Case Study

Portwell, Inc.

Digital Signage

Always draw your attention by Digital Signage (DS) Solution.

Low-power Intel Atom™ processor brings Digital Signage high efficiency

Situation

Focusing on digital signage applications, Portwell continues to broaden our vision of the global landscape. After several years efforts on strategic research and development, Portwell's product lines have expanded to include multi-media player, content management server, and advanced management software for monitoring and reporting. Moreover, our systems can be augmented with customized software to meet the unique application needs of specific customers. By using embedded technology from Portwell, we have developed digital signage equipment that provides the best solution for every scope of application. This digital signage equipment is designed for industrial-grade quality that assures long-term reliability.

Challenge

For applications of digital signage on metro transportation, there are three challenges we should take into consideration. Capital acquisition and set-up costs are the first concerns of the transit operator. Secondly, the installation should be practical and flexible such that the equipment can be used for various purposes and services. Finally, the power consumption and the operation of the digital signage system might be issues when deploying the equipment. In real-world situations, it is not yet commonplace to combine digital advertising with orbital transportation and public transit information in a single display. In short, when developing a digital signage solution for transportation applications, the cost, installation, power consumption, and the structure of the system all have to be considered.

intel Intelligent Systems Alliance Premier

Solution

Portwell has adopted Intel® Atom™ processor D2000 and N2000 series and Intel® NM10 chipset platform to provide our customers with powerful and compact digital signage solutions. End customers need the solution to support full HD 1080p playback while simultaneously executing a multi-function application program. The Intel platform fully meets their requirements of performance as well as energy efficiency and enables Portwell to market the product with a high capability to price value ratio. Combining orbital transportation and public transit information systems provides transit users with timely travel information while at the same time the digital signage application generates advertising income.

The traditional way

The transit operator faces the omnipresent challenges of establishing the transportation infrastructure and the increasing cost of maintenance. In the past, to balance the budget the minister may have simply increased ticket prices and/or lowered service quality to reduce the cost. Using more advanced technology the minister can solve the problems more proactively by generating income from advertisements. However, the advertisements normally visible in public places near the highway and on public transit systems are merely a variation of static signage in the format of a large poster with limited "communicating" interface due to the inherent inflexibility of that medium.

Digital advertisement in the field of transportation

Nowadays advertisers are looking for a medium for them to deploy more dynamic and interactive advertisements to promote their products and services.
A digital signage management platform can also meet the demand of the transit operator for improved interaction with its passengers. Once the digital system is deployed, the operator can easily manage the content on a timely basis, including changing the messages, modifying errors, announcing the delay of trains, and issuing safety warnings. What's more, the displays can show the latest news, sports and weather, and the systems can be refreshed and upgraded almost instantaneously.

Considering Intel® Atom™

The Intel® Atom™ processor D2000 and N2000 series, the latest generation of Inter Atom processor family, provides several advanced features such as enhanced media and graphics with full HD up to 1080p, more display interface options including VGA and HDMI, and low power consumption to enable longer battery life and fan-less design.

With the performance of the Intel platform, our system enables the users to update information more rapidly. High resolution graphics helps deliver clearer, high-quality images on the display. The fan-less design makes it possible for us to design a low-profile solution for flexible installation in different spaces and operating environments.

Product Features

* Web smart multi-player

Web smart multi-player can run flash, HTML website, video, photos, and text. Content may be placed in any section of the display, allowing the user to freely design their "digital" poster, by showcasing only one message on the entire screen or displaying numerous messages in different sections. In addition, integrated with 3G and GPS features, the web smart multi-player provides mobility and location-based application. No matter what type of transportation it is installed on, it can detect its position and play location-relevant content automatically.

The player can be flexibly integrated with many input and output devices such as content management server, application programs, touch screen, and cell phone, to name a few. Every player provides an easy web-based user interface so that the administrators can manage remotely through wired or wireless networks. If a device does not operate correctly, the watchdog timer can reboot it automatically or the administrator can recover it from the central site depending on the circumstances. Moreover, manual update of the media content through a USB device or network computer is also available.

* Content management server

A content management server can manage multiple smart multi-players simultaneously. Management server can build two hierarchical layers to distribute to the players, which centralizes all play lists for all players and synchronizes them automatically with the target player group.

Solution

Portwell's Vertical Computing Service (VCS) team recommended that their transit customer implement the content management server as the means to manage train information centrally. Train information such as estimated arrival time is displayed on a 42-inch plasma screen on the appointed train platform for passengers to easily and quickly identify the right platform. In addition to the train platforms, the operator can set up six web smart multi-players in the central lobby, waiting zones, and ticket center. They can flexibly show the content they want on each independent display. Different advertisements can be targeted to the most appropriate locations to achieve the best results. In general, the digital signage system can not only help passengers arrange their traveling time but also helps reduce the operating cost.

Conclusion

The benefits of this solution result from Portwell fully leveraging the Intel® Atom™ processor D2000 and N2000 series' enhanced features to design a fan-less and full HD-performance solution. Our partner is committed to continue refining their products for their customers' digital signage applications. Portwell is working together with Intel and our partner closer than ever to deliver more intelligent solutions.

About Portwell

Portwell, Inc., a world-leading innovator in the Industrial PC (IPC) market, is a Premier member of the Intel® Intelligent Systems Alliance. Providing a complete range of Industrial products, including PICMG 1.0/1.3, COM express & Q7 Modules, Industrial M/B and system solutions along with advanced quality & service, Portwell serves customers in embedded markets such as automation, transportation, gaming and medical technology.

Intel® Intelligent Systems Alliance members provide the hardware, software, firmware, tools and systems integration that developers need to take a leading role in the rise of intelligent systems. Portwell is now one of five Premier members of the Alliance worldwide. This Premier membership not only means advanced technology and initiative awareness, new business exploration, co-marketing and co-selling opportunities, it also reflects a close working relationship between Intel and Portwell that can provide greater benefits to customers for shorter design cycles and strategic development of the embedded markets.

Portwell is a Premier member of the Intel® Intelligent Systems Alliance. From modular components to market-ready retail systems, Intel and the 200+ global member companies of the Intel® Intelligent Systems Alliance provide the performance, connectivity, manageability, and security developers need to create smart, connected systems. Close collaboration with Intel and each other enables Alliance members to innovate with the latest technologies, helping developers deliver first-in-market retail solutions to increase sales and efficiency. Learn more at: intel.com/go/intelligentsystems-alliance.

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