

Re: SVGA, LCD, Win CE 6.0 and PB

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- *From:* John <John@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 5 Aug 2008 15:39:01 -0700
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Paul,

thank you for the suggestion. I will try it. I know it is almost impossible to analyze and troubleshoot a problem like this without working in front of the setup. The cause could turn out to be a very obvious and stupid mistake. I also do tech support. I have plenty stories like that and I've done things like that myself many time before. :-) Before I leave to do experiments, I just want to add a few more lines, providing some food for wild thoughts. :-)

After playing with my problem more, I can identify three windows/screens in my system:

- 1) A Physical Screen tied to BIOS. It displays stable images only when the BIOS is set at SVGA.
- 2) A Desktop tied to boot.ini. When I set resolution terms in boot.ini as 1024x768. I can have a desktop larger than physical screen window. The desktop can be moved around inside the physical screen window by me dragging the mouse pointer to the edges of the physical screen.
- 3) An actual Image Window. The desktop can also move around in this window as if in the physical screen window.

My problem is the image window does not match the physical screen window. Is any key in reg file (or a component in NK.bin) that will cause this?

Thanks!

John

"Paul G. Tobey [eMVP]" wrote:

One thing to do would be to draw rectangles of various sizes on the display and, in that way, find out **exactly** where the black rectangle begins. That is, it might be revealing if its value was 689, as opposed to 700 (and it gives you a number to search for in code, registry, etc.) Once you know that number, look for it, and one more than it and one less than it, in the obvious places, particularly in the bootloader, registry, etc. Yes, you'll probably get lots of false-positives, but there's a reasonable chance that

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you'll find it --- there just isn't much we can do without the hardware, the software, and suitable instrumentation in front of us...

Paul T.

"John" <John@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
news:F4305EEB-20F7-45F2-9091-92DD805A1194@xxxxxxxxxxxxxxxxxxxx

Hi guys,

Thank you very much for offering speculations and suggestions. I really appreciate them all.

I've been gone thru all of reg files in catalog. There is no key as ".../LCDC". There are a few keys look like related to the resolution. But they seem to be right, specifying resolutions with standard numbers, e.g. 800x600, 1024x786 and etc. The thing puzzles me most is why it draws lines up to 700 pixels? Where is this number 700 from? It will be a better clue if the number is 640 or 600 (one of the "standard" numbers). :-) So, I have a feeling that the problem probably is not very obvious such as a typo defining the resolution as 700x600, or a piece of the code that is wrong (because there must be millions of people used it before me). I feel the problem is still in how the NK.bin is built and there is a key(s) that has an indirect effect to the LCD driving, for example, as Paul described, causing errors in frame buffer preparation or alike. Do you guys know such keys existed? Another thing discourages me is I have no way to trace the problem. I can not set up "break points" and step thru the execution. :-)

Any speculation about keys or suggestions about how to close in at this problem?

Many thanks!

John

"MichaelH" wrote:

Hello John...

Do you have the following registry:
[HKLM]/Drivers/Display/LCDC

or something along this line defined in your BSP? It could be that the

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CE 6

driver is getting some bad information from the registry and changing the display.

Good luck.
Michael H.

"John" wrote:

Hi,

The original discussion of my problem is listed under "A black strip on right side of LCD" which may be too long to read. So, I summarize my problem and findings in one post here:

The problem:

I run Win CE 6.0 on an AMD CPU based SBC (Single board computer) board. I've got a black (blank) strip (100 pixels wide) at the right side of the LCD covering (or say, cut off) portion of the desktop image.

What I've found:

- 1) I've got full 800 pixel wide desktop image when I run Win XP on the same board with the same LCD.
- 2) The BIOS image on the LCD is fine. It extends to the edge of the LCD screen.
- 3) I drive a CRT and an LCD simultaneously. While I have a black (blank) strip on the LCD, the image on CRT is ok (full 800 pixels wide).
- 4) When I select the LCD resolution setting in BIOS, the LCD clock rate

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and
synch signals change accordingly. I have
measured the timing of each
signals
at different settings. They were correct for
that setting. Only the
SVGA
setting gives me a stable LCD display. The
change of LCD modes in BIOS
affects image size on CRT but I've got a full
desktop image on CRT no
matter
what LCD mode I select.

5) I played with resolution settings in
boot.ini (w/ BIOS set at SVGA).
Except the 800x600 setting, every other
setting (higher or lower)
actually
shows a smaller image on both (CRT and
LCD) screens with black (blank)
strips
all round. The actual resolution changes
accordingly. On LCD screen in
addition to the blank strip I still lose 1–2%
desktop image at the
right side
(with SVGA setting, I lose $100/800=12.5\%$.
What I lose is exactly the
width of
the blank strip).

6) Under SVGA resolution, if I move the
mouse pointer behind the blank
strip
and do right-click, I can bring up a menu
window. So, to the mouse,
the
screen resolution is SVGA.

7) My board can not read EDID. If I set
BIOS read customer EDID, the
LCD
display is blank.

The help I need:

- 1) Can anyone guess who the possible
culprit of this problem is?
- 2) How can I troubleshoot (trace) this
problem with PB?

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My board vendor thinks this is a display driver problem. But they use AMD BSP and they don't have detailed information (e.g. source code) about the driver. I doubt this is a display driver problem. Maybe I am wrong but I would think different display driver may provide some special features such as being efficient in some regards. But all of them should be able to drive a full desktop image, especially the display driver provided by AMD which should at least be tested for generic capabilities. Right?

Hey, I am stuck. I even don't know what kind of expertise to look for to solve this problem. Can anyone can shed me a light? Many thanks in advance.

John