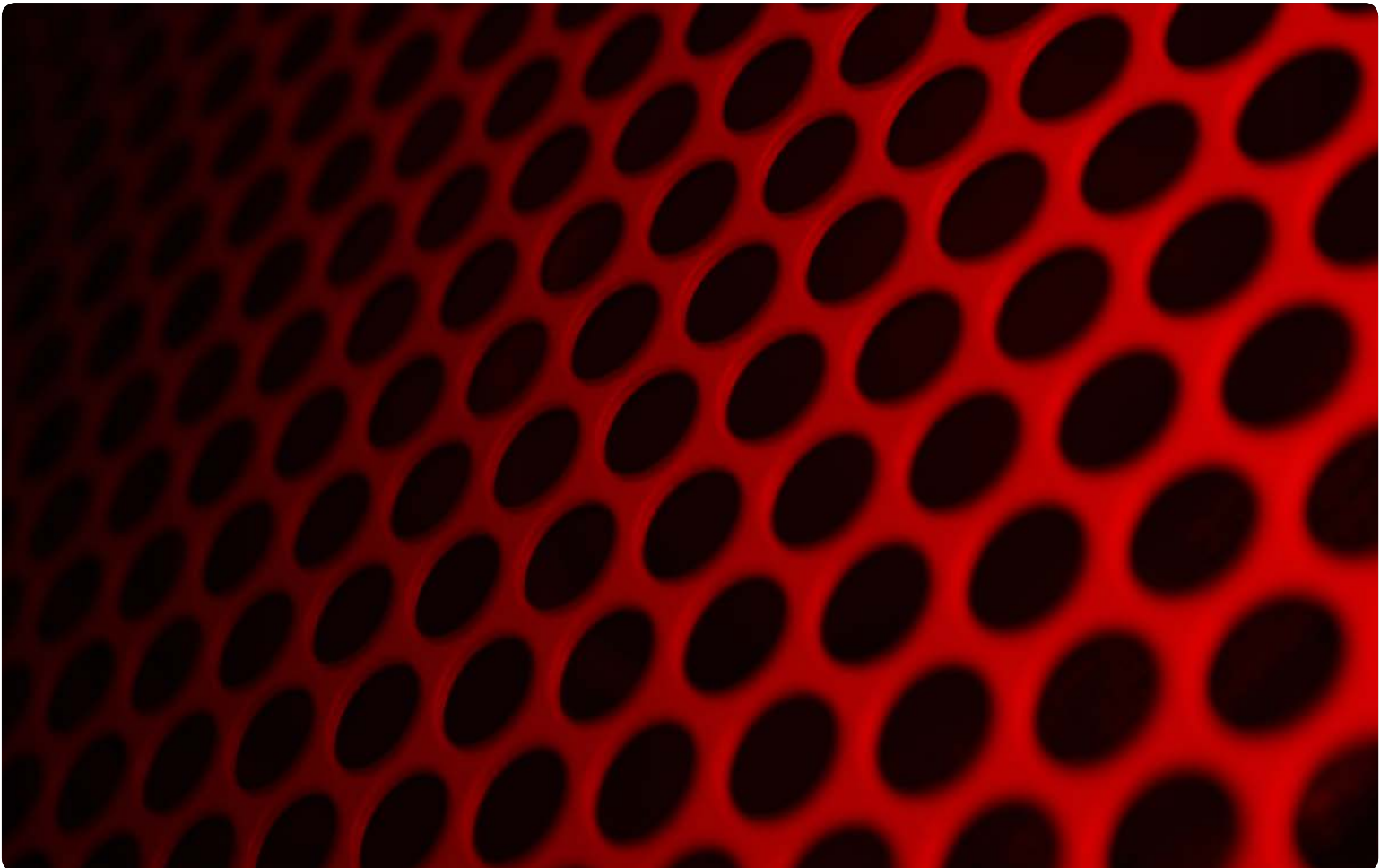# SMART Attribute Details

SMART Attribute Details

Provides a detailed description of SMART Attribute support and how each may be used.

Kingston® SM2280S3G2, SEDC400S37, SKC310S37A, SHSS37A, SUV300S37A, SKC400S37 and SV310S37A SMART Attribute Details

ID	HEX	Attribute Name	Description
1	01h	Read Error Rate	Counts the number of uncorrectable errors that accumulate when controller reads data from Flash and ECC events occur. Raw Value Byte [1~0]: Uncorrectable errors count
2*	02h	Throughput Performance	Not used
3*	03h	Spin Up Time	Not used
5*	05h	Reallocated Sectors Count	Not used
7*	07h	Seek Error Rate	Not used
8*	08h	Seek Time Performance	Not used
9	09h	Power-On Hours	Counts the power-on hours that accumulate from initial drive deployment. Raw Value Byte [1~0]: Power on hours count
10*	0Ah	Spin Retry Count	Not used
12	0Ch	Power Cycle Count	Counts the number of drive power on-off cycles since initial drive deployment. This value accumulates when system is powered-on. Raw Value Byte [3~0]: Power on/off cycles count
168	A8h	SATA PHY Error Count	Counts the number of SATA PHY errors. This value includes all PHY error counts, ex data FIS CRC , code errors, disparity errors, command FIS crc. Value clears upon system power-down. Raw Value Byte [3~0]: SATA PHY error count
170	AAh	"Bad Block Count (Early / Later)"	Counts the number of Bad blocks. Raw Value Byte [1~0]: Early bad block count Raw Value Byte [5~4]: Later bad block count Formula MABN: maximum acceptable bad block number CBBN : Current bad block number Spare unit percentage = ((MABN - CBBN)/(MABN)) *100 This formula calculates percentage of spare blocks. Value will range from 100 to 1.
173	ADh	Erase count (Average, Max Erase Count)	Max and average erase count Raw Value Byte [1~0]: Max erase count Raw Value Byte [3~2]: Average erase count

* These fields are included for compatibilty with legacy systems and return fixed values.

ID	HEX	Attribute Name	Description
175*	AFh	Bad Cluster Table Count	Not used
187	BBh	Uncorrectable Errors	Counts the number of host read uncorrectable errors. When the host reads data from the controller and the contoller reports that ECC happened during this access, this attribute value will increment by 1. Raw Value Byte [3~0]: Total number of ECC error count reported to host
192	C0h	Unsafe Shutdown Count	Counts the number of unexpected power loss events. This attribute returns the total unexpected power loss events numbers since initial drive deployment. Raw Value Byte [3~0]: Total number of accidental power loss count
194	C2h	Temperature	Temperature Raw Value Byte [1~0]: Current temp Raw Value Byte [3~2]: Lowest temp Raw Value Byte [5~4]: Highest temp
196*	C4h	Later Bad Block Count	Not used
197*	C5h	Current Pending Sector Count	Not used
199	C7h	CRC Error Count	Counts the number of CRC errors (read/write data FIS CRC errors). Raw Value Byte [3~0]: Total nunmber of CRC Error count
218	DAh	CRC Error Count	Counts the number of CRC error (read/write data FIS CRC error). Raw Value Byte [3~0]: Total number of CRC Error count
231	E7h	SSD Life Left	Raw Value Byte [0]: SSD Life Remaining Formula 100 - ((average erase count / rated PE)(100))
233	E9h	Lifetime Writes to Flash	Lifetime writes to Flash in Gigabytes. Raw Value Byte [5~0]: Increments in 1GB values
240*	F0h	Write Head	Not used
241	F1h	Host Writes (Sector Unit)	Lifetime write from host (each GB). Raw Value Byte [5~0]: Host write increments in 1GB values
242	F2h	Host Reads (Sector Unit)	Lifetime read from host (each GB). Raw Value Byte [5~0]: Host read increments in 1GB values
244	F4h	Average Erase Count	Average erase count. Raw Value Byte [3~0]: Total Average erase count
245	F5h	Max Erase Count	Max erase count. Raw Value Byte [3~0]: Max erase count
246	F6h	Total Erase Count	Total erase count. Raw Value Byte [3~0]: Total erase count

* These fields are included for compatibilty with legacy systems and return fixed values.