

from Device to Enterprise



User's Guide

Embedded Windows System

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About this manual

Congratulations on your purchase of Embedded Windows System!

This document focuses on EWS from a user's perspective and explains all its features, how to setup, operate and manage the device.

Organisation of the documentation

Installation

Installation Guide Hardware Platform 10 (FCHWP10IG)

Bundles information related to the hardware, such as the installation of the device, IP networking, serial interface details and technical specifications.

Employment

User's Guide (EWSSWUG)

Explains how EWS is used in your application development, and documents all its features.

Warning

Before using this device, make sure you have read the Installation Guide also.

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1. Overview of EWS

1.1 Introduction

The EWS1700 is a compact but powerful embedded controller. Everything is on board for a full Windows computer. And the EWS1700 is so cheap you can effort to give your applications their dedicated computer systems.

The ethernet port supports a connection with your network or even the internet. And the I/O ports, like the RS232 (or the optional RS485) port enables you to link sensors, devices or other external equipment.

The EWS1700 doesn't contain a mechanical harddisk. Instead it has an electronic harddisk (4GB) allowing the system to operate faster and more reliable.

The EWS1700 is designed for low energy use. As a result it can work day and night for you. The system even operates without fan. So no dust and no noise!

To provide you with start software a Windows XP embedded distribution is included.

1.2 Key features

The EWS has the following main features:

- complete: both hardware and (Windows) software.
- silent
- low power consumption
- reliable

2. Specifications

Windows Embedded Standard, or Win XPe, is the componentized version of Microsoft Windows XP Professional and the successor to Windows NT 4.0 Embedded. Win XPe is based on the same binaries as Win XP Professional, but Win XPe is marketed towards developers for OEMs, ISVs and IHVs that want the full Win32 API support of Windows but without the overhead of Win XP Professional. It runs existing Windows applications and device drivers off-the-shelf.

Win XPe is not related to Windows CE. Win CE does not have the Win32 APIs Win XPe has (although CE has an API that is similar to the Win32 API). Win XPe will run most of the tens of thousands of drivers and WIN32 API based Windows applications that already exist.

2.1 User accounts

EWS has got 2 user accounts by default:

Username: *Administrator*

Password: *EWSadmin*

Username: *Guest*

Password: *guest*

Note that this account must be enabled before it can be used.

You can create additional user accounts by yourself.

2.2 Language support

The default language of EWS is English (UK). Other languages can be requested by CER International BV.

The *Regional Options (Numbers, Currency, Time and Date)* can be changed from the *Control Panel*.

2.3 Update

Windows XP Embedded can NOT be updated directly from the Windows Update site.

The Windows Update site has no knowledge of Embedded as an OS platform, therefore there is no built-in logic to assess what features (and files) are present on the runtime. This means that Windows Update would blindly push down all security updates that were not already present on the runtime, whether they were appropriate or not.

More information on this subject can be found at

<http://blogs.msdn.com/embedded/archive/2007/04/04/why-can-t-i-use-windows-update-with-xpe.aspx>

3. Quick Start

3.1 Log in using monitor and keyboard

- Connect a monitor to the VGA connector of your EWS
- Connect a keyboard to the USB connector of your EWS
- Log in using a username / password of your EWS

3.2 Installing Applications

Windows applications can be installed on the EWS, but the system is not intended to be used for desktop applications.

4. Windows® Embedded Standard

4.1 What is Windows® Embedded Standard ?

Windows Embedded Standard (previously called Windows XP embedded) is the componentized version of the leading desktop operating system, enabling rapid development of the most reliable and full-featured connected devices.

Based on the same binaries as Windows XP Professional, Windows XP Embedded enables embedded developers to individually select only the rich features they need for customized, reduced-footprint embedded devices.

Building upon the proven code base of Windows 2000, Windows XP Embedded delivers industry-leading reliability, security, and performance along with the latest multimedia Web browsing capabilities, and device support.

Windows XP Embedded also incorporates the latest embedded-enabling capabilities such as headless support and flexible boot and storage options.

Windows(R) XP Embedded is already installed, you just have to download your application!

4.2 Windows® Embedded Standard license issues

The use of the Windows Embedded Standard (=Windows XP Embedded) is subject to your acceptance of the terms of the end user license agreement with Microsoft. Windows applications can be installed on the EWS, but the license is not for desktop applications. The Windows XP Embedded product may be used in your product under one of the following license options.

* By purchasing a device from CER with the operating systems pre-installed onto a compactflash card, CER can supply Windows XP Embedded license.

The Microsoft OEM Customer License Agreement signed by CER states that CER must supply the Windows XP Embedded software pre-installed onto your device and that the license label is attached to the back side of the device.

* if you prefer to use the Windows XP Embedded operating system image by CER and purchase the Windows XP Embedded license directly from your local Microsoft distributor, you must sign an OEM Customer License Agreement which is supplied by your local Microsoft distributor. In this situation you are responsible for installing the operating system and applying the license labels.

* if you intend to build your own version of the operating systems and then purchase Windows XP Embedded licenses, you must purchase a copy of the authoring tools Windows Embedded Studio. Please contact your local Microsoft distributor for detailed info.

4.3 Differences between Windows® Embedded Standard and Windows® XP Professional

Microsoft® Windows® Embedded Standard is a componentized version of the Microsoft® Windows® XP Professional operating system that brings the rich feature set of Windows XP Professional to embedded devices. However, there are some differences between Windows Embedded Standard and Windows XP Professional. The major difference is that Windows Embedded Standard is engineered specifically to support embedded devices

and their manufacturers.

For more info, read: <http://www.cer.com/support/diffxpe.pdf>

This white paper describes Windows XP Embedded solutions for common embedded scenarios, and describes Windows XP Professional features that Windows XP Embedded does not include.

4.4 Modify Windows® Embedded Standard component setup

Microsoft® Windows® Embedded Standard (= Windows® XP Embedded) is a componentized version of the Microsoft® Windows® XP Professional operating system. The selection of basic components has been done by CER. Some additional components can be installed using *Control Panel > Add/Remove Programs > Add/Remove Windows Components*.

4.5 End User License Agreement (EULA)

This device is supplied with a licensed copy of Windows XP Embedded. A license must be purchased for all devices that use this software.

By using this device you have accepted the terms set out in the End User License Agreement (EULA).

In all cases you must include a copy (printed or electronic) of the End User License Agreement (EULA). If you are not the end user you must supply a copy of the EULA to your customer and make it clear that they accept the terms of the agreement. The EULA must be distributed along the supply chain to the end user. It is the responsibility of suppliers to make the terms of the EULA clear to the customer. Refer to <http://msdn.microsoft.com/embedded/howtobuy/default.aspx>

The OEM Customer License Agreement and End User License Agreement for the Windows XP Embedded product identify the application restrictions and limitation of distribution and liability.

Windows XP Embedded Runtimes are not intended for use in all environments.

Restricted environments include, but are not limited to, those that require fail-safe performance and/or those in which a malfunction of the operating system may result in foreseeable risk of injury of death to the operator of the device or system or to others.

An "Embedded Application" means industry or task-specific software programs and/or functionality that provide the primary functionality of the device and which offer significant functionality in addition to Windows XP Embedded. You must check these before using the product.

4.6 Brandlabeling

In the normal situation the Windows XP Embedded operating system image has been created using a unique CER PID (issued by Microsoft) and is configured to run on the EWS single board computer. CER will supply a Windows XP Embedded license label (COA).

If you brandlabel the EWS1700 devices, CER can install your operating system image under

the terms of a Microsoft Third Party Installer agreement. You purchase the Windows XP Embedded license labels (COA) from any approved Windows Embedded distributor and apply these to your product. Please contact CER for detailed info regarding brandlabel services.

If you prefer, you create your own operating system image (using your own PID) and install this onto your selected media. You purchase the Windows XP Embedded license label (COA) directly from any approved Windows Embedded distributor.

For creating your own operating system image a complete tool set, called Windows Embedded Studio, is available which enables developers to rapidly configure, build, and deploy smart designs.

The Windows XP embedded development kit includes a copy of Microsoft Windows Embedded Studio (includes Target Designer, Component Designer etc.) to allow you to create a new (120 day time limited) operating system image for evaluation purposes only.

To create a new production release copy of the operating system, you will need a licensed copy of Windows Embedded Studio - please contact any approved Windows Embedded distributor.

4.7 Design services

If you need to optimize the operating system image, CER offers the technical expertise of a dedicated Windows Embedded Development team to work with you, either to enhance the features of the operating system or reduce the footprint to save storage space. CER has a track record of helping a wide range of industrial and OEM customers to develop and integrate new drivers and achieve the very best from Windows XP Embedded.

Notice to the user

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