Case Study:
Interactive Retail Applications

Application Story

AMD Embedded R-Series APU Helps TMTFactory and AOPEN Create a Personalized Digital Experience at the FC Barcelona MegaStore

FC Barcelona Megastore provides its customers with a unique experience both in terms of retail innovation and multimedia technology, offering them a seamless digital experience and the opportunity to customize, visualize, and purchase personalized products onsite at the store. The three-story store located on the Camp Nou premises, a football stadium in Barcelona, Catalonia, Spain, is renowned for offering the finest collection of official FC Barcelona and brand-name football products.

FC Barcelona has further differentiated itself by embracing digital media as a means to entice customers. The high-profile FC Barcelona Megastore recently underwent a sophisticated makeover, redesigning its shop interior, and integrating a 16-meter-wide LED screen, which now takes center stage in the store. But FC Barcelona wanted an additional “wow” factor – the megastore wanted to fuse the digital and physical domains by automating its popular personalized shirt printing, making it more interactive for customers and cutting long wait times.

Working with TMTFactory and using AOPEN Digital Engine media players as the technological backbone, FC Barcelona installed large interactive touch kiosks throughout the store so that customers can choose their favorite football shirt, add their name or text plus their lucky number, and immediately see the result on the large display to review what they have created.

TMTFactory, a service company that provides multimedia content and consulting services for digital projects, selected AOPEN Digital Engine DE6100 media players with AMD Embedded R-Series APUs to power the displays due to the underlying multidisplay capabilities and rich-media application support, which helped to ensure smooth operation and quick response times.

Digital Multimedia Technology Excels for Interactive Retail Applications

CUSTOMER:
TMTFactory/AOPEN

INDUSTRY:
Digital Signage and Retail

CHALLENGES:
Digital signage applications require high-performance, high-definition visual experiences across multiple, independent displays delivered in a cost-efficient manner.

SOLUTION:
AMD Embedded R-Series APUs provided high-definition video on multiple displays and helped deliver the performance, features and cost efficiency TMTFactory, and AOPEN needed to offer stunning visual experiences for FC Barcelona’s customers.

RESULTS:
FC Barcelona installed large interactive touch kiosks throughout the store for its point-of-sale application using real-time, high-definition product visualization capabilities to drive sales and decrease in-store wait times.

AMD TECHNOLOGY AT A GLANCE:
AMD Embedded R-Series APU
GETTING THE RIGHT TECHNOLOGY
Among the reasons that TMTFactory chose AOPEN Digital Engine DE6100 media players were the high performance, low total cost of ownership, and reliability of the systems. AOPEN’s Digital Engine DE6100 media players are designed to handle advanced multimedia and computational workloads. Compact and powerful systems, they enable multidisplay capabilities for cutting-edge digital signage applications with support for Spanning (stretched desktop) and Extended Desktop for up to three independent HD displays.

As the underlying processing platform behind AOPEN’s Digital Engine DE6100 media players, AMD Embedded R-Series APUs deliver high-performance processing coupled with a premium high-definition visual experience. With extraordinary integrated graphics and multidisplay capabilities in a compact, low-power solution, AMD R-Series APUs are well equipped to power AOPEN/TMTFactory’s embedded application. With average power as low as 13 watts and discrete-class AMD Radeon™ HD 7000G Series graphics integrated into the AMD R-Series APU, applications that previously required a discrete graphics card can be developed with a single-chip solution in smaller form factors, potentially resulting in lower power and cost.1

The third-generation Unified Video Decoder in the AMD R-Series APU enables the delivery of crisp and clear video. For more demanding graphics applications, AMD Radeon™ Dual Graphics technology combines the processing power of AMD R-Series APUs and discrete AMD Radeon™ Embedded GPUs to more than double graphics performance compared to using discrete graphics alone.2,3 AMD Eyefinity technology allows the AMD R-Series APUs to drive multiple displays simultaneously as a single large surface, enabling stunningly crisp 3D, 4K, and HD video content and offering support for up to four independent displays (4096 x 2160 resolution per display output).4

AMD Embedded R-Series APUs help enable a wide range of compute-intensive applications that are low power and fit into small form factors, easily accommodating AOPEN’s compact Digital Engine DE6100 media players.

HIGH-DEFINITION VISUALIZATION HELPS DRIVE SALES
FC Barcelona’s interactive kiosk, the Digital Locker™, is a fully integrated eCommerce platform spanning product selection to point-of-sale capabilities. To buy a personalized shirt, the customer simply touches the screen, customizes their item and pays via credit card, then picks up the final product from FC Barcelona’s “Printing Lab” without having to wait in long queues. In the first four months after the Digital Locker went live, FC Barcelona enjoyed a 22% increase in sales on personalized shirts.5

The Digital Locker instills elements of fun and enticement, because passers-by can see what others create and are tempted to do the same. Shoppers are embracing digital technology in the store, which in turn is driving sales. In addition to the sales increase, the store also minimizes wait times as queues are much shorter at the cash register and the shirt customization process has shortened as a result of the real-time product visualization capability.

AMD Embedded R-Series APUs are an excellent fit for solution providers such as TMTFactory and AOPEN who help facilitate high-definition visual experiences for customers like FC Barcelona. AMD R-Series APUs offer the right balance of performance per watt per dollar and help deliver the rich multimedia content that grabs consumers’ attention and drives sales.

Watch video below:
ABOUT AOPEN
AOPEN is a major electronics manufacturer and one of the world’s leading providers of commercial products and applied business solutions. It specializes in two areas: ultrasmall form factor computing for both home and business applications, and digital signage, from hardware to software and services. Founded in 1996 in Taipei, Taiwan, AOPEN listed on the Taiwan Stock Exchange in August 2002. Through its parent company, Wistron, AOPEN has access to a worldwide pool of expertise and solutions.

AOPEN now operates a growing global business in over 100 countries. Its clients range from governments and financial institutions to retailers and branding agencies, including major global brands and blue chip Fortune 500 companies. AOPEN’s business has maintained its core values and beliefs throughout its evolution and continues to focus on working with customers to achieve their business goals. It also fosters a culture of “intrapreneurship” to drive innovation and employee development. AOPEN works across the entire value chain. For more information, visit www.aopen.com

ABOUT TMTFactory
TMTFactory was founded in 1997 as a multimedia production company. With the birth of Digital Signage in 2005, the company converted itself into a software engineering company and started to develop custom technology products for its clientele. The company later reaffirmed the theory “content is king,” becoming a pioneer in content creation for the sector, developing corporate content, information, advertising, entertainment, and more. In the past two years, TMTFactory has managed to not only achieve but to be recognized on a global level as a consultant in strategic technology for digital signage (DS), with global solutions based in the conceptualization, production, and management of various distinguished channels.

The current goal of the company is to offer all kinds of digital products and services in the field of digital marketing and communications, providing creative and technical experience in a language adapted and suited for any audience. For more information, visit www.tmtfactory.com

ABOUT AMD
AMD (NYSE: AMD) designs and integrates technology that powers millions of intelligent devices, including personal computers, tablets, game consoles, embedded applications, and cloud servers that define the new era of surround computing. Embedded solutions from AMD give designers ample flexibility to design intelligent, interactive, and immersive experiences with the flexibility to design scalable, low-cost, and energy-conservative systems. For more information, visit www.amd.com/embedded

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1. The average power for ISV TDP AMD API when running one iteration of 3DMark 06 default run was 12.861 Watts. Test performed on an AMD A60 Series AP11 that is equivalent to the AMD E-464L API. System configuration: AMD E-464L 2.3GHz 4/2/1, “Parmer” development platform, 4 GB RAM, Windows 7 Ultimate, AMD 20

2. AMD Radeon™ Dual Graphics technology combines the processing power of select AMD APUs and select AMD Radeon GPUs and can support displays connected to either the APU or the discrete GPU. Windows Vista® or Windows® 7 operating system required.

3. 3DMark Vantage P-score for AMD Radeon E6460 alone is 2162. The combined 3DMark Vantage P score for the E6460+R-464L is 4538. System configuration: AMD R-464L APU, “Parmer” development platform, AMD Radeon E6760 6XMDP graphics adapter, 4 GB RAM, Windows 7 Home Premium, AMD 19

4. AMD Eyefinity technology supports up to six DisplayPort monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design. Confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. A maximum of two active adapters is recommended for consumer systems. See www.amd.com/eyefinity for full details.

5. See AMD’s Web site for additional information and solutions about AMD products. To find more detailed information about AMD products, visit www.amd.com

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