Benefits

Unmatched Protection

The highest level of protection against piracy available, includes public key cryptography and 128-bit AES encryption

Secure Time-Based Licensing

Sentinel V-Clock™ also prevents time tampering without added costs

Rapid Deployment

Business Layer API™ framework reduces implementation time by up to 60% or more, providing most secure implementation possible

Trusted Distribution

Securely control and regulate your distribution channels with Distributor Keys

Quickly Added Protection

Sentinel Shell enhances overall security by adding multiple layers to thwart hacking attempts. The Shell also compresses the code and includes protection against debuggers, making reverse engineering even more difficult.

Sentinel Hardware Keys

The Most Secure Hardware Token in The World

Protect Against Piracy

Over 35 million applications worldwide are protected by SafeNet hardware keys. Sentinel has been setting the standard for software protection since 1984 and secures more clients worldwide than any other key.

Secure Communications

Sentinel Hardware Keys are the most secure hardware token available in the world. Both public key cryptography and 128-bit AES encryption are used to secure communications between the key and the protected application. Middle layer attacks such as record and playback, and driver emulation are effectively stopped. A unique encryption key is used for every communication session between the application and the hardware token, making brute force attacks virtually impossible. In addition, the keys include internal authentication, which effectively prevents cloning of the keys.

Speed Implementation — Business Layer APIs™

The best implementation of any protection scheme should include complete integration into your application through APIs. By using Sentinel Business Layer APIs, you can obtain the highest level of security and control over sophisticated license designs without spending time on lower level programming. Business Layer APIs are pre-configured, higher level APIs for popular license models such as subscription, evaluation and pay-per-use. These tools typically reduce the programming time required to secure a new application by up to 60% or more compared to other hardware key solutions. Reducing and simplifying the required programming steps also improves implementation quality and security.

Simplify Updates and Activation

Sentinel APIs also include Logical Addressing which allows developers to add or change implementations without being concerned about specific memory address usage. This greatly speeds development time as well as reducing risk of error from overwriting information in memory cells.

With Sentinel Hardware Keys, you can also program multiple keys at once and customize license models at the production stage. License configuration can be altered without requiring further development changes. Sentinel technology allows ISVs to send updates to keys in the field in a secure, controlled manner. Updates are sent using the same high level of security as communications between the hardware token and the software application.

Quickly Add Protection — Sentinel Shell

The Sentinel Shell offers a way to quickly add protection to your application without requiring any alteration to the source code. When used in conjunction with API level integrations, the Shell enhances overall security by adding multiple layers to thwart hacking attempts. The Sentinel Shell compresses the code in order to reduce total application size to make reverse engineering even more difficult. Additionally, the Shell prevents memory dumping and includes protection against debuggers. With the Sentinel Shell, you can embed licensing and protect your application in minutes, even if you don't have access to source code.

SafeNet
The Foundation of Information Security

Implement Time-Based Licensing — Sentinel V-Clock™

The Sentinel Hardware Key V-Clock allows you to reliably and securely offer time-based license models such as trial, demo or subscription. The V-Clock checks and stores the system time in the Hardware Key, then checks repeatedly to verify consistency. If the system time ever differs significantly from the last known date and time, the application can be disabled or run in a restricted mode. Sentinel V-Clock comes standard with Sentinel Keys and requires no on-board battery, effectively preventing time tampering without added costs.

Secure Your Distribution Channels — Sentinel Distributor Keys™

Sentinel Hardware Keys allow you to carefully control and regulate your distribution channels through the use of Distributor Keys. You can assign and securely embed encryption keys during the manufacturing process in order to control the creation of licenses through your channels. Distributor Keys can enforce limits such as a maximum number of licenses or the creation of trial versions only. Sentinel Hardware Keys allow you to secure each link in your distribution chain.

Protect Multiple Applications

Sentinel Hardware Keys allow you to protect multiple applications with a single token. With Sentinel multi-tasking technology, unique independent sessions are employed simultaneously for each application all while maintaining the same high level of security and without any degradation in performance. You can even add protection for additional applications at a later date without altering the existing security structure.

Advanced Memory Management

Sentinel Hardware Keys V-Cell technology optimizes memory availability, so that developers can easily and flexibly access all available memory on the token to store data and secure applications. Advanced mirroring technology ensures an exceptionally high level of reliability by self-correcting any errors in communication to the key.

Multiple Development Environments and Platforms

Sentinel provides you with the ability to protect applications created in numerous development environments. Sample code for the most popular environments is also provided, such as Microsoft Visual C++, Microsoft Visual Basic and Microsoft .NET to get you started on custom applications. With Sentinel you can support your application on multiple operating platforms with a single development effort, further reducing development time and cost.

License Across Networks

The network version of Sentinel Hardware Keys protects client-server applications and provides server monitoring to track license usage on the network. Sentinel Keys empower network administrators to cancel licenses in order to redistribute among users or revoke idle licenses. This provides administrators with the ability to control optimal license use across the enterprise.

Obtain Superior Technical Support

The SafeNet Technical Services organization provides worldwide telephone, email and Internet-based support to our customers. Our *SafeNet Service Pledge* ensures that you consistently receive the highest level of service. The *Sentinel Integration Center* provides online resources to assist your development staff through the implementation process.

Technical Specifications

Minimum System Requirements
- Pentium II or above (450 MHz or above)
- VGA Monitor with 1024 x 768 resolution (1152 x 868 recommended)
- Windows NT (network clients only), 2K, 2K3, XP, 98 (only client), ME (only client)
- 70 MB free hard disk space
- 128MB RAM (256 MB recommended)
- Java 2 Runtime Environment version 1.5
- Internet Explorer 5.0 or higher
- Adobe Reader 4.0 or higher

Supported Compilers
- Microsoft Visual C++
- Microsoft Visual Basic
- Microsoft Visual C#.NET
- Microsoft Visual Basic .NET
- Borland C
- Borland C++ Builder
- Borland Delphi (5.0, 6.0, 7.0)
- Java (1.4, 1.5)
- AutoCAD (14, 2000, 2004, 2005)

Supported Networks
- TCP/IP
- IPX
- NetBEUI
- HTTP (only for License Monitoring tool)

Certifications
- Windows Hardware Quality Labs certified for Windows 2003 and Windows XP (32-bit)

Operating Systems
Windows
- NT (network clients only)
- 2000
- 2003
- XP
- 98 (Client Only)
- ME (Client Only)

Corporate: 4690 Millennium Drive, Belcamp, Maryland 21017 USA
Tel: **+1 410.931.7500** or 800.533.3958 **email:** *info@safenet-inc.com*

www.safenet-inc.com

Brazil +55 11 4208 7700
Canada +1 613.723.5077
China +86 10 885 19191
Finland +358 20 500 7800
France +33 1 41 43 29 00
Germany +49 18 03 72 46 26 9
Hong Kong +852.3157.7111
India +91 11 26917538

Japan +81 45 640 5733
Korea +82 31 705 8212
Mexico +52 55 5575 1441
Netherlands +31 73 658 1900
Singapore +65 6297 6196
Taiwan +886 2 27353736
UK +44 1276 608 000
U.S. (Massachusetts)
+1 978.539.4800

U.S. (Minnesota)
+1 952.890.6850
U.S. (New Jersey)
+1 201.333.3400
U.S. (Virginia) +1 703.279.4500
U.S. (Irvine, California)
+1 949.450.7300
U.S. (San Jose, California)
+1 408.452.7651

U.S. (Torrance, California)
+1 310.533.8100

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