

君正 **Linux** 系统资源指南

Revision: 1.0
Date: Dec. 2007



北京君正集成电路有限公司
Ingenic Semiconductor Co. Ltd

君正 Linux 系统资源指南

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Release history

Date	Revision	Change
Dec. 2007	1.0	First release

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1 概述

Jz4730 和 Jz4740 是北京君正推出的两款高性能低功耗的 MIPS 内核 32 位嵌入式处理器，主频 350MHz，支持 MMU，包括 16KB 的 I-Cache 和 16KB 的 D-Cache，同时还集成了大量的外围设备。在君正处理器平台上可以运行 Linux、WinCE 和 uCOS-II 等操作系统，适合用来开发个人数字助理（PDA）、便携媒体播放器（PMP）、卫星导航仪（GPS）、数码学习机/电子辞典、数码像框、电子书和智能手机等多媒体和通信设备。

北京君正提供完整的 Linux 系统支持，帮助用户在君正 Jz 系列处理器平台上快速完成产品开发。为方便用户在设计过程中快速检索 Linux 系统下的各种可用资源，本文将详细列出目前已支持的基于 Linux 开发的各种资源，包括编译工具链，引导程序，和 Linux 系统核心、设备驱动程序支持、文件系统。

2 系统资源列表

Notes:

√: has been supported

-: not supported, but being scheduled to support

x: not supported, and has no schedule to support.

Table 1 Toolchain

Features	Status
GCC 3.3.1	√
GCC 4.1.2	√
GLIBC 2.3.2	√

Table 2 U-Boot Resource (Version 1.1.6)

Features	Status
Boot from NOR Flash	√
Boot from NAND Flash	√
NOR Flash driver	√
NAND Flash driver	√
Serial console and download	√
LCD console	√
Ethernet driver for tftp/nfs download	√
MMC/SD driver	√
I2C driver	√

Table 3 Linux Resource

Features	CELinux 2.4.20	Linux 2.6.22
➤ Kernel Features		
Preemptible kernel	√	√
O(1) scheduler	√	√
➤ Device Drivers		
Standard serial driver	√	√
Ethernet MAC driver	√	√
MTD NOR flash driver	√	√
MTD NAND flash driver	√	√
NAND Flash Translation Layer driver		

- Bad block management	√	√
- Logical to physical address mapping	√	√
- Weal leveling	√	√
MMC/SD driver (support up to 32GB)	√	√
LCD framebuffer driver	√	√
Audio driver		
- OSS AC97 audio driver	√	√
- OSS I2S audio driver		
- JZ4740 internal audio codec	√	√
- AK4642 external audio codec	√	√
- ALSA audio driver	×	√
JZ generic char device driver		
- Camera sensor (CIM) driver	√	√
- Touchscreen driver		
- via JZ4740 internal SADC	√	√
- via external AK4182	√	√
- via external UCB1400 codec	√	√
- via external WM9712 codec	√	√
- Keypad driver	√	√
- Smart card driver	√	√
USB 1.1 host driver	√	√
JZ4730 & JZ4740 USB device driver		
- USB file storage gadget driver	√	√
- USB serial gadget driver	√	√
- USB ethernet gadget driver	√	√
- USB RNDIS support	√	√
I2C bus driver	√	√
SPI driver	√	√
PCMCIA/CF card driver	√	×
IDE driver in PIO mode	√	×
JZ4740 On-Chip RTC driver	√	√
External RTC driver (PCF8563)	√	√
WIFI driver		
- Marvell WM8686 WIFI driver (SPI mode)	√	√
- Atheros AR6001X WIFI driver (SDIO mode)	√	√
- Atheros ZD1211 WIFI driver (USB dongle)	√	√
- VIA VT6656 WIFI driver (USB dongle)	√	√
Bluetooth support	-	-
MobileTV support	-	-
➤ File System		
EXT2/EXT3	√	√
FAT16/FAT32	√	√

JFFS/JFFS2	√	√
YAFFS/YAFFS2	√	√
UBIFS	x	√
➤ Power Management		
CPU clock change	√	√
IDLE mode	√	√
SLEEP mode	√	√
HIBERNATE mode	√	√
Power off mode	√	√
Advance Power Management (APM)	√	√
➤ Middle Ware		
Web Browser	-	
Java Virtual Machine	-	
Office (Word, PDF, TXT)	-	
Email	-	
SQL database	-	
➤ Application		
GTK+	-	
Microwindows	-	
QTE/Qtopia	-	
MiniGUI	-	
GPE	-	