



## Customer:

IBASE

## Industry:

Digital Signage

## AMD Technology at a Glance:

AMD Embedded R-Series SoCs

### SI-60E 8K VIDEO WALL PLAYER

- ISMART- for EuP/ErP power saving, auto-scheduler and power resume
- Supports up to 12 displays with max. 7680 x 3240 resolution
- Hardward EDID built-in
- Discrete AMD Radeon™ E8860 graphics processors with 2GB GDDR5 graphics memory
- Supports 4x DDR3 1600 MHz, max. 32 GB
- 2x RS232 serial ports, 2x Mini PCI-E (x1) slots for Wi-Fi, 4G and TV tuner options
- 2x SATA III 2.5" HDD with RAID 1 support
- Compact and rugged design

## AMD Case Study –

# AMD Embedded Radeon™ graphics driving IBASE digital signage system for multi-display video walls

From their early emergence in the 1980s, video walls have gone a long way. From tiled display matrixes comprised with CRT monitors that were not only limited in function, quality, and affordability, video walls have now become the choice in major venues to deliver high definition content and engaging visual experiences in almost any screen layout, at increasingly attractive prices.

The market for video walls is growing steadily at a dynamic pace and expected to generate CAGR of 19 percent between 2016 and 2020, according to Research and Markets (Source: PRNewsWire-USA)<sup>1</sup>. The total market size is projected to reach \$17,956.26 million in 2020, according to MarketsandMarkets research<sup>2</sup>. This growth is secured by the expanding applications generated as new technologies improve, and markets shift to dynamic video display from static audio visuals in both commercial and government applications, spanning diverse industries from health, retail, transportation, security, to indoor and outdoor advertising, among others.

The competition among video wall solution providers is quite stiff. Large companies have jumped on the bandwagon, contending for a share in the high growth sales prospects, and more are joining by adding video wall solutions to their product lines. Yet, excitement is high as makers roll out product innovations, forging new ties and partnerships to meet the current market requirements.

## APPLICATION

Larger retail stores for fashion, cosmetics or electronics as well as public places such as shopping malls, airports and train stations today use video walls to promote their offerings with superior quality. And in times when conventional consumer TVs often come in screen sizes of 55" and beyond with 4K resolution, digital signage installations have to offer more to provide a truly breathtaking user experience. At the same time, these installations have to impress the audience and gain attraction by offering the best possible quality. Video walls are

often used in configurations that are several feet high to showcase the latest commercials in breathtaking dimensions. The aim is to draw and compel visitors to stay longer inside the shops by engaging them with unique and satisfying experiences through effective video walls. Creative video content will, for instance, evoke romantic moments by showing a Christmas coming home scene in winter months, generate refreshing thoughts by displaying waterfalls in forests, or inspire powerful dynamism through latest state-of-the-art video animations. All these different scenes put different demands on the graphics solution. First of all, the solution has to power as many separate screens as possible. In terms of quality, vivid and lifelike coloring, high color range, high frame rates and extraordinary 3D performance for animations are a must. Additionally, highest resolution is required to offer best quality impression without pixelation even in close proximity to the screen, because in contrast to TVs or cinemas, where the viewing distance is fixed, the audience in retail stores may be in touch distance to the screens.

## CHALLENGE: BEAUTIFULLY RELIABLE VIDEO WALLS

On top of these requirements, the technical choreography of video content will also have to be flawless, and content must be synchronized as it is often played on multiple video walls distributed around the store, and in different stores around the globe. The system controller must offer flexible programmability and ease of operation to support frequent updating of content as new products have to be promoted every week. The displays will need to be clear and consistent, and reliability must prevail in every phase of the operation. For these delicate marketing needs, customers demand highest quality technology

## IBASE- THE PRIME CHOICE

When Shanghai Unicross MSP, an M2M managed service provider, was looking for such a high quality solution for their growing video wall business in various industries, their partner Scala knew just who to recommend. As customers will not tolerate any black screen and compatibility issues that many suppliers are yet to solve, Scala recommended IBASE Technology who addresses the requirement for smooth operation and reliability with a total solution. From hardware design and assembly to software configuration, IBASE also performs the testing and validation for compatibility and reliability of the digital signage players. The company also carries out the extensive tests, both on the individual components and the complete systems, and this is one very important aspect which many competitors fail to implement. On top of these is the capability to provide a cost effective solution. The total cost of an IBASE system, in some instances, can be half that of the competition due to the efficient production and integration technologies IBASE has developed<sup>3</sup>.

## FEATURE SPECIFICATION- SI-60E

### VERSATILITY AND FLEXIBILITY

With the IBASE proprietary Multiple-Display Matrix Technology, the SI-60E 8K video wall player, winner of both 2015 Computex Best Choice Award and 2016 Taiwan Excellence, offers flexible VW configuration and resolution setting, hardware EDID emulation and bezel adjustment. Each SI-60E, powered by the AMD Radeon™ E8860 graphics processor, enables support for up to 12 screens with awesome 3D graphics performance in resolutions of up to 7680 x 3240. AMD delivers the core graphics technology needed to support IBASE in driving an immersive digital signage experience. This includes powerful 4K graphics processing, multi-display configurability and power efficiency in a flexible, scalable form factor.

### COST EFFECTIVENESS AND HIGH PERFORMANCE

Without having to rely on costly chipsets, the SI-60E offers affordable performance solutions. The innovative hardware configuration features a desktop processor and AMD Radeon™ E8860 graphics processor that allows 12 video outputs, powering more displays per player and thereby reducing overall costs. It also supports four DDR3 sockets with a capacity of up to 32GB of system memory and flexible display setting with optimum resolution of 11520 by 2400 pixels.

### ROBUST 24/7 RELIABILITY

The iSMART technology built in every SI-60E protects the systems and enables them to use power efficiently through automatic power scheduling, power failure detection, and temperature monitoring to reduce downtime especially in low temperature environments. With iSMART, the processor is able to resume and restore the operating system to factory default state in the event of a system crash or software corruption, automatically start and shut down as scheduled, and boot up even under extremely low ambient temperatures. This ensures that businesses can rely on the industrial-grade SI 60E to deliver constantly high performance even in rugged conditions - 24/7.



iBase SI-60E

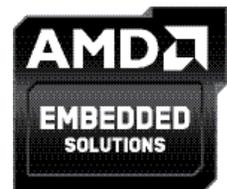
### About IBASE

*IBASE Technology (TPEX: 8050) is a reputable supplier that specializes in the design and manufacturing of robust industrial PC products. Since its establishment in 2000, IBASE has been committed to the production of high quality products, and to the rendering of excellent services. IBASE carries out manufacturing and quality control at its own production sites in Taiwan that are certified to meet ISO 9001, ISO 13485 and ISO 14001 standards. Specializing in OEM/ODM/JDM services, its current product offerings comprise of x86 and RISC based industrial motherboards, embedded systems, industrial panel PCs, digital signage players and network appliances for various applications in the automation, digital signage, gaming, transportation, smart building, medical, retail and networking markets. For more information, please visit [www.ibase.com.tw](http://www.ibase.com.tw)*

### About AMD

*For more than 45 years AMD has driven innovation in high-performance computing, graphics, and visualization technologies—the building blocks for gaming, immersive platforms, and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit [www.amd.com](http://www.amd.com)*

**AMD.com/Embedded**



1. Global Video Wall Market 2016-2020, Researchandmarkets.com, September 2016.

2. Video Wall Market by Product (Video Wall Displays, Housing, Installation, & Content Management), Application (Indoor, Outdoor, Menu Board, & Billboard), Vertical (Retail, Hospitality, Transportation, Healthcare) & Geography - Forecast to 2020, Markets&Markets.com, March 2015.

3. Engaging Video Wall Experience with Digital Signage. IBase, n.d. Web