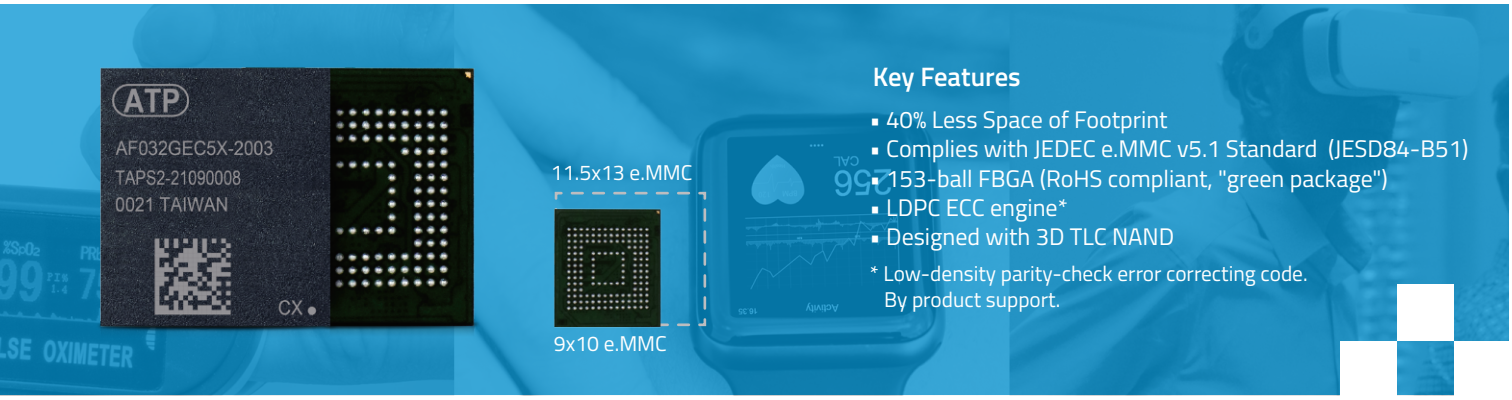
ATP 9x10 e.MMC
Embedded Flash Storage Solution

Commercial-Grade Configuration for Read-Intensive Applications



Key Features

- 40% Less Space of Footprint
- Complies with JEDEC e.MMC v5.1 Standard (JESD84-B51)
- 153-ball FBGA (RoHS compliant, "green package")
- LDPC ECC engine*
- Designed with 3D TLC NAND

* Low-density parity-check error correcting code. By product support.

Smaller than a typical e.MMC, ATP 9x10 e.MMC comes in a 153-ball fine pitch ball grid array (FBGA package).The tiny footprint/package size makes it perfectly suitable for embedded systems with space constraints. Its low power consumption will be a major factor in wearable device configuration.

ATP e.MMC is built to meet the tough demands of commercial applications. As a soldered-down solution, it is secure against constant vibrations. Its commercial temperature rating means that scenarios from cold -25°C to hot 85°C will not cause an adverse impact on the device or the data in it.

Compliant with the latest JEDEC e.MMC 5.1 Standard (JESD84-B51), ATP e.MMC features Command Queuing and Cache Barrier to enhance random read/write performance; High Speed 200MHz DDR Mode (HS400) for a bandwidth of up to 400 MB/s; Enhanced Strobe in HS400 Mode facilitates faster synchronization between the host and the e.MMC device; and Field firmware update (FFU) make end application easier to resolve problems in the far-end field. Secure Write Protection ensures that only trusted entities can protect or unprotect the e.MMC device.

It is backward compatible with previous versions (v4.41/v4.5/v5.0), supporting features such as power-off notifications, packed commands, cache, boot or replay protected memory block (RPMB) partitions, and high priority interrupt (HPI).

e.MMC	
	Commercial Grade
Product Line	Value E600Vc
Flash Type	3D TLC
IC Package	153-ball FBGA
JEDEC Specification	v5.1, HS400
Power Loss Protection Options	Firmware Based
Operating Temperature	-25°C to 85°C
Capacity*	32 GB
Performance	
Sequential Read/Write up to (MB/s)**	250 / 135
Bus Speed Modes	x1 / x4 / x8
ICC (Typical RMS in Read/Write) mA	81.5 / 49.5
ICCQ (Typical RMS in Read/Write) mA	80.5 / 61.5
Endurance and Reliability	
Endurance TBW (Max.)**	8.3 TB
Reliability MTBF @ 25°C	>2,000,000 hours
Others	
Dimensions: L x W x H (mm)	9.0 x 10.0 x 0.8
Certifications	RoHS, REACH
Warranty	One Year

* Low-density parity-check error correcting code. By product support.
** All performance is collected or measured using ATP proprietary test environment, without file system overhead.

Technologies & Add-On Services	Life Monitor	Sudden Power-Off Recovery (SPOR)	AutoRefresh	Advanced Wear Leveling	Dynamic Data Refresh	End-to-End Data Protection	Auto-Read Calibration	Secure Erase	Industrial Temperature	SiP	Vibration-Proof BGA Package	Complete Drive Test	Joint Validation
Value	○	○	○	○	○	○	○	○	▲	○	○	○	▲

▲: Customization option available on a project basis.

Product spec and its related information are subject to change without advance notice.
Please contact ATP Sales for more information.

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