Trusted Gaming Platforms

Tailored to Fit Gaming Products

- Arcade
- Lottery
- Casino



Trusted ePlatform Services

ADVANTECH

www.advantech.com

Trusted Gaming Platforms

The Trusted Gaming Platform that Fits Your Application Requirments

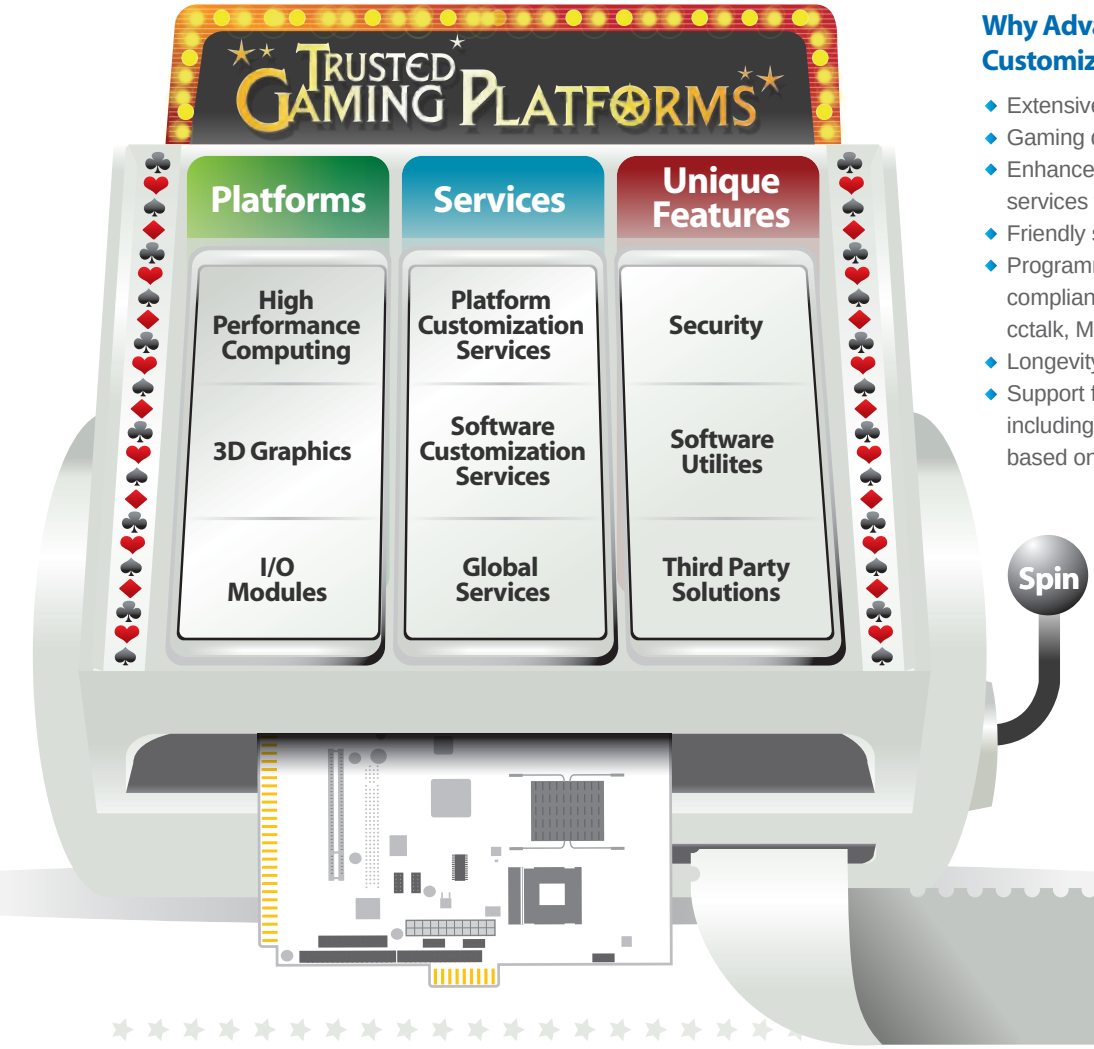
Advantech is dedicated to helping customers develop reliable gaming machines. Gaming applications face strict regulations and must satisfy industry specific standards. Advantech has years of industrial ePlatform design know-how and experience with professional software development. We offer gaming machine customization services to meet the most exacting requirements.

ADVANTECH DTOS
Design To Order Services

Advanced Design for Arcade, Casino and Lottery Applications

- Security & data protection
- Multiple I/O with high ESD protection
- Onboard graphics processor or graphics expansion slot
- Gaming-specific firmware & API





Why Advantech for Gaming Customization Services?

- Extensive experience of board and system solutions
- Gaming domain know-how
- Enhanced BIOS customization and OS integration services with unique security features
- Friendly software application interfaces
- Programming interface (API) for software developers, compliant with gaming industry protocols such as cctalk, MDB, ID003.
- Longevity Support
- Support for high-end 3D graphics, including nVidia and ATi (longevity support based on vendor's product life cycle)

Gaming Platform Customization Services

Gaming-specific Platform Design

Advantech's Gaming Platform customization service helps customers to engineer gaming machines that offer a high degree of reliability, flexibility, security, ease of installation and maintenance.

JAMMA Compatible



With multiple GPIO and external power inputs available along the board's edge, the CPU board can connect with external gaming device inputs, like buttons, alarms, meters and so on. The JAMMA interface is very popular in Asia and South Europe. Advantech offers an alternative solution to JAMMA compatible internal connectors that support more than 64-pin GPIOs and power inputs. While customers are not required to apply the JAMMA standard to enjoy more than 64-pin GPIO features, the system is fully compatible with all JAMMA layout protocols.

Advanced Encryption Standard (AES)



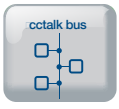
A hardware AES (Advanced Encryption Standard) engine is included as an Advantech FPGA. Customers can use the AES to encrypt their data values. AES is one of the most popular algorithms used in symmetric key cryptography.

Hardware Random Number Generator (RNG)



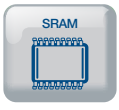
A Random Number Generator (RNG) is at the core of every gaming platform. It is a sophisticated program that functions as the dealer in all games, shuffling the deck of cards, spinning the roulette wheel, dealing the hand, etc. For fair gaming, it is critical that game results generated by the RNG are completely random and that this randomness is tested and certified by a qualified agency or testing facility.

cctalk



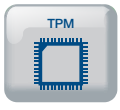
cctalk is a serial communication protocol developed for monetary control systems. It is useful for low speed control networks. It offers easy interconnection to simplify the management of various types of cash handling and coin validation equipment over a simple, 3-wire interface. Various peripherals use cctalk to communicate with the host controller, some of which include: coin acceptors, bill authenticators and hoppers.

Battery-backed SRAM

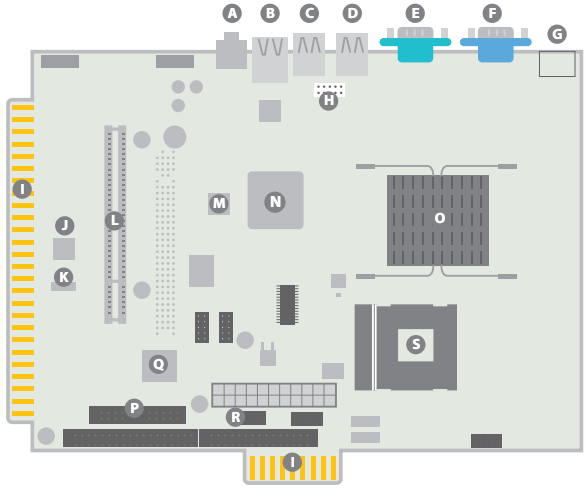


The robust nature of the silicon ensures that the information stored there is made more secure from external software attacks and physical theft. Battery powered SRAM allows storage of the game tracker.

Trusted Platform Module (TPM)



A Trusted Platform Module (TPM) can be used to authenticate a hardware device and for data protection.



- A Audio
- B LAN
- C USB x 2
- D USB x 2
- E VGA
- F COM1
- G Keyboard/Mouse
- H LVDS
- I JAMMA Compatible
- J FPGA
- K Battery-backed SRAM
- L PCI
- M TPM
- N South Bridge
- O North Bridge
- P COM2/3
- Q Super I/O
- R COM4
- S CPU



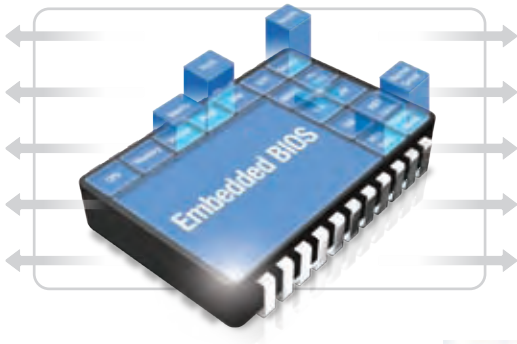
Gaming-specific Firmware & Software Customization Services

Gaming Platforms are controlled by specialized firmware & software. Advantech offers several options and extensions to customize gaming applications.

Embedded BIOS

Advantech provides a full-featured embedded BIOS that delivers the superior performance, compatibility and functionality that is expected by manufacturers of gaming platforms.

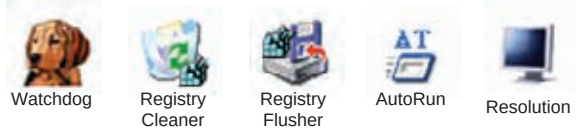
- Fast Multi-boot
- OEM Splash Screen
- CMOS Default Settings
- Multiple COM Ports
- Dual Independent Display
- Watchdog Timer
- I2C and SMBus Control



- Animated Logo and Sound Effects
- Legacy Free Platform Auto-detection
- Super IO Auto-detection
- OEM Data and Board Information
- BIOS Setup Menu Customization
- Hardware DIP-switch Control
- Up to 72 GPIO Pins

Embedded OS

With a custom Microsoft CE/XPE OS Image, Advantech provides a unique set of built-in utilities. The pre-configured OS image offers several key features and utilities.

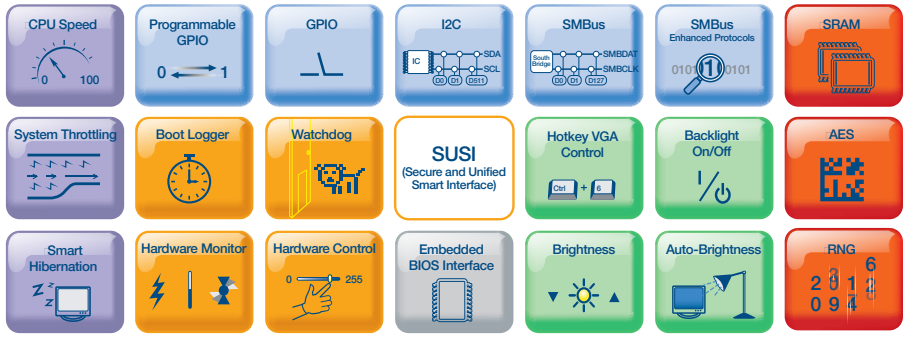


- File Based Write Filter
- USB Native Boot
- .NET Framework 2.0
- DirectX 9.0 and Media Player 10
- Customizable boot logo
- System Reboot Utility
- Registry Flusher Utility
- Registry Editor Utility
- Auto Launch Utility
- Memory Adjust Utility
- CE Image Information Utility
- Watchdog Timer Utility
- Screen Resolution Utility

SUSI (Secure & Unified Smart Interface) Application Interface

Generic APIs are supplied for device access and control.

- GPIO, Watchdog, Thermal Sensor, Brightness and Fan Speed Control
- Power Saving: CPU Speed, System Throttling and Smart Hibernation



Secure Application Interface

Enhanced security features are included.

- Hardware Security ID & Storage
- Hardware AES Decryption Engine
- Hardware Random Number Generator (32-bits)
- Paired SRAM for Secret Data Storage
- TPM/TCG 1.2 Compliance



Gaming Platforms



Industrial Motherboards

MiniATX AIMB-440

- Intel 945GM and ICH7M platform
- JAMMA compatible gold edge connector
- Hardware TPM and AES engine on board
- Hardware RNG on board
- Battery-backed SRAM
- Dual display: CRT + DVI-D or CRT + LVDS



MicroATX AIMB-564

- Intel Q965 chipset 533/800/1066 MHz FSB
- Supports Intel Core 2 Duo processor
- Supports DDR2 533/667/800 SDRAM up to 4 GB
- 1 PCIe x16, 1 PCIe x4, 2 PCI, 1 COM, 10 USB 2.0, 5 SATA II, 1 e-SATA



MicroATX AIMB-562

- Intel 945G chipset 533/800/1066 MHz FSB
- Supports Intel Core 2 Duo processor
- Supports DDR2 533/667 SDRAM up to 4 GB
- 1 PCIe x16, 1 PCIe x1 , 2 PCI, 2 COM, 8 USB 2.0, 4 SATA II



Embedded ATX AIMB-344

- Intel GM965+ ICH8M platform
- Supports Intel Merom processor with 667/800 MHz FSB
- Supports DDR2 533/667 SDRAM up to 4 GB
- 1 PCIe x4, 2 PCI by riser card, 8 USB 2.0, 4 COM
- 1 COM and 1 LAN with isolation
- Dual Display: CRT + DVI or DVI + DVI



mini-ITX AIMB-253

- Intel 82945GM Express Chipset
- Supports Intel Core Duo / Core Solo / Core 2 Duo / Pentium M /
- Supports DDR2 533/667 SDRAM up to 2 GB
- 1 PCIe x16, 1 PCI, 5 COM, 2 SATA, 4 USB 2.0
- Dual Display: CRT + LVDS

System On Modules



COM-Express SOM-5786

- Intel Core 2 Duo processor
- Supports SODIMM DDR2 533/667 MHz up to 4 GB
- 10/100/1000Mbps Ethernet
- 8 USB 2.0, 6 PCIe x1, 3 SATA
- Dual Display: CRT + LVDS



ETX SOM-4486

- Embedded Intel Celeron M Processor
- Supports SODIMM DDR2 200/266 MHz up to 1 GB
- 10/100Mbps Ethernet
- 1 COM, 1 USB 2.0
- Dual Display: CRT + LVDS

Small Form Factors



3.5" SBC PCM-9386

- Embedded Intel ULV Celeron M 600 MHz and 1.0 GHz processor
- Intel 852GM + IH4 platform
- 2-channel (two x 18-bit) LVDS LCD display (two x 24-bit optional)
- 2 COM, 3 USB
- MIO/160 Interface for security module expansion

Gaming System Solutions

IPC-6806S





PCI-6872



PCI-6880



PCI-6886

Features

- Compact and rugged PC/AT compatible for PCI CPU card expansion system
- 6-slot passive backplane
- Easily expandable with customer-designed security cards and multiple GPIO cards etc.

EBPC-5250





PCM-9581



PCM-9582



PCM-9586

Features

- Compact and rugged AT/ATX compatible for 5.25" biscuit SBC CPU card system
- Includes PCI and PC/104 expansion
- Front & rear external access of universal I/O ports for easy customer maintainence

ARK-6610





AIMB-240



AIMB-251



AIMB-254

Features

- Ultra compact and robust construction for the most popular mini-ITX system
- Shock-resistant drive bay design for 3.5" HDD and slim ODD
- User-friendly fan module and anti-dust filter design

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