

Windows[®] Embedded Compact 7

Componentized Embedded Systems Platform

Overview

The easy-to-use Digi JumpStart Kit[®] for Microsoft[®] Windows Embedded Compact 7 allows immediate product development using the familiar platform, technologies, and toolset provided by Windows Embedded Compact 7.

It combines the feature-rich selection of the Windows Embedded high-level software components and applications with complete out-of-box support for Digi module platforms. This enables customers to bring powerful and innovative products to market at a fraction of the time needed when compared to other operating system and hardware platforms.

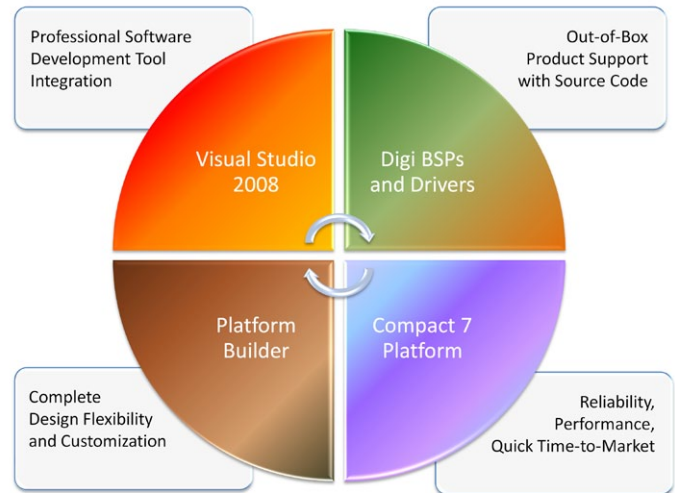
Digi Support for Windows Embedded Compact 7

Microsoft Windows Embedded Compact 7 is the evolution of Windows Embedded CE. It provides optimized support for the capabilities of today's high-performance embedded systems and integrates new technologies for the next generation of connected healthcare and industrial solutions with entirely seamless enterprise integration.

Windows Embedded Compact 7 offers a number of key performance improvements (CPU, kernel, storage), support for up to 3 GB of physical memory (RAM), new network connectivity features (NDIS 6.1, DLNA, MTP), advanced user interface design options (IE 7 for Embedded with pan/zoom, Adobe Flash 10.1, Silverlight for Embedded 3.0, multi-touch gestures) and Platform Builder 7 integration with Visual Studio 2008 and Expression Blend v3 development tools.

The native, performance-optimized support for modern ARM processor architectures (ARMv7, NEON, VFP) also makes Windows Embedded Compact 7 the ideal choice for product designs built on the ConnectCore[™] for i.MX51/i.MX53 modules.

Digi is a Windows Embedded Gold Partner and offers complete technical support for all hardware and software components, effectively eliminating inefficient and time-consuming interactions with multiple vendors. Working with a single, competent partner dramatically reduces your overall design risk and keeps your product development schedule on track.



Features/Benefits

Fully integrated and optimized support for Digi hardware platforms

Feature-complete and scalable Windows Embedded Compact 7 architecture

Microsoft IP indemnification and long-term product commitment

Evaluation licenses for Compact 7, Visual Studio 2008 and Expression Blend included

Digi is the single point of contact for hardware and software support

- No additional porting effort for Digi target platform support required
- Source code of Digi BSP components and U-Boot bootloader included
- Proven, performance-optimized platform for next-generation devices/products
- Complete set of production-quality software components accelerate time-to-market
- Reduced litigation risk through unlimited legal protection for intellectual property
- Extended 10-year support lifecycle and 15-year availability
- Fully functional out-of-box embedded product design solution with small up-front investment
- Eliminates time-consuming and inefficient interaction with multiple vendors

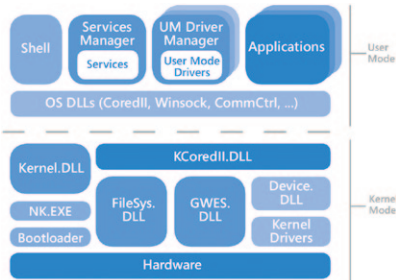


www.digiembedded.com



Features

- ARM architecture support
 - ARMv5, ARMv6, ARMv7
 - Vector Floating Point (VFPv3)
- Kernel
 - Multi-threaded, preemptive kernel
 - Max 32,000 simultaneous processes
 - Up to 3 GB of physical memory
 - Max 2 GB virtual memory address space per process
 - Address Space Randomization (ASR)
 - Randomizes load address of DLLs
 - Increases security by making addresses non-deterministic
 - Data Execution Prevention (DEP)
 - Prevents code from executing out of data pages



- Silverlight for Embedded 3.0
 - Improved performance (vs. 2.0)
 - Expression Blend 3 support
 - Perspective transform
 - Pixel shaders
 - Bitmap caching
 - Writable bitmap
 - Sample XAML skins
 - Internet Explorer for Embedded
 - Media player
 - Home screen
- Internet Explorer for Embedded
 - Based on IE 7 with performance updates
 - Adobe Flash 10.1 renderer included
 - Gestures (pinch-to-zoom, swipe-to-pan)
 - Improved rendering and gesture response performance
- New connectivity features
 - NDIS 6.1
 - DLNA 1.5 (Renderer/Server/Controller)
 - MTP (USB, TCP/IP)
 - Kerberos 5.0
 - NT LAN Manager v2.0
- Fully componentized platform
 - 500 KB minimum footprint
 - Over 700 selectable software components through Platform Builder for Compact 7: End-user applications, applications and services development, communication services and networking, core OS services, device management, file systems and data storage, fonts, graphics and multimedia, international support, internet client services, security, shell and user interface

Peripherals/Drivers

- Ethernet (single/dual)
- 802.11a/b/g/n WLAN
- VPU/GPU (2D/3D)
 - Hardware video codec integration
- IPU
 - Single/dual-screen support
 - Extended desktop, cloning
- Monitor/panel support
 - CRT: ADI® ADV7125 (VGA), ADI AD9389B (HDMI)
 - TFT: Sharp® LQ050W1LAXX, LQ070Y3DG3B, LQ072K1LAXX, LQ104V1DG62, LQ106K1LA05, LQ121K1LG52
 - Customer-specific displays
- Touch Screen
 - TI™ ADS7843, Internal
- Camera
 - Single/dual operation
- Peripherals
 - UART, SPI, I²C, ADC, PWM, CAN, 1-Wire
 - USB (OTG, Host, Device)
 - GPIO (processor and external expander)
 - Power Management IC (PMIC)
 - Freescale MC13892, Dialog DA9053
 - Accelerometer
 - Freescale MA7455L
- Storage
 - PATA, SATA, SD/MMC, USB
- Timers, Watchdog, RTC
- NAND flash
 - Stream interface driver
 - Flash file system

Note: Interface/peripheral availability depending on capabilities of actual target platform (module).

Boot Loader

- U-Boot
 - Boot support for flash, SD/SDHC, USB memory stick, Ethernet
 - Custom boot splash screen
 - Robust NVRAM system configuration storage with redundant image support
 - Fusebox (eFuses) configuration
 - Flash partitioning command option
 - Digi command extensions
 - Full build environment included user/application-specific customization

Visual Studio 2008

- Platform Builder 7 integration (add-in)
- Code editor with IntelliSense® code completion and code snippet support
- .NET Compact Framework and native code development support
- Microsoft Visual Basic®, Microsoft Visual C#®, Microsoft Visual C++® and Microsoft Visual J#®
- XSD and XSLT editing and debugging
- Advanced debugging tools

WLAN Security

- WEP (Wired Equivalent Privacy)
 - 64/128-bit encryption
 - RC4
 - Open System Authentication
 - Shared Key Authentication
- WPA/WPA2/802.11i
 - 128-bit encryption
 - TKIP/CCMP (AES)
 - Enterprise mode (802.1X)
 - EAP-TLS, PEAP/TLS, PEAP/MS-CHAPv2, EAP-MD5 CHAP
 - Pre-shared key mode (PSK)

iDigi® Device Cloud™

- Digi for Windows Embedded Compact 7 provides full support for the iDigi Device Cloud. Visit www.idigi.com for more information.

User Documentation

- Quick start guide
- Online welcome guide
- User's guide
- Building your first application
- Hardware reference manuals
- U-Boot reference manual

Microsoft Runtime Licensing

- Per-unit license starting at US\$3
- Tiered volume discounts available
- Licenses available through Windows Embedded Authorized Distributor
- Digi offers delivery option for pre-licensed hardware

Target Connectivity

- Image Download
 - Platform Builder
 - Ethernet (TFTP)
 - Digi TFTP Server software provided
 - USB (Memory Stick), SD
- Debugging
 - Via Ethernet through Visual Studio 2005

Supported Hardware Platforms

- ConnectCore™ for i.MX51
- ConnectCore™ for i.MX53

