HIKVISION

V310 series

Solid State Drive

Table of Content

1 Introduction

1.1 General Description

This document describes the specifications and capabilities of the HIKVISION SSD V310 Series.

As the leading enterprise in security industry, HIKVISION processes EB-level (1EB =1024 PB, 1PB=1024 TB) of data every year, so it has many years of accumulation in data storage technology and flash memory management technology.

On the technology side, V310 series SSD adopts the advanced SSD controller and 3D NAND Flash, coordinate with HIKVISION's self-designed NAND Flash management firmware to ensure the read/write speed and data security.

On the production side, V310 series adopts the best quality 3D NAND Flash, BGA, automatic production line, testing according to the standard of video surveillance server, so that it offers better stability. Now V310 series has been applied to NVR, DVR and so on, it provides stable and high-speed service for target system.

1.2 Ordering Information

V310 Series

Capacity	Model
V310 128G	SSDV04dBB10A128GCAA
V310 256G	SSDV04dBB10A256GCAA
V310 512G	SSDV04dBB20A512GCAA
V310 1024G	SSDV04dBB40A1024CAA

Note

Contact your local Hikvision sales representative for ordering information.

2 Features

- Components:
  - 3D TLC NAND Flash Memory
  - Standard Endurance Technology (SET)
- Form Factor:
  - 2.5-inch
- Stability:
  - BurnInTest 168h+ No Errors, 10pcs per capacity
- Algorithms:
  - Garbage Collection, Wear Leveling
- Hotplug support:
  - It needs BIOS Enabled
- Compliance:
  - SATA Revision3.0; compatible with STAT 6 GB/S, 3 GB/S,1.5 GB/S interface rates
  - ATA/ATAPI Command Set-3(ACS-3Rev5)
  - Includes SCT(Smart Command Transport) And device statistics log support
  - Enhanced SMART ATA feature set
  - Native Command Queuing(NCQ) Command set
  - Data set management Trim Command (Windows 7 or above)
- Warranty:
  - 3 years
- Endurance:
  - TBW: 128GB/256GB/512GB/1024GB 124 TB/188TB/410 TB/909 TB
- Power Management:
  - 5 V±10% SATA Supply Rail
  - SATA Interface Power Management
- Temperature:
  - Operating: 0 °C to 70 °C
- Shock(operating and non-operating): 1000 G/0.5 ms
- Vibration:
  - Operating: 2 G_RMS (5-700 Hz)
  - non-operating: 2.1G_RMS (5-800 Hz)
- Reliability:
  - Uncorrectable Bit Error Rate(UBER): 1 sector per 10^{-16}bit read
  - Mean Time between Failures(MTBF): 1.5 million hours
  - Data Retention: 3years@40 °C
- Compatibility:
  - Windows 7/8/10*
  - Windows Server 2012*,
  - UOS-desktop-20-professional-1022
  - CentOS 7.0
  - Ubuntu 16.0.0/18.04.3
  - Galaxy unicorn 4.0.2
  - Red Hat Enterprise Linux Server 7.0
  - SUSE Enterprise Linux Server 12 SP3

Note

1. Specifications are subject to change without notice.
2. 1 MB=1,000,000Bytes, 1 GB=1,000,000,000Bytes, Unformatted Capacity. User accessible capacity may vary depending on operating environment and formatting.
3. Operating Temperature (0 °C ~70 °C) is subject to SSD's S.M.A.R.T. display.

3 Product Specifications

3.1 Interface and Compliance

- SATA 6 Gbps
- Fully compliance with ATA/ATAPI Command Set-3(ACS-3Rev5)
- Support enhanced SMART ATA feature set
- Native Command Queuing (NCQ) Command Set
- Support Data Set Management Trim Command

3.2 Performance

Table 1: V310 Series Sequential And Random Read And Write Bandwidth

Capacity	128GB	256GB	512GB	1024GB	Unit
Max. Seq. Read	550	470	470	470	MB/s
Max. Seq. Write	165	300	525	520	MB/s
Max. Ran. Read	30 K	55 K	85 K	90K	IOPS
Max. Ran. Write	40 K	65 K	75 K	75 K	IOPS

Note

1. Specifications are subject to change without notice.
2. 1 MB=1,000,000Bytes, 1 GB=1,000,000,000Bytes, Unformatted Capacity. User accessible capacity may vary depending on operating environment and formatting.
3. Operating Temperature (0 °C ~70 °C) is subject to SSD's S.M.A.R.T. display.
4. Sequential performance and IOPS performance measurements based on CrystalDiskMark 6.0.2. Performance may vary based on SSD's firmware version, system hardware & configuration.
   Test system configuration:
   CPU: Intel® Core i7-9700K @ 3.60GHz
   Memory: DDR 8 GB,
   OS: Windows 10 64-bit (DirectX 12),
   Motherboard: GIGABYTE Z370 HD3-CF
5. All the test data is based on HIKVISION's internal test environment.

3.3 Power Consumption

Table 2: Power Consumption For V310 Series Form Factor

Capacity	128 GB	256 GB	512 GB	1024GB	Unit
Idle	0.4	0.4	0.4	0.4	W
Write Ave.	0.9	1.2	1.8	1.8	W
Write Max.	1.0	1.3	1.9	1.9	W
Read Ave.	0.9	0.9	0.9	1.0	W
Read Max.	1.0	1.0	1.0	1.1	W

Note

1. The Workload equates 128 K Queue Depth equal to 32 sequential writes (read). RMS (Root Mean Squared) Average Power is measured using oscilloscope over a 100 ms sample period.
2. The Workload equates 128 K Queue Depth equal to 32 sequential writes (read). RMS (Root Mean Squared)

Maximum Power is measured using oscilloscope over a 400 us sample period.

3. All the test data is based on HIKVISION's internal test environment.

4 Mechanical Specification

Table 1: V310 Series,Physical Dimensions and Weight

Model	Height (mm)	Width (mm)	Length (mm)	Weight (gram)
V310 Series	7 ± 0.2	69.9 ± 0.15	100.2 ± 0.15	≤ 40.6

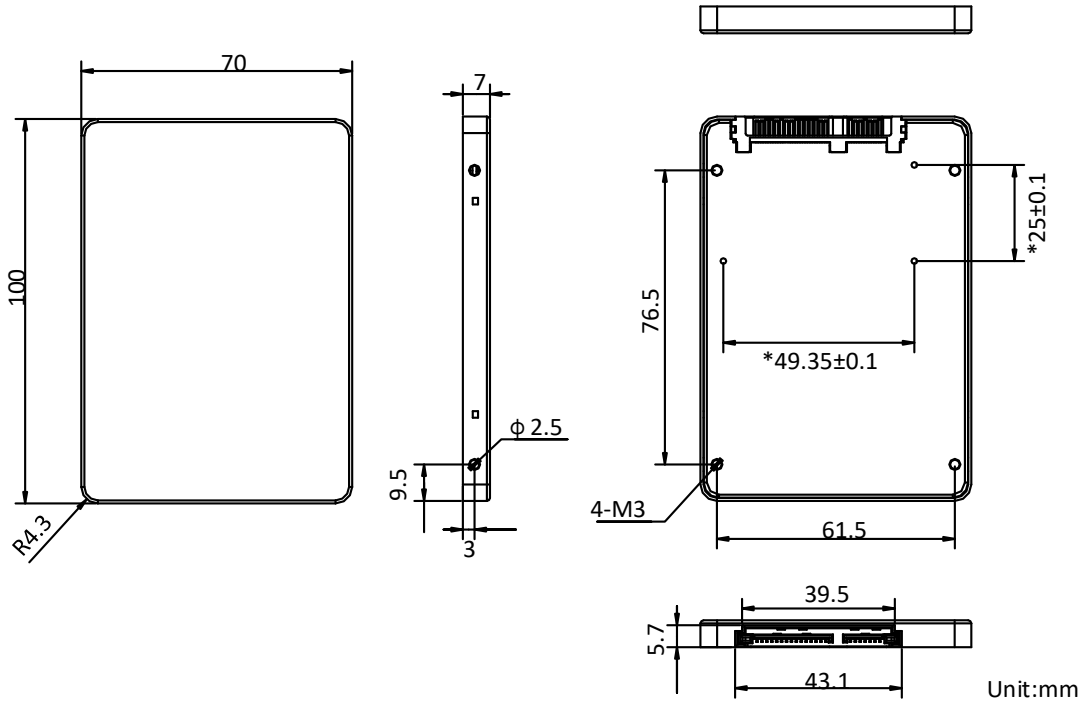

Figure 1 Physical Dimension

5 Electrical Interface Specification

Serial SATA Interface Connector

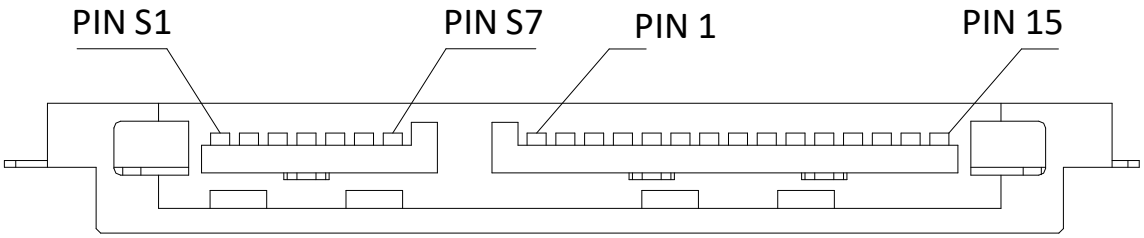

Figure 2 Drive Plug Connector

Serial SATA Interface Connector Pin Assignments

Table 2: Pin Assignments

Word	No.	Plug Connector Pin Definition	
Signal	S1	GND	1^{st} mate
	S2	A +	Differential signal A form Phy
	S3	A -	

	S4	GND	1^{st} mate
	S5	B -	Differential signal B form Phy
	S6	B +	
	S7	GND	1^{st} mate
Key And Spacing Separate Signal And Power Segments			
Power	P1	V33	3.3 V power (Unused)
	P2	V33	3.3 V power (Unused)
	P3	V33	3.3 V power, pre-charge, 1^{st} mate(Unused)
	P4	GND	1^{st} mate
	P5	GND	1^{st} mate
	P6	GND	1^{st} mate
	P7	V5	5 V power, pre-charge, 1^{st} mate
	P8	V5	5 V power
	P9	V5	5 V power
	P10	GND	1^{st} mate
	P11	DAS/DSS	Device Activity Signal/Disable Staggered Spin-up
	P12	GND	1^{st} mate
	P13	V12	12 V power, pre-charge, 1^{st} mate(Unused)
	P14	V2	12 V power(Unused)
	P15	V12	12 V power(Unused)

Note

3.3 V and 12 V are not sued.

6 Supported Command Sets

The HIKVISION SSD V310 Series supports all mandatory ATA (Advanced Technology Attachment) commands defined in the ATA8-ACS3 REV5F specifications described in this section.

6.1 ATA General Features Command Set

The HIKVISION SSD V310 Series supports the ATA General Feature command set (non-PACKET), which consists of:

- EXECUTE DEVICE DIAGNOSTIC
- SET FEATURES
- IDENTIFY DEVICE

Note

See Appendix A, “IDENTIFY DEVICE Command Data” for details on the sector data returned after issuing an IDENTIFY DEVICE command.

The HIKVISION SSD V310 Series also supports the following optional commands:

- READ DMA
- WRITE DMA
- READ SECTOR(S)
- READ VERIFY SECTOR(S)
- READ MULTIPLE
- SEEK

- SET FEATURES
- WRITE SECTORS(S)
- SET MULTIPLE MODE1
- WRITE MULTIPLE
- FLUSH CACHE
- READ BUFFER
- NOP
- DOWNLOAD MICROCODE
- WRITE UNCORRECTABLE EXT

Note

1 The only multiple supported will be multiple 1.

6.2 Power Management Command Set

The Hikvision SSD V310 Series supports the Power Management Command set, which consists of:

- CHECK POWER MODE
- IDLE
- IDLE IMMEDIATE
- SLEEP
- STANDBY
- STANDBY IMMEDIATE

6.3 Security Mode Feature Set

The Hikvision SSD V310 Series supports the Security Mode command set, which consists of:

- SECURITY SET PASSWORD
- SECURITY UNLOCK
- SECURITY ERASE PREPARE
- SECURITY ERASE UNIT
- SECURITY FREEZE LOCK
- SECURITY DISABLE PASSWORD

6.4 SMART Command Set

The Hikvision SSD V310 Series supports the SMART command set, which consists of:

- SMART READ DATA
- SMART READ ATTRIBUTE THRESHOLDS
- SMART ENABLE/DIABLE ATTRIBUTE AUTOSAVE
- SMART SAVE ATTRIBUTE VALUES
- SMART EXECUTE OFF-LINE IMMEDIATE
- SMART READ LOG SECTOR
- SMART WRITE LOG SECTOR
- SMART ENABLE OPERATIONS
- SMART DISABLE OPERATIONS
- SMART RETURN STATUS
- SMART ENABLE/DISABLE AUTOMATIC OFFLINE

Attributes

The following table lists the SMART attributes supported by the Hikvision SSD V310 Series and the corresponding status flag and threshold settings.

Table 1: SMART Attributes

ID	Attribute	Status Flag						Threshold
		SP	EC	ER	PE	OC	PW	
05h	SMART_ATTR_ID_REALLOCATED_SECTOR_COUNT	1	1	0	0	1	0	32h
09h	SMART_ATTR_ID_POWER_ON_HOURS_COUNT	0	1	0	0	1	0	00h
0Ch	SMART_ATTR_ID_DRIVE_POWER_CYCLE_COUNT	0	1	0	0	1	0	00h
A7h	SMART_ATTR_ID_SSD_PROTECT_MODE	1	0	0	0	1	0	00h
A8h	SMART_ATTR_ID_PHY_ERROR_COUNT	0	1	0	0	1	0	00h
A9h	SMART_ATTR_ID_BAD_BLOCK_COUNT	0	1	0	0	1	1	0Ah
AAh	SMART_ATTR_ID_AVAILABLE_RESERVED_SPACE_0	1	1	0	0	1	1	0Ah
ABh	SMART_ATTR_ID_PROGRAM_FAIL_COUNT	1	1	0	0	1	0	00h
ACh	SMART_ATTR_ID_ERASE_FAIL_COUNT	1	1	0	0	1	0	00h
AEh	SMART_ATTR_ID_ERASE_COUNT	0	1	0	0	1	0	00h
AFh	SMART_ATTR_ID_POWER_LOSS_PROTECTION_FAILURE	1	1	0	0	1	1	0Ah
B1h	SMART_ATTR_ID_READ_RETRY_COUNT	0	1	0	0	1	0	00h
B4h	SMART_ATTR_ID_SPARE_BLOCK_COUNT_LEFT	1	1	0	0	1	1	00h
B7h	SMART_ATTR_ID_SATA_DOWNSHIFT_COUNT	1	1	0	0	1	0	00h
B8h	SMART_ATTR_ID_END_TO_END_ERROR_DETECTION_COUNT	1	1	0	0	1	1	5Ah
BBh	SMART_ATTR_ID_REPORTED_UNC_ERRORS	1	1	0	0	1	0	00h
C0h	SMART_ATTR_ID_UNEXPECTED_POWER_LOSS_COUNT	0	1	0	0	1	0	00h
C2h	SMART_ATTR_ID_TEMPERATURE	1	0	0	0	1	0	00h
C4h	SMART_ATTR_ID_REALLOCATION_EVENT_COUNT	0	1	0	0	1	0	00h
C5h	SMART_ATTR_ID_PENDING_SECTOR_COUNT	0	1	0	0	1	0	00h
C7h	SMART_ATTR_ID_CRC_ERROR_COUNT	1	1	1	1	1	0	00h
CEh	SMART_ATTR_ID_MINIMUM_ERASE_COUNT	1	1	0	0	1	0	00h
CFh	SMART_ATTR_ID_MAXIMUM_ERASE_COUNT	1	1	0	0	1	0	00h
D0h	SMART_ATTR_ID_AVERAGE_ERASE_COUNT	1	1	0	0	1	0	00h
E7h	SMART_ATTR_ID_SSD_LIFE_LEFT	1	0	0	0	1	1	05h
E9h	SMART_ATTR_ID_GByte_TO_NAND_COUNT	1	1	0	0	1	0	00h
EAh	SMART_ATTR_ID_GByte_TO_NAND_COUNT	1	1	0	0	1	0	00h
F1h	SMART_ATTR_ID_WRITE_Gbyte	1	1	0	0	1	0	00h
F2h	SMART_ATTR_ID_READ_Gbyte	1	1	0	0	1	0	00h
F3h	SMART_ATTR_ID_NAND_TEMPERATURE	1	1	0	0	1	0	00h
FEh	SMART_ATTR_ID_SSD_CAPACITANCE_DETECT	1	1	0	0	1	0	00h

SMART Attribute Status Flags

Table 2: SMART Attributes Status Flags

Status Flag	Description	Value=0	Value=1
SP	Self-preserving attribute	Not a self-preserving attribute	Self-preserving attribute
EC	Event count attribute	Not an event count attribute	Event count attribute
ER	Error rate attribute	Not an error rate attribute	Error rate attribute
PE	Performance attribute	Not a performance attribute	Performance attribute
OC	Online collection attribute	Collected only during offline activity	Collected during both offline and online activity
PW	Pre-fail warranty attribute	Advisory	Pre-fail

7 References

Appendix A: IDENTIFY DEVICE Command Data

Table 1: Returned Sector Data

Word	Value	F/V	Description
0	0040h		General configuration bit-significant information:
		F	15 0 = ATA device
		X	14-8 Retired
		F	7 1 = removable media device
		X	6 Obsolete
		X	5-3 Retired
		F	2 Reserved
		X	1 Retired
		F	0 Reserved
1	3FFFh	X	Number of logical cylinders
2	C837h	V	Specific configuration
3	0010h	X	Number of logical heads
4-5	0000h	X	Retired
6	003Fh	X	Number of logical sector per logical track
7-8	0000h	V	Reserved for assignment by the CompactFlash_ Association
9	0000h	X	Retired
10-19	variables	F	Serial number (20 ASCII characters)
20-21	0000h	X	Retired
22	003Fh	X	Obsolete
23-26	variables	F	Firmware revision (8 ASCII characters)
27-46	variables	F	Model number (40 ASCII characters)
47	8001h	F	15-8 80h
		F	7-0 00h = Reserved

Word	Value	F/V	Description
		F	01h = Maximum number of 1 sectors on READ/WRITE MULTIPLE commands
48	4000h	F	Reserved
49	2F00h		Capabilities
		F	15-14 Reserved for the IDENTIFY PACKET DEVICE command.
		F	13 1 = Standby timer values as specified in this standard are supported
		F	0 = Standby timer values shall be managed by the device
		F	12 Reserved for the IDENTIFY PACKET DEVICE command.
			11 1 = IORDY supported
		F	0 = IORDY may be supported
		F	10 1 = IORDY may be disabled
		F	9 1 = LBA supported
		X	8 1 = DMA supported.
			7-0 Retired
50	4000h		Capabilities
		F	15 Shall be cleared to zero.
		F	14 Shall be set to one.
		F	13-2 Reserved.
		X	1 Obsolete
		F	0 Shall be set to one to indicate a device specific Standby timer value minimum.
51-52	0000h	X	Obsolete
53	0007h	F	15-3 Reserved
		F	2 1 = the fields reported in word 88 are valid
			0 = the fields reported in word 88 are not valid
		F	1 1 = the fields reported in words 70:64 are valid
			0 = the fields reported in words 70:64 are not valid
		X	0 1 = the fields reported in words 58:54 are valid
			0 = the fields reported in words 58:54 are not valid
54	3FFFh	X	Obsolete: Number of logical cylinders
55	0010h	X	Obsolete: Number of logical heads
56	003Fh	X	Obsolete: Number of logical sectors per logical track
57-58	00FBFC10	X	Obsolete
59	0101h	F	15-9 Reserved
		V	8 1 = Multiple sector setting is valid
		V	7-0 xxh = Setting for number of sectors that shall be transferred per interrupt on R/W Multiple command
60-61	variables	F	Total number of user addressable sectors
62	0000h	X	Obsolete
63	0407h	F	15-11 Reserved
		V	10 1 = Multiword DMA mode 2 is selected
			0 = Multiword DMA mode 2 is not selected
		V	9 1 = Multiword DMA mode 1 is selected

Word	Value	F/V	Description
			0 = Multiword DMA mode 1 is not selected
		V	8 1 = Multiword DMA mode 0 is selected
			0 = Multiword DMA mode 0 is not selected
		F	7-3 Reserved
		F	2 1 = Multiword DMA mode 2 and below are supported
		F	1 1 = Multiword DMA mode 1 and below are supported
		F	0 1 = Multiword DMA mode 0 is supported
64	0003h	F	15-8 Reserved
		F	7-0 Advanced PIO modes supported
65	0078h	F	Minimum Multiword DMA transfer cycle time per word
66	0078h	F	Manufacturer's recommended Multiword DMA transfer cycle time
67	0078h	F	Minimum PIO transfer cycle time without flow control
68	0078h	F	Minimum PIO transfer cycle time with IORDY flow control
69-74	0020h	F	Reserved (for future command overlap and queuing)
75	001Fh	F	Queue depth 15:5 Reserved 4:0 Maximum queue depth - 1
76	E70Eh	F	Serial ATA Capabilities 15:13 Reserved for Serial ATA 12 1 = Supports NCQ priority information 11 1 = Supports Unload while NCQ commands are outstanding 10 1 = Supports the SATA Phy Event Counters log 9 1 = Supports receipt of host initiated power management requests 8 1 = Supports the NCQ feature set 7:4 Reserved for Serial ATA 3 1 = Supports SATA Gen3 Signaling Speed (6.0Gb/s) 2 1 = Supports SATA Gen2 Signaling Speed (3.0Gb/s) 1 1 = Supports SATA Gen1 Signaling Speed (1.5Gb/s) 0 Shall be cleared to zero
77	0086h	X	Reserved
78	014Ch	V	Serial ATA features supported 15:7 Reserved for Serial ATA 6 1 = Device supports Software Settings Preservation 5 Reserved for Serial ATA 4 1 = Device supports in-order data delivery 3 1 = Device supports initiating power management 2 1 = Device supports DMA Setup auto-activation 1 1 = Device supports non-zero buffer offsets 0 Shall be cleared to zero
79	0040h	V	Serial ATA features enabled 15:7 Reserved for Serial ATA 6 1 = Software Settings Preservation enabled 5 Reserved for Serial ATA 4 1 = In-order data delivery enabled

Word	Value	F/V	Description
			3 1 = Device initiated power management enabled 2 1 = DMA Setup auto-activation enabled 1 1 = Non-zero buffer offsets enabled F 0 Shall be cleared to zero
80	03F8h		Major version number 0000h or FFFFh = device does not report version F 15 Reserved F 14 Reserved for ATA/ATAPI-14 F 13 Reserved for ATA/ATAPI-13 F 12 Reserved for ATA/ATAPI-12 F 11 Reserved for ATA/ATAPI-11 F 10 Reserved for ATA/ATAPI-10 F 9 Reserved for ATA/ATAPI-9 F 8 Reserved for ATA/ATAPI-8 F 7 1 = supports ATA/ATAPI-7 F 6 1 = supports ATA/ATAPI-6 F 5 1 = supports ATA/ATAPI-5 F 4 1 = supports ATA/ATAPI-4 F 3 Obsolete X 2 Obsolete X 1 Obsolete F 0 Reserved
81	0000h	F	Minor version number
82	706Bh		Command set supported. X 15 Obsolete F 14 1 = NOP command supported F 13 1 = READ BUFFER command supported F 12 1 = WRITE BUFFER command supported X 11 Obsolete F 10 1 = Host Protected Area feature set supported F 9 1 = DEVICE RESET command supported F 8 1 = SERVICE interrupt supported F 7 1 = release interrupt supported F 6 1 = look-ahead supported F 5 1 = write cache supported F 4 Shall be cleared to zero to indicate that the PACKET Command F feature set is not supported. F 3 1 = mandatory Power Management feature set supported F 2 1 = Removable Media feature set supported F 1 1 = Security Mode feature set supported 0 1 = SMART feature set supported
83	7401h		Command sets supported. F 15 Shall be cleared to zero F 14 Shall be set to one F 13-9 Reserved

Word	Value	F/V	Description
		F	8 1 = SET MAX security extension supported
		F	7 Reserved
		F	6 1 = SET FEATURES subcommand required to spinup after
		F	power-up
		F	5 1 = Power-Up In Standby feature set supported
		F	4 1 = Removable Media Status Notification feature set supported
		F	3 1 = Advanced Power Management feature set supported
		F	2 1 = CFA feature set supported
		F	1 1 = READ/WRITE DMA QUEUED supported
			0 1 = DOWNLOAD MICROCODE command supported
84	4161h		Command set/feature supported extension.
		F	15 Shall be cleared to zero
		F	14 Shall be set to one
		F	13-2 Reserved
		F	1 1 = SMART self-test supported
		F	0 1 = SMART error logging supported
85	7069h		Command set/feature enabled.
		X	15 Obsolete
		F	14 1 = NOP command enabled
		F	13 1 = READ BUFFER command enabled
		F	12 1 = WRITE BUFFER command enabled
		X	11 Obsolete
		V	10 1 = Host Protected Area feature set enabled
		F	9 1 = DEVICE RESET command enabled
		V	8 1 = SERVICE interrupt enabled
		V	7 1 = release interrupt enabled
		V	6 1 = look-ahead enabled
		V	5 1 = write cache enabled
		F	4 Shall be cleared to zero to indicate that the PACKET Command
		F	feature set is not supported.
		F	3 1 = Power Management feature set enabled
		V	2 1 = Removable Media feature set enabled
		V	1 1 = Security Mode feature set enabled
			0 1 = SMART feature set enabled
86	B401h		Command set/feature enabled.
		F	15-9 Reserved
		F	8 1 = SET MAX security extension enabled by SET MAX SET
		F	PASSWORD
		F	7 See Address Offset Reserved Area Boot, INCITS TR27:2001
		V	6 1 = SET FEATURES subcommand required to spin-up after
		V	power-up
		V	5 1 = Power-Up In Standby feature set enabled
		F	4 1 = Removable Media Status Notification feature set enabled
			3-1 1 = Advanced Power Management feature set enabled
			0 1 = DOWNLOAD MICROCODE command supported

Word	Value	F/V	Description
87	4161h		Command set/feature default.
		F	15 Shall be cleared to zero
		F	14 Shall be set to one
		F	13-2 Reserved
		F	1 1 = SMART self-test supported
		F	0 1 = SMART error logging supported
88	007Fh		15-14 Reserved
		V	13 1 = Ultra DMA mode 5 is selected
			0 = Ultra DMA mode 5 is not selected
		V	12 1 = Ultra DMA mode 4 is selected
			0 = Ultra DMA mode 4 is not selected
		V	11 1 = Ultra DMA mode 3 is selected
			0 = Ultra DMA mode 3 is not selected
		V	10 1 = Ultra DMA mode 2 is selected
			0 = Ultra DMA mode 2 is not selected
		V	9 1 = Ultra DMA mode 1 is selected
			0 = Ultra DMA mode 1 is not selected
		F	8 1 = Ultra DMA mode 0 is selected
		F	0 = Ultra DMA mode 0 is not selected
		F	7-6 Reserved
		F	5 1 = Ultra DMA mode 5 and below are supported
		F	4 1 = Ultra DMA mode 4 and below are supported
		F	3 1 = Ultra DMA mode 3 and below are supported
			2 1 = Ultra DMA mode 2 and below are supported
			1 1 = Ultra DMA mode 1 and below are supported
			0 1 = Ultra DMA mode 0 is supported
89	0001h	F	Time required for security erase unit completion
90	0001h	F	Time required for Enhanced security erase completion
91	0000h	V	Current advanced power management value
92	FFFEh	V	Master Password Revision Code
93	0000h	X	Hardware reset result
94-126	0000h	V	Reserved
127	0000h		Removable Media Status Notification feature set support
		F	15-2 Reserved
		F	1-0 00 = Removable Media Status Notification feature set not supported
			01 = Removable Media Status Notification feature supported
			10 = Reserved
			11 = Reserved
128	0021h		Security status
		F	15-9 Reserved
		V	8 Security level 0 = High, 1 = Maximum
		F	7-6 Reserved
		F	5 1 = Enhanced security erase supported

Word	Value	F/V	Description
		V V V V F	4 1 = Security count expired 3 1 = Security frozen 2 1 = Security locked 1 1 = Security enabled 0 1 = Security supported
129-159	0000h	X	Vendor specific
160-254	0000h	X	Reserved
255	xxxxh	X	Integrity word 15-8 Checksum 7-0 Signature

Revision History

Version	Description	Date
V1.0.0	Preview edition	2021.9.1
V1.0.1	Update performance data	2021.11.5
V1.0.2	Document review official version	2021.11.19
V1.0.3	Smart Information change	2021.11.25

Data subject to change without notice.

Unless otherwise expressly stated herein, HIKSTORAGE does not make any warranties, guarantees or representations, express or implied, regarding to the Manual, any information contained herein.

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the HIKSTORAGE website (www.hikstorage.com).