

Re: How to upgrade flash memory under the control of WinCE?

Source:

<http://www.tech-archive.net/Archive/WindowsCE/microsoft.public.windowsce.platbuilder/2004-02/1115.html>

From: Dean Ramsier (*dramsiernospam_at_accelentnospam.com*)

Date: 02/27/04

Date: Fri, 27 Feb 2004 17:07:04 -0500

IPSM can write to the same chip that the OS normally XIPs out of. So can Datalight FlashFX. They don't need to be using different chips, or chips whose hardware has a read/while/write architecture. However, during the actual update all code involved is running from RAM, and steps are taken to ensure there are no interrupts or exceptions that vector back into flash. Doing all that while keeping the overall system responsive is the tricky part.

Note that MS has a flash driver that works with Intel Strataflash parts using their FMD/FAL architecture. However, the MS driver does NOT support a file system on the same part that the OS XIPs out of. It isn't as sophisticated as IPSM or FlashFX.

But, it can be done and doesn't require bootloader involvement. However, anyone who needs to ask how it works should not attempt it. Those of us who have an idea how it probably works just forgo the agony and use the commercial solutions.

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Dean Ramsier - eMVP

Accelent Systems

<http://www.accelent.com>

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<https://www.windowembeddedeval.com/community/newsgroups>

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"Mike Markley" <mmarkley_online@microsoft.com> wrote in message news:y9DBbdW\$DHA.2872@cpmsftngxa06.phx.gbl...

> Lee,

>

> The IPSM is writing to a different memory chip or a different region on the

> chip that is not marked as XIP.

>

> Mike Markley

> Microsoft Corporation

> mmarkley_online@microsoft.com

>

microsoft.public.windowsce.platbuilder: Re: How to upgrade flash memory under the control of WinCE?

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>
> -----
> >From: "Lee Ning" <li.ning@advantech.com.cn>
> >References: <uPzEwX49DHA.1424@TK2MSFTNGP12.phx.gbl>
> <unh7aK59DHA.2184@TK2MSFTNGP09.phx.gbl>
> <uXlmlIS#DHA.3292@TK2MSFTNGP11.phx.gbl>
> <Ci3IkA9#DHA.1560@cpmsftngxa06.phx.gbl>
> >Subject: Re: How to upgrade flash memory under the control of WinCE?
> >Date: Thu, 26 Feb 2004 09:20:54 +0800
> >Lines: 70
> >X-Priority: 3
> >X-MSMail-Priority: Normal
> >X-Newsreader: Microsoft Outlook Express 6.00.2720.3000
> >X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
> >Message-ID: <e4cXJbA$DHA.2476@TK2MSFTNGP12.phx.gbl>
> >Newsgroups: microsoft.public.windowsce.platbuilder
> >NNTP-Posting-Host: 218.241.72.85
> >Path: cpmsftngxa06.phx.gbl!TK2MSFTNGP08.phx.gbl!TK2MSFTNGP12.phx.gbl
> >Xref: cpmsftngxa06.phx.gbl microsoft.public.windowsce.platbuilder:46302
> >X-Tomcat-NG: microsoft.public.windowsce.platbuilder
> >
> >Thank you very much Mike.
> >
> > But I know Intel IPSM can write to flash memory under XIP image.Do
you
> >know how IPSM can make it?
> >
> >Thanks.
> >
> >"Mike Markley" <mmarkley_online@microsoft.com> wrote in message
> >news:Ci3IkA9#DHA.1560@cpmsftngxa06.phx.gbl...
> >> Lee,
> >>
> >> If the Windows CE image is execute in place (XIP) then you cannot write
> >to
> >> the flash memory while the image is running. This is a limitation of
the
> >> flash memory itself and not of the OS. The only way to update the
> >> bootloader if the image is XIP is to have the bootloader update itself
> >when
> >> the device reboots.
> >>
> >> Mike Markley
> >> Microsoft Corporation
> >> mmarkley_online@microsoft.com
> >>
> >>
> >> -----
> >> >From: "Lee Ning" <li.ning@advantech.com.cn>
> >> >References: <uPzEwX49DHA.1424@TK2MSFTNGP12.phx.gbl>
> >> <unh7aK59DHA.2184@TK2MSFTNGP09.phx.gbl>
> >> >Subject: Re: How to upgrade flash memory under the control of WinCE?
> >> >Date: Sun, 22 Feb 2004 16:59:08 +0800
> >> >Lines: 20
> >> >X-Priority: 3
> >> >X-MSMail-Priority: Normal
> >> >X-Newsreader: Microsoft Outlook Express 6.00.2720.3000
> >> >X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
> >> >Message-ID: <uXlmlIS#DHA.3292@TK2MSFTNGP11.phx.gbl>
> >> >Newsgroups: microsoft.public.windowsce.platbuilder
> >> >NNTP-Posting-Host: 218.241.72.85
> >> >Path:
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microsoft.public.windowsce.platbuilder: Re: How to upgrade flash memory under the control of WinCE?

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>
>cpmsftngxa06.phx.gbl!cpmsftngxa10.phx.gbl!TK2MSFTNGXA05.phx.gbl!TK2MSFTNGP0
> 8
> >> phx.gbl!TK2MSFTNGP11.phx.gbl
> >> >Xref: cpmsftngxa06.phx.gbl
microsoft.public.windowsce.platbuilder:46106
> >> >X-Tomcat-NG: microsoft.public.windowsce.platbuilder
> >> >
> >> >
> >> > Thank you Street_Ken,But how can I let the CE not read data from
flash
> >> >while I am updating?
> >> >Is there a method can do that?
> >> >
> >> >"street_ken" <street_ken@sina.com> wrote in message
> >> >news:unh7aK59DHA.2184@TK2MSFTNGP09.phx.gbl...
> >> >> Flash is not ram, you can read directly but you can't write
directly.
> >> >Write
> >> >> need a set of "IO" command, so you need "driver" to do this while
not
> >> >> mapping memory.
> >> >> If you want update flash under CE. You must sure that the CE not
read
> >> >data
> >> >> from flash while you are updating. Because when you update the flash
> >the
> >> >> chip is in erase or program state, the read can't return the right
> >> result.
> >> >> So the CE maybe halt.
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