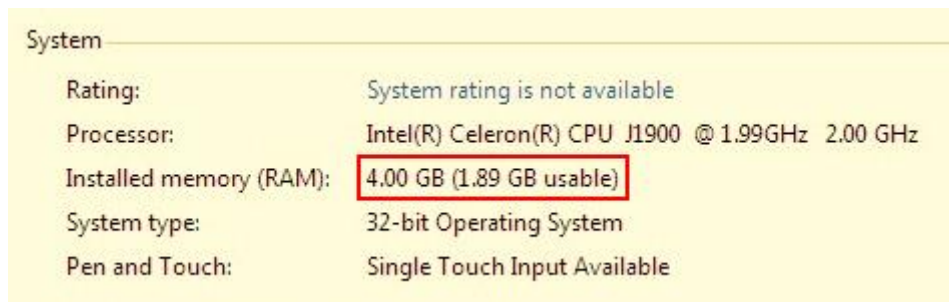


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Date	2018/07/10	Release Note	<input type="checkbox"/> Internal <input checked="" type="checkbox"/> External
Category	<input checked="" type="checkbox"/> FAQ <input type="checkbox"/> SOP	Related OS	N/A
Abstract	How to increase the usable memory with 32bit OS		
Keyword	32bit, Win7, usable memory, 4GB		
Related Product	PCI-7032		

■ **Problem Description:**

The system show 1.89GB usable memory under 32bit OS, but it can show 4GB under 64bit OS.



■ **Problem Analysis:**

Please refer to the Microsoft website to get more detail information about 32bit limitation with 4GB memory as below link:

In addition, it will reserve more memory space for PCI/PCIE devices in the new generation platform, that will cause more less usable memory under 32bit OS.

https://answers.microsoft.com/en-us/windows/forum/windows_7-windows_install/does-windows-7-32bit-support-4g-b-of-ram/76063e3e-1045-4908-9d21-3c6b94ce19b1

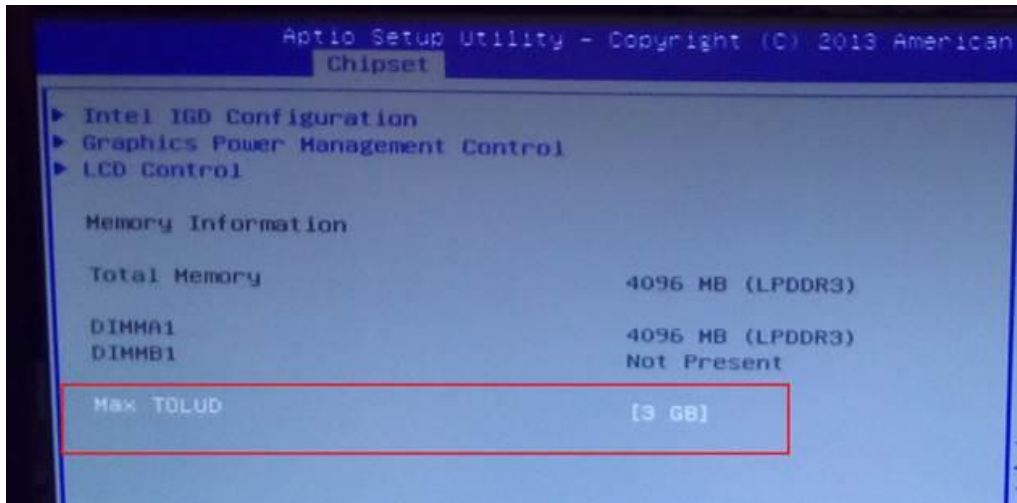
https://answers.microsoft.com/en-us/windows/forum/windows_7-performance/windows-7-32-bit-ultimate-4gb-ram-only-224-gb/175cbbbe-b509-46a9-a1e1-6d2297121d86

■ **Brief Solution - Step by Step:**

We can release some memory space which had been occupied by BIOS setting (Max TOLUD).

Max TOLUD (Top of Low Usable DRAM) This feature sets the maximum TOLUD value, which specifies the "Top of Low Usable DRAM" memory space to be used by internal graphics devices \ PCIE devices... The options are Dynamic, 1 GB, 1.25 GB, 1.5 GB, 1.75 GB, 2GB, 2.25 GB, 2.5 GB, 2.75 GB, 3 GB and 3.25 GB.

We can set the Max TOLUD item from auto to 3GB that can increase usable memory under 32bit OS.



Picture1: set the Max. TOLUD in the BIOS

