MatchPort AR

Linux Software Developers Kit

A HIGHLY SECURE LINUX DEVELOPMENT SOLUTION FOR AFFORDABLE DEVICE NETWORKING CONNECTIVITY

The MatchPort® AR Linux Software Developer's Kit (SDK) is a highly-integrated embedded hardware and software suite that allows Linux developers to easily create value-added applications on Lantronix' small yet powerful embedded networking module. Built on the stable 2.6 Linux kernel, the SDK includes all the components you require for building secure network enabled products using the Linux OS.

In addition to the proven MatchPort AR secure networking module, the SDK provides a validated set of Linux-based applications, an extensive software library, a board support package (BSP) and device drivers which allow you to quickly create a custom tailored finished product. Included with standard GNU toolchains, you can easily integrate your applications using pre-defined configuration profiles and software assembly tools. Sample applications are also provided within the SDK allowing you to jump-start your application development and accelerate time-to-market.

With the MatchPort AR Linux SDK, you can leverage the growing demand for Linux-based products without the usual hassle of doing all the groundwork.

+ **Provides a turn-key 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**

DeviceLinx™

LANTRONIX®

Think it. Connect it. Control it.

FEATURES

+ 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

ORDERING INFORMATION

+ Part Number	+ Description
MPDK1000-LNX-01	**MatchPort Linux Development Kit** (without BDM Debugger Connector): • CD includes: Linux SDK, User Guide, Integration Guide, Quick Start Guide, CodeSourcery Sourcery G++ Light Edition • MatchPort AR w/ 8MB Flash without BDM connector • MatchPort demo board • RS-232 cable, DB9F, null modem • Cat5e UTP RJ45M/M Ethernet cable • 3.3V power supply
MPDK1000-LNX-02	**MatchPort Linux Development Kit** (with BDM Debugger Connector): • Same items as in MPDK1000-LNX-01 Kit plus MatchPort AR w/ 8MB Flash with BDM connector
930-060-R	**P&E Micro-computer systems USB Multilink Debugger**

NOTE: P&E Micro-computer system USB Multilink Debugger (930-060-R) must be ordered separately for the MPDK1000-LNX-02 kit.

For additional MatchPort part offerings, please visit our website.

RoHS WEEE COMPLIANT

LANTRONIX®

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