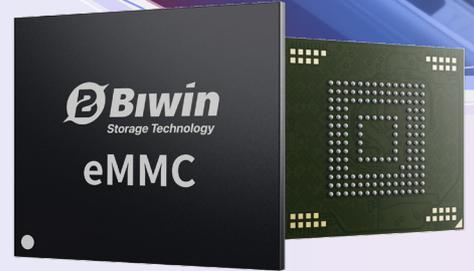


TDE308 Automotive eMMC

BIWIN TDE308 eMMC 5.1 features high-quality industrial-grade controllers and 3D TLC NAND, delivering sequential read speeds up to 325 MB/s and write speeds up to 260 MB/s. Designed for embedded and industrial applications, it supports a wide operating temperature range of -25°C to +85°C, ensuring stable performance despite harsh environments.

From firmware development to stringent testing and manufacturing, BIWIN ensures consistent quality and product reliability. The TDE308 incorporates BIWIN's self-developed firmware, supporting Field Firmware Upgrade (FFU) and firmware area backup for safe and flexible in-field maintenance. The TDE308 supports Power Off Notification, a key feature allowing users to implement targeted data protection tailored to application needs.

With BIWIN's own enhanced cross-temperature Read Retry (RR) algorithms, the TDE308 maintains high stability across temperature extremes. It is fully compatible with leading industrial CPUs, including Allwinner, RK, and SemiDrive, making it an ideal choice for industrial automation, data communication, energy infrastructure, and other mission-critical environments.



Key Features

High-Performance Storage with Advanced Data Integrity

The BIWIN TDE308 features the FBGA 153 ball package and adheres to the eMMC 5.1 protocol, offering high-performance storage for critical applications. Equipped with ECC for error detection and correction, it ensures data integrity and reliability for a seamless and dependable user experience.

Stable and Durable for Industrial Applications

Designed for operation in wide temperature environments ranging from -25°C to +85°C, the BIWIN TDE308 leverages BIWIN's proprietary cross-temperature Read Retry (RR) technology to enhance stability under extreme thermal conditions. It is fully compatible with various industrial CPUs, ensuring long-term, reliable performance despite demanding environments.

Comprehensive Data Protection for Consistent Reliability

The BIWIN TDE308 features its proprietary firmware that supports online firmware updates (FFU) and enables firmware area backups. For enhanced data integrity and device reliability, TDE308 supports regular inspection of the User Data Area (UDA), Extended User Data Area (EUDA), BOOT Area, and Replay Protected Memory Block (RPMB), including data and entry validation.

Rigorous Quality Control for Industrial Reliability

From wafer screening to final shipment, BIWIN's industrial storage products strictly comply with international standards and adhere to a comprehensive quality management system. Each manufacturing process is executed with precision to ensure high reliability at every stage. Ongoing Reliability Testing (ORT) after mass production continuously monitors product performance, ensuring consistent stability and excellence throughout the product lifecycle.

Technologies

FFU (Field Firmware Upgrade)

Power Off Notification

Firmware Backup

Read Retry (RR)

Applications



Industrial
Automation



Network
Communications



Smart Energy



Intelligent
Transportation

Model Name	TDE308
eMMC Standard	eMMC 5.1
Flash Type	3D TLC
Capacity	64 GB / 128 GB
Sequential Read (Up to)	325 MB/s
Sequential Write (Up to)	260 MB/s
Operation Current (Max.)	115 mA
Standby Current (Max.)	110 μ A
Dimensions	11.50 x 13.00 x 1.10 mm
Package	FBGA 153 Ball
Operating Temperature	-25°C to +85°C
Storage Temperature	-40°C to +85°C
Endurance	3000 P/E cycles
MTBF	>3,000,000 hours
Certifications	RoHS, REACH
Warranty	3-Year Limited

Order Information

Capacity	Part Number	Power Loss Protection
8 GB	WEFMD008GN8RC	Firmware-Based

1. Tested by BIWIN labs. Actual performance may vary due to systems, devices, or environment.
2. Maintenance and future updates are required throughout the product lifecycle. Specifications are subject to change without notice.
3. The pictures are for illustration only. Actual products may vary due to product enhancements or changes.
4. Not all products are sold in all regions of the world.
5. As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on the operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabyte per second (GB/s) = one billion bytes per second.
6. MTBF = Mean Time Between Failures based on internal testing using the Telcordia stress testing standard.
7. Please visit www.biwintech.com for warranty details in your region.
8. For more information, please contact sales@biwintech.com.

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