Athena-II/Hercules-II Linux Software Development Kit Guide

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Thank you for purchasing the Athena-II/Hercules-II Linux 2.6.23 Software Development Kit (SDK). This SDK provides you with all the tools required for creating Linux 2.6.23 based platform images for your Athena-II/Hercules-II single board computer.

The SDK includes the following two items:
- Athena-II/Hercules-II flash disk
- Athena-II/Hercules-II Linux 2.6.23 SDK CD

What's included on the Athena-II/Hercules-II flash disk?

The flash disk includes a bootable runtime Athena-II/Hercules-II Linux OS image. In addition to demonstrating Linux operation, the OS image also contains programs that can be used for demonstrating and validating many of Athena-II's/Hercules-II's hardware capabilities. Functions exercised by the bootable Linux OS image include:

- Ethernet support with local-area network installed
- DHCP, SSH, SCP, FTP
- PS/2 mouse and keyboard
- USB 1.0-2.0 ports
- Serial ports RS-232/422/485
- IDE storage devices
- Diamond Universal Driver 6.0x for Linux 2.6.23
- Data acquisition demo programs (for AV model boards)

What's Included on the Athena-II/Hercules-II Linux 2.6.23 SDK CD?

The Athena-II/Hercules-II SDK CD provides a software development platform for customizing the Athena-II/Hercules-II SBC's Linux OS. In order to minimize compatibility issues, the full source code for the Linux kernel that was used in creating the bootable Linux images on the Athena-II/Hercules-II flash disk are also included, along with a GNU development tool-chain.

Specifically, the SDK CD includes:

- Bootable images of the Athena-II/Hercules-II Linux board support package (BSP)
- Athena-II/Hercules-II Linux BSP components and source code:
    - Athena-II/Hercules-II Linux 2.6.23 kernel supporting the Via Mark processor
    - Root file system
    - Grub boot-loader version 0.97
- All required device driver binaries and sources (when applicable) required for Athena-II/Hercules-II to be used with the BSP
- Complete Linux development tool-chain (GCC 3.2.3, GCC-lib-i486, i486-slackware-linux, GNU Make 3.80), g++, etc.
- Step-by-step instructions on using Athena-II's/Hercules-II's BSP and device drivers to customize its Linux platform according to application requirements

Getting started

To run the Athena-II/Hercules-II demonstration:
- Install the flashdisk provided in this SDK on the Athena-II/Hercules-II SBC
- Boot from the flashdisk
- The demo image will run

To build a new Linux image for Athena-II/Hercules-II, start by reading the document entitled "Athena-II/Hercules-II Linux BSP Manual.pdf" (located on the Athena-II/Hercules-II Linux 2.6.23 SDK CD), which provides a comprehensive guide to developing new Linux system images and using the provided tools and utilities.

General information on customizing the Linux kernel, drivers, and utilities is available through numerous Linux websites, discussion forums, and mailing lists.

For additional Athena-II/Hercules-II technical information, visit the Technical Support area of Diamond's website at www.diamondsystems.com/support.