

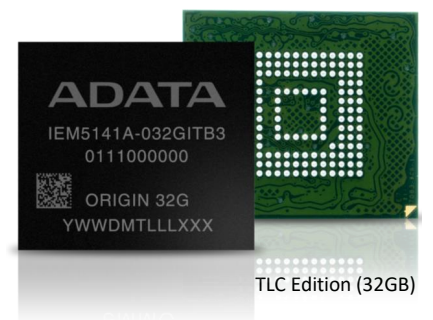


## ADATA Industrial & Embedded Solutions eMMC 5.1

Ideally suited for industrial and IoT applications, the ADATA IEM5141A is a compact, easy-to-install device with integrated flash memory and controller in a Ball Grid Array (BGA) package. It meets the JEDEC eMMC 5.1 standard for low-power consumption and optimized performance. Beyond IoT devices and industrial equipment with space-constraints, the versatility of the IEM5141A also makes it great for smart home, fleet management, automation, drone, and medical applications. To offer the durability and robustness required for industrial applications, the IEM5141A features wide-temperature operability (-40°C to +85°C) and thermal throttling to prevent overheating. What's more, the IEM5141A comes with a 3,000 P/E cycle rating as well as partitioning management, and an auto power-saving mode.

### Key Features

- 3K P/E Cycle Rating for higher durability
- Wide-temperature Operability (-40°C to +85°C)
- Thermal Throttling
- Auto sleep on/off mode for low power consumption
- Partitioning Management
- LDPC ECC



TLC Edition (32GB)

### Target Applications

IoT, Embedded Systems, Smart Home, Fleet Management, Automation, Drone, Medical

Flash Type	Industrial Temp. (-40°C to 85°C)	Auto Refresh	Advanced Diagnostics	Smart Partitioning	Thermal Throttling	Write Protect	Secure TRIM	Low Power Consumption
MLC	●*1	●	●	●	—	●	●	●
TLC	●*2	●	●	●	●	●	●	●

\*1: 16GB  
\*2: 32GB

● Supported — Not Available

## Specifications

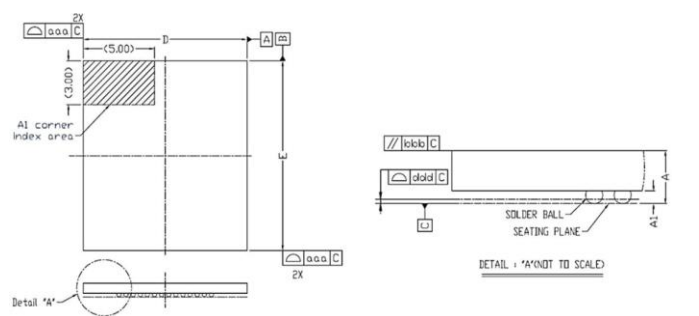
Model	IEM5141A	
Interface	eMMC 5.1	
Flash Type	MLC	3D TLC
Dimensions (L x W x H)	11.5 x 13 x 0.8mm	11.5 x 13 x 1mm
Capacity	8GB / 16GB	16GB / 32GB
Sequential Read (Max.)	300MB/s	300MB/s
Sequential Write (Max.)	120MB/s	170MB/s
Operating Temperature (Standard)	-25°C to 85°C (8GB)	-25°C to 85°C (16GB)
Operating Temperature (Industrial)	-40°C to 85°C (16GB)	-40°C to 85°C (32GB)
Operating Voltage	2.7V - 3.6V	
I/O (VCCQ) Voltage	1.7V - 1.95V or 2.7V - 3.6V	
Data Bus Widths	1 bit (default), 4 bit, 8 bit	
Technologies	Industrial-Temp., Thermal Throttling (*TLC), Secure TRIM, Auto Refresh, Smart Partitioning, Advanced Diagnostics, Low Power Consumption, Write Protect	

## Ordering Information

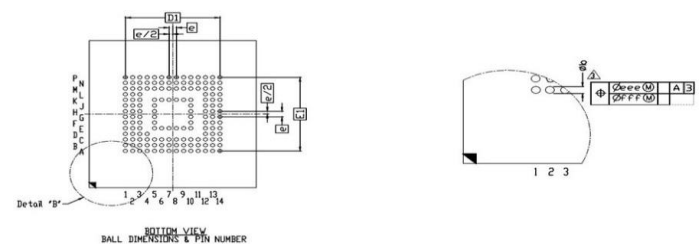
Capacity	MLC Standard (-25°C to 85°C)	MLC Industrial (-40°C to 85°C)
8GB	IEM5141A-008GEM	—
16GB	—	IEM5141A-016GIM
Capacity	3D TLC Standard (-25°C to 85°C)	3D TLC Industrial (-40°C to 85°C)
16GB	IEM5141A -016GETB3	—
32GB	—	IEM5141A -032GITB3



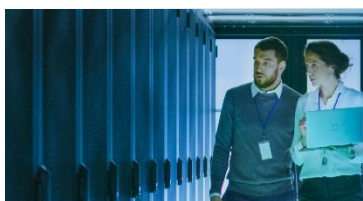
## Dimensions



Package Outline Drawing - Top and Side View



Package Outline Drawing - Bottom View



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