

HDD

- LMR - Longitudinal Magnetic Recording
- CMR/PMR - Conventional Magnetic Recording / Perpendicular Magnetic Recording
 - Tech from 2000. Normal tracks but vertical orientation. 3x density gain
- SMR - Shingled Magnetic Recording (overlapping tracks)
 - Trick to buffers write. Some small SSD memory, some space on platters are used for "journal" with fast CMR access, then disk is using idle time to rewrite it into SMR area. This can be very problematic during huge write load - e.g. RAID rebuild. So keep 20% of disc empty.

Where to check:

- [List of WD CMR and SMR hard drives \(HDD\)](#)
- [Dyski Seagate SkyHawk](#)

Examples

- Seagate
 - Barracuda 2-6TB should be SMR
 - IronWolf still CMR
 - ST1000NM0033-9ZM173 - Constellation ES.3 = CMR
 - ST2000VN004-2E4164 - IronWolf 2TB = CMR / native 512B
 - ST2000NM0008-2F3100 - Enterprise Capacity 2TB = CMR
 - ST2000DM008-2FR102 - Barracuda 2TB = SMR
 - ST1000VX005 1TB - SkyHawk Surveillance - [CMR](#)
 - ST2000VX008 2TB - SkyHawk Surveillance - [CMR](#)
 - ST2000VX015 2TB - SkyHawk Surveillance - [SMR](#)
- Toshiba
 - 1 to 6TB - SMR
 - X300, P300, N300 - CMR
 - Toshiba HDWD120 - Desktop P300 - PMR
 - Toshiba HDWD220EZSTA 2TB - Desktop P300 - SMR!
 - Toshiba HDWV110UZSVA 1TB - Surveillance S300 - CMR
 - Toshiba HDWT720UZSVA 2TB - Surveillance S300 - SMR
 - Toshiba DT01ACA200 - 2TB - CMR
- WD
 - WDC_WD2005FBYZ-01YCBB3 - WD Gold (for NAS/Raid) - CMR
 - WD Red 3,5" (WD20EFAX, WD30EFAX, WD40EFAX, WD60EFAX)- SMR
 - WD Blue 3,5" (WD20EZZ, WD60EZZ) - SMR
 - WD Blue 2,5" (WD10SPZX, WD20SPZX) - SMR
 - WD Black 2,5" (WD10SPSX) - SMR
 - WD22PURZ - Purple 2TB / 256MB cache, 5400 rpm - CMR
 - WD Purple is recommended by community for CCTV
 - WD10EFRX..WD60EFRX - CMR
 - WD80EFAX = CMR
 - WD101EFAX, WD120EFAX, WD140EFFX - CMR
 - WD20EZZ - WD Blue - SMR

SSD

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Last update: **2023/07/09 20:38**

