

Hard Disk Parameters

/dev/sda:

ATA device, with non-removable media

Model Number: WDC WD20EZRZ-00Z5HB0
Serial Number: WD-WCC4N5CARC7J
Firmware Revision: 80.00A80
Transport: Serial, SATA 1.0a, SATA II Extensions,
SATA Rev 2.5, SATA Rev 2.6, SATA Rev 3.0

Standards:

Supported: 9 8 7 6 5

Likely used: 9

Configuration:

	max	current
Logical cylinders	16383	16383
heads	16	16
sectors/track	63	63

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CHS current addressable sectors: 16514064
LBA user addressable sectors: 268435455
LBA48 user addressable sectors: 3907029168
Logical Sector size: 512 bytes
Physical Sector size: 4096 bytes
device size with M = 1024*1024: 1907729 MBytes
device size with M = 1000*1000: 2000398 MBytes (2000 GB)
cache/buffer size = unknown
Nominal Media Rotation Rate: 5400



$16383 \times 16 \times 63; \times 512 = 8 \text{ GB (7.8 GiB)}$

$\times 512 = 137.4 \text{ GB (128 GiB)}$

$\times 512 = 2 \text{ TB}$

(See https://en.wikipedia.org/wiki/Logical_block_addressing)

Capabilities:

LBA, IORDY(can be disabled)

Queue depth: 32

Standby timer values: spec'd by Standard, with device specific
minimum

R/W multiple sector transfer: Max = 16 Current = 0

DMA: mdma0 mdma1 mdma2 udma0 udma1 udma2 udma3 udma4 udma5
*udma6

Cycle time: min=120ns recommended=120ns

PIO: pio0 pio1 pio2 pio3 pio4

Cycle time: no flow control=120ns IORDY flow control=120ns

Commands/features:

Enabled Supported:

- * SMART feature set
- Security Mode feature set
- * Power Management feature set
- * Write cache
- * Look-ahead
- * Host Protected Area feature set
- * WRITE_BUFFER command
- * READ_BUFFER command
- * NOP cmd
- * DOWNLOAD_MICROCODE
- Power-Up In Standby feature set
- * SET_FEATURES required to spinup after power up
- SET_MAX security extension
- * 48-bit Address feature set
- * Device Configuration Overlay feature set
- * Mandatory FLUSH_CACHE
- * FLUSH_CACHE_EXT
- * SMART error logging
- * SMART self-test
- * General Purpose Logging feature set
- * 64-bit World wide name
- * WRITE_UNCORRECTABLE_EXT command
- * {READ,WRITE}_DMA_EXT_GPL commands
- * Segmented DOWNLOAD_MICROCODE
- * Gen1 signaling speed (1.5Gb/s)
- * Gen2 signaling speed (3.0Gb/s)
- * Gen3 signaling speed (6.0Gb/s)
- * Native Command Queueing (NCQ)
- * Host-initiated interface power management
- * Phy event counters
- * NCQ priority information
- * unknown 76[15]
- DMA Setup Auto-Activate optimization
- Device-initiated interface power management
- * Software settings preservation
- * SMART Command Transport (SCT) feature set
- * SCT LBA Segment Access (AC2)
- * SCT Features Control (AC4)
- * SCT Data Tables (AC5)
- unknown 206[12] (vendor specific)
- unknown 206[13] (vendor specific)
- unknown 206[14] (vendor specific)

Security:

Master password revision code = 65534

supported

not enabled

not locked

not frozen

not expired: security count

supported: enhanced erase

330min for SECURITY ERASE UNIT.

330min for ENHANCED SECURITY ERASE UNIT.

Logical Unit WWN Device Identifier: 50014ee263053d6f

NAA : 5

IEEE OUI : 0014ee

Unique ID : 263053d6f

Checksum: correct

S.M.A.R.T. Error Log

S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology)
(see <https://en.wikipedia.org/wiki/S.M.A.R.T.>)

smartctl version 5.38 [powerpc-unknown-linux-gnu] Copyright (C) 2002-8 Bruce Allen
Home page is <http://smartmontools.sourceforge.net/>

=== START OF INFORMATION SECTION ===

Device Model: WDC WD20EZRX-00Z5HB0
Serial Number: WD-WCC4N5CARC7J
Firmware Version: 80.00A80
User Capacity: 2,000,398,934,016 bytes
Device is: Not in smartctl database [for details use: -P showall]
ATA Version is: 9
ATA Standard is: Exact ATA specification draft version not indicated
Local Time is: Mon Feb 13 07:52:01 2017 EST
SMART support is: Available - device has SMART capability.
SMART support is: Enabled



=== START OF READ SMART DATA SECTION ===

SMART overall-health self-assessment test result: PASSED

General SMART Values:

Offline data collection status: (0x80) Offline data collection activity
was never started.

Auto Offline Data Collection: Enabled.

Self-test execution status: (0) The previous self-test routine completed
without error or no self-test has ever
been run.

Total time to complete Offline
data collection: (31200) seconds.

Offline data collection
capabilities: (0x7b) SMART execute Offline immediate.
Auto Offline data collection on/off support.
Suspend Offline collection upon new
command.
Offline surface scan supported.
Self-test supported.
Conveyance Self-test supported.
Selective Self-test supported.

SMART capabilities: (0x0003) Saves SMART data before entering
power-saving mode.
Supports SMART auto save timer.

Error logging capability: (0x01) Error logging supported.
General Purpose Logging supported.

Short self-test routine
recommended polling time: (2) minutes.

Extended self-test routine
recommended polling time: (255) minutes.

Conveyance self-test routine
recommended polling time: (5) minutes.

SCT capabilities: (0x7035) SCT Status supported.
SCT Feature Control supported.
SCT Data Table supported.

SMART Attributes Data Structure revision number: 16

Vendor Specific SMART Attributes with Thresholds:

ID#	ATTRIBUTE_NAME	FLAG	VALUE	WORST	THRESH	TYPE	UPDATED	WHEN_FAILED	RAW_VALUE
1	Raw_Read_Error_Rate	0x002f	100	253	051	Pre-fail	Always	-	0
3	Spin_Up_Time	0x0027	100	253	021	Pre-fail	Always	-	0
4	Start_Stop_Count	0x0032	100	100	000	Old_age	Always	-	3
5	Reallocated_Sector_Ct	0x0033	200	200	140	Pre-fail	Always	-	0
7	Seek_Error_Rate	0x002e	200	200	000	Old_age	Always	-	0
9	Power_On_Hours	0x0032	100	100	000	Old_age	Always	-	18
10	Spin_Retry_Count	0x0032	100	253	000	Old_age	Always	-	0
11	Calibration_Retry_Count	0x0032	100	253	000	Old_age	Always	-	0
12	Power_Cycle_Count	0x0032	100	100	000	Old_age	Always	-	2
192	Power-Off_Retract_Count	0x0032	200	200	000	Old_age	Always	-	0
193	Load_Cycle_Count	0x0032	200	200	000	Old_age	Always	-	800
194	Temperature_Celsius	0x0022	107	101	000	Old_age	Always	-	43
196	Reallocated_Event_Count	0x0032	200	200	000	Old_age	Always	-	0
197	Current_Pending_Sector	0x0032	200	200	000	Old_age	Always	-	0
198	Offline_Uncorrectable	0x0030	100	253	000	Old_age	Offline	-	0
199	UDMA_CRC_Error_Count	0x0032	200	200	000	Old_age	Always	-	0
200	Multi_Zone_Error_Rate	0x0008	200	200	000	Old_age	Offline	-	0

SMART Error Log Version: 1

No Errors Logged

SMART Self-test log structure revision number 1

Num	Test_Description	Status	Remaining	LifeTime(hours)	LBA_of_first_error
# 1	Extended offline	Completed without error	00%	15	-
# 2	Short offline	Completed without error	00%	7	-

SMART Selective self-test log data structure revision number 1

SPAN	MIN_LBA	MAX_LBA	CURRENT_TEST_STATUS
1	0	0	Not_testing
2	0	0	Not_testing
3	0	0	Not_testing
4	0	0	Not_testing
5	0	0	Not_testing

Selective self-test flags (0x0):

After scanning selected spans, do NOT read-scan remainder of disk.

If Selective self-test is pending on power-up, resume after 0 minute delay.