

## **SBC-GX1 BIOS memory limitations**

<b>Issue Date:</b>	11 May. 04	<b>Circulation:</b>	General
<b>PCB Version:</b>	N/A	<b>Schematic Version:</b>	N/A
<b>PCB Issue:</b>		<b>Schematic Issue:</b>	

The SBC-GX1 can be fitted with either an Award or General Software BIOS. The Award BIOS is used for standard boards and is the default version, whereas the General Software BIOS is used with the Windows CE and Windows XP Embedded boards.

The Award BIOS has a limitation that means it will not support all types of SODIMM SDRAM memory modules. This APN is designed to provide information regarding this issue and enable customers to specify the correct modules for use with the Award BIOS.

The SBC-GX1 uses 144-pin SODIMM memory modules. These modules are available from different manufacturers and they can be configured in different ways. As memory technology has developed new versions of the modules have become available. The Award BIOS is not able to correctly detect the memory on some of these modules and the result is that only half of the available memory is actually detected and used.

The reason for this is that the Award BIOS will only support memory devices that have a maximum density of 128Mbit. Some modules use larger 256Mbit devices, which reduce the number of parts used on the modules.

When purchasing modules for use with the Award BIOS they should be built with no larger than 128Mbit devices. This means that a 128Mbyte module will have eight devices fitted, and a 256Mbyte module will have sixteen devices. 128Mbyte modules with 4 devices and 256Mbyte modules with eight devices will not work correctly. The board will power up and during the Power On Self Test only half of the available memory will be detected.

This limitation does not exist with the General Software BIOS that will support the 256Mbit devices.

If you have any questions about this or about any of our products please contact Eurotech Ltd Technical Support.

Will Frazer  
Technical Support Manager