Presenting JMicron Technology Corporation's newest high-speed external storage device solutions

A class-leading high-speed interface IC design company: JMicron Technology Corporation (GSMT: 4925) is introducing a series of high-speed data transfer bridge controllers at Computex Taipei 2018 this year, includes: JMS583 (USB 3.1 Gen2 to PCIe/NeMe Gen3x2), JMS901 (USB 3.1 Gen1 to UFS), JMB585 (PCIe Gen3x2 to SATA 6Gb/s x5) and other new products. The applications will focus on high-speed external storage devices, high-speed card readers, embedded systems, surveillance system, and other solutions.

The trend of storage devices has gradually shifted from traditional mechanical hard drives (HDD) to solid state drives (SSDs), and the transmission interface has also changed from SATA to higher-performance PCIe/NVMe. Therefore, in order to achieve higher performance, lighter and smaller physical size external storage products, a higher speed bridge controller solution is a must. JMicron's JMS583 is the world's first chip developed for this exact solution. The average read/write performance of PCIe SSDs through a JMS583 can achieve over 1000MB/s, which is the class-leading performance for external storage solution. In addition, JMicron integrated a unique power management mechanism and disk-compatible technology to the JMS583 design, which eliminated the need for additional external power supply adapters. This design can easily support large-capacity PCIe solid-state drives and all kinds of different brands of PCIe SSDs. JMS583 is introduced into mass production in April earlier this year. It has completed the development of new products with major leading companies and will be announced at the Computex Taipei 2018 this time.

JMicron also announced a brand new USB to UFS bridge controller solution - JMS901 at the Computex Taipei 2018. JMS901 is a solution developed by JMicron for emerging UFS interface storage devices. UFS (Universal Flash Storage) is a new high-speed storage interface with advantages of high-performance and low-power consumption found on the traditional UHS/eMMC storage solutions. UFS is now trending in the mobile device market, and positioned to be a direct successor interface for eMMC. In addition to be integrated in the mobile phone memory, there are also individual UFS cards that will be sold in the market. UFS cards based on the UFS technology will have the same advantages of the UFS storages and higher performance beyond the current consumer grade SD cards. It is expected that the arrival of UFS card will boost the demand for all memory cards in the card market. JMicron is currently the world's leading supplier of UFS bridge chip solutions. UFS storage devices with JMS901 have an average read/write performance of up to 430MB/s, which is more than 5 times that of currently available card readers. It will significantly reduce the time for customers to share, store and edit data. The JMS901 prototype design will be on display at this exhibition, and it is expected to be in mass production in the third quarter of this year. End products will be launched in the fourth quarter in conjunction with our major customers.

Storage solutions for multiple hard drives have always been a major development focus of JMicron.

During the Computex show, JMicron also announced the world's first SATA bridge chip, the JMB585, to adopt the PCIe Gen3 technology. The current SATA bridge chips in the market are all based on PCIe Gen2 technologies. With the rapid advancement of information and the creation of new products, the existing market solutions have gradually failed to meet the needs of fast data transmission. The high-performance capabilities of JMB585 are here to fulfill the market's need. With many years of experience in SATA storage devices, JMicron has adopted the new generation of PCIe Gen3 technology in the JMB585 design. It also introduces a new architecture without the need for a microprocessor. Using this architecture, customers can easily develop, design, and complete products, without the need to adjust the compatibility and performance through the complicated microcontroller. This will reduce the cost of the overall product development. For the storage solution based on data transfer of multiple hard drives, the newly added FIS-based switching design can overcome the bottlenecks created by operating multiple SATA storage devices simultaneously. The data transmission rate of the JMB585 can achieve to 1700MB/s, which is the maximum transfer speed of PCIe Gen3x2. This is the fastest data read/write transfer speed for multiple hard disk storage solution in the field. JMB585 is expected to be widely used in various embedded systems, surveillance consoles, external SATA expanders, and PC and notebook systems with multiple hard disk integrations.

Tony Lin, Vice President of Sales and Marketing of JMicron, said: "The series of high-speed bridge solutions announced at the 2018 Computex Taipei showed the determination and achievements of JMicron Technology. JMicron's new next generation high-speed bridge controllers will certainly invigorate the entire storage device market and create new innovative applications. JMicron Technology's customers will be able to develop a variety of peripheral storage products with ease. Together with JMicron, and advance into the new high-speed storage era."