

ADVANTECH EMBEDDED PLATFORMS



Windows Embedded Standard 7 Highlights:

- Fully componentized version of Windows 7 builds on global Windows Embedded pool of expertise
- Reduced time to market through use of familiar Windows development tools
- Required-modules-only approach results in minimal OS footprint
- Advantech utilities and software APIs simplify use and integration
- Industry standard connectivity simplifies development, deployment and management
- Next-gen features enable compelling user interface and media experiences
- Support of 64-bit hardware, high-end graphics, and optional multi-touch functionality
- "Green" smart power management for environmentally friendly solutions

Advantech and Windows Embedded Standard 7: Customize the Power and Innovation of Windows 7

As an experienced embedded platform and integration services provider, Advantech announces compatibility with the Windows[®] Embedded Standard 7 operating system for its latest embedded platform products. Windows Embedded Standard 7 (WES 7) is the componentized version of Windows 7, bringing Win32 and .NET compatibility and a wealth of powerful and innovative new features to embedded system developers.

Combined with the Embedded-Enabling Features (EEF) brought forward from Windows Embedded Standard 2009, WES 7 provides robust performance, significant interface enhancements, and excellent security for a broad range of differentiated devices.

The Advantech advantage comes in the form of a broad roster of embedded hardware platforms compatible with WES 7, as well as a growing set of unique utilities and software APIs to make WES 7 easy to use, manage and integrate. For developers and system integrators, this means a powerful set of advanced hardware and software technologies for the design and rapid delivery of solid, optimized platforms offering innovation, performance, and a superior user experience.

Advantech Hardware Platforms Supporting Windows Embedded 7

Advantech's latest state-of-the-art embedded platform series containing Intel[®] Core[™] i3, i5 and i7 processors as well as power-efficient Intel Atom processors are all compatible with Microsoft[®] Windows Embedded Standard 7.

High performance Intel Core i7-based solutions are available in COM-Express Basic, Mini-ITX, ATX and Slot SBC form factors, with some of them also available with Core i5 and Core i3 processors. In addition, Windows Embedded Standard 7 is supported in a variety of EPIC and COM-Express Basic and Compact boards using Intel Core Duo and Core 2 Duo processors.

For cost-optimized projects providing targeted performance and maximum power efficiency, Advantech offers embedded hardware platforms on the Intel Atom N450 and D510 processors. Currently available form

factors are COM-Ultra, COM-Express Compact, ETX 3.0, PC/104, 3.5-inch SBC, EBX, and Mini-ITX. Windows Embedded Standard 7 is also supported on a number of Atom N270-based platforms, including COM-Express Basic and Compact, ETX, 3.5inch SBC, and Mini-ITX.

New Opportunities With WES 7

Unlike prior Microsoft embedded operating systems, WES 7 is well suited to fulfilling the requirements for advanced digital signage, multimedia kiosk, and gaming applications. With uniform driver configuration and Windows Touch, WES 7 can provide easy touchscreen integration, saving developers time and resources in creating a variety of devices for vertical market applications.





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WES 7 Features

- Enhanced Write Filter provides protection of volumes from writes
- File Based Write Filter File level protection
- USB Boot including VHD boot and SD boot
- Custom Shells allows visual customization and shell branding
- HORM "Hibernate Once Resume Many" to return to same hibernated image
- Dialog Filter can be used to manage and/or block message boxes
- RDP 7.0 Remote Desktop Protocol with enhanced remote desktop services
- Feature Sets additional sets can be installed on image after build
- **Internet Explorer 8** browser, engine and foundation

Minimal Ramp-Up — uses most of the familiar Windows tools

Choice of SKUs — default WS7E SKU or extended WS7P SKU with additional features (Branch Cache, BitLocker, Tablet PC, DirectAccess, multitouch)

For more information:

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Standard Operating System vs. Embedded Operating System

Why use an embedded operating system when Microsoft already offers the comprehensive and very popular Windows 7? Because general purpose operating systems such as Windows 7 (and Windows Vista and Windows XP before it) are just that, general purpose. You can do anything you want with them, and run anything on them. With that in mind, Microsoft equipped Windows 7 with all the drivers and software and utilities one could possibly need. The result is a large operating system with numerous processes and services running all the time, all consuming memory and power.

An embedded operating system is totally different. The idea is to only use what you need to perform a certain task and leave everything else behind. This greatly reduces the size of the operating system and dramatically reduces hardware requirements. Windows Embedded Standard 7 can be used for smart, connected and service-oriented commercial, industrial and consumer devices that do not need all of Windows 7, yet can still run thousands of existing Windows applications. An embedded OS with a bootable kernel may require only a fraction of the space and power of a general purpose OS, yet does everything needed for the job.

Building blocks — Windows Embedded Standard 7 is not one-size-fits all. Instead, a developer or system integrator can determine exactly what a device is for and what it should be able to do. They then select the components needed and nothing more, making for a lean, purposeful, reliable platform. There are many thousands of components available in over 150 different feature sets and over 500 driver packages, making it easy to create lean, nimble embedded OS platforms that perform sophisticated high level tasks including the latest desktop technology innovations, seamless connectivity, advanced enterprise and embedded features, as well as rich interactive user experiences with advanced functionality.

Performance and customization — This latest version of Windows Embedded also provides shorter boot times, improved response, better security, reduced power consumption, and advanced features such as location awareness, biometric access controls, and easy deployment to off-the-shelf hardware. Developers will appreciate the new ability to customize an image after it has been built on a device. Image deployment can be remotely, via media boot, or via System Center Configuration Manager.

Advantech Value-Added — Advantech has extensive experience with embedded operating systems. We can provide preconfigured Windows Embedded Standard 7 OS images with sets of unique utilities as well as value-added images suitable for any targeted vertical market application. Our value-added embedded software services also include the Secure and Unified Smart Interface (SUSI) for quick and easy hardware platform and OSindependent system control.

