

DPX® Core SDK

Driver, Runtime and API Toolkit for DPX Series Gaming Platforms



Features

Core Platform Enablement

- DPX Core device drivers for gaming-specific hardware resources
- Structured API for digital I/O, memory, and platform monitoring
- Access to SRAM, ROM, meter outputs, and intrusion inputs

Platform Integration

- Hardware abstraction layer supporting deterministic hardware interaction
- Embedded controller communication through ECPL
- Compatible with DPX Media Validation Toolkit and related platform components

Lifecycle Alignment

- Supported across all DPX Gaming Platforms
- Aligned with long lifecycle gaming deployments



Introduction

DPX Core SDK provides the driver and application programming interface (API) framework for controlled access to gaming-specific hardware features across DPX Series platforms. It forms the foundational software layer for DPX Core-based expansion, non-volatile memory access, digital I/O control, intrusion monitoring, event logging, RTC access, and related platform resources. The SDK abstracts hardware implementation through a structured API and runtime environment, enabling deterministic interaction between application software and regulated gaming hardware.

DPX Core SDK is available with supported DPX Series platforms and is intended for OEM developers building regulated gaming solutions

Architecture & Capabilities

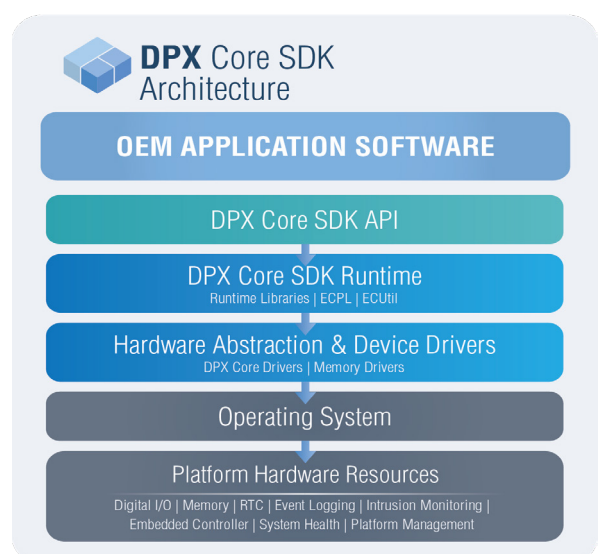
DPX Core SDK consists of:

- DPX Core kernel-level device drivers
- Hardware abstraction layer
- Memory access drivers
- Runtime libraries
- Embedded Controller Protocol Library (ECPL)
- API interface for application-level integration
- Sample programs/source examples

The SDK provides a consistent interface for accessing and controlling hardware resources across DPX Series platforms, abstracting hardware implementation from application software. ECPL operates in conjunction with DPX Core SDK to support structured controller interaction, system monitoring, and platform management.

The SDK maintains forward and backward API compatibility across DPX product generations and families, enabling migration to newer platforms with minimal redevelopment. This protects software investment, reduces development effort, and helps streamline future regulatory approvals

Consistent API behaviour also enables applications to move between DPX platforms more easily, supporting adoption of new or lower-cost products and solutions for different market requirements.



Package Contents

The SDK package includes:	DPX Core device drivers
	Runtime libraries
	Memory drivers
	API libraries and header files
	ECPL and associated components
	Sample programs, source code examples and reference binaries
	Deployment and debugging utilities
	Extensive Programmer's Reference Manual

System Requirements

Development Environment	Supported Windows and Linux operating systems aligned with the selected DPX platform
	Standard industry development toolchains (e.g., Microsoft Visual Studio, GCC or equivalent)
	Standard development workstation resources
Target Platform	Supported DPX Series motherboard or integrated system
	Compatible platform firmware and BIOS configuration

Integration & Compatibility

DPX Core SDK provides a consistent API across DPX product generations and families, supporting application portability and simplified migration between platforms. Its hardware abstraction helps minimise software changes when adopting newer, lower-cost, or market-specific DPX products.

ECPL operates in conjunction with DPX Core SDK to support structured controller interaction, system monitoring, and platform management.

Benefits

- Consistent API across DPX product generations and families
- Simplified migration to newer and alternative DPX platforms
- Reduced software redevelopment and protection of existing software investment
- Supports streamlined regulatory approval processes
- Stable hardware interface for regulated gaming applications

OEM Customization and Product Development

Advantech Gaming Solutions provides PC-based hardware and software design services for regulated gaming applications, supporting customized platform development and long-term product lifecycle management.

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