SafeNet
The Foundation of Information Security

SentinelDOG®

Software Protection, Licensing, and Management

PRODUCT BRIEF

***SentinelDog* is a software rights management solution that protects software vendors from unauthorized use or distribution of their products. *SentinelDog* are hardware tokens which, when attached to a computer or network, monitor and enforce the licensing of protected applications.**

SentinelDog

MicroDog is a flexible, programmable and intelligent software protection solution for PC applications. It contains a microprocessor and a 200-byte nonvolatile memory and supports cascading. It adopts AS technology, and can be widely used in PC applications.

SoftDog is the most cost-effective protection solution for PC applications. It adopts DERNT technology and contains a 100-byte nonvolatile memory.

GrandDog is a flexible, programmable and intelligent software protection solution for PC applications. It contains a microprocessor and a nonvolatile memory (maybe 1K, 7K, 31K, 63K) and supports self-defined algorithm. It adopts AS technology, and can be widely used in PC applications.

Technologies

- License management: Flexible license management and distribution processing, the software developers may control the execution period of software, times to be started and the usage of different modules for each customer. At the same time, it's easy and quick to upgrade the license.
- Virtual Machine: The protected piece of code is executed in a virtual machine based on Smart card chip. The code is encrypted with the software.
- DERNT (Data Exchange Random Noise Technology): The proprietary technology disables all logical analyzers and various capturing kits. It makes secured transmission and obstructs all potential hackers.
- Maze Technology: Many jumping instructions that are included at the points of entry and exit in programs dynamically change the order of executing applications to improve the anti-tracing ability.

Outstanding Manufacturing Facilities

- COB is employed and the IC chip couldn't be replaced.
- Ultra-sonic welding machine enables the plastic cover firm and reliable.
- With the integrated design and reasonable structure, the USB port can endure as many as ten thousand times of plug in and out operations.
- Customized logo and mark are acceptable to be printed on the Dog cover.
- A variety of colors of cover are available.

Common Features

- Hardware Dog cannot be duplicated
- EEPROM memory for developer use
- One and above serial numbers for each customer
- The Shell protection provides protection for EXE/DLL files, which can be executed only with presence of the Hardware Dog
- More than 30 compilers are supported with OBJ interfaces and source codes of examples are provided
- Multi-module and remote upgrade are supported
- Timer is built-in the Hardware Dog, which enhances anti-tracing. Tracing may lead to unpredicted result
- In full compliance with IEEE-1284, USB1.1, ISO-7816, PC/SC standard and compatible with all peripherals

Commitment

- Hardware failure rate is lower than 0.1%
- One year guarantee for defective products

Certification

- ISO 9001 Certified
- FCC and CE Certification
- RoHS Compliance

MicroDog

MicroDog is a flexible, programmable and intelligent software protection solution for PC applications. It contains a microprocessor and a 200-byte nonvolatile memory and supports cascade. It adopts AS technology, and can be widely used in PC applications.

Features and Benefits

MicroDog SDK can run in the operating systems such as Windows 9X/Me/NT/2000/XP/Server 2003/Vista/Windows7, and Linux can support most programming languages and development tools. If you need to use USB Dog on Windows NT 4.0, please contact us for technical support. The MicroDog SDK has the following features.

- ***Protection Algorithm***
  The Software developer may select his own algorithms by defining the bytes for algorithm and algorithm descriptors flexibly. Hardware Dogs contain a 200-bytes nonvolatile memory. You can use Developer's tool or API functions to program the memory. The bytes for defining descriptor are from 196^{th} to 198^{th} and that of algorithm is 199^{th}. So there are 256 different algorithms could be selected, algorithmic descriptor has 24-bits, the variations could be over 4000 mega by changing both the bytes for algorithm and algorithmic descriptor.

- ***Microprocessor***

  Hardware Dog contains a microprocessor. The physical program cannot be read or changed. This helps guarantee Hardware Dog cannot be duplicated illegally.

- ***DERNT***

  Data Exchange Random Noise Technology enables Hardware Dog to effectively resist possible cracking from hardware or software debuggers such as a Logic Analyzer.

- ***Maze Technology***

  Maze technology will effectively change the executive order of the programs to enhance UMH SDK's anti-tracing ability.

- ***Timer***

  Hardware Dog contains a timer. This timer defines the maximum time that all operations may take to access the Dog. Normal operations will not exceed the time limit, but operations tracing the data in Hardware Dog usually will. If this happens, the Dog will return error values.

- ***AS Technology***

  MicroDog SDK adopts the AS technology (the combination of API calls and Shell Protection) in its protection procedures. AS technology, in addition to inserting API calls into your program for protection, provides a shell protection tool (for executable files) to add one more level of protection (called "shell") to your program. The two levels of protection are correlated in shell protection. The API calls in your program will not be functional without the correlated "shell." In other words, if the hacker decrypts the "shell," the API calls in the program will not work correctly, and the cracking cannot continue.

- ***Anti-sharing***

  Hardware Dog contains an anti-sharing device for parallel ports. It is up to you to decide whether to share Parallel Dog or not.

- ***Password***

  You can set a 32-bit password in Hardware Dog. Without the correct password, data in memory cannot be read or written.

- ***Memory***

  200-byte nonvolatile memory for developers to store important data. The data can be read or written with API functions or DogEditor.

- ***Manufacture code***

  A Hardware Dog has a unique Manufacture code that is sequential in the assembly line. Manufacture code can be used to distinguish each Hardware Dog. The Manufacture code of Parallel Dog and USB Dog, or Hardware Dog with same Serial Number may be different.

- ***Cascade performance***

  You may cascade multiple Hardware Dog or other software protection hardware keys with different Serial Numbers to achieve more reliable security. Win32 modules support Parallel Dog cascade performance rather.

- ***The Improved Security Engine II***

  *D*eveloped independently, which integrates the latest cryptology and the advanced algorithm; it will promote the anti-cracked capability of software.

How Does MicroDog SDK Work?

Applications manage Parallel Dog or USB Dog with API functions. Hardware Dog responds to this operation and returns values to applications. Applications verify the returned values and act accordingly.

Minimum System Requirements

Pentium II or above (450 MHz or above)
VGA Monitor with 024 x
768 resolution (1152 x 868recommended)
280 MB free hard disk space
128MB RAM (256 MB recommended)
Java 2 Runtime Environment version 1.6
Internet Explorer 5.0 or higher
Adobe Reader 4.0 or higher

Operating System

Windows 98SE /ME
Windows 2000/XP (32-bit and x64)
Windows Server 2003 (32-bit and x64)
Windows Vista (32-bit and x64)
Windows Server 2008 (32-bit and x64)
Windows 7
Linux

Supported Compilers

Parallel Dog:

DOS16: C , C++, FORTRAN, ASM, Pascal, BASIC (BASCOM, Quick,True, Turbo) , FOXPRO, Clipper, Foxbase, Dbase, EXE/COM

DOS32: C, C++ (High, NDP, Watcom), FORTRAN (NDP, PowerStation,Watcom) , EXP

Win16: C, C++ (Borland, Visual), Visual BASIC, FOXPRO, PowerBuilder,Delphi

Win32: C, C++ (Visual, Borland, C++Builder, MFC), FORTRAN (LAHEY,PowerStation, Visual), Java, VisualBasic, VisualFoxpro, PowerBuilder,Delphi,JavaScript, VBScript, VBA, InstallShield, AutoCAD, .NET

Linux: C, C++, Java

USB Dog:

Win32: C, C++ (Visual, Borland, C++Builder, MFC), FORTRAN (LAHEY, PowerStation, Visual), Java, VisualBasic, VisualFoxpro, PowerBuilder, Delphi , JavaScript, VBScript, VBA, InstallShield, AutoCAD, .NET.

Linux: gcc/C, C++, Java, Kylix

SafeNet Asia Limited
Email: info.apac@safenet-inc.com
Website: http://www.safenet-inc.com