

# Information Only Service Note

Supersedes: NONE

# M9038A PXIe High Performance Embedded Controller: 6-Core

Serial Numbers: ALL Manufacturing ID Number: ALL

# Code 12 errors under Device Manager.

Parts Required: P/N Description Qty. NONE

#### ADMINISTRATIVE INFORMATION

[[]] Calibration Required X Calibration NOT Required PRODUCT LINE: BL AUTHOR: TP

ADDITIONAL INFORMATION:



## Situation:

It has been found when the M9038A embedded controller is used with modules that request 32-bit prefetchable memory space, for example the M8195A, M9054A, M9155C, M9156C, M9168C, M9168E, M9169E, M9170A, M9185A, M9186A, or M9216A, user may run into PCIe enumeration issues that most often results in Code 12 errors in Windows Device Manager.

Device status		
	This device cannot find enough free resources that it can use. (Code 12)	^
	If you want to use this device, you will need to disable one of the other devices on this system.	
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## Solution/Action:

When working with modules that require 32-bit prefetchable memory space, the M9038A BIOS settings are not defaulted to support these. User would have to disable the "Above 4G Decoding" BIOS setting to support these modules. However, if the application has a high number of modules (more than 4 or 5) that require large memory space (for example M9111A, M9195x, M924x, M9336A, M941x, M9601A, or M9603A), the "Above 4G Decoding" BIOS setting may need to be enabled to enumerate them. Currently, there is no one size fits all setting available.

Follow the steps below to disable "Above 4G Decoding" BIOS setting for use with 32-bit prefetchable memory space modules. Repeat the steps below to re-enable "Above 4G Decoding" BIOS setting for use with configurations requiring large memory space.

1. Enter BIOS Setup, navigate the "Save & Exit" tab, enter "Restore Defaults", and choose "Yes" for Load Optimized Defaults.

Aptio Setup Utility Main Advanced Chipset Security	– <mark>Copyright (C) 2022 America</mark> y Boot <mark>save &amp; Exit</mark>	n Megatrends, Inc.
Save Changes and Exit Discard Changes and Exit Save Changes and Reset Discard Changes and Reset Save Options Save Changes Discard Changes		Restore/Load Default values for all the setup options.
Restore Defaults Save as User Defaults Restore User Defaults	Load Optimized Defaults – Load Optimized Defaults?	
Boot Override Windows Boot Manager (Micron_2300 UEFI: Built-in EFI Shell UEFI: PXE IP4 Intel(R) 10 Gigabit UEFI: PXE IP4 Intel(R) Ethernet C Launch EFI Shell from filesystem of	Yes No N prinection (7) I219-LM device	++: Select Screen †4: Select Item Enter: Select +/-: Change Opt. F1: General Help F8: Previous Values

2. Navigate to "Advanced" tab and enter the "PCI and PCIe Configuration" menu.



3. Select "Disabled" or "Enabled" for the "Above 4G Decoding" option as needed.

Aptio Setup Utility – Copyright (C) 2022 American Megatrends, Inc. Advanced					
PCI and PCIe Configuration		Enable/Disable above 4GB MemoryMappedIO BIOS assignment.			
Above 4G Decoding	[Disabled]	Allows 448G's space for 64bit			
Native PCIE Enable	[Enabled]	capable devices.			
PCIe Performance	[Disabled]				

4. Navigate to the "Save & Exit" Tab, press Enter for the first choice, and choose "Yes" to apply the new changes.



# Revision History:

Date	Service Note Revision	Author	Reason for Change
29 Nov 2022	01	TP	As Published