

SD ASSOCIATION INTRODUCES APP PERFORMANCE CLASS AND NEW SD MEMORY CARD SYMBOL

New specification creates more storage expansion options for mobile users to run applications from SD memory cards at optimal levels

SAN RAMON, Calif. — November 21, 2016 — Mobile phones and mobile computing users can choose the right SD memory card to run applications on mobile devices at optimal performance levels with the latest innovation from the SD Association. SD Specification 5.1 establishes the new Application Performance Class to meet technical and market requirements to both run and store applications on SD memory cards while still providing storage of pictures, videos, music, documents and other data. Cards offering App Performance will be easily identifiable with a new App Performance Class symbol.

The mobile device market is application-intensive and requires removable memory to ensure minimum random and sequential performance speeds to meet execution time requirements to run apps. The SDA has a long history of innovation to meet market demands, introducing new innovations each year. SD is trusted by consumers for its reliable, backwards compatible and highly interoperable storage, making SD memory cards the world's leading memory card with billions of SD memory cards and devices in the market.

"With its consumer-friendly symbol, App Performance Class eliminates buyers' frustration with identifying app-running compatibility on their Android devices and microSD memory cards," said Brian Kumagai, SDA president. "Matching the App Performance Class symbol with your mobile device requirements simplifies the process and continues the SD tradition of matching your memory card to your device."

Google released Android Marshmallow in Fall 2015, adding SD memory card support as "Adoptable Storage Devices," which tests for minimum execution time requirements. The benchmark test requires users to own or buy a SD memory card before testing it and some SD memory cards in the market may not pass the test because they were developed for optimal image and video capture, not application-running. The App Performance Class symbol provides product manufacturers with a way to communicate app-running requirements before users buy an SD memory card.

While mobile device manufacturers raised the need for such a performance class, both device and application developers may refer users to specific App Performance Class SD memory cards to meet their minimum levels of combined random and sequential performance.



Upon release, SD 5.1 introduces the first and most basic App Performance level, App Performance Class 1, or A1. SD memory cards displaying the A1 symbol will meet, or exceed, the following levels under specified conditions:

- Random Read Input-Output access Per Second (IOPS) of 1500
- Write IOPS of 500
- Sustained Sequential performance of 10MB/s.

There are two versions of the App Performance symbol:



The SDA will introduce higher App Performance levels as market need evolve.

The SDA has published a new white paper with more details on SD Specification 5.1, "Application Performance Class: The new class of performance for applications on SD memory cards." Summary information and a <u>video</u> about App Performance levels is available on our <u>website</u>.

SD Association

The SD Association is a global ecosystem of nearly 900 technology companies charged with setting interoperable SD standards. The Association encourages the development of consumer electronic, wireless communication, digital imaging and networking products that utilize market-leading SD technology. The SD standard is the number one choice for consumers and has earned more than 80 percent of the memory card market with its reliable interoperability and its easy-to-use format. Today, smart phones, tablets, Blu-ray players, HDTVs, audio players, automotive multimedia systems, handheld PCs, digital cameras and digital video cameras feature SD interoperability. For more information about SDA or to join, please visit the Association's website, https://www.sdcard.org.

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