

## Re: external eSata enclosure drive recognition?

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- *From:* "Bill in Co." <[not\\_really\\_here@xxxxxxxxxxxxxx](mailto:not_really_here@xxxxxxxxxxxxxx)>
  - *Date:* Sun, 3 Aug 2008 14:01:00 -0600
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Bill Blanton wrote:

"Bill in Co." <[not\\_really\\_here@xxxxxxxxxxxxxx](mailto:not_really_here@xxxxxxxxxxxxxx)> wrote in message [news:%23Gvwd7T9IHA.1208@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:%23Gvwd7T9IHA.1208@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Paul wrote:

Bill in Co. wrote:

OK. When the BIOS starts, it enumerates the add-on cards. It visits them one at a time, and reads the configuration info from the main chip.

From the "main chip" on the add-on card, I presume that means. (Not sure what the "main chip" is, but I guess that depends on the nature of the card).

The chip connected to the bus present in that expansion slot. The SIL3132 chip has a PCI Express x1 interface on it, and it connects to the slot. Probes by the BIOS, to the configuration space of the SIL3132, will uncover it is a storage controller card. If a BIOS chip is detected, then the next step would be to load code from the BIOS\_chip.

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SIL3132 ----- BIOS\_chip

|  
| (Enumerates via bus)  
|  
PCI\_Express\_x1\_slot

If the above BIOS chip, has INT 0x13 code present, then that storage card could contribute a drive to the boot list.

I wonder if it does (or how many actually do). Interesting.

If the card is designed like this, then a disk drive connected to the SIL3132 cannot be used to boot the computer.

Cannot? And yet it would appear in the boot list. I don't understand why if the system reads the BIOS on the card it's not able to boot the computer (not that I want that, anyways). It seems you are saying above that if the BIOS on the card is read, that it can't be used for booting? OR that this is somehow tied into the INT 0 x 13 thing you mentioned, and THAT is what creates that limitation?

AIUI, theoretically you could boot the device as long as the BIOS can load and jump into the first sector. Practically, "basic disk" Windows MBR boot code requires the device to be recognised by the 0x13 interrupts. IOW, Windows MBR code uses int 0x13 to load the volume boot sector of the boot device.

So what is the process again? I'm still confused. Let's see what I am missing:

When you initially boot the computer, the \*system\* BIOS 1) enumerates devices, and 2) if it detects BIOS on the added in PCI controller card, the CPU executes an INT 13H CALL instruction, which then tells it to go out and read a sector on the MBR of a HD?

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