

Re: Bug in X86 serial port driver in CE.NET 4.2 ?

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2004-09/0127.html>

From: George McCollister (georgem_at_novatech-llc.com)

Date: 09/02/04

Date: Thu, 02 Sep 2004 08:09:29 -0500

Jason wrote:

> Hello Steve,

>

> Yeah I have noticed that too on some UARTs. The chipset I am dealing with
> now is VIA82C686B bolted to a Pentium III. This board is an 'off-the-shelf'
> board from Aaeon. From the behaviour I am seeing with my driver it seems to
> be a software issue. The edge triggered issue has bit me enough I caught
> that for the UART (unmask/mask sequence at end of IST).

>

> The problem has occured at different baud rates and can happen at very low
> data rates. It was one of those 'random' lock-ups of our box. I have not
> been able to tie the data rate to the hang, it can happen in 5 min. or 2
> hours at any data rate.

>

> The application never reads 1 byte at a time but does depend on the hardware
> connected up (system configurable to control different pieces of hardware).
> No flow control (hardware or software), standard N,8,1 no weird stuff with
> DTR, etc. Its basically the most boring serial port application you can
> think of :)

>

> I did notice in the CE source some little 'weird' stuff but I didn't get
> into it enough to know if it was wrong. For example, the 16550 FIFO
> transmit interrupt happens just when there is 'room' in the FIFO, not when
> it is empty, the code in the kernel seemed to assume a 'transmit shift
> register empty' was the same as 'FIFO empty' but that should just cause lost
> data, not a hang.

>

> I cannot think of any other details that might matter at this point, as
> usual when debugging this kind of problem you develop all sorts of
> 'possibly's but nothing solid. The two known issues so far is no hang with
> no serial ports and no hang with my driver. This is a monolithic driver so
> I bypassed an external ISR, etc.

>

> If I think of anything else I will post it.

>

> Thanks,

> Jason

microsoft.public.windowsce.platbuilder: Re: Bug in X86 serial port driver in CE.NET 4.2 ?

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>

Our Orion product runs on CE .NET 4.1. We offer configurations with up to 18 serial ports. We run the standard driver on several ports and a slightly modified version on the rest. To date, we haven't had any problems reported, even on configurations running 8 serial ports on a single IRQ. We have hardware in the field running as high as 115200 bps and as low as 1200 bps. We have systems communicating over direct serial cable, 485 loops, fiber (direct and loops), radio, dial up modem and leased line modem.

We are running on x86 hardware at 66mhz.

Regards,
George McCollister
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