# Ingenic Linux Resource Guide

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**Release history**

| Date | Revision | Change |
|------|----------|--------|
| Feb. 2009 | 1.2 | Add X11 and GTK+. |
| Mar. 2008 | 1.1 | Add mplayer and realplayer media format description. |
| Dec. 2007 | 1.0 | First release. |

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# Content

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# 1    Overview

The Linux 2.4 and 2.6 kernel can be run on the XBurst platform, a 32-bit embedded CPU. We added BSP support to several SoCs such as JZ4730, JZ4740 and JZ4750. This document will list a simple guide to tell you what are supported. These mainly includes the cross toolchain, bootloader, Linux kernel and drivers, file system and applications etc.

# 2 Resource List

**Table 1 Toolchain**

| Features | Comment |
|---|---|
| GCC 4.1.2 + GLIBC-2.6.1+ X11 + GTK+-2.0 | Cross toolchain |

**Table 2 U-Boot Resource (Version 1.1.6)**

| Features | Status |
|---|---|
| Boot from NOR Flash | Support |
| Boot from NAND Flash | Support |
| NOR Flash driver | Support |
| NAND Flash driver | Support |
| Serial console and download | Support |
| Ethernet download | Support |
| LCD driver | Support |
| MMC/SD driver | Support |
| I2C driver | Support |

**Table 3 Linux Resource**

| Features | Linux 2.6 |
|---|---|
| ➢ **Device Drivers** | |
| Standard serial driver | Support |
| Ethernet MAC driver | Support |
| NOR flash driver | Support |
| SLC/MLC NAND flash driver<br>  - Support 512B/2KB/4KB pagesize<br>  - Support size greater than 4GB | Support |
| NAND DMA and Two-Plane operations | Support |
| NAND Flash Translation Layer driver | |
|  - Hardware ECC | Support |
|  - Bad block management | Support |
|  - Logical to physical address mapping | Support |
|  - Weal leveling | Support |
| MMC/SD driver (support up to 32GB) | Support |
| LCD framebuffer driver (Parallel 16/18-bit, Serial 24-bit) | Support |
| Audio driver | |
|  - OSS AC97 audio driver | Support |

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| | |
|---|---|
| - OSS I2S audio driver | |
|    - JZ4740 internal audio codec | Support |
|    - AK4642 external audio codec | Support |
|  - ALSA audio driver | Support |
| Camera sensor (CIM) driver | Support |
| Touchscreen driver | |
|    - via JZ4740 internal SADC | Support |
|    - via external AK4182 | Support |
|    - via external UCB1400 codec | Support |
|    - via external WM9712 codec | Support |
| Keypad driver | Support |
| USB host driver | Support |
| USB device driver | |
|  - USB file storage gadget driver | Support |
|  - USB serial gadget driver | Support |
|  - USB ethernet gadget driver | Support |
|  - USB RNDIS support | Support |
| I2C driver | Support |
| SPI driver | Support |
| JZ4740 On-Chip RTC driver | Support |
| External RTC driver (PCF8563) | Support |
| WIFI driver | |
|  - Marvell WM8686 WIFI driver (SDIO & SPI mode) | Support |
|  - Atheros AR6001X WIFI driver (SDIO mode) | Support |
|  - Atheros ZD1211 WIFI driver (USB dongle) | Support |
|  - VIA VT6656 WIFI driver (USB dongle) | Support |
| Bluetooth support | Support |
| MobileTV support (Afond AD1000) | Support |
| ➢ **File System** | |
| EXT2/EXT3 | Support |
| FAT16/FAT32 | Support |
| JFFS/JFFS2 | Support |
| YAFFS/YAFFS2 | Support |
| UBIFS | Support |
| ➢ **Power Management** | |
| CPU clock change | Support |
| IDLE mode | Support |
| SLEEP mode | Support |
| HIBERNATE mode | Support |
| Power off mode | Support |
| Advance Power Management (APM) | Support |
| ➢ **MPlayer** | |

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| H264 | Support |
|---|---|
| MPEG2 | Support |
| MPEG4 | Support |
| FLV | Support |
| WMV | Support |
| XVID | Support |
| AVI | Support |
| MJPEG | Support |
| MP3, WMA, AAC etc. | Support |
| ➤ **Realplayer** | |
| RM and RMVB | Support |
| ➤ **GTK+ Platform** | |
| Firefox browser, Abiword, PDF reader, Pidgin etc. Based on X11/GTK+-2.0/Matchbox/XFCE4. | Support |