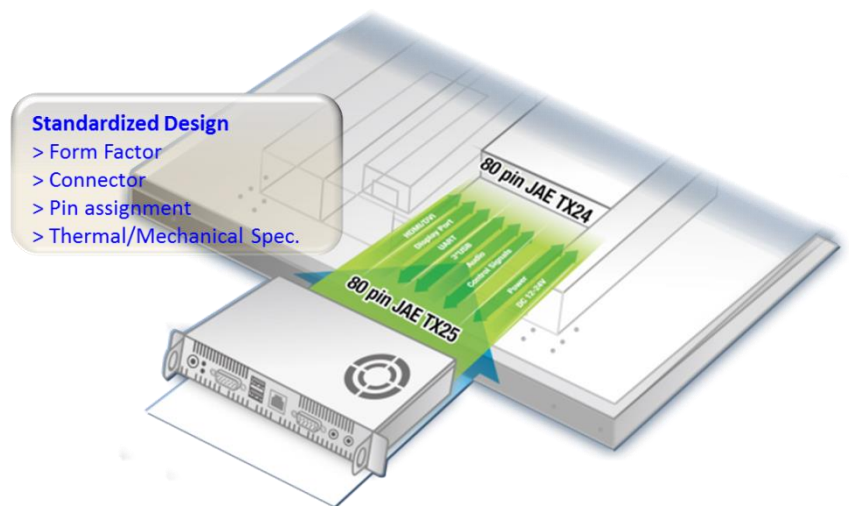
System vendors seek solutions that enable rapid development, easy deployment, convenient usage, efficient management and maintenance, as well as the ideal cost structure. These solutions benefit vendors by accelerating the time-to-market, maximizing returns, and cultivating customer trust.

In the past, delivering multiple benefits via a single solution was fairly challenging. Most digital signage installations involve communication/integration problems between the player, display, and peripherals, with system developers also facing cabling issues and environment limitations. Furthermore, sourcing suitable hardware components and peripherals does not guarantee that a system will be operational. Instead, trials and tests must be repeated until everything functions correctly.

To address market demands and reduce the difficulty of developing and installing digital signage systems, Intel established the open pluggable specification (OPS) in 2010. The OPS standardizes and modularizes the development of displays and media players to ultimately simplify the installation, usage, maintenance, and upgrade of digital signage applications.

## OPS Streamlines Signage Installation

OPS media players feature an 80-pin JAE connector that supports various signal formats and integrates multiple interfaces, including the power, display, video and audio systems, touchscreen, and peripheral ports, for a truly innovative “slot-in” system design. Consequently, no cabling is required, eliminating a potential obstacle to integration and compatibility.



However, effective hardware does not guarantee easy development, deployment, or maintenance. Providers of more sophisticated platforms also consider the software requirements. Well-rounded solutions that comprise hardware, software development kits, diverse APIs, user-friendly interfaces, and digital signage software drastically reduce the development time for system vendors and allow end-users to easily manage and maintain signage systems.

OPS players must be paired with displays that support OPS and JAE connectors. Therefore, the implementation of OPS standards requires strong industrial ecosystem partnerships to avoid limiting market development.

## Advantech's Smart OPS Signage Solutions

The world-renowned and influential industrial computer manufacturer Advantech has taken advantage of the establishment of OPS standards and rendered a ready-to-use solution that considers all hardware and software aspects. Advantech's newest OPS signage player, DS-270, boasts the market's best cost/performance ratio and, with the inclusion of a cost-efficient Intel® Celeron® J1900 2.0GHz processor and independent NVIDIA graphics

chip, supports dual displays of ultra HD (4K).



These capabilities are provided in an OPS-certified form factor that measures just 200 x 119 x 30 mm. Thus, DS-270 can be easily hidden behind a display and linked via a JAE TX25 connector. The player does not require a power cable because the display supplies electrical power through the connector. Additionally, no other cables are needed for visual and audio output because the relevant interfaces are already integrated into the JAE connector, thereby greatly streamlining digital signage deployment. Despite the simple “plug-and-play” installation process, the device delivers an outstanding performance.

Advantech has further enhanced the value of OPS standard with the development of a signage management software package. This package not only offers the same features as Advantech’s SUSIAccess remote device management software, specifically, user-friendly SDKs, remote diagnosis and management tools, McAfee security, and Acronis backup and recovery, but also comprises content management software that allows users to remotely manage and display dynamic and targeted messages in real time. Users can edit the display content and program layout by simply dragging and dropping relevant icons. They can also set playlists and program schedules, and dispatch edited content over the Internet for playback by the system clients, that is, Advantech DS-270 media players.

## Increases Retail, Enterprise, and School Engagement

With the benefits of easy installation, a small form factor, ultra HD 4K graphics, low-profile physical presence, and cable-less design, DS-270 is extremely suitable for deployment in conference rooms, classrooms, shopping malls, and other retail sites. These locations are often crowded, generating safety concerns related to loose cables. This issue is particularly relevant in e-classrooms, where overly enthusiastic children playing together may be at risk of injury. For retail venues, OPS displayers are a favorable option because of their pleasing aesthetics and spatial economy. DS-270 can deliver informative and eye-catching media content in 4K ultra HD, while the remote manageability of the player simplifies the overall system deployment, maintenance, and upgrade processes.

In the current IoT Era, when many client installations are networked and connected to the Internet, customer and user response data can be gathered and accumulated into big data. By analyzing this big data, meaningful information and intelligence can be extracted to improve future business operations or educational content/approaches, making hyper-connected digital signage systems truly intelligent.



## Ecosystem Partnerships for Complete Customer Service Support

With years of cumulative experience and resources in vertical markets, Advantech has established industrial ecosystem partnerships, cooperating with Philips, Panasonic, and Mitsubishi to supply OPS-compliant screens and displays for customer selection. Advantech delivers a genuine “one-stop shopping” service that enables customers to focus more on marketing and developing exclusive features that increase their market appeal.