



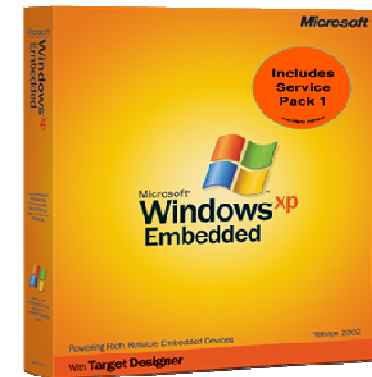
Microsoft® Windows® Embedded XP Overview

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What Is Windows XP Embedded?

- Componentized version of Windows XP Pro
 - Based on the same binaries as Windows XP Professional
 - Choose only features and services you need
- Additional embedded-enabling features
 - Enable a broad range of devices to utilize rich Windows XP Professional features
- Powerful Authoring tools
 - Streamline the end-to-end embedded device development process
 - Leverage familiar application development tools



Comparison of Windows Embedded OS's



Optimized for devices other than personal computers

User Scenarios

Best choice for personal computer usage

High developer flexibility

Flexibility

High end-user flexibility

Reduce image size using components

Footprint

Monolithic image

With 3rd party extensions

Device-specific Functionality

Native

Sold through OEM; priced lower than Professional

Distribution and Pricing

Sold through OEM and retail

What People Are Building Today

Retail Point of Sale

Thin Clients

Gateway/Media Store

Set-Top Box



Network Devices



Kiosk/ATM



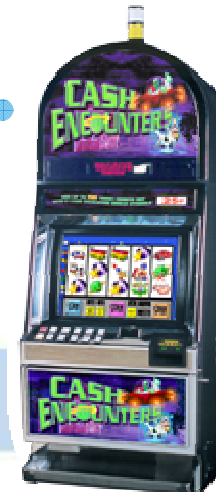
Office Automation



Industrial Automation



Game Platforms



Powerful

Rapid

Reliable

Componentized Windows XP Pro

- Full binary compatibility
- Over 10,000 individually selectable OS features, services and drivers
- Customized, reduced footprint OS

Latest multimedia and browsing

- Windows Media Player
- DirectX
- Internet Explorer

Powerful

Rapid

Reliable

Strong Networking Support

- **USB 2.0, IEEE 1394, 802.1x, IrDA, UPnP, IPv6, RDP, many more**

Advanced Power Management

- **Advanced Configuration Power Interface (ACPI) v2.0**
- **Advanced Power Management (APM)**

Powerful

Rapid

Reliable

Multiple Boot/Storage Options

- **Boot: Floppy, PXE, ROM/RAM, EWF**
- **Storage: Flash, HDD**
- **Headless operation**

Powerful

Rapid

Reliable

Deployment and Management

- Remote Boot
- System Deployment Image
- Device Update Agent
- WinPE

Flexible Localization

- Multilingual User Interface (MUI) packs

Powerful

Rapid

Reliable

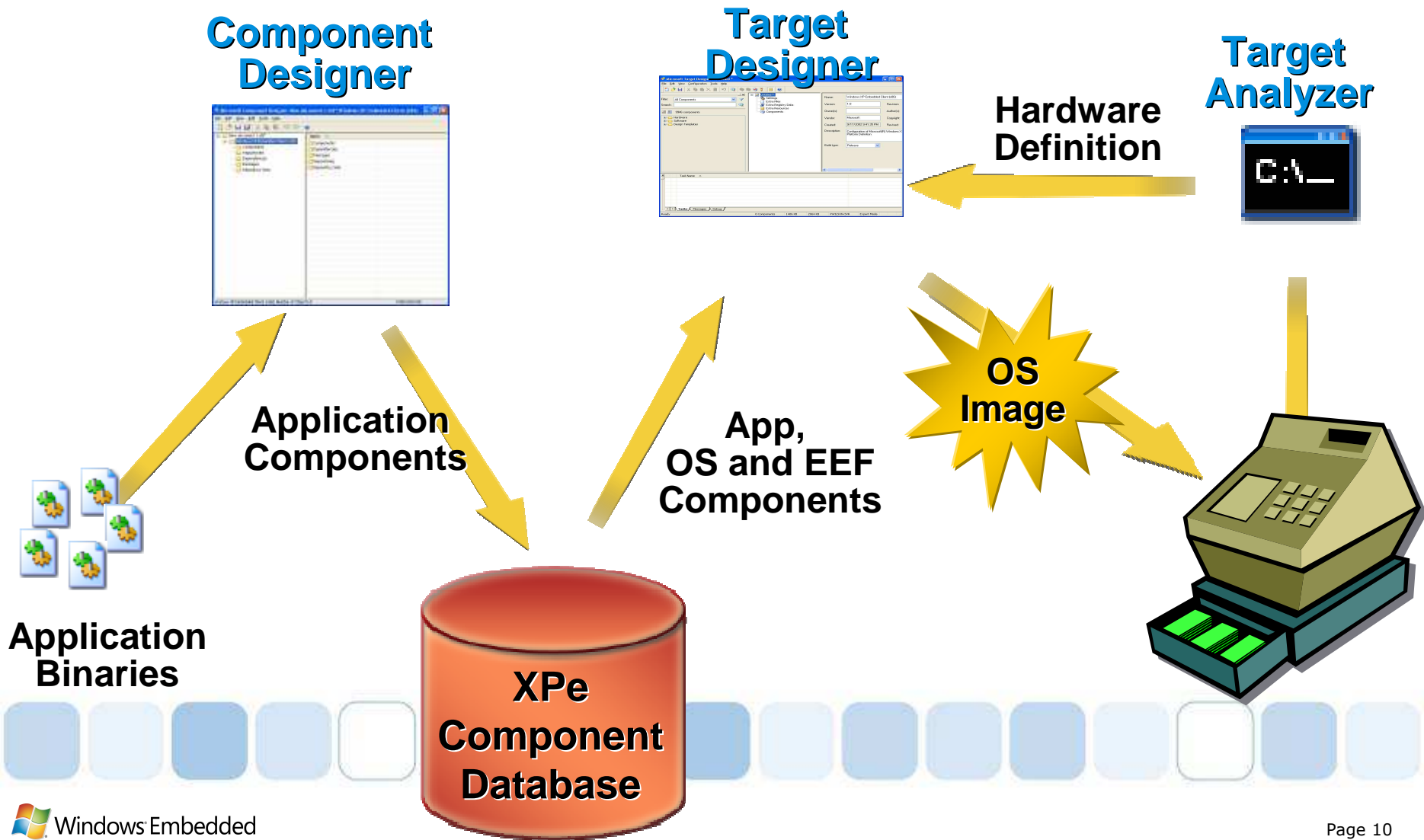
Use PC Hardware and Software

- Full Win32 API support
- Over 9,000 Windows device drivers

Streamline Development

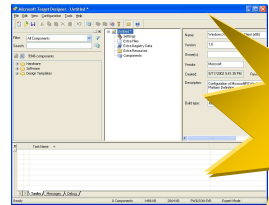
- Leverage desktop expertise
- Fast design starts
- Efficient, managed workflow
- High performance build environment

XPe Development Overview



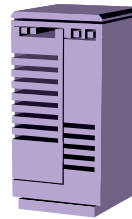
XPe Deployment Overview

Target Designer



OS Image

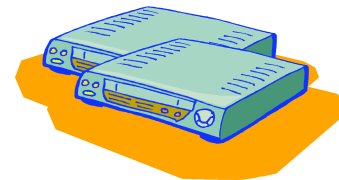
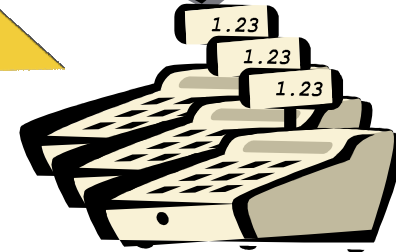
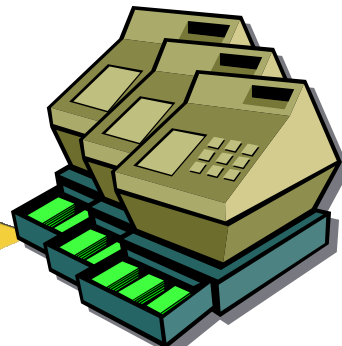
SDI Image



Remote Install

Remote Boot

Clone and Reseal



Powerful

Rapid

Reliable

Robust

- 32-bit computing architecture
- Fully-protected memory model
- Device driver rollback
- Driver signing

Embedded stability

- Reduced surface area
- Closed-case designs

Powerful

Rapid

Reliable

Secure

- Encrypted file system and NTFS
- Internet Protocol Security (IPSec)
- Smart Card Support
- Kerberos Authentication protocol
- Credential Manager
- Internet Firewall

Windows Embedded for Point of Service

- **A standard, retail-optimized OS platform for retail Point of Service devices**
 - **Only POS platform to provide Plug-n-Play support for peripherals**
 - **Based on Windows XP Embedded with Service Pack 2**
 - **Reduced OS footprint**
 - **Available during first half of 2005 from Windows Embedded OEM partners**
- **First of a series of retail-focused investments from Microsoft that will continue through “Longhorn”**

Windows Embedded For Point of Service

- **Componentized version of XP Professional**
 - **Over 10,000 components to flexibly build a customized device**
 - **Embedded-specific features enable wide range of boot, storage, deployment, and manageability options**
- **WEPOS is based on XP Embedded SP2**
 - **But....**
 - **Microsoft has selected the components as has done the build.**
 - **This includes:**
 - **IE, IIS, Multilanguage, additional driver support, Management options, Windows Media Player**
- **You do not need Target designer to deploy WEPOS**
- **Minimal footprint: ~250 MB**
- **Minimal memory footprint 64MB**

Introducing XP Professional for Embedded Systems

- **Same product as XP Pro but different licensing**
 - **Only for Embedded Systems (not for use in general purpose devices)**
 - **no Microsoft user interface components and/or screens are displayed to the end user**

When to use XP Pro with ER instead of XPe?

- **Higher runtime cost is not an issue**
- **OS activation is not an issue**
- **Embedded specific features not needed (headless/CF/minimize footprint etc)**
- **OK to boot into app, no Windows UI needed**
- **OS design often changing**
- **No time to learn about XPe/Toolkit**
- **Windows Update for QFEs is what the OEM/end-customer wants**
- **Third party app compatibility**

Microsoft OS Comparison

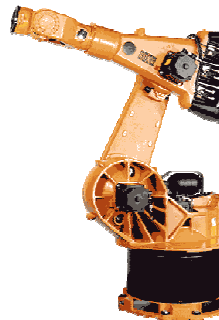
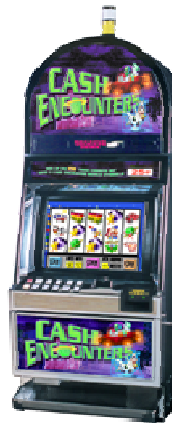
User Scenarios



Mobile and Smaller footprint , fully-customized single-function embedded devices



Fully-customized single function embedded device



Fixed function systems with an embedded application



Fixed function systems with an embedded application



Choosing A Windows Platform



User Scenarios

Mobile and Smaller footprint , fully-customized single-function embedded devices

Fully-customized, single function embedded devices

Best choice for Point-of-Service devices

Fixed function systems with an embedded application

Setup

Windows CE Platform Builder toolkit

Windows Embedded Studio – Target Designer

Installation CD

Installation CD

Application Install

Application Install before OS deployment

Application Install before OS deployment

Application Install before or after OS deployment

Application Install before OS deployment

Distribution

Windows Embedded OEMs

Windows Embedded OEMs

Windows Embedded OEMs

Windows Embedded OEMs

