

Technology from hard drives is now in game controllers — it helps eliminate stick drift

Next-generation game controllers are beginning to use sensors based on tunnel magnetoresistance (TMR) — the same technology previously used in hard drives. It is designed to permanently solve the problem of stick drift.

TMR sensors, like Hall-effect sticks, do not use wear-prone components — instead of friction and carbon tracks in potentiometers, magnets and magnetic fields are used.

The main advantage of TMR is its higher sensitivity, stability under heat, and significantly lower energy consumption (as low as 0.3 mA compared to 2 mA for Hall sensors). This allows them to be integrated into existing game controllers without modifying the circuits.

So far, TMR is only used by third-party manufacturers — GameSir, 8BitDo, GuliKit, and others. The latter has released upgrade kits for PlayStation, Xbox, and Nintendo controllers. However, mass adoption is only a matter of time: the technology is already becoming cheaper and gaining reliability.