![SafeNet logo]

![Sentinel — Software Monetization Solutions logo]

Sentinel HASP® HL

PRODUCT BRIEF

Features & Benefits:

- Unmatched Protection Against Software Piracy
- Strong Intellectual Property Protection
- Secure & Flexible Licensing
- Award-winning Quality & Performance

The World's Most Secure Software Protection Hardware Token Sentinel

HASP® Overview

SafeNet's Sentinel HASP integrated software licensing and security solution enables software publishers to grow their business through software protection, IP protection and secure licensing. Through its role-based tools and by combining hardware- and software-based protection into one solution, Sentinel HASP grants decision-makers the flexibility to choose the level of protection and licensing that best fits their business needs. Sentinel HASP hardware-based protection employs the Sentinel HASP® HL family of keys which offer the highest level of protection available.

Sentinel HASP® HL

Sentinel HASP HL is the hardware-based protection and licensing component of Sentinel HASP. Sentinel HASP HL comes in both USB and ExpressCard form factors that protect software against piracy and illegal copying by allowing access and execution of the protected software only when the key is connected to the computer. The product is then able to establish a secure communications channel for each communication session between the highly secure, impenetrable AES 128-bit encryption engine on the Sentinel HASP HL Key and the application.

Unmatched Protection Against Software Piracy

Strong copy protection guarantees publishers get paid for every software copy. On-chip 128-bit AES encryption ensures a robust link between the application and the hardware key.

Powerful protection against hacker attacks. A secure communication channel between the HASP HL key and the application offers powerful resistance to "man-in-the-middle" and brute force attacks.

A secure, non PC-dependent external storage device. Stores licenses, passwords, strings, and application dependent data in either protected read/write memory or ROM.

Strong Intellectual Property Protection

Prevents industrial espionage to maintain competitive advantage. HASP Envelope automatically wraps files to provide anti-reverse engineering code obfuscation with and file encryption to protect valuable algorithms and trade secrets.

Secure & Flexible Licensing

Sentinel HASP HL protection keys support the following licensing models:

- **Perpetual** - Once purchased the software can be used indefinitely.

- **Feature-Based** - Enable or disable product features based on the user's needs and budget.

- **Pay-Per-Use** - Employ HASP memory counters to charge users for the number of sessions or the number of features they use.

- **Network Concurrency** - Allow multiple sessions in a network environment.

- **Time-Based** - Enable subscription or rental of software for a specific time period.

- **Custom Licenses** - Flexibility to create complex licenses models to best suit business needs using counters, secure memory and unique ID.

- **Tamper-proof licenses** - Unique LicenseOnChip™ technology embedded in each HASP protection key ensures software licenses are protected by hardware.

- **Remote updates** - A powerful Remote Update System (RUS) sends encrypted and RSA signed license terms to users — ensuring secure updates of protection keys in the field. UpdateOnChip™ technology embedded in every key ensures that the key authenticates all updates of data and license extensions.

Sentinel HASP HL Hardware-Based Protection Keys	Basic	Pro	Max	Net	Time	NetTime	Drive	ExpressCard
Security								
Unique 32-Bit ID	-	✓	✓	✓	✓	✓	✓	✓
Secure Communication Channel	✓	✓	✓	✓	✓	✓	✓	✓
Cryptographic Algorithms								
AES 128-Bit Encryption	✓	✓	✓	✓	✓	✓	✓	✓
Remote Update - RSA Digital Signature	✓	✓	✓	✓	✓	✓	✓	✓
64,000 Encryption Keys	-	✓	✓	✓	✓	✓	✓	✓
Supported Licensing Models								
Perpetual	✓	✓	✓	✓	✓	✓	✓	✓
Feature-Based	-	✓	✓	✓	✓	✓	✓	✓
Pay-Per-Use	-	✓	✓	✓	✓	✓	✓	✓
Network Concurrency	-	-	-	✓	-	✓	-	-
Time-Based (subscription & rental)	-	-	-	-	✓	✓	-	-
Custom	-	✓	✓	✓	✓	✓	✓	✓
Clock								
On-Key Clock	-	-	-	-	✓	✓	-	-
Battery Life Warranty	-	-	-	-	4-Year	4-Year	-	-
Memory								
Flash Memory	-	-	-	-	-	-	2 GB or 4 GB	-
Protected Read / Write Memory	-	112 bytes	4 KB	4 KB	4 KB	4 KB	4 KB	4 KB
Read Only Memory (ROM)	-	112 bytes	2 KB	2 KB	2 KB	2 KB	2 KB	2 KB
Backward Compatibility Memory	-	112 bytes	4 KB	4 KB	4 KB	4 KB	4 KB	4 KB
Data Retention	-	At least 10 years						
Write Cycles (EEPROM / Flash)	-	At least 1,000,000					At least 1,000,000 /10,000	At least 1,000,000
Max. Features/Applications Enabled per Key	-	39	231	231	231	231	231	231
Flash Speed (Read / Write) per Sec.	-	-	-	-	-	-	12 MB / 5 MB	-
Physical Specifications								
Catalog Number	08303	08304	08305	10 User - 08305 50 User - 08307 250+ User - 08308	08310	10 User- 08313 50 User- 08314 250+ User- 08315	2 GB – 08861 4 GB - 09526	10456
Default Color***	Blue	Purple	Green	Red	Black	Red	Green	Silver Metal
Connection Type	USB Type A	USB Type A	USB Type A	USB Type A	USB Type A	USB Type A	USB Type A	ExpressCard/34
Lines Used	Power, Ground, 2 for data							
Plastic Case Material	Lexan 500R						CYCOLOY C6600	Polycarbonate/ABS and Stainless Steel SUS304
Storage Temperature	0° C to 70° C / 32° F to 158° F							
Operating Temperature	0° C to 70° C / 32° F to 158° F						0° C to 65° C / 32° F to 149° F	
Humidity Rating (without condensation)	0-95%							
Power Consumption – operating / standby	50 mA / < 0.5 mA						200 mA Typical	25 mA / < 0.5 mA
Dimensions L x W x H (in mm)	40.5x16x8				52x16x8		74.2x11.3x28.6	75x34x5
Weight (in grams)	4.4				5.8		14.4	15
Certification								
USB	USB-IF							
Safety Certifications	CE, UL 1950							
Environmental Certification /Compliance	ISO 14001 / RoHS, WEEE							
Quality Certification	ISO9001:2000							
Manufacturer Warranty								
Covers Manufacturing & Material Defects	1-Year							

* including 32- and 64-bit versions   ** HASP HL also supports Windows CE. Contact Aladdin for details   *** Private labeling, custom colors and additional key accessories also available. Contact Aladdin for details ALL SPECIFICATIONS SUBJECT TO CHANGE WITOUT NOTICE.

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