Software Overview

Introduction
Advantech-Innocore supplies a wide range of software packages and support to accelerate the customer's development cycle. As well as board support packages with highly robust drivers and edge-to-edge coverage for the hardware platforms, we offer a variety of other software products including peripheral protocol libraries, security suites and diagnostic and test software. This sheet provides an overview of the software products available. Please also consult the more detailed datasheets and the web site.

Overview of Packages

Features
- Comprehensive high performance drivers and utilities for the DPX® Series platforms
- Peripheral libraries
- Security solutions
- Software products tailored to the needs of the gaming industry
- Reliable, field proven

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Overview of Packages

Overview of Firmware & Software Packages

Board Support Packages
Drivers and Utilities
DirectPCI SDK & Run-Time
Embedded OS Support
Custom Embedded Linux

Security
SecureBoot™
TPM Suite

Firmware / BIOS
Customer Logo and Settings
TCG CRTM BIOS (TPM)
Custom BIOS Code

Utility / Development
DirectPCI API
DPX® Connector SDK
DPX® SAS Engine
DPX® Diagnostics

Board Support Packages
For each DPX® Series main-board a full set of drivers is supplied to match the standard PC components under Microsoft Windows® and Windows® Embedded. Under Linux, hardware support is verified against a range of Linux distributions and kernels, including:
- Fedora Core 4, 5, 6 & 7
- Debian 3.x
- Ubuntu 5.10, 6.10, 7.04
- Slackware 10.2, 11 & 12 (Custom kernel)

DirectPCI SDK & Run-time
The DirectPCI SDK addresses the unique features of the DPX® Series main boards: SRAM, ROM, Digital I/O and Intrusion detection and monitoring. The package includes:
- Device drivers for Windows® and Linux
- API libraries and header files with more than 100 functions
- Example source code and demos
- Components for Microsoft Windows® Embedded
- Utilities for deployment and debugging
Software Overview

TPM Suite (Trusted Platform Module)
A high level, security API solution and supporting software to utilise the capabilities of the Trusted Platform Module (TPM) chip on DPX® Series main boards. The hardware based security of the TPM provides the most robust security architecture. Capabilities include:

- Ties customer software to customer hardware (to provide copy protection and license protection)
- Software conforms to standards defined by Trusted Computing Group.

SecureBoot™
Low cost, light-weight security tool-kit. Features include:

- Customer hardware runs only designated software
- Assists with compliance against GLI-11 and other gaming regulatory standards
- ROM extension for media hashing function verification
- Flexible boot architecture
- Support for Compact Flash, CD/DVD ROM.

DPX® SAS Engine
A full driver and API implementation ready for integration with a customer’s game application. Features include:

- Support for SAS version 6.02 and all previous versions
- Accounting and metering
- Multi-game support
- Ticket In/Ticket Out (TITO)
- Advanced Funds Transfer (AFT and EFT) facilities
- Over 175 SAS Meters and 150 SAS Events defined
- Real time events

Embedded Support
A collection of componentised drivers for Microsoft Windows® Embedded users including:

- Intel® chipset and extreme graphics drivers
- AMD Radeon embedded graphics drivers
- Realtek Ethernet and ALC655 AC97 codec

DPX® Connector SDK
A toolkit for connecting additional gaming hardware such as bill acceptors, coin hoppers etc. Plug-in oriented and user-extensible for integrating new and custom hardware support modules.

- Device support regularly updated
- Support includes: ID003, CCtalk, EBDS, Epic and Ithaca protocols among others

Custom BIOS support
Customised BIOS are available for DPX® Series main boards. Modifications include:

- Display your company’s logo at bootup
- Use specific BIOS default
- Customised menus
- Prevent users from changing BIOS settings
- Restrict boot devices
- Fast boot
- Customer boot ROM extensions

DPX® Diagnostics
Advantech-Innocore’s test management solution to address, design validation, software release verification and hardware production verification.

- Plug-in oriented and user-extensible for integrating custom tests and Densiron standard tests.
- Full coverage of all gaming-specific hardware included on Advantech-Inncoore products including SRAM, ROM, Digital IO, extra COMs, Intrusion detection and logging processor.

Common Package Contents
Most Advantech-Inncoore software products provide the following features to allow for easy development and integration with the customer’s game application:

- Simple menu driven installation
- SDK and run-time options bundled together
- Sample source code with pre-compiled binaries
- Libraries and header files for developers
- Componentised software for Microsoft Windows® XP Embedded
- Full, detailed documentation supplied in both online and printed form

General Requirements
Development machine:

Windows® XP SP2 or Linux with 2.6 kernel
256MB RAM
Linux: GNU CC v3.3 or later + GNU libc v2.3.4 or later

Target Machine:

DirectPCI Run-Time API
DPX® Series motherboard or system