

Re: XIP – Execute in Place (For Bootloader)

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- *From:* "karthikbg" <karthik.balaguru@xxxxxxxxxxxxxxxxxxx>
 - *Date:* 19 Jan 2007 02:51:57 -0800
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karthikbg wrote:

Hi,

I was trying to bypass Boot ROM and Branch to Bootloader's entry point by some form of RESET configurations in OMAP. I did not get any specific RESET mode/configurations for this. Further, I find that it is not possible to bypass Boot ROM as it plays a very important role . I find that if i design by bypassing the boot ROM, then the bootloader will not get copied to the RAM from the Flash. The Boot ROM has the basic OMAP intialisaton stuffs and is copying the Bootloader from the Flash to RAM , then it invokes the bootloader in RAM.

The Bootloader is copying my application from Flash to RAM and invokes the application in RAM.

So, I think, I cannot bypass Boot ROM . (That is , I cannot Branch to Bootloader Entry point directly after RESET).

But, I think, the following is possible – Making the Bootlaoder to execute in Flash itself:

I would like to execute the Bootloader from the Flash Memory itself (Execute in Place – XIP).

The bootloader CMD files (Linker command Files) have the RAM memory mapping as it was designed to execute in RAM. So, the CMD files of the Bootloader has to be changed .

But, How to make the Bootloader to Execute from the Flash Memory itself ?

Kindly let me know your ideas / suggestions.

Thx in Advans,
Karthik Balaguru

I am avoiding the concept of Bootloader getting copied to the RAM for execution and I have selected the concept of eXecute In Place (XIP)

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concept because I need the RAM for another activity. But what are the things that I need to consider to make the bootloader to execute in Flash Memory itself ?

How to tell to my Processor that it has to execute the contents (Bootloader) in Flash Memory itself ?

Does XIP use RAM for certain activities or ONLY THE FLASH MEMORY ? Should I need to place some part of the bootloader sections (data) in RAM ? -> I am worried about this because I will be having some data in RAM.

Does XIP (execute in place) reduce the lifetime of my Flash Memory ?

What are the possible sources of problem if I use the XIP (execute in place) concept ?

Could anyone of you here kindly share some doc/link regarding the XIP ?

Thx in advance,
Karthik Balaguru