

Product Brief
Evaluation Kit
Digital Signage

Digital Signage Evaluation Kit 12 (DSEK-12)

Complete Evaluation Kit Simplifies Design of Digital Signage Solutions

*Start prototyping
your applications
right away*

The Digital Signage Evaluation Kit 12 (DSEK-12) offers device manufacturers, systems integrators and software developers an application-ready media player platform that is optimized for digital signage applications. This reference platform is designed to significantly reduce evaluation and development effort by including a comprehensive set of hardware and software components featuring solutions from Intel®, Kontron® and Microsoft®, and digital signage content creation and content management software from Flypaper™ and Scala®.

Digital Signage Evaluation Kit 12 (DSEK-12) Overview

The DSEK-12 reference platform consists of commercially available components, including the 3rd generation Intel® Core™ i5 or Intel® Core™ i7 processor, the Kontron OPS-compliant media player KOPS800 and the Microsoft Windows® Studio Embedded POSReady 7 operating system (OS). The kit ships with pre-validated trial software with:

- Preinstalled digital signage demos using high-quality Flash and other video content
- User editable templates for quick development of content
- Content management and playback
- Intel® Audience Impression Metrics Suite (Intel® AIM Suite) software for targeted advertisements

Evaluation Platform

The DSEK-12 enables solution providers to concentrate on designing digital signage rather than investing in platform development. This validated, high-confidence design is the basis for digital signage products capable of servicing a large portion of the digital signage market.

Companies can quickly see the potential of implementing digital signage, and developers can easily create an immersive, interactive digital signage experience for customers wherever digital signs are installed, such as in retail stores, hotels, banks and hospitals. Digital signage solution providers can shorten their time to market by building on this reliable and standards-based development platform. The DSEK-12 allows signage developers to quickly focus on application software and content creation.



Digital Signage Evaluation Kit 12 (DSEK-12)

High Performance and Manageability

The DSEK-12 is configured with a 3rd generation Intel Core i5 or Intel Core i7 processor, allowing developers to scale performance to meet the demands of compute-intensive applications, like anonymous video analytics and multiple zone displays. DSEK-12 supports Intel® Active Management Technology (Intel® AMT) to further lower the total cost of ownership (TCO) for businesses. Intel AMT features robust out of band management and repair functions that work even if the Kontron OPS-compliant media player KOPS800 is powered-off or has a corrupted operating system, drivers or application software. Intel AMT also features keyboard-video-mouse (KVM) capabilities, which allow technicians to control the system as if they were sitting right in front of it.

Simpler, Faster Deployment

The DSEK-12 is Open Pluggable Specification (OPS) compliant, and OPS is an open standard Intel developed to simplify the device installation, usage, maintenance and upgrade of digital signage infrastructure. The OPS specification defines electrical, mechanical and thermal specifications for connecting together media players, displays, projectors and other products via an 80-pin JAE connector, which supports commonly used interfaces such as DisplayPort* and USB, among others. The overall objective is to enable digital signage manufacturers to deploy interchangeable systems faster and in higher volumes to help lower system integration, implementation, support and upgrade costs.

The hardware, pictured in Figure 1, consists of the Kontron OPS-compliant media player KOPS800 and an enclosure (i.e., docking station) that powers the media player and makes the I/O ports available to developers. Once software development is completed, designers can deploy the entire DSEK-12 (media player plus enclosure) or just the Kontron OPS-compliant media player KOPS800 (a fully deployable system), which fits into any OPS-compatible monitor. The Kontron OPS-compliant media player KOPS800 must be powered by either the enclosure or an OPS-compatible display.

Operating System and Development Tools

The DSEK-12 includes a 180-day evaluation version of the Microsoft Windows Embedded POSReady 7 operating system, a componentized version of Windows 7 that allows developers to build run-time OS images that are optimized for digital signage applications. The robust networking capabilities and interoperability of Microsoft Windows Embedded POSReady 7 make it easy to connect to other devices, servers and services. The DSEK-12 platform also supports Windows Embedded Standard 7 and Windows 7 Professional, 32/64-bit. In addition, developers can take advantage of the Image Configuration Editor, Image Builder Wizard and other embedded-enabling tools to accelerate prototyping and image development.

Pre-validated Evaluation Software

The DSEK-12 ships with 180-day trial software that can be used for creating content, managing and playing back content, and anonymous video analytics.

- **Flypaper Studio** is a cost effective software solution for generating high-quality Flash and video content for digital signage networks without custom programming, big budgets and long production schedules. It empowers digital signage agencies, vendors and customers to create, reuse, manage, publish and track content in signage networks.
- **Scala** is a leading provider of content management software and advertising management solutions, offering a platform for content creation, management and distribution in digital signage networks. The company's solutions are used in diverse applications such as retail advertising networks, corporate communications, digital menu boards and posters, among others.

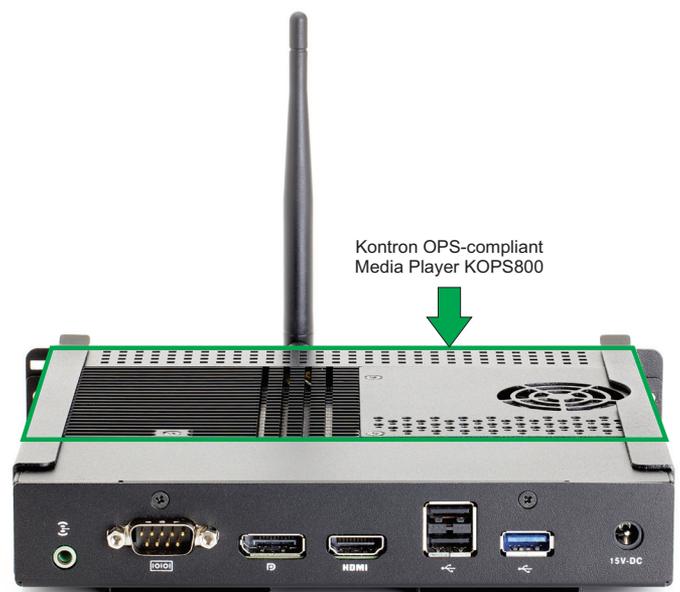


Figure 1. The DSEK-12 with the Kontron OPS-compliant Media Player KOPS800

- **Intel® Audience Impression Metrics Suite (Intel® AIM Suite)** software runs anonymous face detection algorithms to aggregate data on how many people looked at the advertising, how long they watched and their demographics,² as depicted in Figure 2. Combining viewing time and demographics information allows brands and retailers to tailor advertising content based on audience behavior and characteristics, helping to show the right message to the right people at the right time.

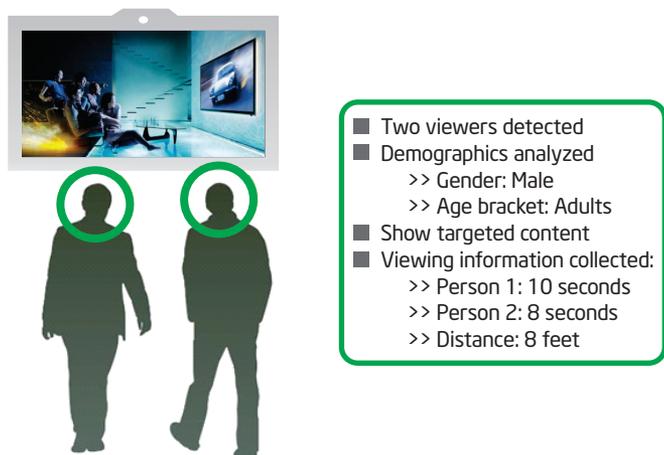


Figure 2. Example of Customer Demographic Information Gathered with Anonymous Viewer Analytics

Platform Benefits

This fully tested and validated platform provides the digital signage industry with a feature-rich, reliable and standards-based digital signage evaluation and development platform. It supports many connectivity options via PCI Express* and USB, has built in WiFi and Ethernet, and can interface to a large variety of external peripherals. The 3rd generation Intel® Core™ processor technology integrates multiple processor cores, memory controller and high-performance graphics engine onto a single silicon chip. The integrated graphics engine saves cost over installing a separate external graphics card and delivers exceptional graphics, high-definition video playback and 3D rendering.

Proven Track Record

Kontron, a global leader in embedded computing technology, provides long product longevity, local engineering and support, and value-added services, which help OEMs and system integrators to develop sustainable embedded solutions. Microsoft Windows Embedded products are covered by an industry-leading 10-year support program plus a product availability of 15 years. An active digital signage ecosystem community of industry-leading partners is available to support OEMs and ISVs through development. In addition to these developer benefits, the DSEK-12 platform provides many others, including those listed in Table 1.

Features	Benefits
Scalability	Solution providers can develop a wide range of signage designs, from entry-level to high-end, using technologies from Intel, Kontron and Microsoft.
Interoperability	Businesses can be confident media players based on Intel® architecture and the Windows platform will connect and integrate seamlessly with existing enterprise infrastructure.
Manageability	Intel® Active Management Technology (Intel® AMT) enables technicians to remotely manage, diagnose and repair systems even when they are powered down.
Energy Efficiency	Microsoft Windows Embedded POSReady 7 Operating System delivers smart power management APIs that aid developers building energy saving applications.
Graphics processing	Improved graphics performance using Windows 7 and Intel® processors with integrated graphics support multiple displays, rich media blending, multiple zones and large LCD displays.
Rich Media	Customers can deploy interactive solutions with panning and zoom, touch and gesture input to dramatically improve digital signage interaction.
Rapid Deployment	After programming, the Kontron OPS-compliant media player KOPS800 can be used as an external media player, or the OPS module can be removed and placed immediately into an OPS-compliant display.
Broad Applicability	The solution meets the requirements of a wide range of market segments, including retail, entertainment, education and health care.

Table 1. Digital Signage Evaluation Kit 12 Features and Benefits

Technical Information

Processor and Chipset	3rd generation Intel® Core™ processor, choice of: <ul style="list-style-type: none"> • Dual-core Intel® Core™ i5-3610ME processor at 2.7 GHz • Dual-core Intel® Core™ i7-3517UE processor at 1.7 GHz Mobile Intel® QM77 Express chipset with integrated graphics support
BIOS	UEFI Aptio*
System Memory	Dual channel DDR3-1600 up to 16GB non-ECC on BGA, 2 SO-DIMM Sockets
Graphics	Intel® HD Graphics 4000
Integrated Storage	80GB mSATA hard drive
Display Interfaces	<ul style="list-style-type: none"> • 2x HDMI/DVI • 1x Display Port (via the OPS connector)
Expansion mPCIe * slot	Expansion mPCIe slot
Audio	Audio Line-In/Line-out accessible on the front panel
Network	<ul style="list-style-type: none"> • Network RJ45 LAN connection on front panel • 10/100/1000 Ethernet
I/O	<ul style="list-style-type: none"> • 2x USB 2.0 ports and 1x USB 3.0 (rear panel) • 2x USB 3.0 ports (front panel) • 1x COM RX & TX only port (rear panel)
Additional Features	<ul style="list-style-type: none"> • Intel® vPro™ technology capable • Intel® Active Management Technology support • TPM 1.2, Watchdog, IR Remote (for system ON/OFF/RESET) • VESA 75 & 100 mounting compliant • Kensington* Lock Hole for mechanical security • Can be set to <22dB idle mode for reduced fan noise
Power and System Management	<ul style="list-style-type: none"> • 15VDC IN power supply • 1x Power and 1x Reset buttons accessible on the front panel • LED Function Indicator lights (1 each) on front panel for HDD, WiFi, and 3G (optional)
Input Voltage	15V to 19V DC input
Power Consumption	<ul style="list-style-type: none"> • 35W estimated max, based on TDP of Intel® Core™ i5-3610ME processor • 17W estimated max, based on TDP of Intel® Core™ i7-3517UE processor
Supported Operating Systems	<ul style="list-style-type: none"> • Windows Embedded Standard 7 SP1 • Windows Embedded POSReady 7 • Windows 7 Professional, 64-bit
Dimensions (WxHxD)	200 x 39.4 x 175mm (OPS compliant) with a matte-finish case
Weight	1.5kg (3.3lb)
Operating Temperature	Operating temperature 0°C - 45°C
Certification (Regulatory test reports available upon request)	<ul style="list-style-type: none"> • IEC 60950-1, Edition 2 • EN 55022 and FCC Part 15, Class A • EN 55024 • Safety, EMI, EMC, and RF including MPE and REACH compliant



Ordering Information

Part Number	Description
DSEK122715	DSEK-12 kit with the Intel® Core™ i5-3610ME processor (2.7 GHz, 35W) with fan
DSEK121717	DSEK-12 kit with the Intel® Core™ i7-3517UE processor (1.7 GHz, 17W) fanless

To order this kit, please visit:

Arrow® at http://ocs.arrow.com/brands_partners_kontron.html

Avnet® at <http://em.avnet.com/dsek12>

¹Intel® Active Management Technology (Intel® AMT) requires the platform to have an Intel AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. With regards to notebooks, Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating or powered off. For more information, see <http://www.intel.com/technology/manage/iamt>.

²Intel® Audience Impression Metrics Suite (Intel® AIM Suite) maintains total anonymity and complete respect for people's privacy as outlined in the 7 Foundational Principles of Privacy by Design. Sources: <http://www.ipc.on.ca/images/Resources/7foundationalprinciples.pdf>, <http://www.privacybydesign.ca>