

Microsoft® .NET Micro Framework 2.5

Rapid development of embedded networking applications

Overview

Microsoft .NET Micro Framework greatly simplifies the traditionally complex task of embedded software development. Complete integration with the Visual Studio tools makes rapid development instantly accessible to software designers that are already familiar with server and desktop application development on existing Microsoft platforms.

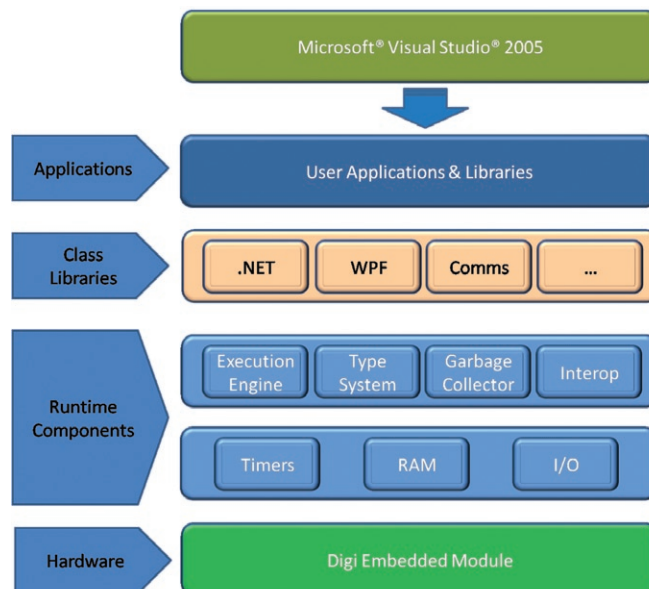
About Microsoft .NET Micro Framework

Built on the .NET foundation and optimized for use in small intelligent devices, .NET Micro Framework combines the reliability and efficiency offered by a .NET enabled managed code environment, the strength of the C# programming language, and the professional Microsoft Visual Studio 2005 tools. Sharing existing .NET code across multiple product lines and platforms results in a shortened development cycle and significantly improved productivity.

With its small memory footprint, specific focus on critical features, and Digi's exclusive support for Ethernet network connectivity, .NET Micro Framework is the ideal choice for smaller network-connected devices utilizing Digi embedded modules in applications that do not rely on the advanced capabilities of a Real-Time Operating System (RTOS) or advanced operating system environments such as Microsoft Windows® Embedded CE or Linux®.

The Digi JumpStart Kit® for Microsoft .NET Micro Framework provides an easy-to-use and complete solution for embedded development. The kit includes a Digi embedded module, development board with power supply, sample code and user documentation. The included Microsoft .NET Micro Framework SDK and the fully functional 90-day trial of Microsoft Visual Studio 2005 allows professional embedded C# development right out of the box.

Digi offers complete technical support for all hardware and software components, effectively eliminating the often inefficient and time-consuming interaction 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

Complete and royalty-free embedded development solution

Built on .NET foundation and Visual Studio 2005 tools

Managed code environment with C# language support

Digi-exclusive support for Ethernet networking

90-day evaluation license for Visual Studio 2005 included

Digi is the single source for complete hardware and software support

- Rapid embedded product development for network-connected devices right out of the box
- Productivity improvements through existing software and tools know-how
- Robust platform for embedded applications based on .NET programming model
- Built-in support for secure and reliable network connectivity
- Fully functional development environment without significant investment
- Eliminates time-consuming and inefficient interaction with multiple vendors



www.digiembedded.com



General

- Reliable and efficient C# managed code application environment
 - Small memory footprint of about 300 KB
 - Full managed-code development
 - Serial (UART) support
 - With Digi extensions for data/stop/parity bit and handshake control
 - GPIO interface support
 - Watchdog timer support
 - Platform-specific driver classes
- ConnectCore 9P 9215
- PWM, SPI, RTC, I2C, ADC
 - Power management
 - Low-power mode
 - Sleep/Hibernate
 - Display support (WPF)
 - Gray-scale LCD
 - Epson S1D13700 controller
 - Crystalfontz CFAG320240CX-TFH-T display, or others
 - TFT LCD
- Coming soon. Please contact us for information.
- Optimized Garbage Collection
 - Persistent storage (flash) support
 - Time-sliced thread management
 - Extended timer support
 - Application control and deployment
 - Key-signed application images
 - Ethernet-based deployment (MFDeploy)
 - Digi bootloader extensions with serial recovery option

Visit the MSDN website for more information about the Microsoft .NET Micro Framework:
<http://msdn.microsoft.com/embedded/netmf>

Networking

- Digi IPv4 TCP/IP stack
 - ARP, ICMP, IGMP, DNS, DHCP, TCP, UDP
 - Static, dynamic (DHCP), or Auto-IP base address assignment

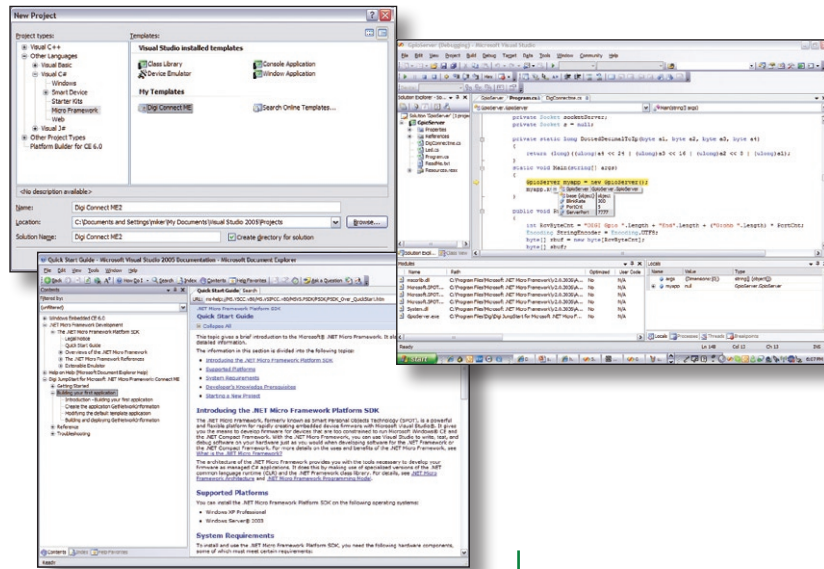
Security

- Application image signing and key management
- Data encryption and decryption services
 - Strong RSA-based asymmetric encryption
 - Symmetric XTEA encryption in CBC mode with ciphertext stealing

Visual Studio 2005

- Code editor with IntelliSense® code completion and code snippet support
- Comprehensive online help
- Advanced debugging tools

Visit the following website for more information about the Microsoft Visual Studio 2005 products:
<http://www.microsoft.com/vstudio>



Class Library Namespaces

- Dpws.Client
- Dpws.Client.Discovery
- Dpws.Client.Eventing
- Dpws.Client.Transport
- Dpws.Device
- Dpws.Device.Services
- Microsoft.SPOT
- Microsoft.SPOT.Cryptography
- Microsoft.SPOT.Hardware
- Microsoft.SPOT.Input
- Microsoft.SPOT.Net.NetworkInformation
- Microsoft.SPOT.Presentation
- Microsoft.SPOT.Presentation.Controls
- Microsoft.SPOT.Presentation.Media
- Microsoft.SPOT.Presentation.Shapes
- System
- System.Collections
- System.Diagnostics
- System.Ext
- System.Ext.Collections
- System.Ext.IO
- System.Ext.Net
- System.Ext.Net.Sockets
- System.Ext.Text
- System.Ext.Xml
- System.Globalization
- System.IO
- System.Net
- System.Net.Sockets
- System.Reflection
- System.Resources
- System.Runtime.CompilerServices
- System.Runtime.InteropServices
- System.Runtime.Remoting
- System.Text
- System.Threading
- System.Xml
- Ws.Services
- Ws.Services.Faults
- Ws.Services.Mtom
- Ws.Services.Soap
- Ws.Services.Transport
- Ws.Services.Transport.HTTP
- Ws.Services.Transport.UDP
- Ws.Services.Utilities
- Ws.Services.WsaAddressing
- Ws.Services.Xml

Sample Code

- A2dConverter
- BlinkLeds
- Buttons
- GetNetworkInformation
- GpioClient
- GpioServer
- I2C
- InterruptPortEdge
- InterruptPortLevel
- InterruptPortTest
- LCD
- MulticastEcho
- PowerSave
- PwmTest
- RTC
- SerialTests
- SpiTest

Additional standard .NET Micro Framework samples provided by Microsoft included.

User Documentation

- Getting started guide
- Hardware reference manuals
 - Technical reference information for Digi modules
- Online help integrated in Visual Studio
 - Digi JumpStart Kit for Microsoft .NET Micro Framework
 - Microsoft .NET Micro Framework

Supported Hardware Platforms

- Digi Connect ME®
- Digi Connect ME® 9210
- ConnectCore™ 9P 9215

Microsoft
.net Micro Framework

