

Innovations in Gaming Computing

The Widest Range of Solutions for the Gaming Industry

- / Lottery / Casino Machines
- / Sports Betting
- / AWP
- / VLTs / Class II
- / Multiplayer Games
- / Arcade
- / Pachislot



Intel® & AMD
Core Platforms



4k Monitors
Supported



GLI, NVGCB, etc
Regulatory compliance



PCI Express
Graphics

ADVANTECH **INNOCORE**

Innovations in Gaming Computing



www.advantech-innocore.com

About Advantech-Innocore

Advantech-Innocore is the leading global gaming supplier. The company specializes in designing and manufacturing industrial grade hardware and dedicated software tailored to the exact needs of the gaming industry. As the gaming-focused business unit of the \$2Bn Advantech Group, Advantech-Innocore stands alone among hardware suppliers in its capabilities to support customers large and small in all regions of the world. Advantech is a premier member of Intel® Internet of Things (IoT) Solutions Alliance, bringing the first-to-the-market IoT solutions to the world. Advantech is also a member of AMD Elite Partner Program presenting a wide range of AMD-based high performance computing platforms. Advantech is also an Elite Partner of Nvidia for high performance and long lifecycle graphics solutions.



Gaming team with 15+ years experience

- Experienced management and sales network with over 150 years of combined gaming experience
- Expert engineering, project management and design capabilities for efficient project execution
- Multi-discipline teams—hardware, firmware, FPGA, BIOS, OS, manufacturing and QC engineers
- Software drivers and libraries available to support the majority of gaming peripherals (including bill acceptors, etc)
- On-time design and build of custom hardware and software projects
- Comprehensive package—prototype validation, driver testing, manuals, drawings, design files, manufacturing test procedures, diagnostics
- Worldwide regulatory approvals for all products



International quality standard from design to delivery

The Group Quality system is audited and compliant with ISO 9001. The Quality system covers all aspects of product design, component selection, design verification, manufacturing, quality control and customer satisfaction. We also hold global certifications of ISO 13485, TL 9000, ISO 14001, OHSAS 18001 and IECQ QC 080000

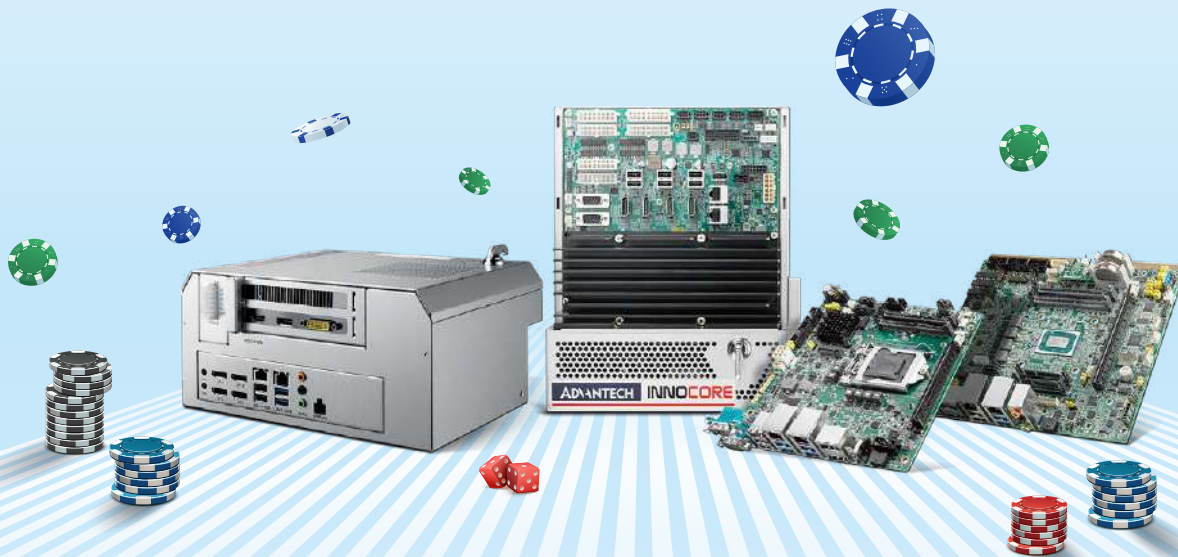
Global Company, Local Services



Excellence in Design, Manufacture and Service

Advantech-Innocore's products are designed and manufactured using high quality components, the most up-to-date design and production methodologies. In contrast to mass produced commercial grade motherboards, Advantech carefully choose components.

Key drivers when designing a DPX[®] motherboard and sourcing components are:



- | | | | |
|-------------|------------------------------|-----------------------|--------------------------------------|
| ✓ Longevity | ✓ Robust, reliable operation | ✓ Power supply design | ✓ Quality (UL, CE, FCC, ISO) |
| ✓ Usability | ✓ Regulatory Constraints | ✓ Cabinet Integration | ✓ Thermal Management and Reliability |
| ✓ EMC | ✓ Signal termination | ✓ Signal integrity | ✓ 24/7 365 Operational requirements. |

Excellence in Manufacturing & Service

With a global footprint covering all the major regions, Advantech-Innocore's organization is unique in its ability to put technical support, configuration and repair services close to its customers.

- | | |
|---|---|
| • Wholly owned manufacturing facilities (>130,000m ²) | • Local support, service and repair/RMA |
| • State-of-the-art production equipment | • Local inventory and fulfillment capabilities |
| • Highest yield rates | • Advantech Care Service Packages: advanced replacements, extended warranty, guaranteed turnaround time |
| • Best quality | |
| • BGA X-Ray inspection | |
| • Automated test routines | |
| • Elevated temperature burn-in | |

ADVANTECH

Complete Portfolio of Gaming Solutions

Advantech-Innocore offers the widest range of industrial grade computer products designed specifically for the regulated gaming industry. We provide our customers with excellent standard products, customized products and services, employing up-to-date technologies for gaming solutions to meet the requirements for Casino Machines, AWP, VLTs, Multiplayer Games, Arcade Games, Pachislots, and Sports Betting.



Gaming Platforms & Systems

- Gaming I/O, Multiple COM
- Onboard NVRAM
- Security
- Worldwide regulatory approvals



Gaming Monitors

- All sizes with touch 4-55" Curved touch with customizable radius
- C, J and other profiles available



Graphic Cards

- Long lifecycle
- Nvidia and AMD
- PCIe Express



Embedded Platforms & Digital Signage

- Mini-ITX, Single Board Computers, Computer on Modules, RISC computing platforms
- Full ranges of signage



Industrial Storage

- SSD, HDD, CF, CFast, M.2
- DDR1-DDR4 SODIMM
- Custom provisioning
- Lifecycle controlled
- Power fail protection
- Comprehensive security features



Software

- Microsoft Embedded authorized distributor
- BSP for Windows, Linux and more
- Custom, lockable image development
- Custom BIOS



DPX[®]-S Series

• Regulated Gaming Machines

• Slot Machines

• VLTs

• GLI Compliant

The DPX[®]-S Series products provide highly integrated industrial single board computers and systems with an unrivaled performance range, scalability, long lifecycle and low power. Both AMD and Intel[®] platforms are offered and each one features a full set of I/O, COMs, and security, developed specifically to meet the requirements of the regulated gaming industry.

Feature Highlights



Chassis options available



Scalability of CPU and graphics



Full feature set of I/Os
COMs, security



Intel[®] & AMD
CPU based



DPX[®]-S450

AMD Ryzen™ Embedded V1000/R1000 Gaming Platform

- Very high performance AMD Embedded V1000/R1000 SOC APUs
- Quad and dual core APUs up to 3.35 (3.8) GHz
- Radeon™ VEGA GPU with up to 11 compute units
- Four independent 4k monitors supported
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for I/O and security

View More



SCAN ME for more information!



Features



Digital I/O
32/32



Expansion
I²C, PCIe x 16 and Golden Fingers



DPX[®] Security suite: Secureboot, TPM support, DPX[®] security features, BIOS customization



Battery Backed SRAM
8MB



8 x USB 2.0
3 x USB 3.0



DPX[®]-Software: Embedded OS , DPX[®] Diagnostics, DPX[®]-Connector DPX[®]-SAS



Displays
4 x DP++ 1.2
(4 simultaneous)



10 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



M.2, SATA DOM, HDD, SSD,
CFast, USB



On-board Micro Controller
PuC

DPX[®]-S445

6/7th Generation Intel[®] Core[™] Gaming Platform

- Very high performance Intel[®] platform
- Dual and Quad Core CPUs from Celeron to Core i7
- Comprehensive gaming features
- High performance integrated or PCI-Express graphics
- Easy integration for gaming applications
- Full featured Driver API for I/O and security

View More



SCAN ME for more information!



Features



Digital I/O
32/32



Expansion
I²C, PCIe x 16 and Golden Fingers



DPX[®] Security suite: Secureboot, TPM support, DPX[®] security features, BIOS customization



Battery Backed SRAM
8MB



8 x USB 2.0
3 x USB 3.0



DPX[®]-Software: Embedded OS , DPX[®] Diagnostics, DPX[®]-Connector DPX[®]-SAS



3 x DP++ 1.2



10 x Coms:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



SATA DOM, HDD, SSD, USB



On-board Micro Controller
PuC

DPX[®]-S440

AMD[®] Embedded R-Series Gaming Platform

- Very high performance AMD platform
- Quad and dual core AMD R Series SOC APUs up to 2.8 (3.4) GHz
- Radeon HD10000 series "3rd generation GCN " graphics
- Comprehensive gaming features
- 12V DC single input or ATX power
- Full featured driver API for I/O and security

View More



SCAN ME for more information!



Features



Digital I/O
32/32



Expansion
I²C, PCIe x 16 and Golden Fingers



DPX[®] Security suite: Secureboot, TPM support, DPX[®] security features, BIOS customization



Battery Backed SRAM
8MB



8 x USB 2.0
3 x USB 3.0



DPX[®]-Software: Embedded OS , DPX[®] Diagnostics, DPX[®]-Connector DPX[®]-SAS



3 x DP++ 1.2



10 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
S2000



Graphics Cards
PCIe x 16 Format



SATA DOM, HDD, SSD, CFast, USB



On-board Micro Controller
PuC

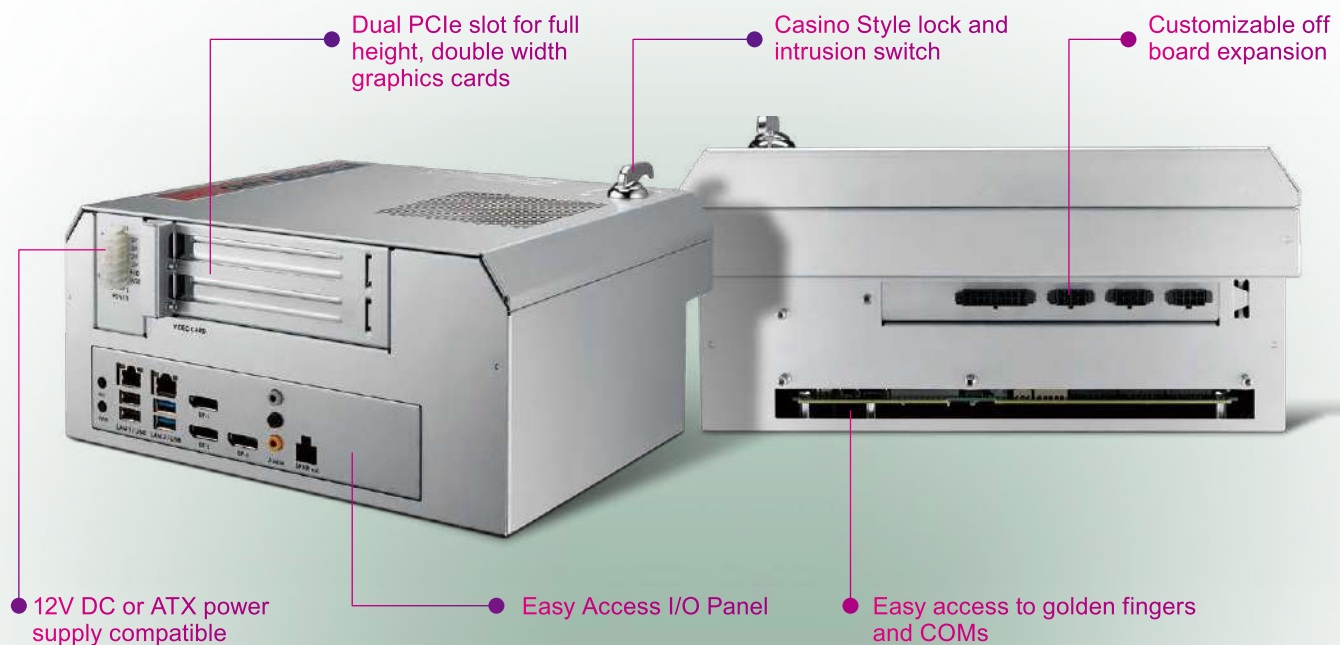
DPX[®]-S2000

The DPX[®]-S2000 series products are gaming system logic boxes designed to accommodate any of Advantech's DPX[®]-S series motherboards in style and with excellent access to the interior behind a casino grade key-locked lid. The system has a card slot bay for a PCIe graphics card that is wide enough for today's high powered double- width graphics cards.

- Full height, double width graphics card
- Compact design
- Tool free SSD/HDD access
- System fan
- Complete solution

Dimensions of Chassis

	Length	Width	Height
DPX [®] -S2450	214mm	260mm	124mm
DPX [®] -S2445	214mm	260mm	124mm
DPX [®] -S2440	214mm	260mm	124mm



DPX[®]-E Series

• Regulated Gaming • Slot Machines • VLT • GLI Compliant

- Performance at a very cost-effective price point
- Full feature set of I/Os and COMs
- Ideal integrated platforms for many gaming, amusement, and kiosk applications
- Gaming functions share the same API as the other DPX[®]-series boards
- Easy to port application code and leverage the different price and performance points across Advantech-Innocode's full range of products

Feature Highlights



Full feature set of I/Os and COMs



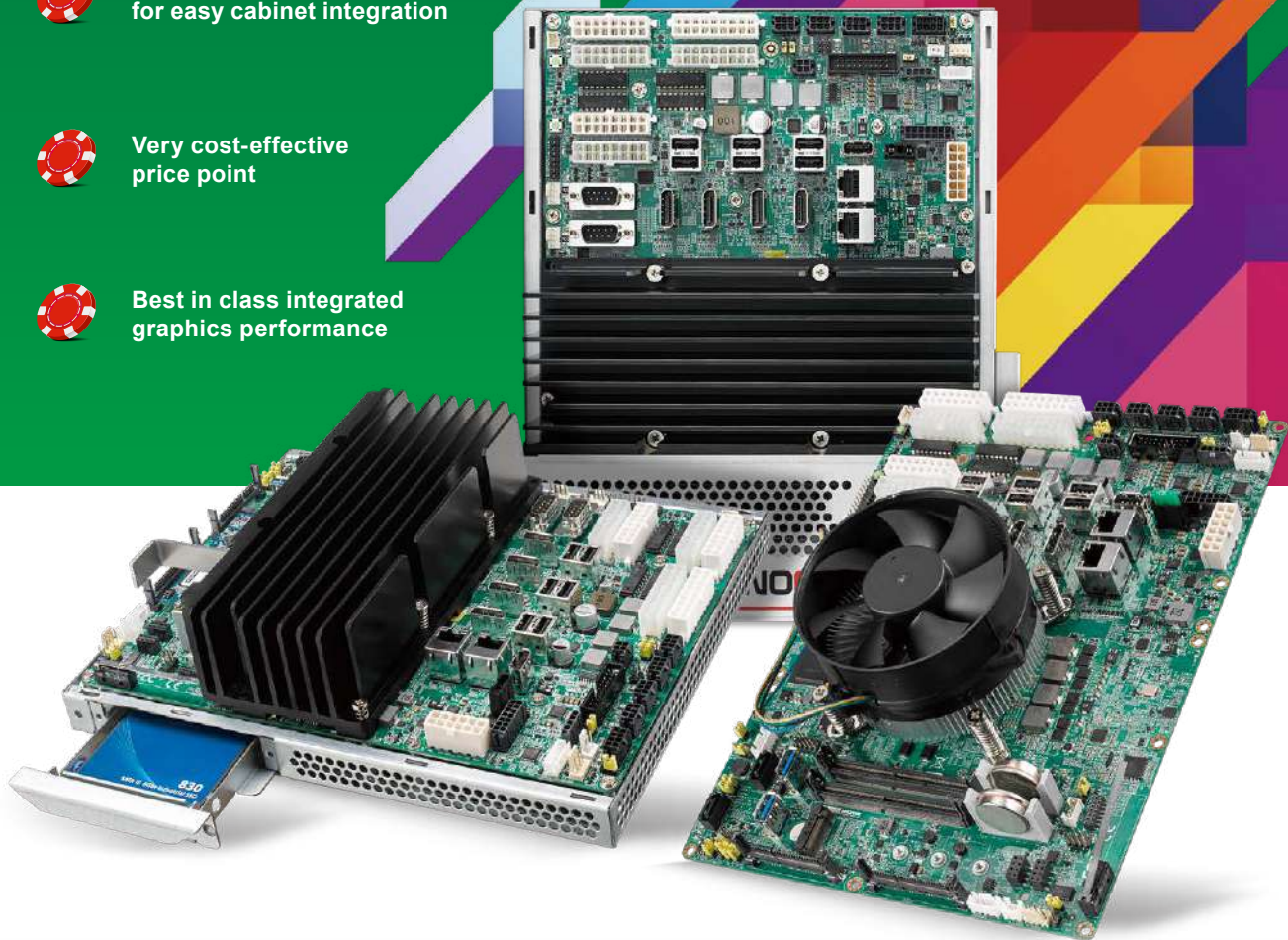
Industry standard connectors for easy cabinet integration



Very cost-effective price point



Best in class integrated graphics performance



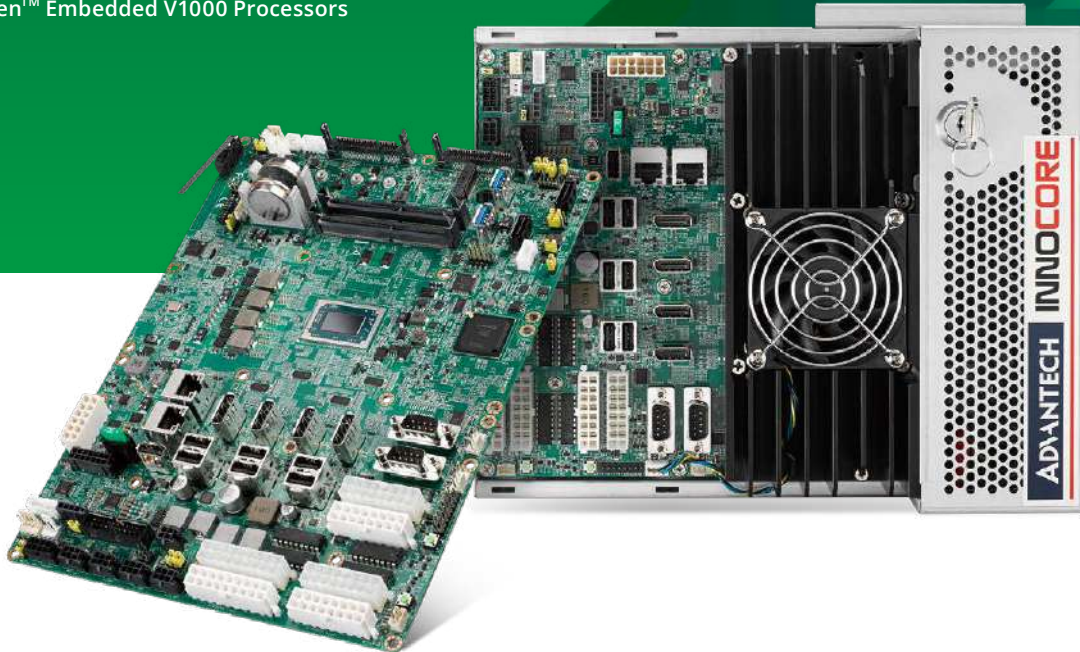
DPX[®]-E140

AMD Embedded Gaming System with V1000 Platform

- AMD Ryzen™ Embedded V1000 Processors
- High performance Radeon™ VEGA series graphics
- Four 4k monitor support
- Comprehensive gaming features
- Passive cooled system up to 25W, 54W with fan cooler
- 12V DC single input or ATX power
- AMD Ryzen™ Embedded V1000 Processors



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Features



Digital I/O
32/32



7 x USB 2.0
2 x USB 3.0



DPX[®]-Software: Embedded OS ,
DPX[®] Diagnostics, DPX[®]-Connector
DPX[®]-SAS



Battery Backed SRAM
8MB



9 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
Metalwork optional



4 x DP++ 1.2



M.2, SATA DOM, HDD, SSD,
CFast, USB



On-board Micro Controller
PuC



Expansion
I²C



DPX[®] Security suite: Secureboot,
TPM support, DPX[®] security
features, BIOS customization

DPX[®]-E135

AMD[®] Embedded G-Series Gaming Platform

- High performance Radeon HD8000 series graphics
- Dual and Quad core AMD G Series SOC platform
- Cabinet-ready I/O connectors on-board
- Comprehensive gaming features
- 12V DC single input or ATX power
- Passive cooled system



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Features



Digital I/O
32/32



7 x USB 2.0
2 x USB 3.0



DPX[®]-Software: Embedded OS ,
DPX[®] Diagnostics, DPX[®]-Connector
DPX[®]-SAS



Battery Backed SRAM
8MB



9 x COMs:
ccTalk, RS232, ID003, RS485, TTL



Enclosure
Included



2 x DP++1.2
1x VGA (2 from 3)



SATA DOM, HDD, SSD, CFast, USB



On-board Micro Controller
PuC



Expansion
I²C



DPX[®] Security suite: Secureboot,
TPM support, DPX[®] security
features, BIOS customization

DPX[®]-E130

AMD G-Series Gaming System for Italy AWP2 and AWP3

- Compliant with Italian AAMS 'AWP3'
- Powered via 5v through JAMMA interface
- Complete software API package for all AAMS functions
- Full set of gaming features, security, COMs, I/O
- Fully cased design; low power, passive cooled options
- High performance, low cost AMD G-Series platform



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Features



Digital I/O
12/16



4 x USB 2



DPX[®]-Software: Embedded OS ,
DPX[®] Diagnostics, DPX[®]-Connector
DPX[®]-SAS



Battery Backed SRAM
4MB



6 x COMs:
ccTalk, RS232, Smart Card



Enclosure
optional



2 x VGA



SATA DOM, mSATA, CFast,
CF, USB



On-board Micro Controller
PwrPIC



Expansion
I²C



DPX[®] Security suite: Secureboot,
TPM support, DPX[®] security
features, BIOS customization

DPX[®]-M Series

• Sports betting • Kiosk • Arcade • Gaming

- Based on Intel[®] 8th and 9th generation Core i processors and AMD Ryzen V1000 series
- These products provide a high performance multi-media engine to the needs of gaming OEMs
- The modular expansion bus allows modules to be added such as I/O, COMs, security, and specialized interfaces

Feature Highlights



AMD and Intel[®] CPUs available, Mini ITX mounting holes, up to 4 x 4K screens and development kits.



M1000 (half height) and M2000 chassis options available, M-Series PSU units are available.



Modular Side expansion bus, Advantech has a range of standard “add-on cards” for Sports Betting or Gaming Sub System.



DPX[®]-M270

Intel[®] 8th & 9th Generation Core™ i7/i5/i3 Embedded Multi-media Gaming Board

- Intel[®] 8th/9th Generation Core™ i7/i5/i3 CPUs 8,6,4,2 core
- Two 260-pin SO-DIMM up to 32GB DDR4 2666 MHz SDRAM
- Supports 3 display outputs (2x DP++, HDMI)
- PCIe x16 Gen 3.0 graphics card slot

- Storage 2 x SATA with 1 x M.2
- Secureboot support
- RS232, ccTalk, TTL, ID003, I²C, intrusion and Digital Inputs
- Modular Expansion Port - Edge connector



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Features



Displays
2 x DP++ v1.2
1 x HDMI 1.4b
(3 simultaneous for Q370,
2 simultaneous for H310)



Onboard:
8 x USB 2.0
4 x USB 3.1

Via Golden Fingers:
2 x USB 2.0



DPX[®] Security suite: Secureboot, TPM support, DPX[®] security features, BIOS customization



DPX[®]-Software: Embedded OS , DPX[®] Diagnostics, DPX[®]-Connector DPX[®]-SAS



Graphics Cards
PCIe x 16 Format



6 x COMs:
ccTalk, RS232, ID003, TTL



Enclosure
M1000/M2000



Expansion I²C, PCIe x 16 and Sidebus modular expansion



M.2, SATA DOM, HDD, SSD, USB



On-board Micro Controller
PucLite

DPX®-E265

AMD Ryzen™ Embedded V1000 mITX with Four DP++, ECC, PCIe expansion

- Supports 4 x DP++ 1.2
- Supports PCIe x8 (PCIe x16 connector, Gen 3.0)
- Two 260-pin SO-DIMM up to 32 GB DDR4 3200 MHz ECC/Non-ECC SDRAM
- Removable gaming BIOS module for field verification
- Side expansion port for application specific expansion modules
- Supports 2 x SATA / 2 x CFAST / 1 x M.2
- AMD Ryzen™ Embedded V1000 processors
- Secureboot support



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Features



Digital I/O
2 x DI



Displays
4x DP++ v1.2
(4 simultaneous)



Graphics Cards
PCIe x 16 Format



Expansion I²C, PCIe x 16 and
Sidebus modular expansion



Onboard:
4 x USB 2.0
3 x USB 3.1

Via Golden Fingers:
2 x USB 2.0



6 x COMs:
ccTalk, RS232, ID003, RS485, TTL



M.2, SATA DOM, HDD, SSD,
CFAST, USB



DPX® Security suite: Secureboot,
TPM support, DPX® security
features, BIOS customization



DPX®-Software: Embedded OS ,
DPX® Diagnostics, DPX®-Connector
DPX®-SAS



Enclosure
M1000/M2000



On-board Micro Controller
PuCLite

DPX[®]-M1000 & DPX[®]-M2000

The DPX[®]-M Series of chassis are available in half height and full height options, to accommodate both standard height graphics cards and other 3rd party PCIe expansion cards.

- Up to 200W power supply
- Compact design
- Tool Free SSD/HDD access
- System fan
- Complete solution

Dimensions of Chassis

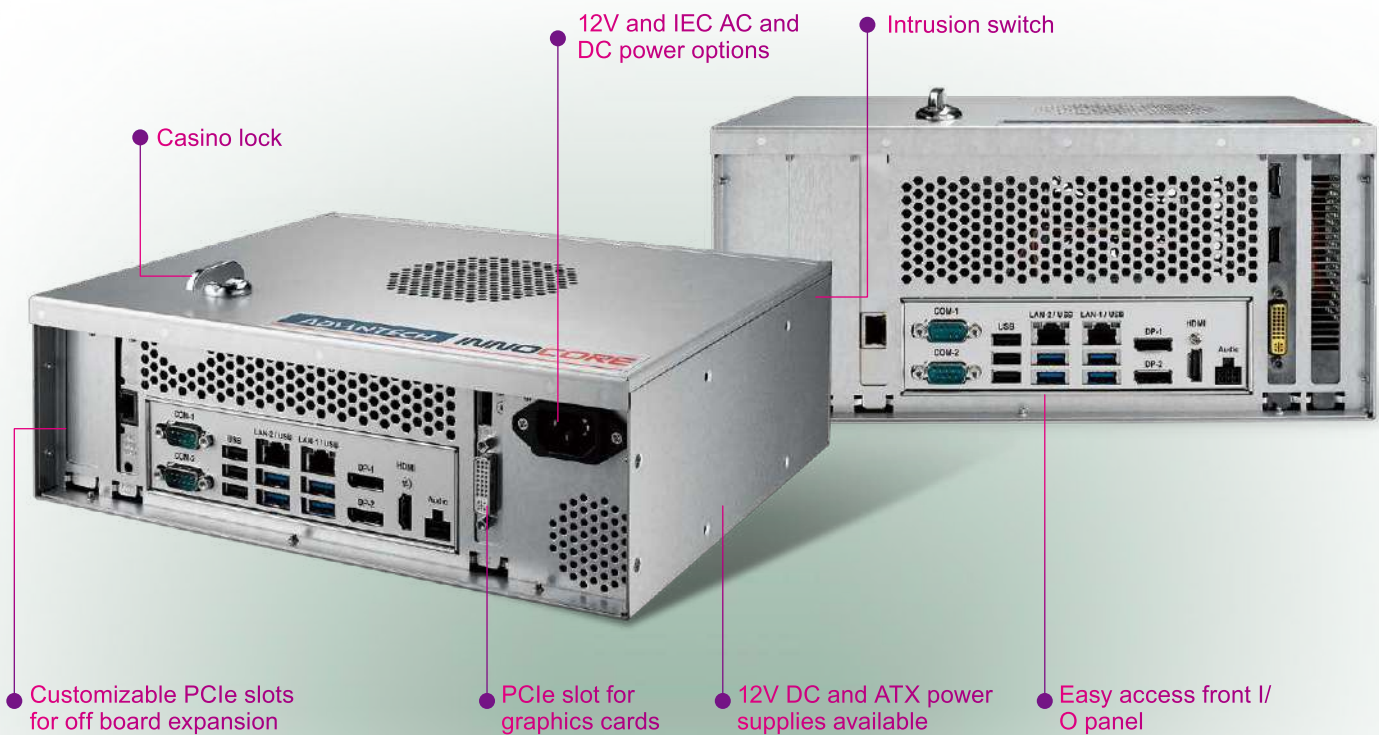
	Length	Width	Height
DPX [®] -M1000	232mm	295mm	104mm
DPX [®] -M2000	242mm	295mm	134mm



Partner Program
ELITE



IoT Solutions
Alliance
Premier



DPX[®]-Development Kits

All inclusive packages for quick development

With development times becoming shorter in the gaming industry, the range of DPX[®] Developer's kits provides a fast, simple way to get up and running with any of the DPX[®] Series products. It also provides the best possible out of the box experience, everything you need to begin developing on the DPX[®]-Hardware platforms, delivered to you, fully tested, up to date drivers etc in one handy box.

- All inclusive kits for each DPX[®] mainboard
- Fast and simple setup to evaluate and start development
- Includes pre-configured operating systems, drivers and utilities
- Demo and reference source code
- I/O development board, power supply, full documentation



The kits are based on a DPX[®] mainboard, and includes all the other necessary items to set up an evaluation and development station.

- Source code
- DPX[®]-Chassis
- Demo utilities
- CD/DVD ROM
- 128GB Advantech Storage
- Demo OS / Linux Image
- Full cable sets
- Motherboard + CPU
- 8GB Advantech RAM
- Complete documentation

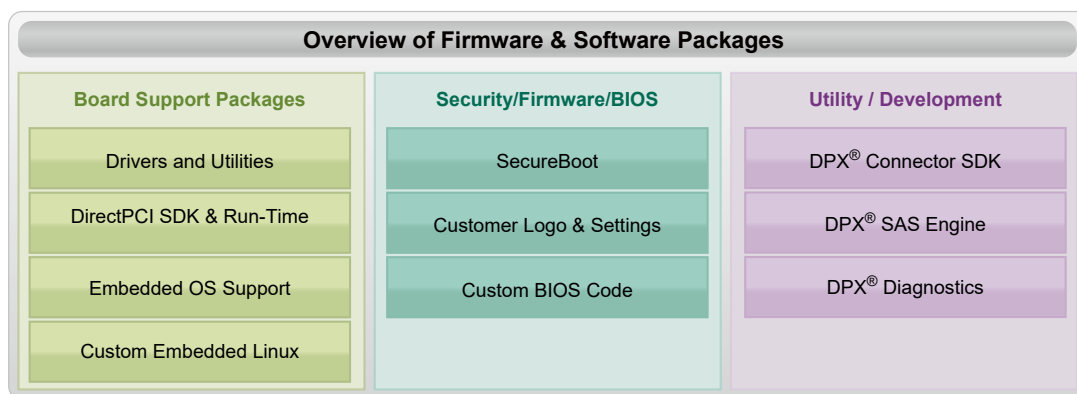


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Gaming Software Firmware, Integration and Security Support

Software Overview

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 that help develop the best-balanced gaming solutions.



Board Support Package

Board support packages provide software support such as Microsoft Windows embedded OS and range of embedded Linux. A full set of drivers and APIs are provided to all standard PC functions as well as all gaming specific hardware features. Direct PCI Software Development Kit are integrated into the DPX®- Series motherboards and handles gaming critical functions such as SRAM, Digital Inputs Outputs (DIO) Watchdog, as well as Intrusion monitoring and other functions. The API is optimized for Embedded Windows and Linux distributions and is common across all DPX®- Gaming motherboards.

Security

Advantech-Innocore understand that the protection of gameplay data and machine state are critical considerations, software / hardware tampering detection, as well as media validation are key requirements by the gaming regulators. The aim is Players and Operators protection, and fair games and correct payouts. As such the DPX® range of gaming motherboards come as standard with the following security features:

- TPM Chip
- Random Number Generator (FIPS)
- Password protected i2c port
- 88 Bit Unique ID
- EWF/UWF support
- BitLocker support
- Software authentication
- TCG Opal 2.0 SFlash products available
- Intrusion detection logging processor (IDLP)

OEM Intellectual Property

Encryption of data and applications, strong password and key storage, platform authentication are all key considerations when choosing a gaming platform, as well as prevention of copying / cloning of game data, stopping unauthorized content from being loaded in order to maintain competitive advantage and protect investment and IP. Our software solutions combined with hardware features give the developer multiple methods to protect their game content.

Gaming Software, Firmware, Integration and Security Support



SCAN ME for more information!

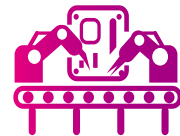
Featured Gaming Software

DPX® - SecureBoot™ SDK

Secureboot provides a toolkit for the developer to produce low-cost, low-overhead security mechanisms for gaming machines. The mechanisms security features cover various aspects of security control and ensure :

- 1) Customers' software applications can only run on designated hardware.
- 2) Designated systems only run designated software.
- 3) Compliance with U.S. and international gaming regulations for media validation.

- SDK for customizable pre boot BIOS media validation
- Meets GLI-11 and other regulatory requirements
- SHA-1 Hash and BIOS self-test
- Supports encrypted digest and multiple hash tables
- Comprehensive user manual



The Trusted Platform Module (TPM)

The trusted platform module (TPM) chip included on Advantech-Innocore DPX® Series main boards is an advanced security co-processor offering a high level of hardware-based security for application development and deployment.

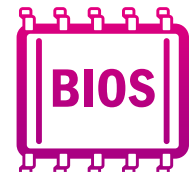
- Unique per-board RSA key Generates, stores and protects RSA keys: keys never leave the TPM chip un-protected
- RSA asymmetric encryption and signing SHA-1 hashing
- Generates random numbers to 1-million bit random-ness (as tested by US NSA)
- Chip is physically secure from physical tampering



BIOS

Advantech provides gaming-specific firmware and software customization services including BIOS and TPM support that deliver superior performance, compatibility and functionality, and also provide information encryption, which is expected by manufacturers of gaming platforms.

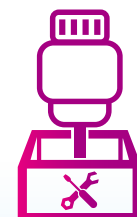
- Secure AMI APTIO UEFI BIOS
- Customization
- Field verifiable BIOS
- Field and Laboratory approved
- Immutable BIOS and development versions
- Customization and write protection for security
- Support for security ROM extensions



DPX® -Connector SDK

DPX® - Connector SDK is a software package developed to address customers' needs to connect third-party hardware peripherals to Advantech-Innocore computer boards. A unified event handler provides an efficient method to handle communications. The SDK supplies a range of hardware and protocol-oriented modules to allow connection of a range of peripherals including:

- Coin Hoppers
- Bill Validators
- Ticket Printers



The DPX®-Connector SDK supports ccTalk and JCM ID003 devices, as well as Windows and Linux.



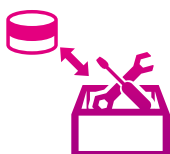
Slot Accounting System (SAS)

The DPX®-SAS Engine is a complete, ready to use driver and API environment that enables implementation of the SAS protocol with the DPX® range of products. Field proven and lab-certified the SAS Engine handles all SAS messaging, register structures and timing protocols.

- Fully Featured SAS protocol library
- Mature field-proven product
- Approved in all major jurisdictions
- Supports latest versions
- Multi-game support
- Windows and Linux
- Ticket in / Ticket Out (TITO)
- Advanced Funds transfer facilities
- Real Time events
- Supports different currencies
- Progressives and tournament support.

DPX® Diagnostics SDK

The DPX® Diagnostics SDK is the perfect pre-deployment hardware verification tool, allows gaming features and software testing. USB and CD bootable, and comprehensive Windows and Linux support. Source code is available.



1-Wire / iButton® SDK

The 1-Wire / iButton® SDK provides support for all 1-Wire and iButton devices, comprehensive Windows and Linux support. Source code is available.

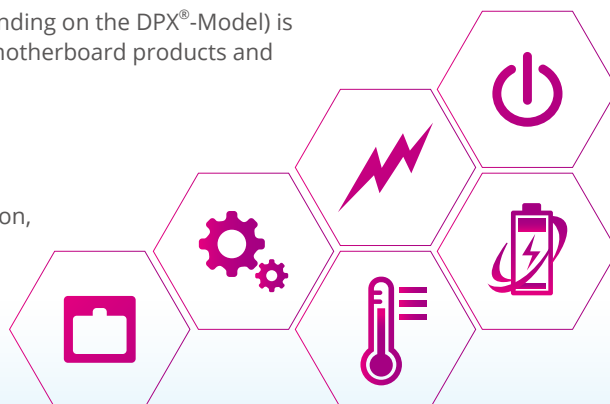
PuC Microcontroller

The PuC embedded Microcontroller (IOC, PuC, MPuC and PuC-Lite* depending on the DPX®-Model) is an integrated subsystem used across the range of Advantech Innocore motherboard products and provides a range of user functions suited to the gaming industry.

What is it? On-board, low cost, low power, 8 bit microcontroller.

What does it do? Provides system maintenance, diagnostics, configuration, reliability, security, event logging and manageability functions.

Customer Benefits Improved system reliability, remote manageability, remote updates, simplified factory set up (jumper-less design, single firmware image), improved security and logging, quieter operation.



Gaming Monitors

Designed exclusively for gaming applications, our gaming display solutions provide a wide range of gaming monitors to meet the special requirements of applications such as slot machines and casinos. Our solutions include open frame monitors and ultra widescreen displays. These display solutions feature widescreens, reliable touch screens and flexible mechanical designs that can be integrated with Advantech gaming platforms for a total gaming solution. Applications include slot machine, lottery terminals, jackpot systems, Sports Betting terminals, lottery terminals etc.



HALO Series

Standard, Front LED and Edge LED

Panel Size: 21.5"
Resolution: 1920x1080@60Hz
Brightness: 250 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: HDMI/DP

Panel Size: 23.8"
Resolution: 1920x1080@60Hz
Brightness: 250 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI, DP

Panel Size: 27"
Resolution: 1920x1080@60Hz
Brightness: 300 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI, DP

Panel Size: 32"
Resolution: 3840x2160@60Hz
Brightness: 250 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: DVI, DP, HDMI



CURVED Series

For C and J curved

Panel Size: 32"
Resolution: 3840x2160@60Hz
Brightness: 250 nits
Radius: 1500mm
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: DVI, DP, HDMI

Panel Size: 43"
Resolution: 3840x2160@60Hz
Brightness: 450 nits
Radius: 1500mm
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: DVI, DP, HDMI

Panel Size: 49"
Resolution: 3840x2160@60Hz
Brightness: 450 nits
Radius: 1500mm
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: DVI, DP, HDMI,

Panel Size: 55"
Resolution: 3840x2160@60Hz
Brightness: 450 nits
Radius: 1500mm
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: DVI, DP, HDMI



EDGE Series

Zero Bezel

Panel Size: 21.5"
Resolution: 1920x1080@60Hz
Brightness: 250 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI (optional HDMI/DP)

Panel Size: 22" SAW TOUCH DISPLAY
Resolution: 1680 x 1050
Brightness: 250 nits
Viewing Angle: 85/85/80/80 LRUD
Video Inputs: VGA, DVI



Open Frame / Button Deck Touch

Panel Size: 10.1"
Resolution: 1280x800
Brightness: 500 nits
Viewing Angle: 85/85/85/85 LRUD
Video Inputs: VGA, DVI

Panel Size: 13.3"
Resolution: 1920 x 1080
Brightness: 500 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI

Panel Size: 16.3"
Resolution: 1920 x 1080
Brightness: 500 nits
Viewing Angle: 89/89/89/89 LRUD
Video Inputs: VGA, DVI

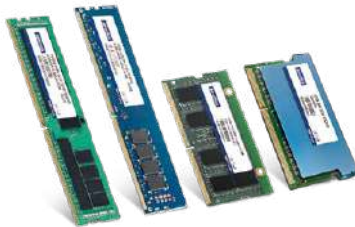
Industrial Memory & Storage, Microsoft OS, PCIe Graphics Cards

Advantech-Innocore gaming peripherals offer specialized, quality components with long lifecycle support for our gaming platforms. All peripherals are fully compatible with Advantech-Innocore gaming boards and systems. We provide

- Long lifecycle graphic cards
- Storage devices - HDD, CFast, SSD, M.2
- Embedded operating system licenses
- Long lifecycle, reliable RAM modules
- Backplanes and Connector Boards
- iButtons
- Enclosures

SQFlash Industrial Storage Solutions

SQFlash series supports various interfaces such as SATA, PCIe/NVMe and PATA/IDE with multiple form factors including 2.5" SSD, mSATA, M.2, DOM, CFast, half-slim SSD and more.



SQRAM Industrial Memory Solutions

SQRAM series offers a comprehensive range of product lines including Unbuffered DIMM ECC DIMM, server DIMM and rugged DIMM with speed of DDR4, DDR3, DDR2 and DDR1.

Graphic Cards

Increasingly in embedded systems, more and more demands are made for rich, vibrant graphics and enhanced parallel computing capabilities. Advantech recently introduced a comprehensive product line of graphics solutions specifically designed for diverse industrial applications needing high processing and imaging technology requirements. Graphics cards feature high performance, rich I/O interface, wide temperature operation, and low power consumption. Advantech supports long lifecycles from 3 to 5 years.



Microsoft OS License



Advantech is a gold worldwide partner and licensed distributor of Microsoft OS and Cloud solutions. Windows 10 IoT is a family of Windows 10 editions targeted towards a wide range of intelligent devices, from small industrial gateways to larger, more complex devices like point of sales terminals and ATMs. Combined with the latest Microsoft development tools and Azure IoT services, partners can gather, store and process data, creating actionable business intelligence that affects business outcomes. Partners building solutions based on Windows 10 IoT will realize expanded opportunities when they harness the full breadth of Microsoft technologies to offer end-to-end solutions.

Gaming Platform and Customization Services

Service Overview

Advantech-Innocore's capability to provide customers with reliable computing solutions is not limited to our wide range of standard products. We welcome custom designs ranging from small modifications of one of our existing products up to completely new product design incorporating new motherboard, chassis, carrier boards, custom firmware and microcontroller design.

- Huge portfolio of reference designs
- 900+ R&D Engineers
- In house CAD design and simulation services
- Intel® & AMD Select Partner
- In house design validation (EMC, signal integrity, thermal, vibration, HALT)
- Worldwide base of installed hardware and field proven software



Hardware Design Services	Firmware and OS design services	System Design Services
• Custom CPU board designs	• Embedded OS support	• Custom enclosures
• Intel®, AMD, and RISC platforms	• OS image development	• Thermal simulation
• GPU design and integration	• FPGA, microcontroller custom firmware	• Peripheral integration
• Custom I/O	• BIOS customization	• System validation (thermal, vibration, EMC, HALT etc)
• Various security solutions	• BIOS Security extension code	• Integration of customer's hardware

Gaming Computing Platforms

Standalone Series



Model Name		DPX®-S2450	DPX®-S450	DPX®-S2445	DPX®-S445	DPX®-S2440	DPX®-S440
Form Factor		DPX® Gaming System	DPX® Gaming Board	DPX® Gaming System	DPX® Gaming Board	DPX® Gaming System	DPX® Gaming Board
Processor System	CPU	AMD Ryzen™ Embedded V1000/R1000 APU		Intel® 6th / 7th Generation Core™-i		AMD Embedded R-Series APU (formerly code-named Merlin Falcon)	
	Socket	BGA		LGA 1151		BGA	
	max. speed	3.35 (3.8) GHz		2.9 GHz (3.8) GHz		2.8 (3.4) GHz	
	TDP	45W		54W		35W	
	Chipset	SoC		Q170		SOC	
	BIOS	AMI APTIO UEFI (Gaming optimised)		AMI APTIO UEFI (Gaming optimised)		AMI APTIO UEFI (Gaming optimised)	
Expansion Slot	PCI	-		-		-	
	MINI PCIe/mSATA	-		-		-	
	PCIe	PCIe x 16 (x8 signal)		PCIe x 16		PCIe x 16 (x 8 mode)	
	MXM	-		-		-	
Memory	Technology	Dual Channel DDR4 3200MHz		Dual Channel DDR4 2400MHz		Dual Channel DDR3/3L 2133MHz	
	Max. Capacity	32GB		32GB		16GB	
	Socket	2x SODIMM		2x SODIMM		2x SODIMM	
Graphics	Controller	in APU (AMD Radeon™ VEGA series graphics engine)		in CPU (Intel GT2-530)		in APU - Radeon R7 (HD10000)	
	VGA	-		-		-	
	DVI	-		-		-	
	DP	4		3		3	
	HDMI	-		-		-	
Ethernet	LAN1	GbE		GbE		GbE	
	LAN2	GbE		GbE		GbE	
Storage	SATA	2		2		2	
	CompactFlash	-		-		-	
	Cfast	2		-		2	
	M.2	1		-		-	
I/O	VGA/DVI/HDMI/DP	0/0/0/4		0/0/0/3		0/0/0/3	
	Ethernet	2		2		2	
	USB 2.0	8		8		8	
	USB 3.0	3		3		3	
	Audio	1 (ch5.1), SPDIF		1 (ch5.1), SPDIF		1 (ch5.1), SPDIF	
	Serial Port	10		10		10	
	Serial Type RS232/Ctaltk/TTL/485	9/2/2/1		10/2/2/1		10/2/1/1	
Gaming Hardware	SRAM	8MB		8MB		8MB	
	ROM Sockets	SPI ROM module		SPI ROM module		SPI ROM module	
	TPM	TPM 2.0/1.2		TPM 2.0/1.2		TPM 2.0/1.2	
	Audio Amplifier	15W+15W+15W (FL,FR, LFE)		15W+15W+15W (FL,FR, LFE)		15W+15W+15W (FL,FR, LFE)	
	Digital Inputs	32 (ESD protected)		32 (ESD protected)		32 (ESD protected)	
	Digital Outputs	32 (OC 500mA 50V)		32 (OC 500mA 50V)		32 (OC 500mA 50V)	
	Intrusion Inputs	8		8		8	
	iButton® / GPIO	2		2		2	
	DPCI Expansion	-		-		-	
	Watchdog Timer	1		1		1	
Gaming Software	Dual BIOS	-		-		-	
	DPCI Advanced Gaming API & Runtime	Standard		Standard		Standard	
	DPX® Connector Peripherals Libraries	Standard		Standard		Standard	
	Embedded OS Support	Standard		Standard		Standard	
	BIOS Customization	Optional		Optional		Optional	
	DPX® SAS Connector	Optional		Optional		Optional	
SecureBoot		Optional		Optional		Optional	
Other Features		I2C, Precision RTC, ATX or 12VDC power		I2C, Precision RTC, ATX or 12VDC power		LED lamp driver, I2C, Precision RTC, ATX or 12VDC power	

Economy Series



Model Name		DPX®-E135	DPX®-E140
Form Factor		DPX® Gaming System	DPX® Gaming System
Processor System	CPU	AMD Embedded G-Series APU	AMD Ryzen™ Embedded V1000 APU
	Socket	BGA	BGA
	max. speed	2.4 GHz	3.35 (3.8) GHz
	TDP	25W (passive cooled)	15-25W (passive cooled), 54W (fan)
	Chipset	SoC	SoC
	BIOS	AMI Gaming Architecture	AMI APTIO UEFI (Gaming optimised)
Expansion Slot	PCI	-	-
	MINI PCIe/mSATA	-	-
	PCIe	-	-
	MXM	-	-
Memory	Technology	Dual Channel DDR3/3L 1866MHz	Dual Channel DDR4 3200MHz
	Max. Capacity	16GB	32GB
	Socket	2x SODIMM	2x SODIMM
Graphics	Controller	in APU (AMD Radeon HD 8000)	in APU (AMD Radeon™ VEGA series graphics engine)
	VGA	1	-
	DVI	-	-
	DP	2	4
	HDMI	-	-
Ethernet	LAN1	GbE	GbE
	LAN2	GbE	GbE
Storage	SATA	2	2
	CompactFlash	-	-
	Cfast	2	2
	M.2	-	1
I/O	VGA/DVI/HDMI/DP	1/0/0/2	0/0/0/4
	Ethernet	2	2
	USB 2.0	7	7
	USB 3.0	2	2
	Audio	1 (ch5.1), SPDIF	1 (ch5.1), SPDIF
	Serial Port	10	9
	Serial Type RS232/Cctalk/TTL/485	4/2/1/1	4/2/1/1
Gaming Hardware	SRAM	8MB	8MB
	ROM Sockets	SPI ROM module	SPI ROM module
	TPM	TPM 2.0/1.2	TPM 2.0/1.2
	Audio Amplifier	20W+20W (FL, FR)	20W+20W (FL, FR)
	Digital Inputs	32 (ESD protected)	32 (ESD protected)
	Digital Outputs	32 (OC 500mA 50V)	32 (OC 500mA 50V)
	Intrusion Inputs	8	8
	iButton® / GPIO	2	2
	DPCI Expansion	-	-
	Watchdog Timer	1	1
	Dual BIOS	-	-
Gaming Software	DPCI Advanced Gaming API & Runtime	Standard	Standard
	DPX® Connector Peripherals Libraries	Standard	Standard
	Embedded OS Support	Standard	Standard
	BIOS Customization	Optional	Optional
	DPX® SAS Connector	Optional	Optional
	SecureBoot	Optional	Optional
Other Features		LED lamp driver, I2C, Precision RTC, ATX or 12VDC power	ATX or 12VDC power

Note: "-" : means Not Applicable (N/A)

Model Name		DPX®-E130
Form Factor		DPX® Gaming System
Processor System	CPU	AMD Embedded G-Series APU
	Socket	-
	max. speed	1.6GHz
	TDP	18W
	Chipset	A55E
	BIOS	AMI UEFI 32Mb
Expansion Slot	PCI	-
	MINI PCIe	1
	Pcie	-
	MXM	-
Memory	Technology	Dual Channel DDR3 1600MHz
	Max. Capacity	8GB
	Socket	2xSODIMM
Graphics	Controller	In APU (AMD Radeon HD 6320/6310/6250)
	VGA	2
	DVI	-
	DP	-
	HDMI	-
Ethernet	LAN1	GbE
	LAN2	-
Storage	SATA	1
	CompacgFlash	1
	Cfast	1
Rear I/O	VGA/DVI/HDMI/DP	2/0/0/0
	Ethernet	-
	USB 2.0	2
	USB 3.0	-
	Audio	1 (ch2.1)
	Serial Ports (RS232,Cctalk, TTL,485)	3
	SRAM	4MB
Gaming Hardware	ROM Sockets	-
	TPM	-
	Audio Amplifier	3W+3W
	Digital Inputs	-
	Digital outputs	-
	Intrusion Inputs	5
	iButton R /GPIO	-
	Dpci Expansion	-
	Watchdog Timer	-
	Write Protect Gaming BIOS	Yes
Gaming Software	DPCI Advanced Gaming API & Runtime	Standard
	DPX® Connector Peripherals Libraries	Standard
	Embedded OS Support	Standard
	BIOS Customization	Optional
	TPM Suite	Optional
	DPX® SAS Connector	Optional
SecureBoot		Optional

Modular Series



Model Name		DPX®-M270	DPX®-M1270
Form Factor		Extended Mini-ITX	DPX® Multimedia Gaming System
Processor System	CPU	Intel® 8th & 9th Gen. Core™-i7/i5/i3	
	Socket	LGA1151	
	max. speed	3.2(4.6) GHz	
	TDP	65W	
	Chipset	Q370/H310	
Expansion Slot	BIOS	AMI UEFI SPI with Secureboot support	
	PCI	-	
	MINI PCIe/msATA	-	
	PCIe x 16	PCIe x16 Gen3	
	Side Expansion Port	2 PCIe x1 (only one with H310), 2 USB, I2C, Control	
Memory	MXM	-	
	Technology	Dual Channel DDR4 2666 MHz SDRAM (Non-ECC)	
	Max. Capacity	32 GB/ 16 GB per SO-DIMM	
Graphics	Socket	2 x 260 PIN DDR4 SO-DIMM	
	Controller	Intel UHD Graphics 630 / Intel HD Graphics 615	
	VGA	-	
	DVI	-	
	DP	2(see note 2)	
Ethernet	HDMI	1(see note 2)	
	LAN1	GbE	
Storage	LAN2	GbE	
	SATA	2	
	CompactFlash	-	
	Cfast	-	
I/O	M.2	1	
	VGA/DVI/HDMI/DP	0/0/1/2	
	Ethernet	2	
	USB 2.0	10 (2 via side expansion)	
	USB 3.0	4	
	Audio	6-Way header (Line-out (FL, FR, LFE), SPDIF Out)	
	Serial Port	2 x DB-9 RS-232 full signal, supports 9 bit data)	
	Serial Type RS232/Ctalk/TTL/485	6/1/1/0	
	SRAM	-	
	ROM Sockets	-	
Gaming Hardware	TPM	TPM2.0	
	Audio Amplifier	-	
	Digital Inputs	-	
	Digital Outputs	-	
	Intrusion Inputs	5 (4 via side expansion)	
	iButton® / GPIO	-	
	DPCI Expansion	-	
	Watchdog Timer	1	
	Dual BIOS	-	
	DPCI Advanced Gaming API & Runtime	N/A	
Gaming Software	DPX® Connector Peripherals Libraries	Standard	
	Embedded OS Support	Standard	
	BIOS Customization	Optional	
	DPX® SAS Connector	Optional	
	SecureBoot	Optional	
Other Features		12VDC power	

Note 1: "-" : means Not Applicable (N/A)

Note 2: (3 simultaneous for Q370, 2 simultaneous for H310)

Model Name		DPX®-E265	DPX®-E1265
Form Factor		Extended Mini-ITX	Gaming System
Processor System	CPU	AMD Ryzen™ Embedded V1000 APU	
	Socket	BGA	
	max. speed	3.35 (3.8) GHz	
	TDP	54W	
	Chipset	SoC	
Expansion Slot	BIOS	AMI APTIO UEFI (Gaming optimised)	
	PCI	-	
	MINI PCIe/mSATA	-	
	PCIe	PCIe x16 (x8 signal), 2 PCI-e x1 (via expansion)	
	MXM	-	
Memory	Technology	Dual Channel DDR4 3200MHz	
	Max. Capacity	32GB	
	Socket	2x SODIMM	
Graphics	Controller	in APU (AMD Radeon™ VEGA series graphics engine)	
	VGA	-	
	DVI	-	
	DP	4	
	HDMI	-	
Ethernet	LAN1	GbE	
	LAN2	GbE	
Storage	SATA	2	
	CompactFlash	-	
	Cfast	2	
	M.2	1	
I/O	VGA/DVI/HDMI/DP	0/0/0/4	
	Ethernet	2	
	USB 2.0	6 (2 via expansion)	
	USB 3.0	3	
	Audio	1 (ch2.1)	
	Serial Port	6	
	Serial Type RS232/Ctalk/TTL/485	6/1/1/1	
	SRAM	-	
	ROM Sockets	SPI ROM module	
	TPM	TPM 2.0/1.2	
Gaming Hardware	Audio Amplifier	-	
	Digital Inputs	-	
	Digital Outputs	-	
	Intrusion Inputs	1	
	iButton® / GPIO	-	
	DPCI Expansion	-	
	Watchdog Timer	1	
	Dual BIOS	-	
	DPCI Advanced Gaming API & Runtime	N/A	
	DPX® Connector Peripherals Libraries	Standard	
Gaming Software	Embedded OS Support	Standard	
	BIOS Customization	Optional	
	DPX® SAS Connector	Optional	
	SecureBoot	Optional	
Other Features		ATX or 12VDC power Side expansion for M series modules	



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