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基于不同类型Flash-ROM的Bootloader设计

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摘要 嵌入式微处理器片内资源越来越复杂以至于离开操作系统管理的嵌入式系统将无法有效运行。如何根据开发板硬件资源来设计嵌入式操作系统的引导程序(Bootloader), 无疑是一个重点和难点。介绍了具有不同固态存储类设备的嵌入式开发平台上的Bootloader的概念、主要任务和实现分析等。对比了NAND Flash和NOR Flash的主要异同。以加载ARM-Linux操作系统内核为例, 阐述了基于TI TMS320DM6446嵌入式系统开发平台上利用NAND及NOR Flash两类Flash-ROM(闪存)引导加载操作系统的软件设计方法。

关键词 [Bootloader](#) [TMS320DM6446](#) [NOR Flash](#) [NAND Flash](#) [嵌入式系统](#)

分类号

Design of bootloader based-on different flash-ROM

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Abstract

Embedded microprocessor inner resources are more and more complicated so that the resourceful embedded systems development platform does not work efficiently without the management of operating system. How to develop BootLoader on the basis of the specific hardware platform is a key point and difficulty without question. The main similarities and differences of NAND Flash are compared with that of NOR Flash. The concept, function and implement analysis of embedded operating system booting program—Bootloader are introduced at different firmware-class storage device. Taking loading ARM-Linux operation system kernel as an example, software designing methods with two kinds of Flash-ROM—NAND and NOR Flash are expatiated in TI TMS320DM6446-based Embedded Development Platform

Key words [Bootloader](#) [TMS320DM6446](#) [NOR Flash](#) [NAND Flash](#) [embedded system](#)

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