

FMS 2022: BIWIN's Latest Storage Solutions for Embedded and Industrial Markets

Data storage solutions for embedded computing and industrial markets

MIAMI, FL, UNITED STATES, August 4, 2022 /EINPresswire.com/ -- At Flash Memory Summit 2022 Booth 619, BIWIN Storage Technology Co., Ltd. showed its wide-ranging embedded memory and industrial solutions portfolio designed to meet the increased demand for complex memory and storage needs.

Flash Memory Summit showcases the mainstream applications, key technologies, leading vendors and innovative startups driving the multi-billion-dollar non-volatile memory and SSD markets.

Non-volatile memory and SSD business will continue to experience substantial growth fueled by the digital transformation of enterprises, Industry 4.0, the rise of millions of consumer content creators, and the beginning of the metaverse as a computer interface.

Also, the unprecedented trillion-dollar global growth in Internet of Things (IoT) triggers an evolution in new technology with a particular focus on collecting, storing, managing and analyzing data. The evolution requires more powerful industrial-grade memory and storage, customized embedded solutions and even some storage capable of processing massive data sets despite harsh conditions where extreme temperatures, shock and vibrations, toxins, and unpredictable power supplies rule the environment.



BIWIN C1004 in-vehicle SSD



BIWIN DDR5

AT FMS 2022, BIWIN's innovative storage solutions covered enterprise server system SSDs, in-vehicle SSDs, industrial DDR5, Gen4 BGA SSDs and embedded memory chips.

Popular INDUSTRIAL SOLUTIONS on the BIWIN stand in Booth 619 included:

Enterprise Server: BIWIN SSD SS321 is a pioneering product built with 3D NAND wafer bundled with SATA 6 Gbps interface and DDR4 external DRAM cache. It delivers a maximum sequential 560MB/s read and 500MB/s write. Available in 240GB, 480GB, and 960GB.

In-vehicle: BIWIN C1004 is specially manufactured for car monitoring system of NVR/DVR. To cope with the severe challenges, such as frequent outages, unstable voltage, large temperature differential, large capacity for data storage, strong vibration, and huge interference, C1004 adopts the SATA interface. With the maximum capacity of up to 1.92TB, it boasts the functions of over-temperature protection, high-and-low temperature resistance, firmware backup, SMART monitoring, power-off protection, V-REC algorithm optimization, etc.

The DDR5 Revolution

The demands of the industrial market for massive data processing and high-performance computing will lead us to the faster adoption of DDR5 technology.

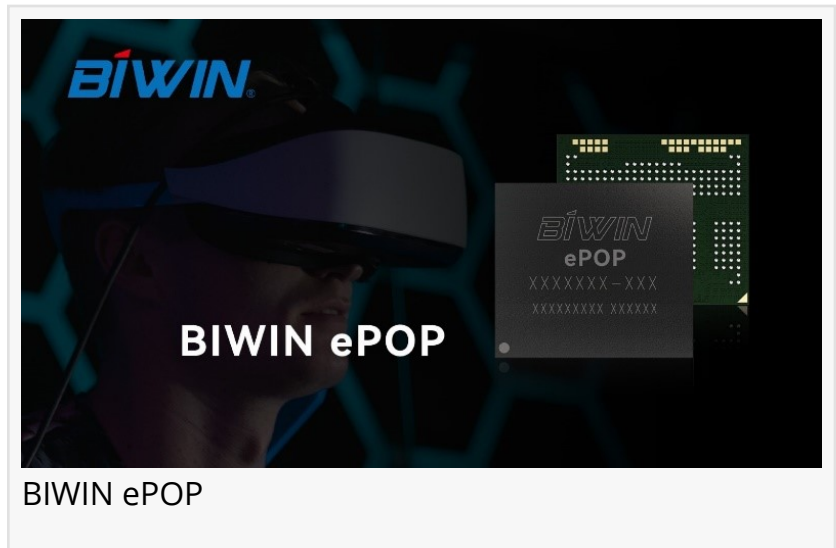
DDR5 is not just an upgrade to DDR4; DDR5 is a revolution with its dual-channel architecture, providing double the bandwidth. DDR5 unlocks new value for industry and businesses, driving the rapid innovation needed at the intelligent edge.

Compared with DDR4, the bank groups of DDR5 memory have doubled, allowing the memory to respond to execution actions at a faster speed and achieve ultra-high performance.

The standard operating voltage of DDR5 memory is reduced from DDR4's 1.2V to just 1.1V, improving the power saving efficiency by 8% (and reducing heat generation).

Instead of the traditional control method through the motherboard, the DDR5 memory is equipped with a power management IC (PMIC), which can control the system power load more efficiently and improve the power conversion efficiency by 85%. This improves signal integrity and compatibility, and even reduces the cost of the motherboard design for power supply.

BIWIN DDR5 U-DIMM is a low power consumption, high-performance memory module that fully



conforms to JEDEC's 288-pin DDR5. This series of products use 1.1V operating voltage and can face ambient temperature ranges from 0° to 85°. With 16GB to 32GB of DIMM capacities, the data transfer rate is up to 4800MT/s. The DRAM ICs used in this series of products are strictly screened to ensure stable operation and strong compatibility, making the products the best choice for industrial control, security and protection, desktop PCs and more.

BIWIN DDR5 SO-DIMM is a low-power, high-performance product that fully conforms to JEDEC's 262pin DDR5 small size memory module. This series of products use a working voltage of 1.1V and their applicable operating temperature range is from 0° to 85°. With a capacity range of 16GB – 32GB with up to 4800 MT/s data transfer speed, DDR5 SO-DIMM fits computer and gaming laptops, NUCs, thin client, security, and protection and more.

EMBEDDED MEMORY CHIPS

With a wide range of embedded storage solutions for different industries, BIWIN visitors will find a solution that matches their industry, and their product needs.

The new BIWIN BGA SSD EP400 is designed to help customers become trendsetters in flagship intelligent terminal applications. Coupled with PCIe Gen 4 x 2 interface and NVMe 1.4 protocol, EP400 delivers unrivaled speed up to 3500 MB/s. With the same size as eMMC and UFS, the read and write speeds of EP400 are twice that of PCIe 3.0 BGA SSD E009 series and much higher than UFS 3.0/3.1 products. It boasts comprehensive edges in flagship mobile smart terminals and is an excellent choice for 2-in-1 laptops, flagship smartphones, autonomous driving, drones, and other applications.

BIWIN ePOP254 (available in different capacities) combines MMC and Mobile LPDDR in a single package. With leading wafer packaging technologies, including wafer grinding, lamination, and lead bonding, BIWIN integrates RAM and ROM in a single device that not only improves performance and is more energy-efficient, but also saves printed circuit board space (PCB) and shortens the development period for customers. BIWIN ePOP products are small in size, low in power consumption, low in cost and easy to develop, making them ideal solutions for smart wearables, IoT devices, and portable and handheld devices (such as smartphones, tablets, PMP, PDAs and other media devices).

BIWIN eMCP144, using our decades of experience in chip packaging and our state-of-the-art facilities, integrates an eMMC chip and a low-power DRAM solution (adhering to a JEDEC standard protocol). This simplifies our customer's device manufacturing process and development cost, shortens the development time, and speeds up the launch of the products. The data transmission rate of this series of products can reach 4266 MT/s. Compared with traditional MCP, eMCP uses a built-in NAND flash control chip which reduces the burden of main chip computing and manages larger capacity Flash memory.

These innovative BIWIN storage products, purpose-built for industrial or embedded applications, help businesses generate more value.

Further BIWIN Resources

▶▶▶our (video): [New BIWIN Science & Technology Campus](#)

▶▶roduct page: [BIWIN Industrial Storage and Embedded Chips](#)

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