

AMD Geode™ GX DB533 Development Board Specification Update



Scope

This document discusses known issues of the AMD Geode™ GX DB533 development board.

The table below provides a summary of the issues. A detailed description of each issue, its impact and a recommended resolution/fix follow.

Note: This is revision B of this document. The change from revision A (dated September 2004) is the addition of issue #2.

Issues Summary

Issue # ¹	Description
1	LAN Connectivity LED does not light
2	IDE drives configured for Cable Select (CSEL) will not work (Rework B)

1. Issue numbers may not be sequential since issues are omitted once they are resolved.

Issues

1 LAN Connectivity LED does not light

Description: The LAN connection LED (green LED on the LAN connector) will never illuminate. Per the schematic, U15 is supposed to drive low if either of its inputs are low. The inputs are from the LAN controller's MA1 and MA2 lines that go low for 10 Mb/s or 100 Mb/s respectively. By design, the green LED on the LAN connector is supposed to illuminate for either speed. The schematic logic symbol for U15 shows an AND gate, which would yield the desired results. However, the part called out on the schematic is an OR gate. With the LAN controller driving either MA1 low or MA2 low (never both), the output of this gate will never be low.

Implications: By not illuminating the connectivity LED, a user may think that the LAN connection is not working. No other operation of the LAN circuitry or functionality is affected by this issue.

Resolution: None.

Rework: This rework applies to all existing SOM-DB2301 base boards.

- 1) On the SOM-DB2301 base board, replace U15 (74AHCT1G32) with 74AHC1G08.
- 2) Mark board with "Rework A".

2) IDE drives configured for Cable Select (CSEL) will not work (Rework B)

Description: Overview of CSEL from the ATA specification: IDE devices can be configured to use the CSEL (Cable Select) pin to determine their assignment. The host provides a low on this pin. The IDE cable will leave the pin open on the Device 1 connector on a two-device cable. If a device sees a low on its CSEL pin, it will be Device 0, otherwise, a high will cause it to become Device 1.

The host (in this case, the GX DB533) has left the pin floating. Devices will configure themselves as Device 1. In a single-device configuration, the system will not find the boot device. In a two-device configuration, they will both attempt to become Device 1 and will cause contention on the IDE bus

Implications: With the host not pulling the IDE signal CSEL low, the drives cannot correctly determine their device number assignment. The system may not boot.

Workaround: Drives can be individually configured as Device 0, or Device 1.

Rework: This rework applies to all existing SOM-DB2301 base boards.

- 1) On the SOM-DB2301 base board, install R172 (470 ohm).
- 2) Mark board with "Rework B".

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