



The 4K Revolution Driving Advances in Playback Technology

New robust fanless media players are delivering the best in true 4K graphics performance

By Richard Slawsky | Contributing writer, Digital Signage Today

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Digital signage, including single screens, video walls and multi-display networks, has long been shown to be an effective tool for customer engagement in markets ranging from foodservice to retail to hospitality to transportation.

According to statistics compiled by DigitalSignageToday.com, digital signage captures 400 percent more views than static signage, and has a recall rate of an astounding 83 percent. In a retail or restaurant setting, the use of digital displays increases customer spend by 29.5 percent and generates 32.8 percent more in-store traffic.

And while 1080p resolution was once the standard for digital displays, developments in screen technology have put 4K resolution within reach of many deployers. Those screens have nearly four times the resolution of 1080p screens, reproducing the most intricate details in content with impressive clarity and allowing for the viewer to be much closer to the screen when seeing those details.

It's no surprise, then, that the 2017 Digital Signage Future Trends report found that 10 percent of digital signage end users already had made the shift to 4K with some or all of their screens, with another 30 percent planning to make the transition within the next few years. In addition, 13 percent of deployers who responded to a Digital Signage Today survey said they believe 4K will have a major impact on the digital signage industry going forward.



Getting the most out of those ultra-high resolution displays, though, requires content to be designed to take advantage of 4K and media players capable of deploying such content flawlessly.

New products addressing the need

Applications for digital signage run the gamut from digital menu boards in quick-serve restaurants to transportation displays in bus stations, train stations and airports to customer engagement displays in retail stores.

Content is fed to those displays by media players, dedicated devices built for the sole purpose of feeding content to a digital display or series of displays. Those devices are essentially small computers, and in fact in the early days of digital signage media players were desktop computers with high-end graphics cards. In most cases, new content was fed to those devices via CDs or flash drives.

Today, media players are small enough to fit behind a display, eliminating the need for an unsightly collection of wires and a separate space to house the player. And as those players get smaller, they are becoming increasingly more powerful.

But as digital signage becomes more and more a part of the consumer landscape, deployers are looking for ways to make their networks stand out and cut through the clutter. Those concerns are helping to drive the shift to 4K.

To make it easier for deployers to leverage the full power of their digital signage network and take advantage of the eye-grabbing power of the latest in high-resolution displays, technology companies continue to introduce new media players with expanded graphics capabilities.

Sunnyvale, California-based hardware manufacturer IBASE Technology, for example, recently introduced its new SI-623-N signage player based on the 7th/6th Generation Intel Core processor and supporting up to 4K (3840 x 2160) resolution in each display channel. To deliver a high level of graphics performance and provide a more engaging visual experience for audiences, the player is powered by the integrated Intel HD Graphics 530 via one HDMI 2.0 and two HDMI 1.4 display interfaces. The SI-623-N can offer robust performance with impressive true 4K@60p quality and deliver 4 times the resolution of Full HD and high dynamic range without any noise (totally fanless).

Breaking down the specs

The SI-623-N plays true 4K, H.265, 10-bit video at 60 frames per second via the HDMI 2.0 interface for superior content delivery. In addition, it is equipped with numerous storage and I/O connectivity options including 2x DDR4 SO-DIMM sockets with up to 32GB capacity, 1x RJ-45 for Gigabit LAN, 1x RJ45 for RS-232, 2x USB 3.0, 2x USB 2.0, 1x M.2 B key, 1x M.2 M-key, and 1x 2.5" SATA HDD/SSD for storage, 1x SIM and 1x Mini PCI-E slot.

The 1x M.2 B key (3042) slot allows for Wi-Fi, Bluetooth and 4G options for wireless content updating, while the 1x Mini PCI-E (Full-size) slot allows for Wi-Fi, Bluetooth, 4G and TV tuner options. The standard SI-623-N model is supplied with 8GB system memory, 128GB SSD and 84W power adaptor.

The SI-623-N features Intel AMT 11.6 designed to help system admins to remotely manage and secure the platform, and iSMART technology for on/off auto scheduling and power resume functions. It also comes with a pair of wall-mount brackets and can comfortably fit behind multi-displays or video walls deployed in virtually any market.

The player also features hardware External Display Identification Data simulation and software setting mode to prevent screen convergence problems and issues due to cable disconnection or failure to identify software settings. EDID issues can result in overscan and resolution problems as well as the display device not displaying any image at all.

“The internal EDID on the SI-623-N eliminates the need to adopt an array of dongles that fake the electronic display ID and state of display connection from the system. It also makes it unnecessary the deployment of additional players to address EDID issues.”

— Archer Chien, senior manager of IBASE digital signage product line.

The SI-623-N digital signage media player

- iSMART - for auto-scheduler and power resume.
- iAMT(11.0), TPM1.2, vPro and Watchdog timer.
- 7th/6th Generation Intel® Core™ mobile processor.
- Integrated Intel® HD Graphics 530.
- 2x DDR4-2133 SO-DIMM, Dual channel, Max. 32GB.
- 1x HDMI 2.0 + 2x HDMI 1.4 with independent audio output support.
- Built-in hardware EDID emulation function.
- 1x M.2 B key(3042) for storage, Wi-Fi, Bluetooth, 4G options.
- 1x M.2 M-Key(2280) for storage.
- 1x Mini PCI-E (full-size) for Wi-Fi, Bluetooth, 4G, or TV tuner options.
- Compact and fanless design.

Source: IBASE Technology



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