



## Product Change Notification (PCN)

**Date:** 7 March 2021

**PCN TRACKING NO:** PCN# 20210307/SM

**Subject:** Product Change Notification (PCN) for Alliance **8G DDR3L MICRON DIE SDRAMs**

<b>Affected Part Numbers</b>	AS4C512M16D3L-12BCN, AS4C512M16D3L-12BCNTR, AS4C512M16D3L-12BIN & AS4C512M16D3L-12BINTR
<b>Description of Change:</b>	<b>End-Of-Line</b> of affected Part Numbers
<b>Reason for Change</b>	<ul style="list-style-type: none"> <li>▪ Affected part numbers are Micron Die offered in Alliance Marking.</li> <li>▪ Micron Wafer Production End-Of-Line.</li> <li>▪ Migrating customers to Alliance Design rev 'A' &amp; 'B' Die alternatives for better <b>Longevity</b>.</li> </ul>
<b>Traceability, Guidelines (lot, date code, markings, shipment date)</b>	Traceable through marketing part number
<b>Datasheet for Alternative Part</b>	'A' and 'B' dies part alternatives already on website and can be found at <a href="https://www.alliancememory.com/datasheets/AS4C512M16D3LA/">https://www.alliancememory.com/datasheets/AS4C512M16D3LA/</a> <a href="https://www.alliancememory.com/datasheets/AS4C512M16D3LB/">https://www.alliancememory.com/datasheets/AS4C512M16D3LB/</a>
<b>Summary of Alternative</b>	See table 1 Below

**Table 1 - 8Gb DDR3L**

Density	Organization	Alliance E O L Part Number	Alliance Alternative Part Number to use*
8Gb	512M x 16	AS4C512M16D3L-12BCN	AS4C512M16D3LA-10BCN AS4C512M16D3LB-12BCN
8Gb	512M x 16	AS4C512M16D3L-12BCNTR	AS4C512M16D3LA-10BCNTR AS4C512M16D3LB-12BCNTR
8Gb	512M x 16	AS4C512M16D3L-12BIN	AS4C512M16D3LA-10BIN AS4C512M16D3LB-12BIN
8Gb	512M x 16	AS4C512M16D3L-12BINTR	AS4C512M16D3LA-10BINTR AS4C512M16D3LB-12BINTR

- Offered with Dual Die package with both 800MHz & 933MHz clock frequencies & DDR3L-1600Mbps/pin & DDR3L1866Mbps/pin

<b>Last Time Buy Date:</b>	August 31, 2021
<b>Last Time Ship Date:</b>	November 30th, 2021
<b>Sample Availability Date for rev 'A' &amp; 'B' part numbers</b>	Existing - Parts already in Production
<b>PCN Effective Date</b>	March 08, 2021

\*Any orders after 8 June 2021 are Non-Cancelable/Non-Returnable and cannot be changed. Products cannot be returned in stock rotation after this date.



**Alliance Memory Inc.**

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Dear Valued Customer:

This letter provides End-of-Life (EOL) notice of products for Alliance Memory 8Gb MICRON single DIE DDR3L SDRAMs 1.35V for 512Mx16 (96-ball FBGA) due to Micron end of Wafer production. Alternatives to these products will continue to be offered in the 'A' & 'B' dual die package (DDP) options already in mass production.

The delivery deadline is **November 30th, 2021** with last time buy (LTB) deadline **on August 31, 2021**. Please note that the standard shipment dates will apply in general and extended delivery dates must be pre-arranged and accepted in writing by Alliance Memory Management.

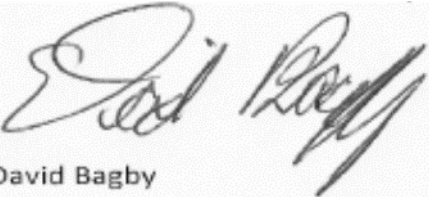
Regarding the replacement, Alliance Memory can continue to provide 25nm technology product line-up (refer to *Table 1* above).

Samples are now available for customers to start verification procedures.

We provide product comparisons within the pages that follow this PCN#20210307/SM.

Please contact your local Alliance Memory representative if you have any questions regarding this information

Yours faithfully



David Bagby  
President  
Alliance Memory Inc.



David Bagby  
President  
**Alliance Memory Inc.**

## AS4C512M16D3L-12BCN vs AS4C512M16D3LA-10BCN vs AS4C512M16D3LB-12BCN Comparison

Part Number & result Parameter	AS4C512M16D3L-12BCN	AS4C512M16D3LA-10BCN	AS4C512M16D3LB-12BCN	Comparison Result
<b>Product Description</b>	<b>DDR3L SDRAM</b>	<b>DDR3L SDRAM</b>	<b>DDR3L SDRAM</b>	Same
<b>Die per Package</b>	Single Die Package	Dual Die Package	Dual Die Package	
<b>Density/Memory Size</b>	8Gb	8Gb	8Gb	Same
<b>Memory Organization</b>	64Meg x 16 x 8 banks	64Meg x 16 x 8 banks	64Meg x 16 x 8 banks	Same
<b>Data Bus Width</b>	16 bits	16 bits	16 bits	Same
<b>Row / Column Address</b>	A[15:0] / A[9:0]	A[15:0] / A[9:0]	A[15:0] / A[9:0]	Same
<b>Page Size</b>	2KB	2KB	2KB	Same
<b>Operating Power Supply</b>	VDD/Q=1.35V (1.283~1.45V)	VDD/Q=1.35V (1.283~1.45V)	VDD/Q=1.35V (1.283~1.45V)	Same
<b>DDR3 Backward Compatibility</b>	Yes (VDD/Q= 1.425V ~1.575V)	Yes (VDD/Q= 1.425V ~1.575V)	Yes (VDD/Q= 1.425V ~1.575V)	Same
<b>Operating Temperature</b>	Commercial (0°C ≤ TC ≤ +95°C)	Commercial (0°C ≤ TC ≤ +95°C)	Commercial (0°C ≤ TC ≤ +95°C)	Same
<b>Max. Clock Frequency</b>	800 MHz	933 MHz	800 MHz	Same
<b>Max Data Rate (MT/s)</b>	1600 Mbps	1866 Mbps	1600 Mbps	Same
<b>CAS Latency</b>	11	13 for 933 MHz 11 for 800 MHz	11	Comparable
<b>tRCD/tRP (ns)</b>	13.75	13.91 for 933 MHz 13.75 for 800 MHz	13.75/13.75/11	Same
<b>I/O Capacitance</b>	CIO :2.2pF Max	CIO : 2.2pF Max	CIO : 2.2pF Max	Same
<b>Pin to Pin Compatible</b>	Yes	Yes	Yes	Same
<b>AC &amp; DC Characteristics</b>	Same	Same	Same	Meet JEDEC
<b>Package Dimension</b>	96b FBGA (9 x 14 x 1.2mm)	96b FBGA (9 x 13.5 x 1.2mm)	96b FBGA (9 x 13.5 x 1.2mm)	Different
<b>Package Ball Matrix</b>	12 x 6.4 x 0.8mm	12 x 6.4 x 0.8mm	12 x 6.4 x 0.8mm	Same
<b>Pb &amp; Halogen Free</b>	Yes	Yes	Yes	Same

## AS4C512M16D3L-12BIN vs AS4C512M16D3LA-10BIN vs AS4C512M16D3LB-12BIN Comparison

Part Number & result Parameter	AS4C512M16D3L-12BIN	AS4C512M16D3LA-10BIN	AS4C512M16D3LB-12BIN	Comparison Result
<b>Product Description</b>	<b>DDR3L SDRAM</b>	<b>DDR3L SDRAM</b>	<b>DDR3L SDRAM</b>	Same
<b>Die per Package</b>	Single Die Package	Dual Die Package	Dual Die Package	
<b>Density/Memory Size</b>	8Gb	8Gb	8Gb	Same
<b>Memory Organization</b>	64Meg x 16 x 8 banks	64Meg x 16 x 8 banks	64Meg x 16 x 8 banks	Same
<b>Data Bus Width</b>	16 bits	16 bits	16 bits	Same
<b>Row / Column Address</b>	A[15:0] / A[9:0]	A[15:0] / A[9:0]	A[15:0] / A[9:0]	Same
<b>Page Size</b>	2KB	2KB	2KB	Same
<b>Operating Power Supply</b>	VDD/Q=1.35V (1.283~1.45V)	VDD/Q=1.35V (1.283~1.45V)	VDD/Q=1.35V (1.283~1.45V)	Same
<b>DDR3 Backward Compatibility</b>	Yes (VDD/Q= 1.425V ~1.575V)	Yes (VDD/Q= 1.425V ~1.575V)	Yes (VDD/Q= 1.425V ~1.575V)	Same
<b>Operating Temperature</b>	Industrial (-40°C ≤ TC ≤ +95°C)	Industrial (-40°C ≤ TC ≤ +95°C)	Industrial (-40°C ≤ TC ≤ +95°C)	Same
<b>Max. Clock Frequency</b>	800 MHz	933 MHz	800 MHz	Same
<b>Max Data Rate (MT/s)</b>	1600 Mbps	1866 Mbps	1600 Mbps	Same
<b>CAS Latency</b>	11	13 for 933 MHz 11 for 800 MHz	11	Comparable
<b>tRCD/tRP (ns)</b>	13.75	13.91 for 933 MHz 13.75 for 800 MHz	13.75/13.75/11	Same
<b>I/O Capacitance</b>	CIO :2.2pF Max	CIO : 2.2pF Max	CIO : 2.2pF Max	Same
<b>Pin to Pin Compatible</b>	Yes	Yes	Yes	Same
<b>AC &amp; DC Characteristics</b>	Same	Same	Same	Meet JEDEC
<b>Package Dimension</b>	96b FBGA (9 x 14 x 1.2mm)	96b FBGA (9 x 13.5 x 1.2mm)	96b FBGA (9 x 13.5 x 1.2mm)	Different
<b>Package Ball Matrix</b>	12 x 6.4 x 0.8mm	12 x 6.4 x 0.8mm	12 x 6.4 x 0.8mm	Same
<b>Pb &amp; Halogen Free</b>	Yes	Yes	Yes	Same

# AS4C512M16D3L-12BxN vs AS4C512M16D3LA-10BxN vs AS4C512M16D3LB-12BxN PINOUT COMPARISON

AS4C512M16D3L-12BCN/BIN/TR Pinout										AS4C512M16D3LA-10BCN/BIN/TR Pinout										AS4C512M16D3LB-12BCN/BIN/TR Pinout																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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