Solution Brief

Digital Signage

Intel® Core™2 Duo Processors

Intel® Active Management Technology (Intel® AMT)

Reaching the Right Audience

Intel® technologies in digital signage systems help maximize advertising messaging and return on investment

Increasing Advertising Impact

Consumers watching advertisements in stores, airports or just about anywhere probably don't realize that some digital signage systems are helping advertisers gauge their interest. Equipped with cameras and anonymous facial-recognition software, these systems detect personal features and determine whether consumers are paying attention to the display, just glancing or ignoring it completely. With this capability, called 'anonymous video analytics,' advertisers can also target specific demographic groups by displaying ads that are compelling to the viewing audience. For example, the systems can dynamically change their content if the audience is male, female, a senior or a family. By accurately identifying their target audience, these digital signage systems can help advertisers reach the right customers, with the right content, at the right time.

Maximizing Return on Investment (ROI)

Like anonymous video analytics, several Intel platform capabilities, listed in Table 1, are helping digital signage customers achieve a higher ROI. Scalable CPUs and chipsets with integrated graphics reduce OEM development and system unit costs, savings that can be passed on to customers. Remote management features will detect non-functioning displays and get them online faster with lower support costs, avoiding costly on-site repairs. Advertising aggregators, companies that create media delivery channels and sell advertising space, will benefit from these declining acquisition and maintenance costs.

Micro Industries Touch&Go* Messenger* 65L

Large-Format All-in-One Computer with Integrated Touch Screen

With a 65-inch high definition (HD) LCD display, the Touch&Go* Messenger* 65L from Micro Industries is big enough for use in open retail environments ranging from huge airport complexes to large stores and malls. Delivering breakthrough performance and improved power savings, the Intel® Core™2 Duo processor and its companion chipset with integrated graphics enable the Messenger 65L to display complex multi-media graphics effortlessly. Micro Industries also integrates Intel® Active Management Technology (Intel® AMT), which enables its mCosm* management software to scan and fix a system that has crashed (e.g., disk corruption) or is powered off. This capability can reduce on-site service calls and downtime. For more information on Touch&Go software, visit www.microindustries.com/software.

Intel® Platform Features	Benefits in Digital Signage
Anonymous Video Analytics	Increase advertising effectiveness
Remote Management	Avoid expensive on-site repairs with Intel® Active Management Technology
Integrated Graphics	Lower system cost with Intel® Graphics Media Accelerator 4500MHD
Low Power Consumption	Reduce power bills and enable quiet, fanless devices
Scalable Performance	Optimize system price-performance with Intel® Core™2 Duo processors

Table 1. Intel® platform features and benefits

Targeting Consumers with Video Analytics

Measuring advertising campaign effectiveness is essential for calculating an ROI, but it's a challenge for most companies. How can businesses correlate their advertising expenditures to customer interest or better yet, actual sales? Digital signage with built-in video analytics functionality helps advertisers gauge consumer interest level, correlate advertising to purchases and target ads to the appropriate audience:

- **Gauge interest level:** Measure advertising effectiveness by capturing data on the number of viewers, viewing duration and audience demographics.
- **Correlate to sales:** Determine the sales increase from advertising by cross-checking sales receipts with video analytics reports.
- **Target messaging:** Play more relevant ads by dynamically changing the advertising mix depending on the audience composition.

Keeping Systems Online with Remote Management

Today, almost every digital signage system is connected to a network in order to access video streams and information from back office systems. These networks also provide the communications link for remote system management. In most cases, remote system management relies on the continued operation of many equipment components such as the CPU, operating system, hard disk drive and system memory. However, Intel Active Management Technology[1] (Intel® AMT) provides an alternative design called Out-of-Band (OOB) remote system management, which is shown in Figure 1. OOB remote system management with Intel AMT is an enhanced capability that enables system diagnosis and repair, independent of major system components. If the equipment is connected to a power outlet and the LAN, then special circuitry within the Intel® chipset can access and control the system even if it is powered off or the operating system is not functioning. This allows more failure modes to be fixed remotely, avoiding expensive on-site service calls while getting systems online faster.

Reducing Costs with Power-Efficient Processors

Companies using digital signage equipped with low-power embedded Intel® Architecture Processors can lower their power bill. Compared to prior generations, the latest Intel® Core™2 Duo processors consume less power while providing outstanding performance. IT personnel can further cut utility bills by using Intel AMT to automatically power systems down during off hours.

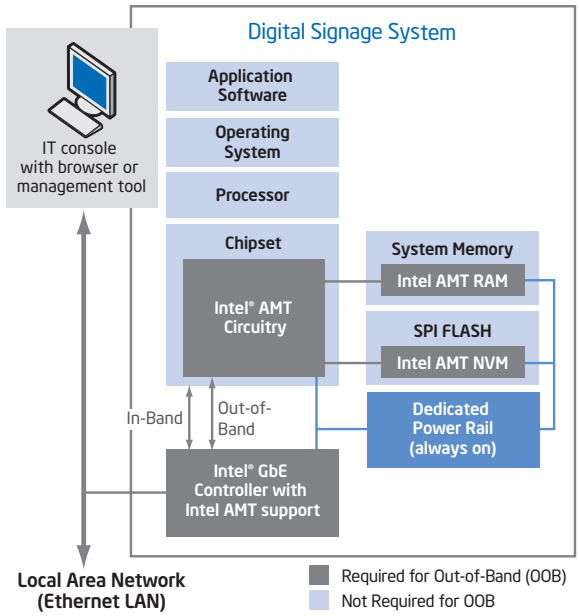

Figure 1. Implementing Intel® AMT

Optimizing Price-Performance with Scalability

System scalability is a requirement for digital signage OEMs looking to develop a single design that's the basis for multiple price-performance SKUs and even next-generation products. This approach saves development cost by enabling a high degree of hardware and software reuse. Developers can choose the desired level of performance by selecting from a wide range of embedded Intel Architecture Processors, which have long lifecycle support. Intel Architecture Processors, such as the Intel Core 2 Duo processors, are truly software backwards compatible, providing design stability and protecting OEMs' development investments.

Lowering System Cost with Integrated Graphics

Using the graphics capabilities integrated into Intel chipsets, digital signage OEMS can lower system cost and power consumption because there's no need to add a discrete graphics solution. High performance Intel® Graphics Media Accelerators 4500MHD and 4500HD deliver captivating graphics, 3D rendering performance and HD video playback. There's a wide assortment of display and video output options, including VGA, LVDS, DVI, HDMI and DisplayPort with integrated High-bandwidth Digital Copy Protection (HDCP) technology.

Additional information about Intel® embedded products can be found at www.intel.com/products/embedded/index.htm.

[1] Intel® Active Management Technology (Intel® AMT) requires the computer system to have an Intel® AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes. For more information, see www.intel.com/technology/platform-technology/intel-amt/index.htm.

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