Quick Start Guide | WibuKey

■ **Installation**

■ **Use**

■ **Distribution**

WIBU
SYSTEMS

... the ultimate copy protection and Digital Rights Management (DRM) system. This Quick Start Guide explains the WibuKey concept, and how to apply WibuKey within a few minutes.

More detailed information about WibuKey you find in the WibuKey Developer Guide.

This tutorial takes you step-by-step through the process of installing the system, protecting your software, and preparing for distributing your application. Moreover, you get a quick overview on how to program the WibuBox hardware and use the WibuKey Control Panel Applet.

Installation

To install WibuKey, insert the CD into your CD-ROM drive. The WibuKey CD menu will load automatically (otherwise run "CDStart.exe" from the root directory of the CD).

Now choose your language and click the button "WibuKey SDK". This installs the WibuKey Development Kit on your PC automatically including the WibuKey Runtime. In addition, you are able to install the source code of programming

WibuKey SDK
CD-Installation

examples by clicking the button "WibuKey Samples".

The last step is to connect the Wibu-Box/U+ or the WibuBox/RU+ to any available USB port on the PC.

Please always use the latest software version, and check our website for available updates (www.wibu.com).

The WibuKey Protection Kit contains:
■ WibuKey Developer Guide
■ WibuBox hardware (single WibuBox /U+ or /RU+)
■ WibuKey CD
■ Quick Start Guide

Getting started

WibuKey software protection is based on encryption and decryption. The WibuBox hardware provides this feature depending on entries you program into the WibuBox.

The WibuBox included in your Development Kit enables you to program entries using the evaluation Firm Code of 10.

Note: Find installation packages for the operating systems Linux and Mac OS in separate installation directories on the CD-ROM.
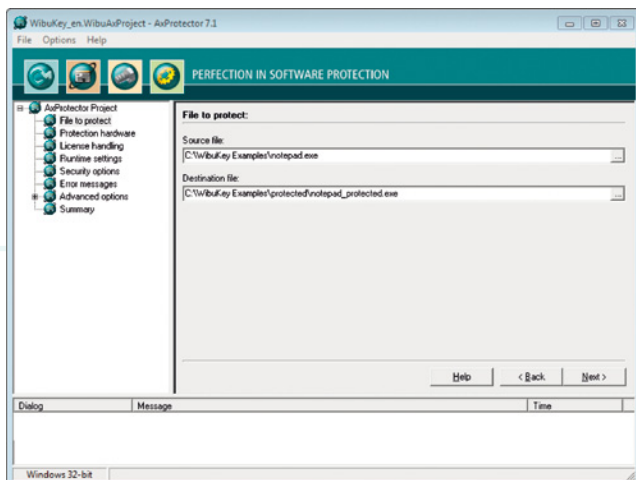
Protecting a Windows Program

AxProtecor

The starting point for our short tutorial is the AxProtector. You quickly, easily and safely protect your compiled application (*.exe, *.dll) by using this automatic encryption tool.

The tool is available as GUI or as commandline version.

After selecting the project type "Project for Windows 32-bit", in AxProtector you specify the application you want to protect.

In our example, we will use the Windows editor (notepad.exe) located in the Windows root directory. We copy ths file to the seperate directory "C:\ WibuKey Samples" we previously create.

Type in the file name directly, or use the "…" button to select the application. But feel free to use also your own application for this first test.

The best way to save the destination file is to choose an alternative directory different to the source directory. AxProtector automatically recommends the subdirectory "…\ protected\". Next, change the name of the destination file, in this examp-
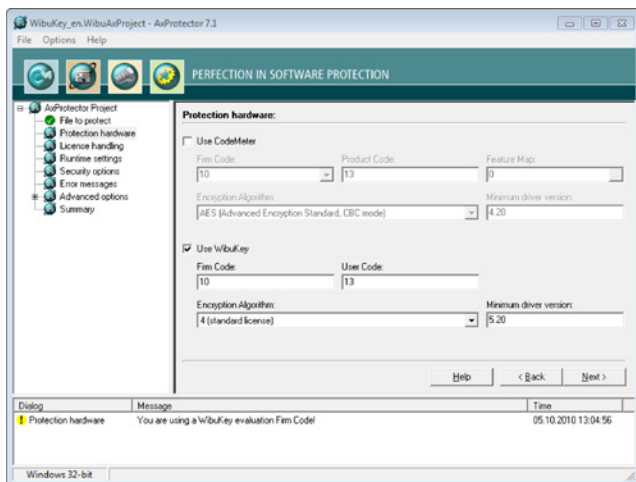
AxProtector –
Select the
hardware

le to "notepad_protected.exe". Now close the "File to protect" dialog and continue by pressing the "Next >" button.

In the next dialog you are asked to specify the protection hardware to be used. AxProtector supports both product lines CodeMeter and Wibu-Key. Please check "WibuKey". In our tutorial, we use an evaluation Firm Code of 10, and a User Code of 13.

The Firm Code 10 is assigned by default. Next, type 13 for the User Code in the respective field.

The WibuBox shipped with your Development Kit already holds the matching entries.

Now, step-by-step, follow through all subsequent dialogs, and use the suggested defaults.

Detailed information on the individual options you find in the WibuKey Developer Guide and the AxProtector help file.

Note: For all other settings in this exercise, please use the default values.

AxProtector –
Security options
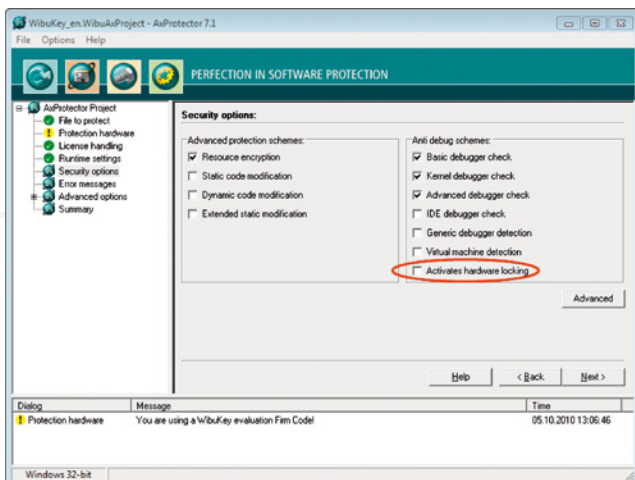
In our short tutorial, we will protect the Windows editor so that the protected application will only start, when a WibuBox with the matching entries is connected to the local computer.

When selecting the "Runtime check" option in "Runtime settings", your application checks every 30 seconds for a connected valid WibuBox.

In "Security options" you specify the protection methods, and whether, for example, the hardware is locked in the case a hacker attack is detected.

Please deactivate the option "activates hardware locking". This option deactivates the decrement of an Limit Counter which then is no longer available for other operations.

Note: You can anytime move back to previous selections. In the last dialog you are also able to manually start the encryption by pressing the button "Protect now!".
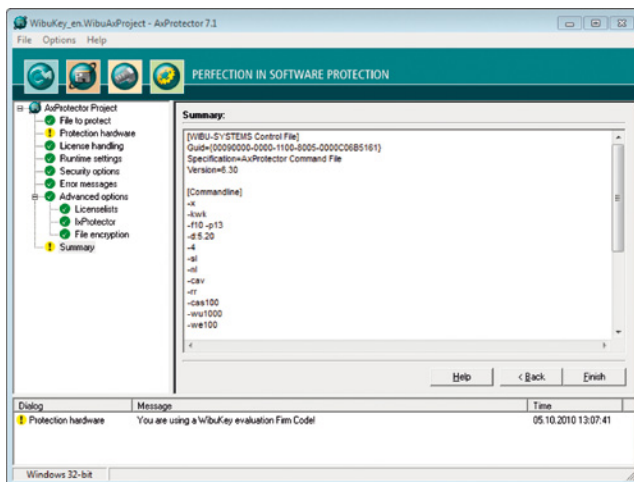
AxProtector –
Summary of all
settings

In "Error messages" you define error handling. When selecting "User Message Dll", automatically all required files are copied to the destination directory. Using an *.ini file you are able to customize error message texts and the logo meeting your requests.

In the "Advanced options" dialog you check the "Activate IxProtector" box to configure the use of the Software Protection API. This API allows protecting separate modules of your application using different licenses.

In our test with an application not using this API, a configuration is not required.

The final dialog shows you a summary of all settings. Start the encryption process by pressing the button "Finish".

Now your application is protected. You can only start it with a connected WibuBox holding a matching entry.

Note: There are many more features available, that are not mentioned in this Quick Start Guide. For detailed information about these features, please refer to the included manual.

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License Entry and Encryption

When you program a license entry into a WibuBox, it consists of a Firm Code and a User Code. The Firm Code you receive by Wibu-Systems, the User Code you are able to choose for yourself.

A WibuKey Firm Security Box (FSB) guarantees that only you can program a WibuBox with your Firm Code.

Every license entry represents a set of secret keys that can be used to protect your software. This means, your software can only be decrypted and executed, when the WibuBox holds the matching Firm Code and User Code.

WibuKey is available in a standard version including 10 Firm Code / User Code entries and in a Lite version holding a single Firm Code / User Code entry.

Each license entry may have additional different but combinable licensing options:

- Limit Counters decremented on use and checked at runtime allows, for example, pay-per-use licenses

- Expiration Dates allow time-limited licenses (demo and test versions)
- Master Entries and matching User Codes support the release of, for example, different versions of the same software (downgrade licenses)

Note: There are many more license options, that are not mentioned in this Quick Start Guide. For detailed information about these features, please refer to the included manual.

WibuKey Control Panel Applet

The Applet accessible by the System Control Panel has been designed for the software developer and the user of an application protected by WibuKey.

By default, it displays WibuBoxes connected locally to the PC or on a network, network settings for the client (local PC), installed drivers, and version information.

In an Advanced Mode also WibuBox license remote updates are featured allowing to program, modify or delete the complete content and options of a license by file transfer.

Network Monitor

The Network Monitor represents the tool to manage WibuKey in a network environment.

Here you check access on WibuKey Servers on a network (number of user accesses, access time, time of last access), delete user access rights, and see internal status information of the network server process and of the kernel driver on accessing WibuBoxes.

WibuKey Server

For starting a protected application the WibuBox does not need to be inevitably connected to a local computer. You are also able to connect one or several WibuBoxes to a network server, so-called WibuKey Server.

Protected applications then use licenses on the WibuKey Server. The integrated license management ensures that applications can be used only according to matching licenses in the WibuBoxes. This even works in
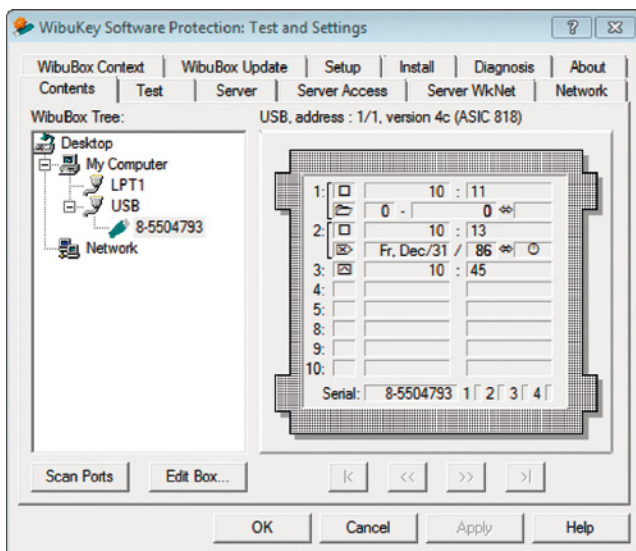
WibuKey
Control Panel
Applet

WIBU
SYSTEMS

heterogeneous networks consisting of Windows, Linux or Mac OS.

The communication between clients and WibuKey Server is based on the TCP/IP protocol. The communication components are easy to install on the clients and the servers and support almost all local WibuBox functions, including remote programming of WibuBoxes via TCP/IP.

WkCrypt

A command line tool that can be used for programming, e.g. using a batch file to simultaneously program several WibuBoxes.
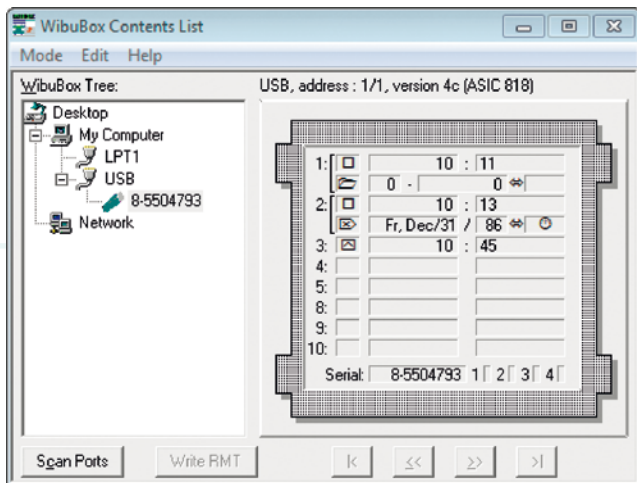
Note: To program a license entry into a WibuBox a special WibuBox, the Firm Security Box (FSB), is needed. For programming with the Evaluation-Firm Code10 no FSB is necessary.
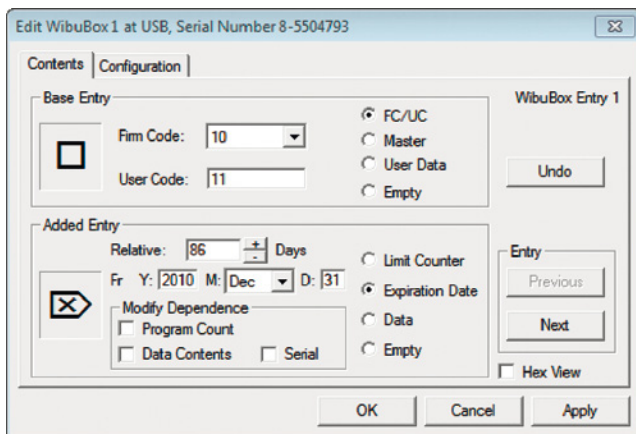
Programming of License Entries

WibuBox Programming

Now, we will have a brief look at the options for programming license entries into a WibuBox

WibuKey
WkList 32

WibuKey
Programming

WkList32

Start WkList32 to see a tree of ports on the local machine and for optional WibuKey network server. On the right, you view the contents of the selected WibuBox. Each entry is displayed with an icon that identifies the type of entry and the actual data stored in that entry.

Double-click on an entry to change the entry. The upper half shows the basic entry. For the first 5 Firm / User Code or Master entries you are able to specify an additional entry in the lower half. This entry may hold data, a Limit Counter, or an Expiration Date. Using the WibuBox/R allows only a single entry as basic entry however not as Master entry.

Try to change entries, add or change Limit Counters or Expiration Dates and see what happens when you run your protected application.

Note: There are many more features available, that are not mentioned in this Quick Start Guide. For detailed information about these features, please refer to the included manual.

COM-API

An ActiveX-based extension of the WibuKey programming interface allowing to implement the license management from within your own application.

Integrating WibuKey

The automatic protection with AxProtector as described above presents only one option to integrate WibuKey as license management system.

Alternatively, or best of all, you should use the WibuKey application programming interfaces for programmers.

Interfaces for Programmers

The ideal supplement to automatic encryption is provided with the WIBU Universal Protection Interface (WUPI). The Software Protection API allows you to implement license operations, when your program procedures require it.

For example, you are able to assign additional licenses for modules, or query further details, such as the status of a Limit Counter.

In the case WUPI options do not cover all of your requirements, you can simply fall back to the Classic API (C-API), and, for example, individually encrypt contents.

Benefits and Application Scenarios

The explicit implementation of the Software Protection API or the Classic API offers a variety of options:

■ Realize modular protection by assigning and checking separate User Codes. Use the Master entries to simulate licenses of several User Codes with only one entry. This way you can realize even extensive licenses.

■ Use an additional Limit Counter, for your software modules you then count down at runtime using different values. Realize a fine-grained pricing model for your software functions.

■ Provide demo versions to prospective customers running with limited functions. Or activate additional modules for existing customers as time-limited demo versions.

■ In time-critical real-time applications simply implement WibuKey in parts of the software that are not time-critical.

The Alternative - Implementing in own Projects

When explicitly implementing the APIs, it is you who determines efficiency and effectiveness of the license management!

A good place to start – The WibuKey Samples

With the menue item "WibuKey Samples" in the autorun menue of your WibuKey-CD-ROM you can install samples for different programming languages.

Find the help file of the samples for different programming languages at "Start | Programs | WibuKey | Development-Kit | Documents | Samples Overview & Help" and read the help file "WibuKey Samples" in the "Start | Programs" directory of the Development Kit.

Distributing your protected application

Distributing your protected application is also very easy. You duplicate your protected application just as you did before it was protected. You include a properly configured WibuBox, and the WibuKey Runtime Kit which can be copied from the WibuKey CD-ROM.

This installs all the necessary WibuKey software and drivers for whichever operating system your customer is using. If you want, you can also integrate this driver installation functionality into your own setup program. More information about this can be found in the manual.

> **Note:** There are many more features available, that are not mentioned in this Quick Start Guide. For detailed information about these features, please refer to the included manual.

You have already seen how easily and quickly you can implement copy protection with WibuKey, but there are many more features which can be used.

The User's Guide contains information about all of the different options for automatic encryption, WibuBox programming, and distributing drivers and protected programs.

A good place to start – The WibuKey Samples

Different WibuBoxes

WibuBox/P+
parallel Port (LPT)
10 Entries
16 kByte Memory

WibuBox/RP+
parallel Port (LPT)
1 Entry
16 kByte Memory

WibuBox/U+
USB Port
10 Entries
16 kByte Memory

WibuBox/RU+
USB Port
1 Entry
16 kByte Memory

WibuBox/M+
PC Card Port (PCMCIA)
10 Entries
16 kByte Memory

WibuBox/ST
serial Port (RS-232)
10 Entries

Operating systems	Form Factors			
	/P(+) /RP(+)	/U(+) /RU(+)	/M(+)	/ST
Windows 98 / Me / 2000 / XP / Server 2003 / Vista / Windows 7 / Server 2008	x	x	x	x
Windows 95 / NT4	x		x	x
Mac OS 8 / 9 / X		x		
LINUX	x	x		x
UNIX-Derivates				x

Support and Consulting
You need support? Free support is available via Internet, e-mail, and telephone.

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**WIBU
SYSTEMS**

No ordinary Copy Protection System

WibuKey represents a complete and efficient Software Management System in a single small device.

WibuKey also features the use of older interfaces and the integration into any operating system. In particular, the serial version can be addressed by almost any operating system or in-house development sending ASCII characters

WibuKey stands for data encryption, software protection, license management on a network, software metering, pay-per-use, software leasing, expiration dates, and secure remote programming.

- Built-in network support
- Windows 98 / Me / 2000 / XP / 2003 / Vista / 2008 / 7, Mac OS X, Linux, Cross-Plattform API.
- Protection of applications or modules with a single WibuBox.
- Automatic detection of Wibu-Boxes across ports at runtime
- Wibu-Systems is certified according to DIN EN ISO 9001:2008

Wibu-Systems is DIN EN ISO 9001:2008 certified and member of BITKOM e.V., VDMA PCMCIA, SD Card Association, USB Implementers Forum, SIIA and others, and Microsoft Gold Certified and Embedded Partner.

When companies like SONY, Kodak, Motorola and Siemens think of software security and DRM (Digital Rights Management) for documents and media, they think of Wibu-Systems. These companies demand reliable and distinctive security solutions and recognize that a company, focused on DRM technologies since 1989, a company that consistently wins industry awards, and a company that is looking to the next threat instead of patching for the last one; is a company to do business with.

Wibu-Systems wants to provide "Perfection in Protection" for all our DRM products; elevate the level of customer service and increase the level of respect we show our own suppliers. And finally, help prepare the next generation of business leaders by investing in education and directly supporting youth activities.