BGAE440 │ eMMC │ 100-ball

SMART's BGAE440 eMMC is an embedded Flash storage solution in a small BGA package designed specifically for the most demanding applications. SMART's BGAE440 eMMC products address the need for enhanced reliability by incorporating on-board error detection and correction, wear leveling algorithms, and other data management techniques to provide reliable operation and maximum NAND media life expectancy over the product life cycle.

SMART's BGAE440 eMMC is compliant to eMMC v5.1 specification and is available in the standard JEDEC 1.0mm pitch, 100-ball BGA package. The 100-ball package offers larger ball pitch and ball diameter which enables lower cost PCB designs and simplifies PCB routing with wider metal traces.

Features & Benefits

- Compliant to JEDEC v5.1 Standard
- Pre-Configurable to pSLC Enhanced Storage Media Mode
- Industrial Temp (-40°C to +85°C)

Applications

- IIoT
- Set Top Box
- Transportation
- Networking

Product Family Overview

Form Factor	Capacity	Sequential Performance
BGAE440 (pSLC)	20GB	Up to 300MB/s Up to 230MB/s

Specifications

	BGAE440 pSLC	100-ball
NAND Type	pSLC
Performance	
Host Interface Rate (maximum)	eMMC v5.1
Capacities	20GB
Sequential Read (maximum)	Up to 300 MB/s
Sequential Write (maximum)	Up to 230 MB/s
Random Read (maximum)	9180 IOPS
Random Write (maximum)	3680 IOPS
Reliability	
Endurance (JEDEC Enterprise Workload)	20GB: 920 TBW
Data Retention	10 years
Error Correction	ECC
Power	
Input Voltage	VCC: 2.7 – 3.6V VCCQ (Dual voltage): 1.7 – 1.95V or 2.7 – 3.6V
Environmental	
Operating Temperature	Industrial: -40°C to +85°C
Storage Temperature	-40°C to +85°C
Physical	
Length	14 mm
Width	18 mm
Height	1.4 mm

Ordering Information

Part Number	Density
**BGAE440 pSLC	eMMC	100-ball** **Industrial Operating Temperature (-40°C to +85°C)**	
KTLCGR2BWI11	20GB

For more information, please visit: **www.smartm.com**

Headquarters/North America:

T: (+1) 800-956-7627 • T: (+1) 510-623-1231

F: (+1) 510-623-1434 • E: info@smartm.com

Latin America:

T: (+55) 11 4417-7200 • E: sales.br@smartm.com

Asia/Pacific:

T: (+65) 6678-7670 • E: sales.asia@smartm.com

EMEA:

T: (+44) 0 7826-064-745 • E: sales.euro@smartm.com

Customer Service:

T: (+1) 510-623-1231 • E: customers@smartm.com