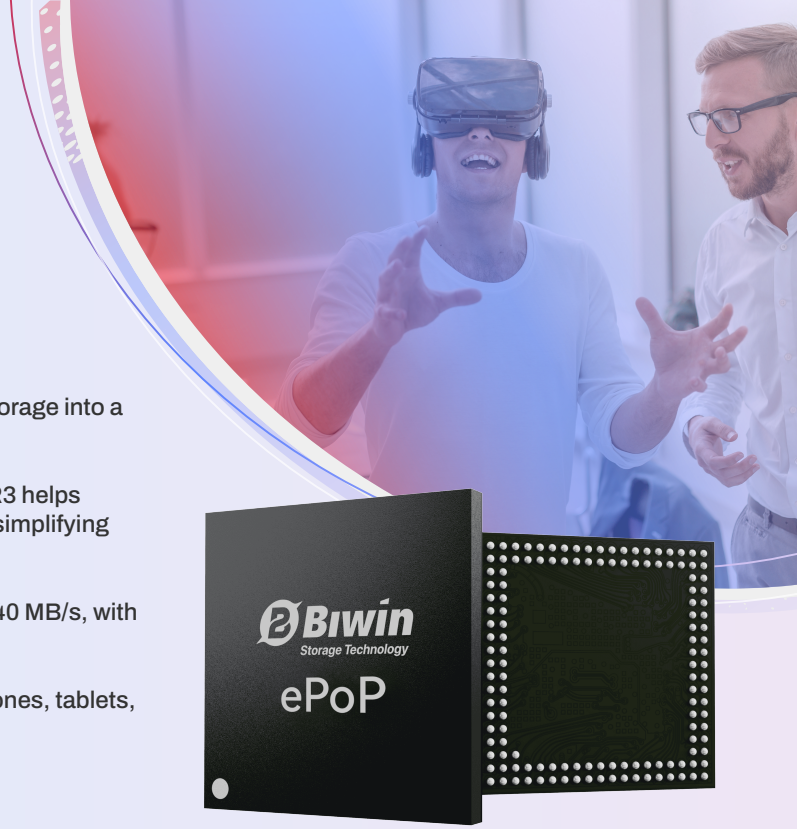
Biwin
Storage Technology

ePoP LPDDR3



BIWIN ePoP LPDDR3 integrates LPDDR3 DRAM and eMMC 5.1 storage into a Package-on-Package (PoP) solution.

With a compact size of just 10.00 × 10.00 mm, BIWIN ePoP LPDDR3 helps miniaturize and slim down devices such as smart wearables while simplifying circuit connection designs.

It achieves sequential read and write speeds up to 280 MB/s and 140 MB/s, with frequency up to 1866 Mbps.

It offers capacity up to 32 GB+8 Gb, and is widely used in smartphones, tablets, educational electronics, smart wearables, drones, and more.

Key Features

High Integration with Compact Form Factor

The BIWIN ePoP LPDDR3 uses multi-chip packaging technology to vertically stack eMMC and LPDDR3 within a single micro BGA package. This innovative design significantly reduces core PCB space usage by 40%-60% compared to traditional discrete configurations, providing a highly efficient storage solution for space-constrained applications, such as ultra-compact wearable devices and next-generation mobile electronics.

Exceptional Power Efficiency for Extended Lifespan

The BIWIN ePoP LPDDR3 incorporates an optimized low-power architecture in conjunction with advanced power management strategies, minimizing energy consumption. This enhancement delivers substantial improvements in power efficiency, contributing to extended battery life while maintaining stable performance.

Proprietary Firmware and Reliable Components

With BIWIN's proprietary firmware and rigorous testing, the BIWIN ePoP LPDDR3 passes through high standards of quality control across the entire production process. From component selection to final product validation, each stage adheres to comprehensive quality assurance practices, delivering exceptional reliability and durability, and consistent performance for mission-critical applications.

Wide Compatibility and Consistent Performance

The BIWIN ePoP LPDDR3 is fully compliant with JEDEC standards, offering seamless integration and compatibility with a wide range of system-on-chip (SoC) platforms from leading manufacturers. The BIWIN ePoP LPDDR3 delivers sustained, high-performance operation across diverse application environments.

Technologies

- Write Protection
- Quick Erase
- Wear Leveling
- Garbage Collection
- TRIM Command

Applications

- Smart Wearable
- VR / AR

Specifications

Model Name	ePoP LPDDR3
Interface	eMMC 5.1 + LPDDR3
Capacity	4 GB + 4 Gb, 8 GB + 8 Gb, 32 GB + 8 Gb
Performance	**eMMC 5.1:** Sequential Read: 290 MB/s Sequential Write: 150 MB/s **LPDDR3:** Up to 1866 Mbps
Operating Voltage	**eMMC 5.1:** V_{CC} = 3.3 V V_{CCQ} = 1.8 V **LPDDR3:** V_{DD1} = 1.8 V $V_{DD2} = V_{DDCA} = V_{DDQ}$ = 1.2 V
Dimensions	10.00 × 10.00 mm
Packaging	ePOP 136 Ball
Operating Temperature	-25°C to + 85°C
Storage Temperature	-40°C to + 85°C
Supported Platforms	Ingenic, Qualcomm, Unisoc
Warranty	3-Year Limited

Order Information

Capacity	Part Number	Packaging	Dimensions
4 GB + 4 Gb	BWCD24NL-04G	FGBA136	10.00 × 10.00 mm
8 GB + 8 Gb	BWCD28NL-08G	FGBA136	10.00 × 10.00 mm
32 GB + 8 Gb	BWCD28NP-32G	FGBA136	10.00 × 10.00 mm

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 life cycle. 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. Please visit www.biwintechnology.com for warranty details in your region.
6. For more information, please contact sales@biwintech.com.

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