



## Sentinel HL

Driverless Configuration Keys	Basic	Pro	Max	Time
<b>Form Factor</b>	Mini	Mini	Mini	Midi
<b>Security And Cryptographic Algorithms</b>				
Unique 32-Bit ID		✓	✓	✓
AES 128-Bit Encryption	✓	✓	✓	✓
64,000 Encryption Keys	1	✓	✓	✓
On Chip Execution (AppOnChip-32bit & 64bit Win)	✓*	✓*	✓	✓
<b>Licensing Models Support</b>				
Perpetual	✓	✓	✓	✓
Feature-Based		✓	✓	✓
Pay-Per-Use		✓	✓	✓
Network Concurrency		✓*	✓*	✓*
Time-Based		✓*	✓	✓
Custom		✓	✓	✓
<b>Clock</b>				
Real Time Clock				✓
V-Clock		✓*	✓	✓
Battery Life Warranty				4-Years
Real Time Clock Accuracy (at 25° ± 5°C)				≤12.8 minutes/year
<b>Memory</b>				
Protected Read / Write Memory		112 Bytes	4KB	4KB
Read Only Memory (ROM)		112 Bytes	2KB	2KB
Dynamic Memory			390KB	390KB
Data Retention		At Least 10 Years	At Least 10 Years	At Least 10 Years
Write Cycles (EEPROM / Flash)		At Least 1,000,000	At Least 1,000,000	At Least 1,000,000
Max. licensable modules (Features, depending on license complexity)		11-39	3484-24386	3484-24386
Flash (Read / Write) per second				
Flash Memory				
<b>Physical Specifications</b>				
Default Color	Blue	Purple	Green	Black
Plastic Case Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Operating Temperature***	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F	-20°C to 60°C -4°F to 140°F
Humidity Rating	0-95%	0-95%	0-95%	0-95%
Power Consumption - operating / standby	50mA / < 0.5 mA	50mA / < 0.5 mA	50mA / < 0.5 mA	50mA / < 0.5 mA
Dimensions L x W x H (in mm)	40.5 x 16 x 8	40.5 x 16 x 8	40.5 x 16 x 8	52 x 16 x 8
Weight (in grams)	5.63	5.63	5.63	7.36
<b>Certification</b>				
Safety Certifications	IEC 62368-1, EN 62368-1, UL 62368-1, CAN/CSA-C22.2 NO.62368-1 A, AS/NZS 60950.1	IEC 62368-1, EN 60950-1, UL 62368-1, CAN/CSA-C22.2 NO.62368-1 A, AS/NZS 60950.1	IEC 62368-1, EN 60950-1, UL 62368-1, CAN/CSA-C22.2 NO.62368-1 A, AS/NZS 60950.1	IEC 62368-1, EN 60950-1, UL 62368-1, CAN/CSA-C22.2 NO.62368-1 A, AS/NZS 60950.1
Certification / Compliance	RoHS, WEEE, REACH	RoHS, WEEE, REACH	RoHS, WEEE, REACH	RoHS, WEEE, REACH
EMC Certifications	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI



Driverless Configuration Keys	Max	Drive microSD**	Max	Max
<b>Form Factor</b>	Board	Midi	Micro	Chip
<b>Security And Cryptographic Algorithms</b>				
Unique 32-Bit ID	✓	✓	✓	✓
AES 128-Bit Encryption	✓	✓	✓	✓
64,000 Encryption Keys	✓	✓	✓	✓
On Chip Execution (AppOnChip-32bit & 64bit Win)	✓	✓	✓	✓
<b>Licensing Models Support</b>				
Perpetual	✓	✓	✓	✓
Feature-Based	✓	✓	✓	✓
Pay-Per-Use	✓	✓	✓	✓
Network Concurrency	✓*	✓*	✓*	✓*
Time-Based	✓	✓	✓	✓
Custom	✓	✓	✓	✓
<b>Clock</b>				
Real Time Clock				✓
V-Clock	✓	✓	✓	✓
Battery Life Warranty				
Real Time Clock Accuracy (at 25° ± 5°C)				
<b>Memory</b>				
Protected Read / Write Memory	4KB	4KB	4KB	4KB
Read Only Memory (ROM)	2KB	2KB	2KB	2KB
Dynamic Memory	25KB	25KB	390KB	25KB
Data Retention	At Least 10 Years	At least 10 Years	At least 10 years	At least 10 years
Write Cycles (EEPROM / Flash)	At Least 1,000,000	At least 1,000,000	At least 1,000,000	At least 1,000,000
Max. licensable modules (Features, depending on license complexity)	240-2160	240-2160	3484-24386	240-2160
Flash (Read / Write) per second			*Depends on microSD card	
Flash Memory			Support microSD card up to 64GB	
<b>Physical Specifications</b>				
Default Color	Black	Green	Green	Black
Plastic Case Material		Polycarbonate		
Operating Temperature***	-25°C to 85°C -13°F to 185°F	0°C to 60°C 32°F to 140°F	-40°C to 85°C -40°F to 185°F	-25°C to 85°C -13°F to 185°F
Humidity Rating	0-95%	0 - 95%	0-95%	0-95%
Power Consumption - operating / standby	20mA / < 0.5 mA	200mA max	50mA/<0.5mA	20mA/<0.5mA
Dimensions L x W x H (in mm)	15.2x8x12.4	52x16x8	18x12.2x4.5	8.2x5.3x2.1
Weight (in grams)	1.23	6.98	1.64	NA
<b>Certification</b>				
Safety Certifications	IEC 62368-1, EN 62368-1, UL 62368-1, CAN/CSA-C22.2 NO.62368-1 A, AS/NZS 60950.1	IEC 62368-1, EN 62368-1, UL 62368-1, AS/NZS 60950.1	IEC 62368-1, EN 62368-1, UL 62368-1, CAN/CSAC22.2 NO.62368-1 A, AS/ NZS 60950.1	
Certification / Compliance	RoHS, WEEE, REACH	RoHS, WEEE, REACH	RoHS, WEEE, REACH	RoHS, REACH
EMC Certifications	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	

\* Requires a paid upgrade. \*\* Supported only with Sentinel LDK 7.4 and later.  
 \*\*\* The host USB port which powers the hardware key should be compliant with LPS (Limited Power Source) requirement in IEC 62368-1 clause 2.5. The operating temperature of the hardware keys is up to 85°C, and to avoid scalding, do not touch the keys with hands directly when the environment temperature is higher than 50°C.



**Sentinel HL**

HASP Configuration Keys	Basic	Pro	Max	Max	Net
<b>Form Factor</b>	Mini	Mini	Mini	Micro	Mini
<b>Security And Cryptographic Algorithms</b>					
Unique 32-Bit ID		✓	✓	✓	✓
AES 128-Bit Encryption	✓	✓	✓	✓	✓
64,000 Encryption Keys		✓	✓	✓	✓
<b>LICENSING MODELS SUPPORT</b>					
Perpetual	✓	✓	✓	✓	✓
Feature-Based		✓	✓	✓	✓
Pay-Per-Use		✓	✓	✓	✓
Network Concurrency					✓
Time-Based					
Custom or Remote Desktop		✓	✓	✓	✓
<b>Clock</b>					
Real Time Clock					
Battery Life Warranty					
Real Time Clock Accuracy (at 25° ± 5°C)					
<b>Memory</b>					
Protected Read / Write Memory		112 Bytes	4KB	4KB	4KB
Read Only Memory (ROM)		112 Bytes	2KB	2KB	2KB
Backward Compatibility Memory		112 Bytes	4KB	4KB	4KB
Data Retention		At Least 10 Years			
Write Cycles (EEPROM / Flash)		At Least 1,000,000			
Max. licensable modules (Features, depending on license complexity)		39	231	231	231
Flash (Read / Write) per second					
Flash Memory					
<b>Physical Specifications</b>					
Default Color	Blue	Purple	Green	Green	Red
Plastic Case Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Operating Temperature	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F
Humidity Rating	0-95%	0-95%	0-95%	0-95%	0-95%
Power Consumption - operating / standby	50mA / <0.5 mA	50mA / <0.5 mA	50mA / <0.5 mA	50mA / <0.5 mA	50mA / <0.5 mA
Dimensions L x W x H (in mm)	40.5 x 16 x 8	40.5 x 16 x 8	40.5 x 16 x 8	18 x 12.2 x 4.5	40.5 x 16 x 8
Weight (in grams)	5.63	5.63	5.63	1.64	5.63
<b>Certification</b>					
Safety Certifications	IEC 60950-1, EN 60950-1, UL 60950-1, CAN/CSA-C22.2 NO.60950-1A, AS/NZS 60950.1				
Certification / Compliance	RoHS, WEEE, REACH				
EMC Certifications	CE, FCC, VCCI, KCC-REM-SFNHLMax	CE, FCC, VCCI, KCC-REM-SFNHLMax	CE, FCC, KCC, VCCI	CE, FCC, VCCI, KCC-REM-SFNHLMicro	CE, FCC, VCCI, KCC-REM-SFNHLMMax

**Sentinel HL**



HASP Configuration Keys	Time	NetTime	Drive microSD**	Max	Max
<b>Form Factor</b>	Midi	Midi	Midi	Chip	ExpressCard
<b>Security And Cryptographic Algorithms</b>					
Unique 32-Bit ID	✓	✓	✓	✓	✓
AES 128-Bit Encryption	✓	✓	✓	✓	✓
64,000 Encryption Keys	✓	✓	✓	✓	✓
<b>Licensing Models Support</b>					
Perpetual	✓	✓	✓	✓	✓
Feature-Based	✓	✓	✓	✓	✓
Pay-Per-Use	✓	✓	✓	✓	✓
Network Concurrency		✓			
Time-Based	✓	✓			
Custom or Remote Desktop	✓	✓	✓	✓	✓
<b>Clock</b>					
Real Time Clock	✓	✓			
Battery Life Warranty	4 Years	4 Years			
Real Time Clock Accuracy (at 25° ± 5°C)	≤12.8 minutes/year	≤12.8 minutes/year			
<b>Memory</b>					
Protected Read / Write Memory	4KB	4KB	4KB	4KB	4KB
Read Only Memory (ROM)	2KB	2KB	2KB	2KB	2KB
Backward Compatibility Memory	4KB	4KB	4KB		4KB
Data Retention	At Least 10 Years				
Write Cycles (EEPROM / Flash)	At Least 1,000,000				
Max. licensable modules (Features, depending on license complexity)	231	231	231	231	231
Flash (Read / Write) per second			*depends on microSD card		
Flash Memory			Support MicroSD card up to 64GB		
<b>Physical Specifications</b>					
Default Color	Black	Red	Green	Black	Silver Metal
Plastic Case Material	Polycarbonate	Polycarbonate	Polycarbonate		Polycarbonate/Stainless Steel
Operating Temperature	-20°C to 60°C -4°F to 140°F	-20°C to 60°C -4°F to 140°F	0°C to 60°C -32°F to 140°F	-25°C to 85°C -13°F to 185°F	-25°C to 85°C -13°F to 185°F
Humidity Rating	0-95%	0-95%	0-95%	0-95%	0-95%
Power Consumption - operating / standby	50mA / <0.5 mA	50mA / <0.5 mA	200mA max	20mA / <0.5 mA	25mA / <0.5 mA
Dimensions L x W x H (in mm)	52 x 16 x 8	52 x 16 x 8	52 x 15 x 8	8.2 x 5.3 x 2.1	75 x 34 x 5
Weight (in grams)	7.36	7.36	6.98	N/A	15
<b>Certification</b>					
Safety Certifications	IEC 60950-1, EN 60950-1, UL 60950-1, CAN/CSA-C22.2 NO.60950-1A, AS/NZS 60950.1			EN60950	IEC 60950-1, EN 60950-1, UL 60950-1, AS/NZS 60950.1
Certification / Compliance	RoHS, WEEE, REACH			RoHS; REACH	RoHS, WEEE, REACH
EMC Certifications	CE, FCC, KCC, VCCI	CE, FCC, VCCI, KCC-REM-SFNHLTime	CE, FCC, VCCI		CE, FCC, KCC, VCCI

\*\*Supported only with Sentinel LDK 7.4 and later.

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