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MatchPort® AR Linux Software Development Kit

Embedded Linux Networking Solutions

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- Provides a robust development environment using industry standard Linux software tools combined with well known GNU toolchains
- Improves the ease and flexibility of application development—shortening time-to-market
- Allows you to leverage the knowledge of a well established Linux development community
- Simplifies the complicated and time consuming process of custom development on Linux-based platforms
- Integrated with our small, proven, and very powerful hardware module



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[MatchPort AR
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Features & Specifications

Supported Hardware

- MatchPort AR

Host Development Platforms Supported

- Ubuntu 8.04
- Ubuntu 8.10
- Fedora 6
- Fedora 9
- Debian 4.0r4

(There are minimal dependencies on the host Linux distribution.)

Toolchain

Code Sourcery G++ 4.3-45 Lite Edition provides the entire GNU Toolchain - C/C++ compilers, a flexible assembler, a powerful linker, runtime libraries, and a source and assembly-level debugger.

Toolchain component versions:

- gcc 4.3.2
- gdb 6.8.50
- binutils 2.18.50
- uClibc 0.9.29

Linux

- Kernel version 2.6.26
- Based on uClinux Distribution (20080808)

Device Drivers

- Ethernet
- Serial RS-232 and RS-485
- Configurable Pins Manager
- MTD (Flash support)
- Watchdog

Applications and Libraries

- BusyBox v1.13.2 – shell and various Linux utilities
- Boa v0.94.14RC21 – web server
- Dropbear v0.52 – compact SSH client and server

- inetd – Network Server
- telnetd – Telnet Server
- ftpd v1.4.1 – FTP Server
- dhcpcd v1.3.20 – DHCP Client
- mii-tool v1.9.1.1 – Ethernet Configuration Tool

File Systems

- ROMFS – space efficient read-only filesystem
- JFFS2 – Journaling Flash File System version 2. Supports flash wear leveling and helps prevent corruption from power failures
- NFS – Network File System
- AUFS – layering File System – allows easy separation of applications and their configuration files

Debugging and Testing

- gdbserver – for remote debugging
- iperf v2.0.4 – network performance testing
- tcpdump v3.9.8 – network packet sniffer

Available Lantronix Applications

- Software upgrade utility
- Failure Recovery Framework – Solves the maintenance and deployment issues of devices in the field by allowing recovery of failed devices to a known good state over the network. This provides an additional layer of robustness for applications deployed on MatchPort AR.

Provided Sample Programs

- CP Manager - GPIO control
- Serial to Ethernet (s2e) – serial tunneling over the network

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