

Sentinel HL Driverless Configuration Keys												SL (including CL)	
		Basic	Pro	Max	Net	Max	Time	NetTime	Max	Drive microSD**	Max		
FORM FACTOR		Mini	Mini	Mini	Mini	Micro	Midi	Midi	Board	Midi	Chip		
SECURITY AND CRYPTOGRAPHIC ALGORITHMS													
Unique 32-Bit ID		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
AES 128-Bit Encryption	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
64,000 Encryption Keys	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
On Chip Execution (AppOnChip)	Y*	Y*	Y	Y	Y	Y	Y	Y	Y	Y	Y		
LICENSING MODELS SUPPORT													
Perpetual	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Feature-Based		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Pay-Per-Use		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Network Concurrency		Y*	Y*	Y	Y	Y*	Y	Y*	Y*	Y*	Y*	Y* (Only SL-AdminMode, CL)	
Time-Based		Y*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Custom or Remote Desktop		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
CLOCK													
Real-Time Clock							Y	Y					
V-Clock		Y*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Battery Life Warranty							4-Years	4-Years					
Real Time Clock Accuracy (at 25° ± 5°C)							≤12.8 minutes/year						
MEMORY													
Protected Read/Write Memory		112 Bytes	4KB	4KB	4KB	4KB	4KB	4KB	4KB	4KB	4KB	4KB	
Read-Only Memory (ROM)		112 Bytes	2KB	2KB	2KB	2KB	2KB	2KB	2KB	2KB	2KB	2KB	
Dynamic Memory	HW Type 1***		390KB	390KB	390KB	390KB	390KB	390KB	390KB	390KB	390KB	2MB	
	HW Type 2***		25KB	25KB	25KB	25KB	25KB	25KB	25KB	25KB	25KB		
	HW Type 3***		25KB	25KB									
Data Retention							At Least 10 Years						
Write Cycles (EEPROM/Flash)							At Least 1,000,000						
Max. licensable modules (Features, depending on license complexity)	HW Type 1	11-39	3484-24386	3484-24386	3484-24386	3484-24386	3484-24386	3484-24386	3484-24386	3484-24386			
	HW Type 2	11-39	240-2160	240-2160	240-2160	240-2160	240-2160	240-2160	240-2160	240-2160			
	HW Type 3	11-39	240-2160	240-2160									
Flash (Read/Write) per second										* Depends on microSD card			
Flash Memory										Support microSD card up to 64GB			
PHYSICAL SPECIFICATIONS													
Default Color	Blue	Purple	Green	Red	Green	Black	Red	Black	Green	Black			
Plastic Case Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	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	-20°C to 60°C -4°F to 140°F	-20°C to 60°C -4°F to 140°F	-25°C to 85°C -13°F to 185°F	0°C to 60°C 32°F to 140°F	-25°C to 85°C -13°F to 185°F			
Humidity Rating	0-95%	0-95%	0-95%	0-95%	0 - 95%	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 / < 0.5mA	50mA / < 0.5 mA	50mA / < 0.5 mA	20mA / < 0.5mA	200mA Max	20mA / < 0.5mA			
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	40.5 x 16 x 8	18x12.2x4.5	52 x 16 x 8	52 x 16 x 8	15.2 x 8 x 12.4	52 x 16 x 8	8.2 x 5.3 x 2.1			
Weight (in grams)	HW Type 1	5.63	5.63	5.63	5.63	1.64	7.36	7.36	6.98				
	HW Type 2	5.63	5.63	5.63	5.63	1.64	7.36	7.36	1.23				
	HW Type 3	6.3	6.3	6.3	6.3								
CERTIFICATION													
EMC Certifications	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI			
Safety Certifications	HW Type 1	IEC 62368-1, EN 62368-1, CSA/UL 62368-1, AS/NZS 62368.1							IEC 62368-1, EN 62368-1, CSA/UL 62368-1, AS/NZS 62368.1				
	HW Type 2	IEC 60950-1, EN 60950-1, UL 60950-1, CAN/CSA-C22.2 NO.60950-1A, AS/NZS 60950.1											
	HW Type 3	IEC 62368-1, EN 62368-1, CSA/UL 62368-1, AS/NZS 62368.1											
Certification & Compliance	RoHS, WEEE, REACH, ECCN(EAR99)									RoHS, REACH, ECCN(EAR99)	ECCN(EAR99)		

* Requires a paid upgrade. ** Supported only with Sentinel LDK 7.4 and later. *** Differentiation of three HW types: Type 1 - Housing with gold color key-ring and upper-case 'MADE IN CHINA' text. Type 2 - Housing with silver color key-ring and upper-case 'MADE IN CHINA' text. Type 3 - Housing with silver color key-ring and first capital letter and lower case 'Made in China' text. Learn more at [Product Change Notification](#) **** 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											SL (including CL)
		Basic	Pro	Max	Net	Max	Time	NetTime	Drive microSD**	Max	
FORM FACTOR		Mini	Mini	Mini	Mini	Micro	Midi	Midi	Midi	Chip	
SECURITY AND CRYPTOGRAPHIC ALGORITHMS											
Unique 32-Bit ID			Y	Y	Y	Y	Y	Y	Y	Y	Y
AES 128-Bit Encryption	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
64,000 Encryption Keys		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LICENSING MODELS SUPPORT											
Perpetual	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Feature-Based		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pay-Per-Use		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Network Concurrency					Y			Y			Y* (Only SL-AdminMode, CL)
Time-Based							Y	Y			Y
Custom or Remote Desktop		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CLOCK											
Real-Time Clock							Y	Y			Support V-Clock
Battery Life Warranty							4-Years	4-Years			
Real-Time Clock Accuracy (at 25° ± 5°C)							≤12.8 minutes/year	≤12.8 minutes/year			
MEMORY											
Protected Read/Write Memory		112 Bytes	4KB	4KB	4KB	4KB	4KB	4KB	4KB	4KB	4KB
Read-Only Memory (ROM)		112 Bytes	2KB	2KB	2KB	2KB	2KB	2KB	2KB	2KB	2KB
Backward Compatibility Memory / User-Created Memory	HW Type 1***	112 Bytes	4KB	4KB	4KB	4KB	4KB	4KB	4KB		2MB
	HW Type 2***	112 Bytes	4KB	4KB	4KB	4KB	4KB	4KB			
	HW Type 3***	112 Bytes	4KB	4KB							
Data Retention		At Least 10 Years	At Least 10 Years	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	At Least 1,000,000	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)	HW Type 1	39	231	231	231	231	231	231	231		
	HW Type 2	39	231	231	231	231	231	231	231		
	HW Type 3	39	231	231						231	
Flash (Read/Write) per second											* Depends on microSD card
Flash Memory											Support microSD card up to 64GB
PHYSICAL SPECIFICATIONS											
Default Color		Blue	Purple	Green	Red	Green	Black	Red	Green	Black	
Plastic Case Material		Polycarbonate	Polycarbonate	Polycarbonate	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	-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				
Humidity Rating		0-95%	0-95%	0-95%	0-95%	0 - 95%	0-95%	0-95%	0-95%	0-95%	
Power Consumption - operating / standby		50mA / < 0.5 mA	50mA/<0.5mA	50mA / < 0.5 mA	50mA / < 0.5 mA	200mA Max	20mA Max				
Dimensions L x W x H (in mm)		40.5 x 16 x 8	18x12.2x4.5	52 x 16 x 8	52 x 16 x 8	52 x 16 x 8	8.2 x 5.3 x 2.1				
Weight (in grams)	HW Type 1	5.63	5.63	5.63	5.63	1.64	7.36	7.36	6.98		
	HW Type 2	5.63	5.63	5.63	5.63	1.64	7.36	7.36		N/A	
	HW Type 3	6.3	6.3	6.3	6.3						
CERTIFICATION											
EMC Certifications		CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	CE, FCC, VCCI	
Safety Certifications	HW Type 1	IEC 62368-1, EN 62368-1, CSA/UL 62368-1, AS/NZS 62368.1									
	HW Type 2	IEC 60950-1, EN 60950-1, UL 60950-1, CAN/CSA-C22.2 NO.60950-1A, AS/NZS 60950.1									
	HW Type 3	IEC 62368-1, EN 62368-1, CSA/UL 62368-1, AS/NZS 62368.1									
Certification & Compliance		RoHS, WEEE, REACH, ECCN(EAR99)	RoHS, WEEE, REACH, ECCN(EAR99)	RoHS, WEEE, REACH, ECCN(EAR99)	RoHS, WEEE, REACH, ECCN(EAR99)	RoHS, WEEE, REACH, ECCN(EAR99)	RoHS, REACH, ECCN(EAR99)	ECCN(EAR99)			

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