

SLC vs MLC vs TLC

Which Flash to Choose?

Legacy Electronics' SSD solutions are a superior alternative to conventional hard disk drives, delivering silent operation along with greatly enhanced durability, performance, and power efficiency. With no moving parts, the SSD does not need to spin up to write or seek files like on conventional hard disk drives, delivering a considerable increases in performance while greatly reducing the risk of mechanical failure.

Once the choice to take advantage of Legacy's SSD technology has been made, the next most important decision is what type of NAND Flash technology is right for your application. Because all NAND flash has limited write endurance, the correct type must be chosen to maximize performance vs cost effectiveness.

The three main architectures in use today are Single-Level Cell (SLC), Multi-Level Cell (MLC), and Triple-Level Cell (TLC). Generally speaking as the amount of write endurance available increases, so does the cost. Legacy Electronics SSDs are equipped with built in S.M.A.R.T. monitoring that can be used to measure drive usage under real world conditions and calculate endurance with customer specific work loads.

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Feature Comparison Chart

Parameters	SLC	MLC	TLC
Write / Erase Endurance	Best	Better	Good
Data Retention	Best	Better	Good
Cost per GB	High	Moderate	Low
Read / Write Transfer Performance	Best	Better	Good
Read / Write Latency	Best	Better	Good
Operating Temperature Range	Best	Better	Good
ECC Complexity and Overhead	Low	Moderate	High
Correctable Bit Error Rate	Low	Moderate	High
Controller and Firmware Complexity	Low	Moderate	High
Overall Drive Capacity	Good	Better	Best

About Us

Located in Canton, South Dakota, Legacy Electronics specializes in designing and manufacturing a full line of high-density memory modules, printed circuit boards, SSDs, and other computer products.

Legacy Electronics is home of the patented Canopy® chip-stacking alternative, a three-dimensional printed circuit board subassembly and process technology. Legacy utilizes an ISO 9001:2008 certified Quality Management System.

Legacy's cutting edge products are available in a variety of densities, speeds, and voltage levels. Our standard and custom modules are available in a wide array of form factors, including JEDEC-standard DIMMs and SO-DIMMs. Our products exceed industry standards. All Legacy products are proudly made in the USA..

Advanced tested memory products

Legacy Electronics is the only company to have a 100% pass rate for over 300 tests in a calendar year at CMTL (Computer Memory Test Labs).

In addition, CMTL awarded Legacy Electronics with a lifetime achievement award after 15 plus years of service with CMTL.

The CMTL Memory Module Certification Program performs advanced compatibility testing on motherboards from the industry's leading manufacturers like Intel®. All the modules listed at CMTL have passed rigorous cross platform certification testing criteria and are proven to be compatible with the motherboards on which they were tested.



Contact Us

Give us a call or visit us online for more information about our products and services

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